

Bjerck, Mari

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Apparel at Work: Work Uniforms and Women in Male-dominated Manual Occupations

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SOLBJERG PLADS 3
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Mari Bjerck

APPAREL AT WORK

**WORK UNIFORMS AND WOMEN
IN MALE-DOMINATED MANUAL
OCCUPATIONS**

PhD School in Organisation and Management Studies

PhD Series 01.2017

CBS  **COPENHAGEN BUSINESS SCHOOL**
HANDELSHØJSKOLEN

Apparel at Work

Work uniforms and women in male-dominated manual occupations.

Mari Bjerck

Supervisors:

Professor Anne-Marie Søderberg
Department of Intercultural Communication and Management
Copenhagen Business School

Research professor Ingun Grimstad Klepp
Consumption Research Norway (SIFO)
Oslo and Akershus University College of Applied Sciences

Doctoral School of Organisation and Management Studies
Copenhagen Business School

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Mari Bjerck

Oslo, December 2016

Summary

This dissertation is concerned with work uniforms for women in male-dominated manual occupations. As such, it has analysed parts of the gender-segregated labour market in light of material conditions that dress workers every day. This has been done on the background of a research and development project called *Uni-Form* funded by the Research Council of Norway. The dissertation presents findings from ethnographic fieldwork in six male-dominated occupations; construction, skilled manual work, industrial production, off- and onshore gas and oil production, industrial fishing and the Navy. It also analyses the project *Uni-Form*'s product development process and seeks to show how work research can benefit from employing more materiality-based studies.

Work clothes and uniforms for women in male-dominated occupations have come in the form of men's clothes or feminized copies of men's clothes where form and aesthetics have been adapted to the female body and female dress standards. There are several problematic aspects of work clothes and gender that points to premises of standardisation, which do not promote inclusion and recruitment or contribute to retaining women in the gender-segregated labour market. Research on workwear, uniforms and uniform dressing in general have largely documented that women dressing in uniform workwear are problematic in practical, functional and social-symbolic terms, but it has not contributed with a larger study or shown how this can be solved in practice.

The dissertation shows that despite the work uniform's poor fit for many of the female workers, wearing it is crucial to their ability to be included (and excluded) in these occupations dominated by men. The work uniform is a part of a tacit dimension at work and is therefore not always evident in the conversations about work. When the dissertation deals with these tacit material relations through the fieldwork material it is evident that the work uniform turn out to reproduce gender constructions and work practices. In this lies a potential for the work uniforms to work as a change agent for the gender-segregated labour market. This applies both to the workwear becoming a part of a strategic and political discourse concerned with balancing the gender segregation in the Norwegian labour market, and by making work life studies more

materially structured. The dissertation also points out the tactile change potential of designing work clothes that are less standardized and more adapted to gender, body and work.

Looking at the gender-segregated labour market and the standardization of workwear in this specific context, it can be argued that workwear as part of the working environment's material conditions and workers' everyday lives are a forgotten or neglected part of working life in politics and in working-life research. The neglect of workwear applies both to how clothes are designed to include a wide range of different people and occupational-specific work tasks, and the significance it is ascribed for working life in general. The most obvious effect of this neglect can be seen in women who are in an obvious minority in these occupations. This dissertation shows a clear connection between the physical, socio-cultural and material aspects embodied in the work uniform. It strives to contribute important insight into and contextual knowledge about women in male-dominated occupations that have not previously been presented. Simultaneously it points to concrete solutions that might better include women in male-dominated occupations..

Sammendrag

Denne avhandlingen omhandler arbeidsuniformer for kvinner i mannsdominerte yrker. Den analyserer deler av det kjønnsdelte arbeidsmarkedet i lys av materielle forhold som kler arbeidere hver dag. Dette er gjort på bakgrunn av et forsknings- og utviklingsprosjekt kalt *Uni-Form* finansiert av Norges Forskningsråd. Avhandlingen presenterer funn fra etnografisk feltarbeid i seks mannsdominerte yrker i Norge: bygg- og anlegg, håndverk, industriell produksjon, off- og onshore olje- og gass produksjon, industrielt fiske og marinen. Den analyserer også prosjektet *Uni-Forms* produktutviklingsprosess og søker å vise hvordan arbeidslivsforskning kan ha nytte av å anvende mer materielt baserte studier.

Arbeidsklær og uniformer for kvinner i mannsdominerte yrker har kommet i form av mannsklær eller feminiserte kopier hvor form og estetikk er blitt forsøkt tilpasset kvinnekroppen og kvinnelige klesnormer. Det er flere problematiske sider ved arbeidsklær og kjønn som peker på premisser for standardisering som ikke fremmer inkludering og rekruttering, eller bidrar til å beholde kvinner i det kjønnsdelte arbeidsmarkedet som eksisterer i Norge i dag. Forskning på arbeidstøy, uniformer og uniformering har i stor grad dokumentert at kvinner som kles i uniform arbeidsbekledning er problematisk i praktiske, funksjonelle og sosiokulturelle termer, men det har ikke foreligget større undersøkelser av dette eller pekt på hvordan disse problematiske sidene kan løses i praksis.

Avhandlingen viser at til tross for at arbeidsbekledningen passer dårlig til mange av de kvinnelige arbeiderne, er den avgjørende for deres evne til å inkluderes (og ekskluderes) i disse yrkene dominert av menn. Arbeidsbekledningen er en del av den tause kunnskapen i arbeidslivet, og er derfor lite tydelig i samtaler om arbeidet. Når avhandlingen tar for seg slike tause materielle forhold gjennom feltarbeidsmaterialet viser det seg at de virker reproduserende på kjønnskonstruksjoner så vel som arbeidslivspraksiser. Gjennom dette er det et potensiale i arbeidsbekledningen som endringsaktør for det kjønnsdelte arbeidsmarkedet. Dette gjelder både ved å inkludere arbeidsbekledningen som en del av den strategiske og politiske satsningen på å utjevne kjønnsdelingen i arbeidsmarkedet og ved å gjøre arbeidslivsstudier mer materielt strukturerte. Avhandlingen peker også på det taktile endringspotensialet som ligger i å utforme arbeidsbekledning som er mindre standardisert og tilpasset både kjønn, kropp og arbeid.

Avhandlingen tar altså for seg en del av det kjønnsdelte arbeidsmarkedet og dens standardisering av arbeidstøy. Denne viktige delen av arbeidets materielle forhold og arbeidstakernes hverdag er en glemt eller neglisjert del av arbeidslivspolitikken og i arbeidslivsforskning. Denne forsømmelsen gjelder også klærnes utforming til å inkludere et bredt spekter av ulike mennesker og yrkesspesifikke arbeidsoppgaver. Den mest åpenbare virkningen av denne forsømmelsen kan ses på kvinner som er i et åpenbart mindretall i disse yrkene. Avhandlingen peker således på viktigheten av å se sammenhengene mellom de fysiske, sosiokulturelle og materielle aspektene i arbeidslivet og viser til hvordan dette er nedfelt i arbeidsuniformen. Således bidrar avhandlingen med viktig innsikt inn i og kontekstuell kunnskap om kvinners materielle utgangspunkt i mannsdominerte yrker som tidligere ikke har blitt presentert. Den bidrar også til konkrete løsninger som kan bedre inkluderingen av kvinner disse yrkene.

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1. Introduction

Getting dressed in clothes every day for work looks and feels very different depending on the occupation you are dressing for, what your workday consists of and the people you are going to meet. Imagine being a woman and getting dressed to perform physical, manual labour among mostly male colleagues. You dress the same as everyone else in loose fitting trousers, boots and a sweatshirt. Yet your breasts, hips, shoulders, fingers, hair, eyes, voice, laughter, as well as your way of moving reveal that your female body covered by these clothes is not similar to those of your male colleagues. Something is off; something does not fit. Imagine that same woman on an airplane handing out coffee or fastening seatbelts. She is wearing a skirt, blouse, high heels, her hair is well groomed and her face is neatly made up with mascara and red lipstick. Now, things fit. The associations made to women in dirty, ill-fitting workwear and to women in air stewardess uniforms are quite different, yet both uniforms participate in gendered stereotypes. A man in a uniform signals authority and uniformity (Craik 2005) while a woman in a stewardess' uniform has been associated with the image of frivolous *dolly birds* (Craik 2005: 115). Something happens when a person of another gender steps into the same clothes for work. To imagine men in a stewardess' uniform would be unheard of and as a consequence, they have been given their own uniform specifically tailored to their gender. By contrast, most women in male-dominated manual occupations go to work every day dressed in the same clothes as their male colleagues.

This thesis is about women and work uniforms in strenuous occupations mainly dominated by men. In these occupations, there are few female employees and sometimes only one woman among many men. Workers in these occupations, whatever their gender, size or individual preferences dress in work uniforms. These uniforms are often provided by the employer and are intended to protect the worker and facilitate work tasks. In addition, these work uniforms are designed to ensure that the work force appears presentable to clients. At first glance, the work uniform may appear as an unproblematic aspect of working life, but this thesis will show otherwise and seek to complicate these assumptions. To dress men and women in the same clothing presents some practical, functional and socio-cultural challenges. A closer inspection of work uniforms reveals tacit and explicit relationships between work practices and gender

constructions in work uniforms. The work uniforms involves contradictory elements that make it difficult to develop, specifically for women.

The importance of material realities in manual occupations and the material objects involved are only to a limited degree taken seriously in politics, work research and society. This applies in particular to work uniforms, which stand out in comparison to other material structures that are the same for everyone such as wardrobes, lunchrooms, toilets, etc. The proximity of clothes to one's body makes clothing an active participant in our everyday relations – both in relation to the wearer and to their material and social surroundings. Work uniforms are particularly interesting due to their paradoxical relationship between representation and the diverse expressions these clothes form together with the specific bodies. Clothing has the ability to both cover and reveal elements that may not at first glance be visible. This thesis will attempt to reveal material aspects of working life that until now have not been given the attention they deserve, and to show how these aspects can contribute to a better understanding of the gender-segregated labour market in Norway.

The Norwegian gender-segregated labour market

The labour market in Norway, where this thesis is rooted, is unique. Compared with many other countries in the world, Norway has made great strides for gender equality (Risel & Teigen 2014: 11; Meld. St. 7 (2015-2016): 37). Along with Iceland and Switzerland, Norway is at the top when it comes to women's participation in the labour force. In 2014, men's participation in the Norwegian labour market was only four percent higher than that of women (Meld. St. 7 (2015-2016): 37). However, from an international perspective, it appears that the Norwegian labour market has a clear gender division (Meld. St. 7 (2015-2016): 37). Women and men are employed in different occupations and participate in different industries and sectors. This phenomenon is called a *gender-segregated labour market* and, more specifically, *horizontal segregation*¹ (Dahlerup 1989) and refers to the “systematic distribution of women and men in different sectors, different professional fields and different job functions, even within the same workplace and profession” (Bloksgaard 2011: 6). Countries that have traditionally been

¹ The gender segregation in the labor market is divided into horizontal and vertical aspects. *Vertical segregation* refers to segregation within the hierarchy of the labor market and specific workplaces (Dahlerup 1989: 14, in Bloksgaard 2011: 6)

considered to have less gender equality in society have a statistically lower gender segregation in the labour market, if unpaid housework is not included (Barth et al. 2014).

Despite Norway being a gender-equal welfare state, gender equality is not reflected in the Norwegian labour market – a paradox which has long been referred to as the *Norwegian gender equality paradox* (Reisel & Teigen 2014: 11). That certain occupations are associated with a particular gender applies to all occupations in this study, which consist of construction, industrial production, skilled manual work, oil and gas production, industrial fishing and the Navy².



Table 1. Percentage of employed women and men in different labour markets in Norway. (Statistics Norway 2015)

This is evident in Table 1 from Statistics Norway above, which shows statistics on the number of women and men employed in different labour markets. It is immediately evident that men dominate certain industries. In the occupations of electricity, stone masonry, fishing, industrial production and oil and gas production approximately 80% of employees are male, while in

² According to the statistics provided by the SSB and published in the Meld. St. 7 (2015-2016) the Navy is covered under the label «Public administration and defence» with a 49% female workforce. However, this is not representative as it covers too broad of a sectoral category. In 2014, 90% of employees in the military were male. The Norwegian Defence has set a goal of employing a 20% female workforce by 2020 but as of 2016 is not close to reaching this goal.

construction women make up only 8% of the workforce (Meld. St. 7 (2015-2016)). Hence, there are good reasons for referring to these and similar manual occupations as *male-dominated*.

Women's relative subordination to men through educational choices are made visible in the labour market where the consequences are reflected in lower wages, part-time employment, poor pensions, an elevated retirement age and fewer leadership positions (e.g. Ellingsæther & Solheim 2002; Padavic & Reskin 2002; Holst 2009; England 2010; Reisel & Teigen 2014). Academic discussions of women who choose to work in manual, male-dominated occupations are preoccupied with understanding why so few women choose these occupations. Neumann, Rysst and Bjerck (2012: 242) suggest three explanations for this discussion. One is that the risk of harassment and sexual harassment, in particular, keep women from applying to these occupations (Yount 2005). Another explanation is that participating in occupations that do not require higher education goes against the emphasis of feminism on self-realization and economic freedom for women (England 2010). The last understanding is a gendered perception of women that presumes that women are uninterested in working in strenuous occupations where they may get dirty. This perception is rejected by Ferguson (1994) and Padavic (1992), among others.

The Norwegian government is determined for gender equality to pay off for the individual and for society at large. They seek to create equal opportunities for men and women, largely due to the value created within the country by offering families greater occupational choices (Meld. St. 7 (2015-2016)). The government assists citizens in choosing non-traditional educations and occupations that contribute to a less gender-segregated labour market. To strengthen gender equality in the workplace, several labour organizations have also taken active steps to recruit for education, careers and leadership positions where there is an uneven gender distribution (Meld. St. 7 (2015-2016): 39). The government is particularly concerned with providing good tools and methods for creating equality and diversity in the workplace. Among other things, financial support has been given to explore the possibility for a certification of workplaces that meet a predefined standard for equality and diversity. Six indicators define this standard: 1. Diversity within management, 2. Regular career advancement, 3. Full-time positions are the norm, 4. Facilities are provided for employees with disabilities, 5. Claims of harassment and discrimination are handled adequately and in a timely manner, and 6. Equal wages for men and

women (Bråten et al. 2014; Meld. St. 7 (2015-2016): 40). In this dissertation, I will argue that this list is incomplete. If the Norwegian government is to succeed in achieving equality and diversity in the modern Norwegian workplace, it must better understand how work uniforms play into establishing gender segregation in the Norwegian labour market.



Picture 1. Cover page of the newest Message to Parliament on gender equality (Meld. St. 7 (2015-2016))

Picture 1 presented above is the cover page of the newest Message to Parliament (Melding til Stortinget) on gender equality (Meld. St. 7 (2015-2016)) from the Ministry of Children and Equality. The title of this document is *Equality in Practice* and it deals with existing and future political initiatives for achieving equal opportunities for women and men in the labour market, among other areas of society. The cover photo depicts a woman dressed in workwear at what can be assumed is a male-dominated manual workplace. Her clothes are far cleaner than those I saw during my fieldwork for this study, but the point is that the picture's main focus is a woman and her work clothes in a workplace context. Despite this, nowhere in this Message to

Parliament is there any mention of clothes, uniforms, workwear or any other material element that dresses these women and men every day for work. This is a crucial oversight.

This dissertation underscores the importance of studying material conditions such as work uniforms and for giving these conditions the recognition they deserve in work research and in policy seeking to address gender-imbalanced labour markets. At the same time, this dissertation suggests ways of studying these material conditions that go beyond academic publications and extend to the concrete development of work uniforms. If women are to be integrated in the male-dominated labour market, it is important that this integration is based on a wider perspective of how the labour market works physically, socially and materially. Furthermore, it is important that we start considering how it can practically and materially be done in workplaces that welcome these women in various ways after they have left school.

Research problematic and aim

This thesis draws attention to the importance of work uniforms for the gender-segregated labour market. Work uniforms are here seen as more than the fulfilment of functional and safety requirements. They work as a social and symbolic instrument for the improved integration of women in various male-dominated occupations. The title of the dissertation, “Apparel at work”, reflects this dissertation’s concern with the clothes for work, but also how these clothes is at work in its context. Work uniforms determine much of the work that is done, but have not been devoted much space in the discussions about what constitutes working life, with an exception of issues related to safety and health. The materiality of work has an important function, both in socio-cultural and in practical contexts. Through careful study of uniforms in working life, this dissertation aims to fill a knowledge gap in the importance material conditions and objects have in determining gender equality in the workplace.

This thesis emphasizes the importance of the materiality of work uniforms in order to achieve an empirically grounded understanding of gender-segregation in the Norwegian labour market. In this, the overarching research question is formulated as follows:

What potential lies in the work uniform as an agent of change for the gender-segregated labour market?

This is an explorative research question that probes an area of central importance to politics and society as a whole, namely work and diversity. The significance of work uniforms for working life is underestimated and this thesis aims to pave the way for future, materially oriented studies of work and gender. This dissertation is concerned with material objects and their non-reflexive interaction with individuals. It shows how to illuminate tacit relations through work uniforms in interaction, and couples it with emic understandings of gender and how this integrates with practices related to work. The overarching research question will be answered by looking at work uniforms in light of ordinary consumption and as an important part of everyday consumer practice. It is the use phase of everyday consumption that is at issue here and the relationship between gender and work formed through the materiality of what is worn on the body, at work.

Labelling the work uniform as a potential change agent points to its ability to change both the body of the person who wears it and the environments that surrounds it. The exploration of the work uniform's change potential will be made through the following four research problematics:

1. *What is the work uniform's potential for the inclusion and exclusion of female workers?*
2. *How do work uniforms have the potential to challenge and reproduce work practices and gendered constructions?*
3. *In what ways do work uniforms have the potential to reveal tacit and embodied understandings of work environments?*
4. *In what ways does the innovation of work uniforms provide potential for change of the gender-segregated labour market?*

These questions are answered through the four articles included in this dissertation, which address the position of standardized work uniforms in male-dominated work environments. This dissertation shows how workwear affects the execution of work and how it is integrated into the interaction between individual actors in the workplace. Looking closer at workwear and uniforms reveals tacit and explicit relationships between work practices, gender constructions and uniformed workwear. The contribution of this dissertation will be to explore the importance of uniforms for women's integration into male-dominated occupations and to look at how work uniforms partake in interactions between co-workers and how they impact their work in general.

This dissertation will also highlight ways to reveal embodied conditions when studying material objects, and consider what potential that lies in the uniform for change and innovation. Ultimately, these questions will culminate in a discussion of whether the work uniform has potential for change. If the work uniform is a symptom and a sign of masculine dominance penetrating the sphere of work, it could be possible to improve a gender-segregated labour market by altering work uniforms. This thesis will address this challenge directly towards the end.

In addition to contributing to knowledge about work uniforms in relation to gender constructions and work practices, an overall aim of this dissertation is to open up a field for studying material culture within work research and policymaking. This aim is twofold: Firstly, I seek to advance the importance of materiality in workplace studies. Work uniforms must be taken seriously as an essential component of workers' everyday lives. Secondly (and this is an extension of the first aim), if detailed studies of these material realities are taken seriously, it might be possible to talk about work uniforms as a challenge to and an opportunity for equality and equal rights in the labour market. The occupations women choose may be as much determined by the material clothing that they see themselves dressing in every day as are their opportunity for career advancement.

Contribution, background and motivation

The study of women and work uniforms in six, manual male-dominated occupational categories speaks directly to the gender division of occupational spheres in Norway. In work research, concrete bodily experiences through clothes are given voice primarily related to health and safety issues at work (e.g. Klemsdal 2003; Frøyland et al. 2004). Some studies have been conducted on the relationship between clothing and work. These are mainly placed within a culture-historical tradition where the development of clothing for individual groups has been studied, such as for postal services (Larsson 2008), male politicians (Pettersen 2004), and the police (Finstad 2000; Drege & Nytingnes 1999; Young 1997), as well as studies where clothing is included as one of several elements (Conradson 1988).

When it comes to the uniform or work wear as a design product, several functional analysis of this type of clothing has been conducted. Petersen and Riisberg (2015) has studied the interplay between different actors involved in the design process of uniforms for health care professionals

that both answers to functional analysis *and* individual actors concerns with self-presentation and identity. However, few studies, especially of women in male-dominated occupations have thematised the use of workwear at the intersection of work, clothing, body and gender. A study by Carol Wolkowitz (2006) is an example where body, work and gender is analysed through industry workers, service workers, and prostitutes, but here clothes have been taken out of her analysis.

Much research has been done on women in the Norwegian military and many strategies have been suggested to recruit and retain women in military positions. Unfortunately, few of them have actively dealt with uniforms as a possible route towards gender equality and diversity. One study that does examine uniforms briefly comes from Ellingsen et al. (2008), appearing as part of a pilot study of the recruitment of women to the Norwegian military. In this study, the authors point to the paradoxical fact that after 25 years of having women in the military, uniforms and equipment have yet to be adapted to female soldiers. They see this as a symbol of a monolithical structure in occupations where the female body does not fit in. Here, uniforms instead become an illustration of women's differentness.

Women and men's material conditions in the workplace are not considered a contributing factor to the gender-segregated labour market. However, in the male-dominated occupations in this study, the standardization of work clothes is an important common feature. These clothes are obligatory for all workers but is mainly grounded in forms and sizes common for male workers. Women who work in the male-dominated occupations break with the gender-segregated labour market, but this is despite of common work uniform practices. This dissertation is about these clothes and women, and how understanding and changing their material conditions may contribute to changing the gender-segregated labour market.

Background and motivation

This dissertation is one of the outcomes of a larger research and development project called *Uni-Form: Workwear for Women in Male-Dominated Occupations* (referred to as *Uni-Form*) led by a large Norwegian sports and workwear company. The project consortium was initiated by this anonymised Norwegian sports- and workwear company and Consumption Research Norway and consisted of two academic institutions (Consumption Research Norway known as SIFO and the Norwegian Work Research Institute known as AFI), a public sector institution (the

Norwegian Defence Logistics Organization known as NDLO) and the Norwegian sports and workwear company. This project was concerned with developing knowledge about workwear products and services for women in male-dominated occupations. As a starting point, this study looked at the few work garments that already existed for women in these occupations, which were unsuccessful. They did not sell well on the market, and the workwear company wanted to know why and what they could do to improve sales. This research project also started by looking at why there was so little knowledge about women in male-dominated occupations – particularly regarding their use of uniforms and workwear in the intersection of work, body and gender. The project was funded through the Norwegian Research Council's program for *User Driven Innovation* over a four-year period. This project started in 2009 and ended in 2013, and all four publications attached to this dissertation stem from this project. The *Uni-Form* project and its implications for the doctoral study will be addressed at greater length in the methods section of this thesis.

Research on uniforms and uniformation in both historical and contemporary studies have noted that women and uniformation is problematic. Our contribution to this project innovating work uniforms for women in male-dominated occupations is not simply to point out problems with uniformation but to arrive at how these problems can be solved in practice. On a more elevated level, we wanted to study how practice-oriented clothing and work research could be utilized in concrete product development. This was to be done through the following main problematic specified in the project application: *Develop competence-based products for women in male-dominated occupations, with technical and social functionality that will contribute to increased well-being and improved integration of women into workplaces.* These competence-based products for women were to be developed through the following objectives: 1. Describe women's experiences, challenges and preferences in relation to workwear and uniforms, and how uniforms and workwear are used and experienced by female users. 2. Describe how gender is marked and communicated at a selection of male-dominated work spheres. 3. Describe the user contexts for uniforms and workwear, including the relationship between the use of work clothes and private clothes for sport and leisure. 4. Improve workwear through practice-oriented clothing and work-life research. 5. Develop new product concepts and marketing strategies for workwear for both sexes in male-dominated occupations. 6. Improve military clothing for

soldiers of both genders. 7. Improve information strategies to ensure that greater clothing functionality can be achieved through proper usage.

In the fulfilment of these objectives it was a challenge to translate between social sciences where the development of concepts and ways of understanding are central, to design where thoughts are meant to be given a tangible form. The relationship between the material, technology and society was both a theoretical and methodological challenge in this project. We believed the project could contribute to this discussion, which had been more dominated by theoretical development than empirical operationalization. To achieve these objectives, we needed a broad knowledge base on the use of workwear and uniforms. The project attempted to contribute to a greater understanding of the work clothes' user context, which was to give the workwear company opportunity to improve their products and information strategies. In addition, the ethnographic research was intended to lead to further scientific publications and contribute to the completion of this dissertation. The articles presented in this dissertation and two other publications from this project is further elaborated in the next section.

The articles

The issues set forth in this introduction will be answered on the basis of four articles. These are:

- A. **Bjerck, M (2013). En borrelås til besvær: Kvinnelig uniformering på minefartøyer.** [A Velcro that upsets: Female uniforms on Navy vessels.] In P. Strandbakken & N. Heidenstrøm (Eds.) *Hinsides symbolverdi: Materialiteten i forbruket.* [Beyond symbolic value: The materiality of consumption.] Novus forlag: Oslo, pp. 121-144.

Abstract:

The Norwegian Defence Logistics Organisation (FLO) had in 2010 provided a selection of its naval force at a minesweeper in Norway a new work uniform (M / 04) for testing. The new version of the jacket provided the possibility for a more feminine shape in the work uniform; with a shorter shoulder width and narrower waist line provided by a Velcro strap. This bookchapter is based on one specific material object; the Velcro straps in the waist of the jacket in the work uniform M / 04. The empirical data are gathered through fieldwork on two of the Norwegian Navy vessels. The debate over the Velcro

straps reveals many important discourses about being a woman in a workplace dominated by men. Above all, it points to how women and men negotiate gender through certain clothing practices within a predetermined uniform regulation.

Keywords: materiality, work, uniforms, gender, clothes

- B. Bjerck, M. & Klepp, I.G. **Clothes matter: Work uniforms in Norwegian male-dominated manual occupations.** Submitted to *Journal of Material Culture* in May 2016

Abstract:

The importance of material conditions and artefacts – uniforms and workwear, in particular – for working life are only to a limited degree taken serious in working life studies. This article will try to fill this gap by asking: What relevance does materiality, in the form of work uniforms, have for workers in everyday work life? This article addresses that question by comparing some of the structural conditions and constraints framing such clothing with particular meaning they carry for everyday users. The article will discuss how work uniforms operate within work practices, and the effect they have on one another. By doing this, we hope to show that studying work practices through clothing might provide new knowledge about the physical and social aspects of work.

Keywords: materiality, work, uniforms, clothes, ethnography, gender

- C. Klepp, I.G. & Bjerck, M. (2014) **A Methodological Approach to the Materiality of Clothing: Wardrobe Studies.** In *International Journal of Social Research Methodology*. 17(4), 373-386

Abstract:

The material is not just ‘a carrier’ of different types of symbols, but an active element in the practices (Latour 1996). Bringing this to the fore requires new research methods. This article discusses a methodological approach we call wardrobe study which allows for analysis of the way in which clothes relate to each other on the whole or within parts of the wardrobe. More specifically, we discuss how this method can contribute to

increasing the materiality of clothes studies. The theoretical point of departure for this approach is a practice theory in which the material enters as an integral part (Shove & Pantzar 2005). First, the article briefly discusses developments within the study of dress and fashion. Second, the methods combined and developed in wardrobe studies are discussed. The emphasis here is primarily on the weaknesses of the individual methods in practice-oriented dress studies, but also on how they jointly can contribute to the wardrobe study.

Key words: Method, materiality, clothes, wardrobe

- D. Bjerck, M. **Developing work uniforms for women: The role of ethnographic research.** In *Journal of Business Anthropology* 5(1), 137-153

Abstract:

This article is concerned with the ethnographic research done in a Norwegian product development project aimed at developing workwear for women in male-dominated manual occupations. Making use of ethnographic methods and analysis can be valuable in showing how users' experiences and practices can be studied. It can also be useful in areas where there is poorly developed language and concepts for formulating and discussing products, such as with workwear. This article aims at answering how ethnographic studies might contribute to the development of products and services. Understanding people and things in their everyday relations and achieving action-oriented results may be a challenge to the innovation and development processes. This article explores the challenges that lie in studying the use of clothing in specific work contexts as well as capturing and mediating this experience with workwear in use.

Keywords: Uniform, gender, ethnography, innovation, product development

In addition, the following co-authored publications have contributed to the perspectives set forth in this dissertation:

- Neumann, C.B., Rysst, M., & Bjerck, M. (2012). En av gutta: Kvinner og klær i mannsdominerte arbeiderklasseyrker. [One of the guys: Women and clothing in male-

dominated occupations.] In *Tidsskrift for Kjønnforskning* [Journal of Gender Research] 35(3-4), 240-254. ISSN 0890-6341.

- Vestvik, M. & Bjerck, M. (2012). *Sjøforsvaret i ny drakt. Utviklingen av ny uniform for Sjøforsvaret med vekt på tilpasning til det kvinnelige og mannlige personellens ulike behov for arbeidsbekledning.* [The Navy in a new guise. The development of a new uniform for the Navy with emphasis on adjusting to the female and male personnel different needs for work clothing.] Oppdragsrapport no. 3. Oslo: Statens institutt for forbruksforskning.

Outline of study

This dissertation consists of four articles and an overall frame that draws out the main perspectives of the study and discusses them in light of the four research problematics that were set forth in the introduction. This dissertation is organized in the following way: Chapter 1 introduces the field, background and the research problematics that is answered in the dissertation. In chapter 2, theoretical approaches and basic concepts are presented in relation to work uniforms and constructions of gender. This sets the groundwork for how to understand the field of women, work and uniforms. Chapter 3 consists of the theoretical framework, which comprises the perspectives in the articles and in the discussions and conclusion. These are related to everyday consumption, studies in material culture, and practice theory. In addition, this chapter sets a framework for how to understand the development of competence-based workwear, which was a goal for the project *Uni-Form* and which is important in the discussion of the work uniform's potential as a change agent for the gender-segregated labour market.

Chapter 4 addresses research design, methods and field sites, and gives some background for the choices that were made in the course of this study. This chapter touches upon the ethnographic multi-sited fieldwork and problematic features of the study such as access and choices of fields. Chapter 5 addresses research implications being involved in an innovation project and sets forth three specific dilemmas. It particularly deals with applied research and knowledge production, dissemination and innovation. This sets the scene for the individual articles, which are presented over the next four chapters. These four articles are included in the dissertation due to their insistence of the importance of material objects in work practices. All four articles examine

dress practices in different contexts, and offer varying approaches for each. Chapter 6 presents an article about a Velcro strap in a Navy uniform jacket and shows how the design, modification and negotiation of discourses and practices (about femininity and masculinity) often occurs on the basis of a given material condition. The article is presented in the original Norwegian written language, but is enclosed in a translated English form in an appendix to the dissertation. Chapter 7 presents an article that is concerned with why clothes matter for work and for female workers. It sets forth a structural background for work uniforms and provides a comparative approach to the work uniform in use. These two articles are directly related to the empirical findings of the ethnographic fieldwork.

Chapter 8 presents a methodological article that is concerned with making studies of clothes more materially oriented. It brings forth wardrobe studies as a possible solution to an existing problem within the social sciences. Chapter 9 presents an article that deals with the product development done in the project, *Uni-Form*. It aims at answering what ethnography can add to a product development process by using the research work from the project *Uni-Form* and its collaboration work between researchers and the product development team as an example. These articles are presented in the way that the two first relate to the findings in the ethnographic fieldwork and point to the importance of work uniforms in the everyday lives of female workers. These articles reflect the possibility for work uniforms to aid in negotiating positions in a male-dominated work sphere and serves as tangible input in discussing a topic that is often perceived as less concrete – namely, the importance of material objects in everyday consumption. The two last articles address the process of this study. They suggest concrete ways to apply materially oriented studies in methodology and ways to develop work uniforms for male-dominated occupations based on the empirical findings presented in the two first articles. Together they address the potential work uniforms have in instituting changes in the gender-segregated labour market in Norway.

Chapter 10 uses the four research problematics as a framework to discuss the four articles against the main research question: *What potential lies in the work uniform as a change agent for the gender-segregated labour market?* The conclusion of this dissertation further answers this question. Limitations and further studies are presented in the last part of the dissertation, which suggests alternative and complementary topics of further study. Altogether, this

dissertation contributes to a greater understanding of the various elements at work in the gender-segregated labour market in Norway and provides concrete suggestions of ways to study and improve work uniforms.

2. Work uniforms and constructions of gender

Stories about female versions of (male) uniforms show how changing views on women's professionalism have been given material form in different occupations throughout history. Uniforms for women often reinforce the tendency to see women as different and men as normal (Moi 2001; Beauvoir 2000; Butler 1999). This becomes particularly evident in occupations where women are a minority. The starting point of this dissertation is with women, work and their use of work uniforms. The dissertation is thereby rooted in a social field where gender constructions play out. Gender constructions have a central position in the study of female work uniforms and determine not only the methodological choices and field arenas but also the outcomes of the study as a whole. This chapter will clarify how this dissertation understands and treats work uniforms as standardized workwear and as constructions of gender.

Standardised apparel for work

In research on uniforms a distinction is made between uniforms, quasi-uniforms and casual uniforms (Craik 2005). Referring to work uniforms in the Navy, the term “uniforms” is the correct term to use. This characterizes mandatory clothing dominated by obligatory and protocolled dress. Jennifer Craik (2005) uses the terms quasi-uniforms to refer to standardized workwear and informal uniforms including, among others, sportswear. Thus, the term does not only refer to work clothes and military uniforms. For all occupations in this thesis that has both standardized workwear and uniforms, I refer to them as work uniforms or simply workwear. These concepts brings together both uniforms as we find them in the military and workwear in other, less formally regulated occupations.

In each of the six categories of male-dominated occupations examined in this dissertation, construction, industrial production, skilled manual work, oil and gas production, industrial fishing and the Navy, all workers were required to wear work clothes in one form or another. This was required by the employer and was rooted in a regulatory framework of some kind – either by formal written instruction or by informal verbal instruction. These garments were based on the Ready-To-Wear (RTW) system of clothing and male sizing – a system that has existed since the industrial revolution (Laitala et al. 2011: 20). The development of size designation and RTW clothing was produced against a backdrop of a need to produce large

quantities of uniforms during wars in the eighteenth century (Laitala et al. 2011: 20). This resulted in statistical information about men's body measurements (Aldrich 2007: 6), and it was not until 1939-40 that a large study of this kind was conducted for female body measurements (O'Brien & Sheldon 1941).

Work uniforms for important male-dominated social institutions such as the police (Young 1997; Steele 1989), military (Garber 1992; Kidwell 1989), postal service (Larsson 2005) and fire department are essentially made for men with measurements derived from the male body. The system of RTW sizing is used in the clothing industry to target specific customer groups because it is costly to produce clothes in multiple different sizes (Laitala et al. 2011: 20). The same system applies to workwear and the standardization of sizes within this segment. It favours some customer groups over others, and in male-dominated occupations with less than 20% female workers, women are not a prioritized customer group. This might explain why most of the work uniforms in these occupations are based on male sizing and that the male standardized body is used as a norm in the design of work uniforms.

Effects of standardisation

Employers and employees alike may see the standardization of work uniforms for all workers within manual male-dominated occupations as beneficial. Such standards provide the wearer with a common aesthetic that enables identification and quick recognition. Moreover, these standards bring with them a particular form of authority and sense of belonging to a group. The work uniform may establish visual hierarchies and obfuscate individual differences, but these uniforms can also contain "open" and "hidden" or explicit and tacit meanings (Craik 2005). Because the design of work uniforms is based on the male physique and established sizing system, and is mostly worn by men in male-dominated occupations, it is possible to draw the conclusion that a tacit meaning of the work uniform may be male dominance (Neumann et al. 2013).



Picture 2: Two construction workers taking a break from their manual work tasks.

The Picture 2 above show a woman and a man dressed in the typical work uniform that is treated in this dissertation. Here you can see the garments in high visibility colours, the pants with pockets and loops to accommodate small tools and the protective boots protecting the worker's feet. These elements points towards its uniformed nature as a way of identifying the workers belonging to a specific manual occupational group. If you look closer, the picture also reveals how ill-fitting the work uniform is on a women's body – the kneepads falling below her knees and the short length of the uniform in the waist where a t-shirt must cover it. This picture show how private garments is combined with obligatory garments – a camouflage hoodie combined with high visibility garments. It also reveals the long hair that perhaps specifically tells us that one of the persons sitting there are a woman.

I will claim that the standardization of workwear is problematic for women in these occupations for two main reasons. The first is related to the physical body and the practical and functional aspect of dressing in work uniforms made for men. There are in fact physical differences between women and men that are relatively stable. This makes it more difficult to develop standardized workwear that fits most female workers in male-dominated occupations. These differences are, in essence, that women have breasts and have more curve in their waistlines and lower backs. In addition, women have narrower shoulders and usually shorter arms and legs

than men. The relative measurements for the ratio between the length of the back, the waistline and the hips are also different for women than they are for men (Neumann et al. 2013). This is often (though, not always) taken into account in the design of civilian clothes, but is seldom considered when it comes to workwear and uniforms (Neumann et al. 2013).

A direct consequence of the lack of design to accommodate women is evident through the use of work pants with rather narrow and straight constructions in the waist. When work pants do not fit women in a size they would normally wear due to the shape of its narrow hips, women have had to use a larger waist size. This also effects the length of the pants as they are usually not provided in a variety of lengths, only in different waist sizes. One of the results of wearing a larger pant is that the overall form does not fit the woman's body. It is narrow in her waist but wider in her thighs, and is unnecessarily long. This ill fit impaired the practical details designed into these pants – one of them being the kneepads, which ended up sitting below the female worker's knees due to the extended length of the pants. Unless they continuously pulled the pants up before sitting down, these women lacked any knee protection when working on hard concrete floors of construction sites, for example.

The second problem is related to the socio-cultural work context, which shows that suitable clothes are not only an aspect of a physical nature of bodies and the garments they are dressed in. Suitable clothes are clothes that make the body socially acceptable and able to fit into everyday social contexts, claim Klepp and Rysst (2016: 1). According to Petersen and Riisberg (2015: 60), even though uniforms are not normally considered part of the fashion system understood as a system of rapidly shifting aesthetic preferences, the current fashion ideals manifest themselves in the cut, material and silhouette of the design. Research on uniforms show that women in male-dominated occupations seem to need to present an asexual appearance in both action and in dress (Garber 1992; Neumann et al. 2012), which differs from femininity as it often is performed. Working in skirts has thus been unpopular both socio-culturally and functionally, as it appears in Finstad's study of the police (2000). How women dress suitably in garments based on male standardization, is not only an issue of how the clothes fit the body, but also an issue of how these clothes are felt on the body by the wearer.

These two problematic aspects of work clothes and gender points to premises of standardisation, which do not promote inclusion and recruitment or contribute to retaining women in the gender-

segregated labour market. Research on uniforms and uniform dressing in general have largely documented that women dressing in uniforms are problematic in practical, functional and social-symbolic terms (Joseph 1986; Craik 2005; Kidwell 1989; Barnes & Eicher 1997; Larsson 2008). Looking at the gender-segregated labour market and the standardization of workwear in context, it can be argued that the work clothes as part of the working environment's material conditions and workers' everyday lives are a forgotten or neglected part of working life in politics and in working-life research. The neglect of workwear applies both to how clothes are designed to include a wide range of different people and occupational-specific work tasks, and the significance it is ascribed for working life in general. The most apparent effect of that neglect can be seen on women.

Gender constructions and material bodies at work

Work clothes and uniforms for women in male-dominated occupations have come in the form of men's clothes or feminized copies of men's clothes where form and aesthetics have been adapted to the female body and female dress standards. Whether women themselves, through the work uniforms, want to be distinguished as different or show solidarity to occupations where gender is downplayed is one of the aspects of women and uniforms that is investigated more thoroughly through this thesis. This section will treat gender constructions related to the material body as we find it in gender theory and further in the emic constructions at work.

Having gender as a central object of study presupposes the category gender as given. It is fruitful to problematize the category of gender because it has been and still is under scrutiny and particularly related to how the relationship between sex and gender should be understood. Donna Haraway (1988) uses the term *situated knowledge* to point out that the importance of gender, when one studies it, cannot be understood as a fixed category with unproblematic references. Gender is in this dissertation understood as relational (Connell 2002). Gender is something that people do, it is an on-going process and not biologically predetermined and contained in the body (Butler 2006; West & Zimmermann 1987).

Candace West and Don H. Zimmermann argued that "gender is not a set of traits, nor a variable, nor a role, but the product of social doings of some sort" (1987: 129). This laid the foundation to see gender as produced and reproduced in repetitive everyday interactions based on cultural expectations related to how people categorized as women and men should present and behave

themselves (Rysst 2008: 24). Gender is learned through interaction with others in terms of how one responds to behaviour (West & Zimmermann 1987: 129). This is an important aspect in the study of women and in the study of female work uniforms in male-dominated occupations. The term *heterosexual matrix*, used by Butler (2006), refers not only to how gender is learned but also to how this learned gender behaviour is reflected in the society as a whole. This points to a cultural process that neutralizes body, gender and desire. The term *heteronormativity* (Ingraham 1996; Butler 2006) defines gender as a binary category. It refers to an empirical understanding of how women and men deal with gender, and in this dissertation it will be used in the analysis of work practices where social norms and institutionalized assumptions treat heterosexuality as the norm and variations from this norm as deviant.

Gender and the material body

Studying gender in a universe defined by masculinity may be subject to interpretation challenges surrounding gender and material conditions. The empirical field has to treat the specific material body as the basis of social gender in order to reflect the emic constructions of gender and the physically dressed body. Poststructuralist gender theorists like Butler do not focus on the body as carrier of meaning in itself, but believe that one must make the material into a priority object of study (Langås 2008: 10). To include the material she will turn to the idea of the material as a process that produces experienced properties of materiality as its effect (Butler 1993: 9; Langås 2008: 9).

Judith Butler (1990, 1993) theorizes gender by using *performative gender theory*, i.e., gender as a performative category. To Butler, gender is a constant process where one constructs identity. You become a woman through constant repetition, and not by being born with a biologically determined sex. In her formulation of gender, Butler turns upside down the distinction between sex and gender and claims that it is gender (not sex) that is primary in determining the way we appear and act (Mortensen et al. 2008: 77). Biological sex is therefore an effect of socially constructed gender (Mortensen et al. 2008: 77). The performative aspect of gender therefore implies that the gender effect is not naturally given, but must be adapted, reproduced, repaired and cited (Mühleisen & Lorentzen 2006: 278).

However, a problem with Butler and her performative category is that it is difficult to find a satisfactory answer to how to integrate material (anatomically sexed) bodies in the analysis

when biological bodies are only understood as socially constructed (Moi 1999; Rysst 2008). This is one of the reasons why Toril Moi takes a sharp confrontation with Butler and other poststructuralists in her essay collection, "What is a woman?" (1999). In this collection, Moi wants to develop a theory of gender in which the body – and not language-based subjectivity and identity theories – is at the centre (Mortensen et al. 2008: 257). In the 1960's dominant gender theories biological gender appears as an ahistorical and strangely disembodied thing, Moi (1999: 53) claims, without contact with the concrete historical and social significance contexts. The problem with this is that how this is done is no longer related to the body and thus creates works with a "fantastic abstraction level" (Moi 1999: 54) without providing the specific, situated and materialistic understanding of the body that they initially wanted to reach.

Nina Lykke (2008: 100) points out the importance of social constructionism for feminist gender theory: its unintended by-product is that the body and material can be reduced to what Haraway calls, "a blank page for social inscription" (1991: 197). As I see it, this is also a challenge in relation to the analysis of women and female work uniforms in male-dominated professions. Empirically, it appears that women and men in the study present a strong relationship between biological anatomic gendered bodies and social gender. Gender is inscribed in children's bodies from the moment the child is born (and even beforehand). At this moment, certain social norms and expectations are followed. Butler argues that biological sex is as socially constructed as social gender. This is problematic due to the fact that the existence of material, anatomical bodies become under-theorized and difficult to interpret in light of the empirical fieldwork material in this study. Butler's theory also becomes difficult to apply to a study analysing gendered bodies in uniforms as the physical, gendered body is so important in the analysis of clothing practices.

Women and men as biological or material (anatomically gendered) bodies constitute the main core of this study's research design as well as the empirical field. Dealing only with gender as a social and cultural entity complicates the analysis of materialized bodies. Therefore, I agree with Moi and include bodies as material sizes in my analysis. Women and men are not homogeneous groups and how gender is constructed also varies between women, between men and between women and men (Neumann et al. 2012). Butler's approach is problematic in this study due to her disregarding the physically biological body. Her understanding of performative gender, on

the other hand, is helpful to this study and will be utilized. The idea that social gender is produced and reproduced through certain material structures is something that will be developed further in this dissertation. This is evident particularly in Article B and in the concluding discussion of the work uniform's potential as reproducing and challenging work practices and gender constructions. I will therefore use Butler's theories of gender as something that is done, physically and socially, relationally and processually.

Emic constructions of gender

In my articles presented in this dissertation there are several analyses of practices related to material objects as expressions of gender. In many ways it seems that the close, empirical descriptions of gender in everyday life collide with the central focus of feminist gender theory to eradicate the distinction between biological sex and social gender. With an ethnographic standpoint, the workers' understandings and applications of gender as emic constructions represent a challenge of interpretation for the researcher's analysis, because it is based in the empirical field and cannot be taken to be universal categories of femininity and masculinity. Gender is, after all, something we both gain knowledge about and something that is essential to knowledge (1999: 211).

Hanne Haavind (2000: 210) characterizes gender more empirically grounded as a cultural significance system that not only is used to categorize the human body, but also can place all sorts of phenomena as respectively female and male. She claims that the social participants know the system as a code that is built in and works through the verbal language and body language. In that, what we often call male-dominated or female-dominated arenas and activities is symbolic meanings of gender that connects social structures with subjects' bodies, which appear as peoples' femininity and masculinity. Applied to my study, work uniforms is a part of this system and work as a code where the anatomically gendered body is recognized and distinguishes the masculine from the feminine.

Masculinity and femininity are terms to name the cultural and social expectations we have towards women and men on a generalized level (Neumann et al. 2012: 243), and only give meaning when they are interpreted in relation to each other and seen as mutually constitutive (Connell 1995: 68). The expectations of femininity in male-dominated occupations were tied to stereotypical understandings of women as having weaker physical strength than men, being

reluctant to take on hard and dirty manual labour and being preoccupied with appearance. These expectations become problematic for women who enter male-dominated spheres, especially since they are the opposites of male stereotypes fronted in these occupations which could best be described by the term “real men” (Neumann et al. 2012). In that, a female worker must show that she is just as tough and able to do her job on the same terms as her male colleagues. As such, it became important for the female workers to show distance to the expectations of femininity in order to be included as “one of the boys” in the work sphere. It is in this space that the female workers’ position in the work arena is negotiated through their work uniform (this issue is described particularly in Article A).

To understand this negotiation and how the expectations for biological sex to take emic forms in male-dominated occupations, I build on two categories that Anne Iversen (2006) found in her study of industrial work with female employees: *arbeiderlikhet* (worker equality) and *kjønnsulikhet* (gender inequality). The negotiation of female workers’ position can be understood as a negotiation between a community of solidarity among the workers, resulting in security, unity, loyalty and protection – a sense of “we” versus “them” – and gender as difference where there are two sexes, men and women, which naturally suit different occupations (Iversen 2006: 28-29). The understanding of worker equality and gender inequality in an equality discourse will be further analysed in the concluding discussions. The work uniform is a vital part in under-communicating gender difference and over-communicating workers’ sameness and communion of workers. This is one of the reasons why the work uniform is so important for the (female) workers and for the study of male-dominated manual occupations.

3. Consumption, materiality and practice

This theoretical chapter will deal with everyday consumption as we find it through the use of work uniforms. It will approach this everyday consumption through a practice-oriented theory. This is done in order to grasp the material aspects of working life. It shows the importance of material objects in everyday consumption through an explicit focus on gender, clothing and work practices. It also discusses the challenges and opportunities this provides for a research and development process. The theoretical framework presented in this chapter reflects the theoretical perspectives used as a basis for analyses in the articles included in this dissertation. It also presents further theoretical perspectives that are discussed in the concluding part of the dissertation. This theoretical framework is, together with the previous chapter, important in order to understand how I empirically answer the main research problematic about what potential lies in the work uniform as a change agent for the Norwegian gender-segregated labour market.

This chapter will firstly treat the role of consumption in everyday life as a routinized activity in that it will stress the importance of materiality and present practice theory approaches as a way to analyse work uniforms in use at work. Practice, in the form of internalized knowledge related to the use of work uniforms, is an important concept throughout this dissertation. Practice theory helps us understand how work uniforms are incorporated and used in the everyday practices at work. The understanding of this issue enables a discussion of the social relations and practices it fosters in relation to work uniforms.

The theoretical framework will show the role of everyday consumption in research and development processes by suggesting how to study work uniforms, gender constructions and work practice in developing “competence-based products”. To develop competence-based workwear was an objective in the *Uni-Form* project, which this dissertation is a part of. One of the aims of theorizing product development is to understand how this competence-based workwear can be interpreted and linked to user-driven product development. This is done in order to discuss the implication of competence-based work uniforms for the gender-segregated labour market in the last concluding chapter, and as a basis for the article concerned with the role of ethnography in product development. Here, *scripts* (Akrich 1992; Latour 1992) and

domestication (Silverstone 2006) are important concepts. This helps us understand the relationship between work uniforms and their users, or more concretely, it helps us understand the relationship between the design of work uniforms and their uses.

Everyday consumption as routinized activity

In consumer research there has been a general tendency to focus on the spectacularities of consumption (i.e., those parts of consumption that have been extraordinary and conspicuous) as well as on individual choice, rational decision-making, point of purchase and commodification (Gronow & Warde 2001: 4). In other words, conspicuous consumption and the symbolic and communicative aspects of consumption have been dominating consumer studies (Gram Hansen 2011: 62). This mode of study has not been easily applied to the analysis of other groups in society and has caused problems for consumer researchers who conduct studies in a field where economic and cultural resources are unevenly distributed (Strandbakken & Heidenstrøm 2013: 9).

Over the last few years, however, there has been a shift towards understanding more routine and ordinary consumption, such as the consumption of ordinary items, contextual and collective constraint, conventional and repetitive conduct, and practical contexts of appropriation and use (Gronow and Warde 2001). Work uniforms are indeed such an aspect of ordinary, everyday consumption, although women dressing in work uniforms may themselves feel that they are made the object of extraordinary attention. Work uniforms are taken for granted and often considered neutralizing in the context and practices in which they appear. When this dissertation focuses on everyday consumption, this is done within an understanding of everyday life that denotes “our everyday processes of making meanings and making sense of the world” (Mackay 1997: 7). In this lie the unpredictable, the improvised and the routinized within each actor’s life. This involves routinized activities that we repeat daily, and denotes connections between the materiality, things, and human actors in everyday life.

Clothes, body and materiality

Clothes are a suitable subject for the study of the relationship between the body and materiality as they break down the distinction between nature and culture (Wilson 1985). In social theory, interest in the body has in part been attributed to the rise of consumer culture, which is described

placing a great deal of value on visual appearance and facilitating the display and self-surveillance of the body (Shilling 2004; Faser & Greco 2005; Howson 2004). This development sparked renewed interest in earlier research on the importance of the body for social interaction (Goffman 1963; Foucault 1979; Mauss 1979; Elias 1982; Bourdieu 1984). Clothes have the ability to transform the body (Andrewes 2005) and can be seen and studied as “lived garments” (Miller 2005; Küchler & Miller 2005). The body does something to the clothes, and the clothes do something to the body (Andrewes 2005). Anthropologists, such as Tim Ingold, Igor Kopytoff and Arjun Appadurai contributed to an understanding of the biography and commoditization of “things”. The social life of things was put in focus along with the ways goods move through different systems of ownership, commoditization, and exchange (Appadurai 1986). This new interest in materiality had an important base within consumer research.

The focus on the body in exploring the materiality of clothes has contributed to the exclusion of other perspectives of the material. As in most social sciences, the linguistic turn and subsequent postmodern approaches have been dominating. This means that materiality and artefacts typically has considered passive and undifferentiated entities; something by which could be inscribed meaning through speech, text or signs (Damsholt & Simonsen 2009: 9). According to Tine Damsholt and Dorthe Gert Simonsen (2009: 9) this has provided the non-linguistic world of artefacts with a limited space. Much of clothing research has focused on understanding the driving forces of the changes in *fashion* (Kawamura 2005) and not focused on how clothing practices has been done in specific context. In sharp contrast, ethnological and anthropological studies have shown that people’s clothing practices are surprisingly boring (Hill 2005), stable, and characterized by anxiety (Clarke & Miller 2002; Klepp 2004). In order to get a better understanding of how clothes are used and why, we need more knowledge of the material framework of everyday dress practices.

In much the same way as I treat gender in this dissertation, I view materiality as processual, relational and performative. According to Damsholt and Simonsen (2009: 13) *doing* materiality becomes a question about looking into how materiality is being done in specific contexts. In this way, materiality becomes an active verb focused thorough practice. In an attempt to develop a study that explains the relationship between individuals, a system of clothes and their actual use and doing of clothes this thesis has made use of a theoretical framework that focuses on both

materiality and practice in consumption. This is done in accordance with recent developments in consumption studies.

Alan Warde (2005) claims that a majority of consumption studies lack a theoretical platform. He suggests using practice theory as a conceptual apparatus, and together with Elizabeth Shove and Mika Pantzar (2005) he thereby reintroduces theory in form of practice theory in consumer culture studies. Following the reading of Warde (2005) by the sociologists Pål Strandbakken and Nina Heidenstrøm (2013: 15), a practice theoretical approach could provide insight through various studies of consumption by 1. Studying human actors between choice and structure, 2. Considering both use value and symbolic value and, 3. Studying structures and routines of everyday life. All these three are important aspects of the study of work uniforms and women in which focusing on *practices* at work provides a theoretical platform.

Practice and materiality

Practice theories are “a set of cultural and philosophical accounts that focus on the conditions surrounding the practical carrying out of social life” (Halkier et al. 2011: 3). The term practice is understood here as a fundamental unit of social existence. It is redeveloped from central works of a range of great social researchers such as Bourdieu (1984), de Certeau (1984), Giddens (1984) and Foucault (1979) who have in common that they pay special attention to routine, shared habits, techniques and competence. The fruitfulness of a practice-oriented approach is that it decentres the key objects of dominant social theories – minds, texts, and conversations – and instead emphasizes bodily movements, things, practical knowledge and routines (Reckwitz 2002: 259).

Reckwitz has defined practice in relation to materiality as “a routinized type of behaviour which consists of several elements, interconnected to one another” (2002, p. 249) in which things and their use is an integral part. As Shove and Pantzar write, “all practice has a material aspect” (2005). Theories of practice aim at overcoming the limitations of the classical models of human action and social order where the social is understood as involving more than the mental qualities (Shove et al. 2007). For practice theory, “objects are necessary components of many practices – just as indispensable as bodily and mental activities” (Reckwitz 2002), and particular things are indispensable resources for the practice. Shove and Pantzar’s (2005) attention to the Nordic walking sticks show us not only how things are acquired, appropriated and used

routinely, but also how their uses allow actors to actively be involved in reproducing and re-inventing the practice itself. Much like the broader scope of this dissertation, they point to the importance of materializing social theories of practice.

Embodied habits tied to clothes consist of all the unconscious routines that we carry with us, teach and perform every day without consciously reflecting upon it (Strandbakken & Heidenstrøm 2013). Much of our clothing practices will be tacit knowledge as it is involved in a number of everyday routines (Gronow & Warde 2001) that, especially in the use of workwear, are characterized by being automated and invisible even to the person who practices them. The use of obligatory workwear contributes to reproducing work practices and silent or tacit structures that surround work clothes. Tacit knowledge, as theorised by Michael Polanyi (1966), is a type of knowledge not easily articulated, but is a predisposition for human action, being and knowledge. Gram-Hansen's (2011: 65) notions of 'embodied habits' and 'institutionalised knowledge' within practice theory also encompass this non-reflective embodied interaction with the material. Workwear is a part of this tacit dimension in that it is taken for granted and thereby forms the frame for everyday work.

According to Reckwitz (2002), a practice consists of several elements that all hold the practice together. In this study, this applies particularly to a non-reflexive, bodily interaction with the material. Practice theory is a way to study the ordinary, everyday consumption, claims Strandbakken and Heidenstrøm (2013: 17), and builds on the basis of Gram-Hansen's (2011: 65) distinction, where routinized (embodied habits), institutionalized (rules) individual motivations (personal engagements) and material aspects (technologies) are discussed and considered in relation to each other. All together, these are important aspects of how workwear matters for workers' everyday life. Clothes are of central significance here, for example as a way to subordinate and establish community.

The implicit and explicit practical knowledge stored in uniform workwear is "central in the process of creating interaction, continuity and reality" (Halkier et al. 2011: 6). As such, there are specific socio-cultural implications of dressing in workwear that give directions to workers' habits, routines and bodily repertoires. In the way that clothes are carried on the body and are decisive for the way the body is seen and interpreted by ourselves and by others, it could be considered personal. Even so, focusing on shared, collective practices shows that few things

related to wearing work uniforms are simply individual and personal. Clothes should thus not be reduced to carriers of symbolic messages, for, as Miller formulates, “the sensual and aesthetic – what clothes feel and look like – is the source of its capacity” (2005: 1). In this way, material objects themselves also work as a setting (Miller 2010: 50) in that they make us aware of what is appropriate and inappropriate. Just as practices are routinized bodily activities, social practice is the product of training the body in a certain way so that when we learn a practice; we learn to be bodies in a certain way (Reckwitz 2002: 251). Work practices denote ways of being and doing work in a specific context, and at the same time set guidelines for how to be and do gender according to cultural and societal expectations. Practices are reproduced through imitation, but they may also involve adjustment, interpretation and alteration (Halkier et al. 2011: 9-10). These are important aspects in developing competence-based work uniforms, as it was done in the project *Uni-Form* and shown in the articles and in the dissertation at hand.

Developing ‘competence-based’ workwear

When applying funds for the *Uni-Form* project, one of the aims put forth in the project description was to Develop competence-based products for women in male-dominated occupations with technical and social functionality that may contribute to increased well-being and integration of women in these work spheres³. This notion of *competence-based* products builds directly from the idea that it is possible to build a comprehensive competence about clothes in use that could contribute to new or improved workwear for women by means of enhancing the work-life quality of female workers, contributing to the integration of women *and* providing the workwear company with a competitive advantage.

In actor-network theory as set forth by Latour (1992) amongst others, design of the artefacts are built on ideas about what users should be expected to handle while at the same time it defines what kind of competences and capabilities are needed to use the artefact (Jacobsen 2014: 46). This shows the relationship between design and development of products and services and their actual use. I will not do an actor network analysis in this dissertation, but draw on central contributions from this tradition in order to discuss and analyse intended use in standardisation and the actual use of work uniforms by female workers. This section will examine what theoretical basis can be used to understand the relationship between the design and product

³ Quote from the project application sent to and funded by the Norwegian Research Council.

development of work uniforms, and the actual use and user phase of consumption in this work garment.

By using selected parts of the actor-network theory, specifically script (Akrich 1992; Latour 1992) and domestication (Silverstone 2006), the aim is to theorize how to study the development of competence-based products by examining the use phase of ordinary products. This part of the theoretical framework is designed to discuss potential for change in developing competence-based work uniforms and to contribute to the overall discussion of what potential lies in the work uniform as a change agent for the gender-segregated labour market. These discussions will be outlined further in the last chapter in the dissertation. Now, I will briefly account for the understanding of product development in this dissertation.

Product design in product development

Design has a specific place in product development, but how it is understood and defined depends on what is designed and by whom, as well as by who speaks of it and in what context. Herbert Simon (1996: 111) defines design as “any course of action aimed at changing existing situations into preferred ones.” Sticking with this definition means that product design in product development, in all simplicity, implies a change of some sort, and that it is for the benefit of those actors involved. According to Kannengiesser and Gero (2012) understanding and affecting how end users interact with products is one of the goals of design research, where the ultimate measure of success is the adoption by the user. Shove et al. (2007) identifies three working understandings that are sustained because they are reproduced by designers and by their clients. These are *product-centred design*, *user-centred design* and *practice-oriented design*. They may be simplistic distinctions, but enable a basic entry into the product design field, which allows a further discussion of product development. After all, product design is only a part of the whole process of innovation that deals with the complete process of bringing an improved or new product to market.

Product-centred design is the idea that designers can embed economic, ergonomic or semiotic value in objects in the process of turning them into consumer goods (Shove et al. 2007: 118). When the product is not successful, this is attributed to users incapability to embody the attributes and qualities of the product’s design. Value here resides in the object itself. User-centred design relates to the value that resides in the relation between people and things, and not

in the things alone. The tools of user-centred design differ from more traditional forms of ergonomic analysis in that they reflect and require substantial reinterpretation of the relation between people and things, and hence of design itself (Shove et al. 2007: 131). User-centred design is known to bend methods from various disciplines in order to identify ‘latent’ consumer needs, and as Redström (2006: 124) suggests, using ethnographic methods among others, it attempts to create a “tight fit between objects and users’ experience and understandings” (Shove et al. 2007: 130).

The problem with using concepts such as user-centred design or product-centred design is that they are focused on “individual experiences made possible by isolated products” (Shove et al. 2007: 134). According to Shove et al. (2007), a third design solution called practice-oriented design can be discussed. This provides possibilities for design processes to see things and practices interdependent of each other and further tied to action (Schatzki 2002: 106). In this design approach, the role of designers and artefacts “contribute[s] to the emergence of collective conventions and shared practices” (Shove et al. 2007: 133-134). Objects have a “causal impact on activities and practices” (Schatzki 2002: 197), which point directly to the connection set forth in this dissertation between work uniforms and social actors. Work uniforms configure the needs and practices of the male and female workers who use them. Value is thus determined in relation to the changing practices where products are integrated (Shove et al. 2007: 147).

I would argue that the place of products in people's lives are not only individual, but also a collective action, and this action can be seen as an active feature of everyday life. Accordingly, it is the collective practices at a workplace that must be analysed – that’s to say, it is human practices in relation to products and/or services that are important. Using practices in product development implies that it is not only that certain products and users have an individual relationship but that these products through their interface and design constantly build and sustain practices in the collective group of users. Actors and things in that way effect each other, on a collective scale. This can bring with it the opportunity to develop what I refer to here as “competence-based products”, which could lead to products and services to benefit both consumers and business.

Scripts and domestication

Investigating product design in product development provides “insight into commercial representations of the relation between things and people, and into the kinds of assumptions and understandings that are built into and therefore emerge from the practicalities of production and design” (Shove et al. 2007: 147). The design of artefacts and the multitude of artefacts are built on ideas about what users should be expected to handle, mentally, technically as well as physically. At the same time, design defines what kind of competences and capabilities are needed (Jacobsen 2014: 46). Madeleine Akrich (1992) introduced the concept of *script* in order to understand this relationship between designers, technology and users. Technologies have a number of embedded and implicit assumptions that point to presumed patterns of use and competences of potential users. This is what she calls ‘scripts’.

Scripts are designed primarily to understand technologies. Scripts refer to how actors and technological objects are part of a network of units. This can easily be transferred to the study of work uniforms in male-dominated occupations. Scripts show how a number of claimed characteristics of users (female workers have to adapt to the male-dominated occupational context) materialize through objects (standardised work uniforms and elements belonging to it). These scripts include the technology's physical form and characteristics, and inform the user about its intended use. What can be described as a socio-technical script includes its producers' visions of the world as they attempt to transform them into technology. Representations of users, and their attitudes and values to the technological object attempt to direct the user in the appropriation of the product. Akrich ascribes this to the work of innovators in that it inscribes a “vision of (or prediction about) the world in the technical content of the new object” (Akrich 1992: 208)⁴.

Akrich moves undoubtedly within actor-network theory, which treats people as actors and technological objects on the same analytical level. Here, people are seen as an element of practice whose role is to get the technological object to work. Scripts refer to the overt or hidden

⁴ It is important to note that Suchman (2007) puts the concept of scripts under scrutiny. She claims that ‘despite their careful attention to the contingencies of design and use, [both] leave in place an overrationalized figure of the designer as actor, and an overestimation of the ways and extent to which definitions of users and use can be inscribed into an artifact’ (Suchman 2007: 192).

specifications of use that are founded consciously or not in artefacts (Akrich 1992). In this way, “scripts in materialities can help out coordinating practices” (Jacobsen 2013: 38). This works as a philosophy of science when it shows how science and technology are produced and institutionalized through the production and use of certain objects. When these objects do not work as they should, when work uniforms that are made within a male-dominated discourse are supposed to signal equality, community, regulation, hierarchy, status and roles, but both physically and socio-culturally are not used or perceived as they were intended - what then? Is it the technology in the clothes that ceases to work, or is it the actors who have misunderstood the script? Here, it is useful to apply the concept of *domestication* to this discussion.

Domestication is a component of what Silverstone and Haddon (1996) refers to as the design/domestication interface. Domestication, put forward by Silverstone (2006), is used here to refer to the users' reactions to the scripts and the indicated use pattern that describes how a new technology is accepted, rejected and used by individuals and groups. This perspective is especially fruitful because it refers to the dynamics of innovation and in doing so it privileges the role and perspective of the consumer (Silverstone & Haddon 1996). The aim of the domestication terminology is to “insert the particular characteristics of ‘use’ into [the innovation] process in such a way as to highlight the activities of consumers who, within their distinctive and perplexing forms of rational and non-rational behaviour, both complete and rekindle the innovation cycle” (Silverstone & Haddon 1996).

The perspective of domestication shows that consumers are also producers. Work clothes are dynamic objects incorporated into employees' everyday lives; they are continually converted into usable and meaningful objects in different social contexts. Meanings are formed in interactions with various actors, which, if we follow actor-network theory, consist of both non-human and human actors. In the process of domestication, it is nevertheless the users who ascribe meaning and value to objects. In this thesis, production of meaning is seen inextricably linked to the practices in the workplaces where actors participate. The different scripts form the basis for the product development of work uniforms. In this way, it becomes possible to see products and the process of product development *and* its users, who are actively involved in meaning production through the work uniforms, in correlation. The processes of domestication and scripting never end and are implicated in the making and shaping of the architecture of

practices (Shove et al. 2007: 149). This dissertation shows how this takes place and creates a specific link between gender construction, work practices and workwear to the gender-segregated labour market. Here the innovation of work uniforms has the ability to contribute to change of the material conditions facing women who decide to break the pattern within the gender-segregated labour market.

Implications of theoretical framework for empirical discussion

The way products are actively put together and combined in a process of consumption refers to the competencies required by the consumer and the products as such. This places competence as a central theme of how to approach the study of relationships between products and users (Shove et al. 2007: 16). In this equation, the competence integrated into the product must also be taken into account. The use of scripts and domestication shows that users are constrained in their involvement with the clothes in that there are certain scripts and intended uses built into artefacts (Rohracher 2005: 11). At the same time, users also create specific social practices of use that may not be intended or planned in the product development process. “People do not just submit themselves to the scripts or preferred readings of a technology,” Rohracher claims, they actively “define their manner of usage” (Rohracher 2005: 11). This may be particularly true of technical products, but also describes the incorporation of work uniforms into workers’ everyday lives. Here, the female workers find their own ways to adjust and fit their work uniforms to their bodies, work tasks and socio-symbolic structures, as it will be shown in the empirical analyses to follow.

This thesis takes its outset in the use phase of consumption, i.e. what happens after a product is acquired. This involves a mix of objective characteristics, cultural and symbolic motifs, and aesthetic, social, economic and technical factors that are different for different products (Strandbakken & Heidenstrøm 2013: 20). This sets the framework for the use of ethnography in product development. It is the ethnographer’s job to place focus upon those unintended and surprising uses of products. In this way both its *transformative properties* – enabling inclusion into a work community – and its *challenging abilities* – changing user scripts and intentions of the garments and how one sees gendered attributes belonging to certain occupational categories – come into play when developing work uniforms.

Innovation is inherently uncertain in that the outcome seldom can be predicted. In addition, a developed understanding of innovations over time has made the innovation process increasingly specialised by discipline, function and by institution (Pavitt 2005: 88). Where the idea of rationalism is present in the bureaucracy of organisations, it may constrain innovation in that, following Smircich and Stubbart (1985), there is not just one but multiple rationalities at play. March (1994: 11) points to the individual choice made by decision-makers in organisations who “use stereotypes in order to infer unobservable from observables.” He further recognizes that “they form typologies of attitudes and traits and categorize people in terms of the typologies” and that they look for information but overlook unexpected things in their search for the expected (March 1994: 11). In terms of innovation, this would hinder knowledge production and limit an organisation’s ability to learn in arenas that are least familiar.

Much of the study of innovations in the making revolves around capturing issues of clothing practices and experiences. It also revolves around tackling the relationship between the articulated knowledge and the silent embodied practice of knowledge. Leaving it up to the users to formulate their experiences and embodied practices tied to the products at hand leaves much work in the hands of the user. In an innovation process, those users who are not able to articulate their competence of clothing would not benefit in the design of improved products. That female (and male) wearers of workwear may not be able to articulate their user needs directly to the researcher reveals the importance of capturing the informal and the invisible through the social lens, which Cefkin (2010: 50) stresses. By bringing in ethnographic methods and putting material and social aspects at the forefront, as it is done in the present study, enables a deeper understanding of work uniforms in a user context. The ways in which this is done will be discussed in greater detail in the next section, which will address methodological issues.

4. Research design, methods and field

This dissertation is based on empirical material that was gathered in the research and development project *Uni-Form*. In this project we made use of a triangulation of methods: participant observation, practice study and wardrobe study. These methods are based within a qualitative research tradition, and in the anthropological tradition of ethnographic fieldwork. The way the methods within the fieldwork were assembled emanates from the focus on clothing that dresses the workers, and for the PhD project in particular, my concern was to grasp the embodied knowledge within this specific work context. This chapter will firstly deal with the research design that formed the basis for the choices of methods. Thereafter, I will outline the specificity of methods employed and reflect on how specific techniques were used in the fieldwork context in light of my personal experiences. It is worth mentioning that I was not the only researcher to gather the data used in this dissertation. Two other researchers were involved to varying degrees. Both researchers, like myself, belong to the social science tradition⁵. The last part of this chapter is concerned with the choices of occupations and access to workplaces and takes a closer look at the occupational fields.

Research design

This dissertation draws on growing international research on clothing and fashion as well as work research where gender is central. How clothes can help to improve well-being and the integration of women in male-dominated occupations are only explored to a minimal degree. Much of the research done on clothing and clothing practices has focused on symbolic and communicative aspects of clothing. Besides defining the status of clothing research, core concepts in the literature have been identity, fashion and language. The research on identity, fashion and language has not been well anchored in daily life and working life studies, and has seldom had anything in common with the more object-based costume research at museums. Against that background, there has been unexploited potential in research that to a larger degree has its base in the actual practice and materiality of clothing. This potential is exploited in the research design of this study who relates practice and materiality to embodied knowledge.

⁵ The distribution of fieldworks is emphasized in Table 2, as presented below.

Studying embodied knowledge

In recent years, there has been a change in clothing research with new contributions to the study of body, clothing and appearance. Amongst others, Daniel Miller (2005) has dealt with the bodily experiences of clothing by developing the concept “lived garments.” One of the problems with many of the issues related to lived garments is that it makes it difficult to study the actual practices tied to the clothes since we do not have access to other people’s experience with clothing, only their verbal expressions. One of the ways to surpass this problem is to use the researcher’s own experiences as material for analysis, as Eva Knuts (2006) has done in her study of the wedding dress. This self-reflective strategy nonetheless has methodological weaknesses, among others due to the lack of distance between the material object and the researcher.

Dress and fashion studies are an interdisciplinary field that encompasses a number of different approaches and therefore also a variety of methods. According to Lou Taylor, an important divide is between the object-centred methods and the curator/collectors versus academic social/economic history and cultural theory approaches (1998: 238). Like much social research, the latter has been dominated by textual analysis and qualitative interviews – methods dependent on verbal statements. Concepts that are used to describe clothes and textiles are often unclear in the sense that one word can refer to very different things. This is true both for concrete materials (e.g., flannel) and statements about something perceived as ‘classic’ or ‘comfortable’ (Klepp & Bjerck 2009). The linguistic imprecision applies to both written material, such as women's magazines and advertising, and everyday speech. Much of what concerns our clothing practices will be tacit knowledge. Our body feels when something is wrong, but is only to a lesser extent able to explain why (Klepp 2008). Moore and Sanders point out that the centrality of language in the Western (analytic philosophical) tradition is difficult to surpass, and recognize as a main challenge the translation of the non-linguistic, such as practices tied to clothing through the medium of language (2006: 11). One of the scientific problems in studies of materiality is to capture non-verbalized experience *and* to translate the non-verbalized experience of clothing in use into a written academic language.

Object-based research, on the other hand, more often uses clothing as a primary source. But as Taylor points out, this is often derogatorily referred to as a “wholly descriptive 'catalogue' tradition” (Fine and Leopold 1993: 94). In Norway, much of the object-based research deals

with folk costumes. But neither methods nor results from this object-based research have fed into the international study of dress and fashion. One of the reasons is that their object of study is defined as something else other than clothes and fashion, namely folkloristics and tradition. Researchers in fashion studies, on the other hand, have taken change for granted and studied fashion, not clothes. It is important for the sake of the study to attempt (starting with the design of the research) to look beyond the emphasis on words in the choice of methods and to apply tools and approaches that take bodily practices and non-linguistic materiality into account. As Moore and Sanders (2006: 11) correctly points out:

[I]t is not just that practical knowledge need not – or cannot – be brought into language, but that language-based models and concepts of meaning may be wholly inappropriate for understanding such knowledge. Because body language is not a system of signs in the way that language is, semiotics and semantics cannot stand as the basis for our understanding of embodiment and/or embodied knowledge.

The *verbalisation of practices*, which Moore and Sanders point to here is the main challenge to overcome when choosing methodological strategies. In the choice of methods I have not relied on the female worker's ability to give a direct and sensible answer. To solve this challenge a triangulation of methods was used. Fieldwork was used as a basis for my methodological approach and during fieldwork three specific methods were employed: participant observation, practice study and wardrobe study. Through this, verbalised experiences as well as knowledge of the clothing in practice were obtained. As a supplementary method interviews were conducted at each field site. On two of the sites (offshore and onshore oil and gas production) it was not possible to do fieldwork, so here I primarily made use of interviews.

Fieldwork is inherently qualitative and stems from an anthropological methodological tradition. Two of the articles have research design as a primary or secondary subject with a focus on the use of wardrobe studies and the use of ethnographic research in the product development process. In this part of the dissertation, I will provide an overview over the methods used and the methodological choices taken throughout the study. These articles will thereby supplement and in some areas overlap this section dealing with research design. The PhD candidate undertook most of the data collection, but the data collected by the other researchers have also been included in the analysis for this thesis. When I describe the fieldwork, methods and personal

experiences in the field, I speak only on behalf of myself. I have access to the other researchers' notes, pictures and interview transcriptions, but I do not have access to their own, private and embodied interaction with the field – in other ways than what their written notes and presentations describe. In Table 2 below, the methods, occupations and number of women and men interviewed and tested are outlined. The table also provides an overview of the articles where the material has been used⁶. The occupations that appear in a highlighted font represent the occupations where I performed the fieldwork.

⁶ Note that Article D operate with a different total amount of interviews, 67. This is in reality a combination of transcribed interviews and written conversations. This should have been specified in the already published article. I have chosen to use the amount of *transcribed* interviews in Table 2 and in the overall dissertation.

Occupational category	Occupation	Work site	Fieldwork	Transcribed interviews women/men	Product testing women/men	Articles in dissertation
Construction	Carpenter	Building construction	x	1/7	-	Article B Article D Article C
	Carpenter	Building construction	x	1/1	1/0	Article B Article D Article C
	Carpenter	Building construction	x	1/4	1/1	Article B Article D Article C
	Road worker	Road construction	x	1/1	1/1	Article D Article C
Industrial production	Process operator	Paper production	x	5/0	3/0	Article B Article D Article C
	Process operator	Plastic production	x	5/3	4/0	Article B Article D Article C
Skilled manual work	Electrician	Electrical components	x	2/3	-	Article B Article D Article C
	Stone mason	Stone masonry	x	1/0	1/0	Article D Article C
	Car mechanic	Mechanical workshop	x	1/1	-	Article D Article C
Offshore oil- and gas production	Oil drill mechanic	Platform	-	1/0	1/0	Article B Article D Article C
Onshore oil- and gas production	Process operators and mechanics	Land based	-	5/0	-	Article D Article C
Industrial fishing	Fisherwoman	Industrial fish trawler	x	1/0	1/1	Article D Article C
The Navy	Diverse	Minesweeper	x	2/4	6/9	Article A Article D Article C
	Diverse	Mine trawler	x	3/0	-	Article A Article C Article D
6 occupations		14 work sites		30 women /24 men	19/12	

Table 2. Overview of occupations, work spheres, methods and articles where material have been used.

Methods

In the study of work uniforms and women in male-dominated occupations, participant observations were made of women and men and their clothes at their various workplaces. This method is based on the anthropological fieldwork in which participant observation is crucial (Nielsen 1996; Stewart 1998; Pelto & Pelto 1996). Fieldwork can in fact mean a use of various methods even though participant observation, according to Stewart (1998), Nielsen (1996), Pelto and Pelto (1996) and Bernard (1994) is the main feature of an ethnographic study, or an ideal if we believe Falzon (2009). Bernard (1994) claims that although you cannot claim to have done fieldwork by desk research in the form of constructing a questionnaire, sending them out and waiting for replies, fieldwork can entail data collection like door-to-door sampling, face-to-face interviews and pure observation. In fact, though not all fieldwork involves participation, all participant observation is fieldwork (Bernard 1994). Fieldwork was conducted in selected workplaces with a selection of women – often with women who were the minority among many male colleagues – on their work clothing and uniforms. The choices of occupational fields and work spheres will be further elaborated upon in the section entitled *Field arenas*.

The aim of using participant observation was to gain empirical understandings of female and male workers and their interaction both with one another and in relation to their work uniforms and other material surroundings. In the fieldwork I accompanied women around in their work spheres, helped out with the work they did and took part in their daily routines. I took coffee breaks with colleagues, got dressed in unisex wardrobes and where the fieldwork setting required me to do so, I shared cabins with their colleagues. On the Navy vessels, I shared a cabin with five young men and in the industrial fishing trawler I had access to a cabin for six hours at a time, switching with another fisherman. In this way I got the opportunity to experience working life as a female worker in a male-dominated occupation, even for just a short while.



Pictures 3, 4, 5. Participant fieldwork in three occupations: industrial fishing, construction and the Navy.

I wanted to find out how both uniforms and other items were used and how gender was communicated, or under-communicated at work, for example through accessories, style changes, makeup, jewellery etc. By wearing the clothes myself, where possible, I also gained access to the embodied experiences with these clothes and how these experiences are integrated into the work and into social interactions. This is illustrated in the Pictures 3, 4 and 5 presented above, which show me involved in participant research in three of the field sites: fishing, construction and in a Navy vessel. In the pictures, the fit of the clothes are visible; the clothes are too big and too narrow in all the wrong places. This restricts the movements and hinders much of the work tasks. By wearing the same clothes as the workers I also wanted to find out how the clothes these female and male workers use could contribute to inclusion and exclusion, and how the apparel functioned as reproducing or challenging everyday practices related to clothing and gender.

Participant observation was needed to study the practice of work and to gain experience that could be used to find potential for improvements in regard to work uniforms. I entered the field contexts trying to stand out as little as possible. It was important to observe use patterns, as well as the variations in clothing. In addition, workers' verbal and nonverbal communication about how the clothes functioned in the work contexts was noted during the fieldwork. Very specific issues were also noted such as fabric type, functionality, wear and tear points, colours compared to dirt, storage, washing and maintenance, and so on. There may be challenges in acquiring knowledge about the experiences of others related to clothing, because such experiences are

individual and physical and not always easy to put into words. To resolve this issue, I also used work uniforms during my fieldwork, to gain my own experiences with these clothes in use.

The practice study on the other hand, meant a move in and out of the participant role, becoming more of a pure observer and registering behaviour and movement in relation to the clothes. This enabled a closer look at the repertoires of movement – or the “techniques of the body”, as Mauss (1979) would term it. Here the female workers were the focus as compared to their male colleagues. In the practice study I wrote down, photographed or videotaped how clothes were used, how they integrated with the work the female workers did and what social relations the users and the workwear were a part of. I registered how men or women wore outfits differently or similarly, and I observed and registered how gender was communicated or under-communicated in the work spheres through garments, bodily repertoires, accessories worn (jewellery, hairdo’s, make up, etc.), as well as in the verbal communication between female and male workers. When I looked closer at the learned and developed bodily actions during the practice study in light of Mauss’ (1979) understanding of techniques of the body, I saw embodied aspects of a given socio-cultural context within the work sphere. This revealed conditions evident in the use of particular work clothes such as the fact that women internalise bodily repertoires of their male colleagues and that the values embedded in the clothes identify you as an appropriate or inappropriate member of the work environment.

A not so familiar type of method used during field work was a wardrobe study (see also Banim et al. 2001; Woodward 2007; Skjold 2014), which I have an elaborated presentation of in Article C. In the wardrobe study, each daily outfit was registered. This meant that the women had to be taken away from their work tasks so that I could talk to them more intimately about their work clothes and, if possible, look into their wardrobes to see and register what they contained. The physical form of the wardrobe was also documented through photographs. Doing a wardrobe study and looking closer at the physical space of the wardrobe I tried to answer questions about the clothes and where it were kept. Were they kept in a locker or did they hang freely in a dressing room? Did the women share wardrobes with male colleagues or did they have their own dressing rooms? Were the clothes locked away? Were there separate places for dirty and clean clothes? What did the wardrobes entail? Were the clothes taken home or kept at work? Were there any differences between the male and female wardrobes? This method of inspection

is suitable to generate knowledge about how clothes are acquired, maintained, stored and disposed of. This method also helped gather information about the choices being taken in relation to clothing and helped explain these practices.



Picture 6. Raingear placed in a hatch of a truck.

The wardrobe method was especially adapted to this study due to the fact that locker rooms were not always available or that the locker rooms that were available were provisionally placed in the rear seats and hatches of trucks, or in different cabinets or drawers not associated with a changing area. These issues are illustrated in Picture 6 above. The picture presents a type of unofficial wardrobe in a closed, confined space in the hatch of a truck. The raingear is tucked away with other equipment that is needed to get a job done. This is not a wardrobe as we know it, but for many of the workers in this study, this closed space performs many of the same functions as a wardrobe in storing and accessing their clothes.

Access of clothes was restricted to the clothes that were found at the places of work. The clothes meant for work were compared with private clothes left at home. This had to be compared verbally in that the women themselves spoke about them. The clothes that were left at home were left out of the wardrobe study. The assessments made in advance about dressing for work was examined in the physical presence of these clothes, including how clothes were combined and why certain elements of clothes were chosen or not chosen. I also looked closer at the options female workers had to obligatory work uniforms. In general, by using a study of their

wardrobes I tried to gain an understanding of how choices about dressing for work were made on a day-to-day basis and how the rules and regulations for work uniforms were abided by or broken.

By conducting a wardrobe study it was possible to get even closer to the clothes as representations of a material condition. It enabled an understanding of the whole variation of work clothes each woman had, how they combined the different work outfits and on what grounds decisions about dressing were made. Making use of a wardrobe study enabled the wearer of the work clothes to express – physically, by showing, and verbally, by telling – how the clothes were used and perceived. It also provided an access to a close encounter with the material and socio-cultural sides of dress practices, such as the female workers' relations to individuality, gender, appearance and the body as well as practical solutions and technical features such as dressing and undressing, functionality, safety, flexibility and maintenance. It denoted not only the relationship between humans and clothes, but also between the items of clothing.

Supplementing methods

For the verbalised experience, interviews and conversations were used. As Kvale (1997) so rightfully states, interviews and conversations enable one to glean an informant's world view, which in this case may be tied to their experiences with workwear and gender. This is particularly relevant in those fields where usual outfits for women are separated from outfits for men by individuality and suitability, sizes and size labelling, form and movement, as well as separated by other parts of the clothes such as functionality, security, practical solutions connected to dressing and undressing, flexibility, preservation and maintenance. Interviews provide the basis for obtaining verbal knowledge about informants' understanding of something (Kvale 1997), which in this case is about experiences and emotions related to work uniforms and the conditions at the workplace that are important for the use of these garments. This applies particularly to aspects of general dress and demeanour that differs between men and women. The interviews have addressed issues surrounding gender and the performance of gender, both through clothing and in other ways in everyday work. The interviews were audiotaped and transcribed by a professional transcriber in Norway, and quotes from these transcriptions are used in some of the articles.

Product testing was done in the work towards developing new or improved work uniforms within the project *Uni-Form*. This was not done in a laboratory, but out in work spheres, by workers who had already been part of the fieldwork. The choices of whom, where and in what way to participate in product testing was done by the workwear company, the researchers, the workers and their employers. The workwear company's project managers decided in which occupations they wanted to test different work clothes. The researcher contacted the female and male workers and confirmed permission from both employer and employee, assuming that the workers were willing and able to participate. Altogether eighteen people – thirteen women and five men – tested workwear within construction work, road work, paper production, plastic production, and stone masonry.

A combination of existing garments and prototypes of new garments from the workwear company were given to female and male workers as a package put together especially for the specific work spheres. These packages consisted of, for example, work pants, jackets, sweaters, undergarments, high visibility vests or t-shirts and the like. These garments were to be tested over the course of two seasons, where the season shifted from warm to cold or from cold to warm, with the weather and temperatures those shifts entailed. After the test period was over, the researchers who had completed fieldwork in those occupations went back and carried out a recurring fieldwork that was similar to the first. This fieldwork had the exact same methodological features as the first and lot of the same questions were asked again. This provided valuable information about the prior and new work uniforms so that the experiences with the clothing and observations of practices could be compared.

Product testing was also done on prototypes of work uniforms and storm uniforms on the Navy vessels. Here altogether fifteen of the personnel, nine men and six women, tested two different uniforms. These uniforms had already been made prior to the first fieldwork and were handed out at the end of the first fieldwork. The specifications of these uniforms and the production of the prototypes of the storm uniforms had been done by the workwear company involved in project *Uni-Form*. Half a year later, after two seasons of testing these uniforms, a recurring fieldwork was completed where the experiences with the prototypes in use were written down and recorded. Article A elaborates on the experiences with a newly tested uniform and a Velcro strap, one of the details in the uniform jacket.

Documentation of the data gathered through these methods was made through the use of fieldwork notes, photos and the transcriptions of interviews that were audiotaped. The use of images was important for the researcher to remember situations and how things and physical contexts appear. At the same time photos are important in the dissemination of research. This applies particularly to research on clothing that cannot be adequately described in words and concepts, and in instances when this research was disseminated to a non-academic public, such as to the workwear company. It is necessary to illustrate how clothes fit different bodies *visually* to gain sufficient understanding of how clothes are applied to the body in practice. The pictures have been important during the analysis to recreate the memories associated with specific garments. Some of these pictures have been included in this thesis in order for the reader to gain a visual understanding of the garments in use.

Combining these methodological strategies has provided a rich foundation of material for analysis, which relates to both the verbal expressions encountered in the fieldwork as well as for participation and pure observations of practices. Focusing on the wardrobe and closely tying the verbal expressions and observations of the clothes in use to the actual garments has led to a study that has incorporated the material to a much greater degree. Choosing these strategies within ethnographic research enables an expansion of methodological and analytical perspectives in clothing research in a way that makes clothing more than simply a backdrop for a study of self representation and identity.

Fieldsites

The field study of work uniforms was conducted at various manual, male-dominated occupational sites with at least one female worker. Fieldwork was done in a brief time span with one week at each site. I did recurring fieldwork for a week at those fieldsites where male and female workers did product testing for the workwear company. This was made possible due to access granted by the different workplace personnel departments, which arranged for me to meet with the female workers.

Choices of field sites were made on the background of the types of occupations and workwear that both the workwear company and the research institutions in the project wanted to learn more about. Some of the choices were already set in the project application for funding delivered to the Norwegian research council. Others took place during planning for fieldwork

and some in between fieldworks. As such, this reflects the situational and selective nature of ethnography as logic of discovery, a way to conduct research where the researcher follows data and not the other way around. This also reflects Glaser and Strauss' (1967) strategy for comparative analysis where researchers renegotiate a hypothesis and make plans to compare and contrast the already-gathered data.

In the project description for project *Uni-Form* delivered to the Norwegian research council, six occupations (construction, industrial production, off- and onshore gas and oil production, industrial fishing and the Navy) were identified due to several considerations. First of all, it was important to look at work environments within different occupations rather than different work environments within the same occupations. The workwear company wanted to gain knowledge about different clothing for different occupations and consider their opportunities to sell their workwear within these occupations and its work spheres. A main goal was also to involve as many women as possible in the study. After all, besides workwear, the focus of the projects was on female workers. This meant that we – that is, the researchers – had to concentrate on more than one work environment as women were in such a minority within each occupation and work environment. When it came to choosing occupations, the main criteria for inclusion besides being male-dominated, was that workers wore and were required to wear specific, predefined clothes for work either provided by their company or bought on their own initiative. Another criterion was that the nature of the work had to be manual in terms of it being hands-on, dirty, dangerous or strenuous.

The workwear company preferred that the combination of field sites balanced outdoor and indoor work, and that they varied in intensity. We the researchers hoped to vary between work environments that had both many and few women, while the workwear company was interested in gaining access to fieldwork in larger firms and companies. That said, we began with many and varied criteria. However, as it turned out, we were forced to move away from some of these criteria due to difficulties in gaining access to relevant occupations, finding women within these occupations willing to participate, and identifying companies willing to let us access their work spheres. There seemed to be a paradox between the inclusion I felt from the workers as a fieldworker once I was given access to the work environments and the exclusion I was met with when working with the companies to gain access to their work spheres. Access is a persistent

challenge in any fieldwork – both in terms of the work it takes to gain access to closed work sites (see Garsten 1994) and in terms of the trust it requires to gain access to people and their ideas, understandings and descriptions of their work environments (see below).

The workwear company also applied restraints on when and where the fieldwork would be conducted in order to reflect the connection between outdoor and indoor workwear according to the seasons. Making these criteria relevant in the choice of field sites led to the selection of the following occupations, which were selected in agreement between the researchers and the workwear company: construction, skilled manual work, industrial production, off- and onshore gas and oil production, industrial fishing and the Navy. In making arrangements for fieldwork, two of the occupations turned out to be impossible to gain access to due to on-site safety and security regulations. These were offshore and onshore gas and oil production. Here we only managed to arrange interviews and not direct, on-site observation. Gaining access to the other work environments also required significant effort, but we were successful in making arrangements in each of the remaining occupations for the field researcher to participate in the day-to-day work lives of female workers. The difficulty in gaining access to different work spheres is in itself an interesting point, especially in the fact that gaining access to words is easier than gaining access to observe practices.

Access

Access is both an issue related to gaining access to the confined spaces of a work environment which I have already pointed to and in gaining trust at the work site and thus access to people's ideas, understandings and descriptions. This issue was solved firstly by choosing methods that were less dependant on the verbalisations of these ideas and understandings and more occupied with the practices at work as we observed them and participated in them. Secondly, as a fieldworker or researcher there are no guarantees about being able to participate in a natural context where one gains access to the true descriptions of a given reality. There is no such thing as a neutral or objective form of knowledge, whether doing short-sited or long-sited fieldwork. However, one effective way of gaining access to a contextual understanding of work, women and uniforms in the work spheres where I carried out my fieldwork was to dress the same as the workers. As such, I employed the same strategy as female workers when striving to become integrated into their male-dominated work environments.

Nevertheless, I stood out. I am a woman and was younger than many of the workers during my fieldwork. I did not have particularly good skills to offer the occupations I participated in, and at all times I had a notebook in my pocket and a camera close by. All of this made me a conspicuous observer. And yet, there were others who had these exact physical (dis)abilities (except the camera) but nonetheless participated in the work sphere – namely, the apprentices. Apprentices were a common sight in the work spheres I studied. Some came and stayed on for long periods of apprenticeship; others lasted only a short while. For most of the day, apprentices followed specific workers around, shadowing them on the job site, dressed the same but with far fewer skills to offer than their colleagues. My role was much the same. In this way, I quickly took on the role of a young, female apprentice. Within the week I spent at each site, this role provided me with loads of information and a growing contextual knowledge about the clothes in use. At each site, my understanding of women, of clothes and of the gender-segregated labour market increased. I owe much of this access to the work uniform I wore. It provided me a level of access and embodied understanding about the clothes in use, which has enriched my understanding of this field of research.

Field arenas

When it came to choosing field sites, the main criteria was that the employees had to wear required workwear either provided by the company or bought according to their own initiative, due to the nature of the work (dirty, dangerous, and strenuous). It was important to look at several work environments within multiple occupations, and a main goal was to involve as many women as possible in the study. This meant that we had to concentrate on more than one work environment since women were in such a minority within each occupation and work environment. The workwear company that we collaborated with preferred that the selection of professions balanced outdoor and indoor work, and that it varied in intensity. We hoped to vary between work spheres that had both many and few women, while the workwear company was interested in gaining access to larger firms and companies.

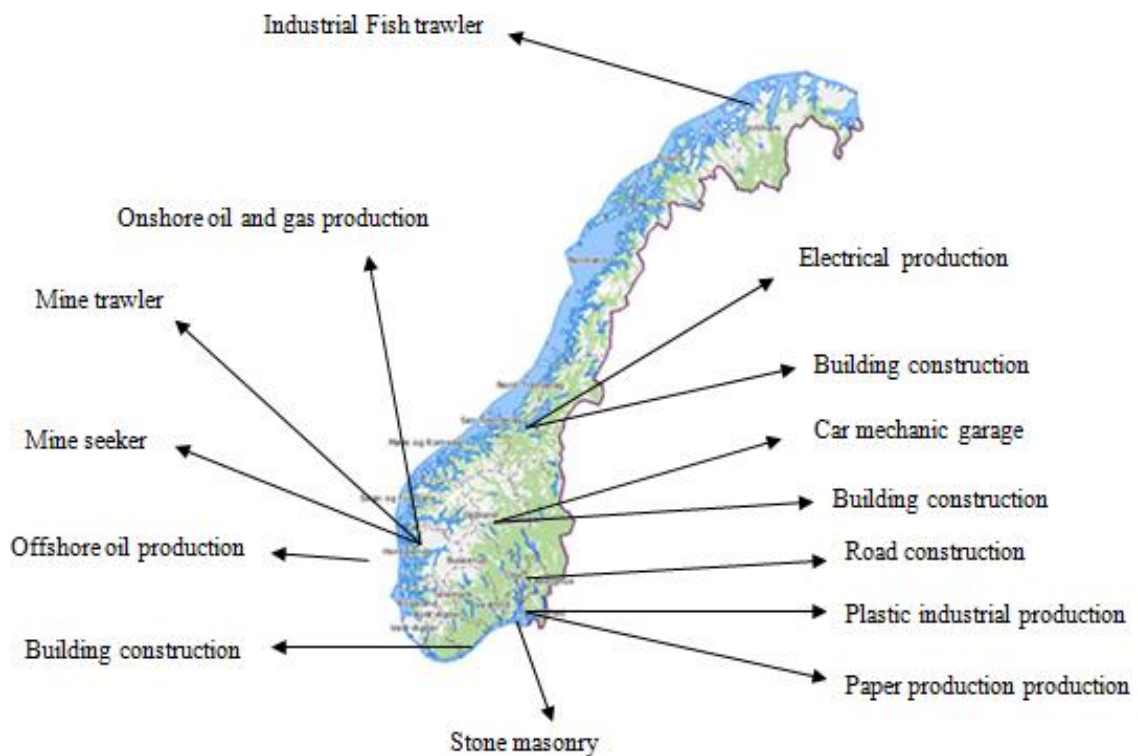


Figure 1. Map of Norway and fieldsites. Source: Norwegian Institute for Nature Research (NINA) <http://www.nina.no/Forskning/Kart-og-data>

Fourteen work sites across six different occupational categories were included in the study. The fourteen work sites studied included four work sites within construction, two work sites within industry, three work sites within skilled manual work, one fishing trawler, two Navy vessels and two oil and gas production sites. These workplaces, the methods used and the people interviewed are elaborated upon in Table 2, presented above, and the locations of the field arenas are located in Figure 1, above. All of the occupational field sites were located in Norway, and the companies ranged in scale from multi-national corporations, to large-scale businesses with several branches in Norway to small-scale businesses with specific, local affiliations.

The construction occupation was the largest occupational group in this project. It was also the occupational group that the workwear company was most interested in. The work spheres consisted of four construction sites, one roadwork site and three building construction sites at different locations in Norway: south, mid, inland and the capital. In these four work sites, there

was only one female employee at each site. The nature of the work in this occupational group was characterized by manual, often labour-intensive work with the use of machines and other equipment that eased the work tasks. This occupational group was specifically exposed to differences in weather and temperature and was particularly dependant on high visibility and protective gear such as helmets, protective boots and gloves due to the nature of their work. Their work clothes mostly consisted of a two-split suit with a work jacket or sweater and work pants, as opposed to a whole coverall. Here workers often combined private items with the required workwear. High visibility clothing dominated the workwear for outdoor use, and darker or more greyish colours were frequently worn for indoor work. Construction was an occupation where there was much alternation between indoor and outdoor work either on a daily basis or periodically.

Skilled manual work⁷ is a widely-defined occupational group characterized by work that is done mainly by using hands and simpler tools. In this study, the work spheres consist of electrical production, car mechanic and stone masonry. The work sites were located in the inland, middle, and southwest part of Norway. Within electrical production, there were two female workers, while in the two others, there was only one female worker at each site. Workwear within skilled manual work was similar to that of construction, but here there were fewer high-visibility garments as this consisted of mostly indoor work.

Industrial production differs from skilled manual work in its use of large machines with the intent of mass production. The sites we gained access to were located in the same town and produced paper and plastic objects. These work sites had the highest amount of women with five and eight women respectively at each site. In industrial production, the workwear was also mainly two-split and mainly dominated by required garments. Dark colours such as black and dark blue were predominant in this occupation, with the exception of the colour red, which for the representatives was the signal colour of industrial safety. This was mainly indoor work and thus not subject to frequent changes in temperature or weather.

The oil and gas production sites consisted of one land-based site and one offshore site, and here we only made use of interviews due to the restricted access to participatory fieldwork. At the

⁷ Skilled manual work is used to translate the Norwegian occupational group *Håndverk*. Note that the term “handicraft” is used about this occupational group in the published articles C and D.

land based site, we interviewed five women from different occupational groups. All of them did manual work, wore work uniforms in the form of coveralls and were in the minority at their worksite as women. In the offshore site we interviewed one woman, who was the only oil rig mechanic on that particular oil platform. The land-based oil and gas production sites were located in the western part of Norway. Much of the work was done outdoors, but also alternated between indoor and outdoor work and challenging tasks like climbing in high drill towers to repair and maintain equipment. In this occupational category, there were strict rules and regulations regarding safety. These regulations could be seen in the work uniforms in their use of highly visible and flame retardant coveralls.

The industrial fish trawler in this study was located in the northernmost part of Norway and belonged to one of the larger multinational companies. Here, there was one woman on board. Everyday work for the fishermen and fisherwomen was dirty, wet, cold and smelly, in addition to being subject to the occasional stormy sea. The work took place outside, pulling in large fishnets from the trawler or inside, processing the fish and arranging storage in freezer rooms or cold fresh fish storage. This set special needs for the workwear they used. Even so, the workers in our study had no formal work uniform provided by their employer and wore a lower standard of clothing compared to workwear in the other occupations. They mainly used oilskin coveralls to protect against fish entrails and other spills, but boiler suits were also used underneath. They acquired all their own workwear, with the exception of protective boots, and were only paid a low monthly stipend for clothing expenses. The special needs for work uniforms in this occupation were difficult to meet with the workers' own resources, both in terms of economy and knowledge. In this way, their workwear differed greatly from what we found in other occupations.

The workers on board of Navy vessels were given plenty of resources but did not have the same degree of dirt and spills as in the industrial fishing. These vessels were located in the western part of Norway, but frequently travelled on special missions or exercises along the Norwegian coast. On board the mine trawler, there were three women and on board the mine sweeper, two women. There were large variations in the work roles on the vessels, which included mechanics, machine operators, deckhands, chefs and navigators. Working in a public sector institution, the Navy workers had to obey special safety and work environment demands. They were given

workwear from bottom to top and from inner to outer layers, and there were strict rules about the use of civilian clothing in addition to what type of uniform to use and how to use them in any given occasion. On board the Navy vessels, we met the strictest regulations for workwear and the strongest incentives for abiding by the rules. These are further elaborated in Article A.

Conducting fieldwork at various field arenas could be considered problematic, but the chosen occupational fields cover different parts of Norway, different types of manual labour and different company sizes. These fields also exhibit wide variation in the apparel used, in how that apparel is managed and in what is required by these work uniforms. However, each of the chosen occupational fields has in common that they are male-dominated and highly manual occupations, requiring workers to dress according to guidelines needed for the nature of the work and/or according to regulations set by the employer. In the field described here, there are representative variations of the occupations labelled as male-dominated and manual that build upon shared characteristics. In this sense, these occupations and field sites can be compared together in a way that is relevant for the sake of generating knowledge about the gender-segregated labour market in Norway and its work uniforms. The next section will treat issues of multisited ethnography and comparison in particular.

Multisited ethnography and comparison

Anthropology has traditionally favoured long-term ethnography that concentrated fieldwork for several months in one site. Multi-sited ethnography, first described by George Marcus in the *Annual Review of Anthropology* in 1995, rose to challenge this traditional conception of ethnography. Labelling it as an emergent methodological trend, Marcus suggested a move away from conventional single-site locations to serve more complex objects of study in “multiple sites of observation and participation that cross-cut dichotomies such as the ‘local’ and the ‘global’, the ‘lifeworld’ and the ‘system’” (Marcus 1995: 95). The shift I made between work contexts, occupations, clothes, people and places has given me the opportunity to compare between the different work spheres, people and practices and to involve as many women as possible in the study. Although some might claim that doing a multi-sited study such as this implies a loss of in-depth knowledge, this way of conducting research and gaining knowledge was a fruitful one for the object of study.

Doing a comparable study of practices and materiality involves not only following people, but

also following things and, in this case, practices. Although I am not primarily following people or things as Marcus (1995) identified as main strategies in multi-sited ethnography, I have chosen to follow a work practice tied to material objects. This practice occurs in different work environments between individuals and things. Doing a multi-sited ethnography is in that regard particularly relevant as it enables a comparison of how virtually the same garments are used in a variety of different contexts by a variety of different people. Doing fieldwork in occupations that have been carefully selected represents a valid vantage point for comparison. It enables the study of practices under different circumstances, occupations and work environments, building the study and collecting data bit by bit.

Through each of the techniques and fieldworks, an understanding of the female workers' relation to work uniforms was formed. This enabled a comparative analysis of practices tied to clothing in use and facilitated the building of a comprehensive contextual understanding of the gender-segregated labour market. Choosing a multi-sited fieldwork and executing comparisons between them enabled an in-depth study of practices instead of one in-depth study of a particular work environment, thereby providing a "thick description" of the subjects as Geertz (1973) has termed it. This does not mean that the context of each fieldwork was overlooked for the sake of comparison. Rather, it means that by using practices and work uniforms as a vantage point for comparison, different groups may be studied in relation to one another with regards to different occupations, gender (men and women), positions (worker and management) and contexts (local and global).

5. Research implications

The theoretical approaches, research strategy and methods that I have presented in this dissertation build on my involvement in the innovation project *Uni-Form*. This was a research and development project that can be termed as ethnographic applied research. The project has made use of qualitative research methods, and has set forth both flexible and exploratory research questions. Its main objectives have been to gain an understanding of the gender-segregated labour marked through certain male-dominated and manual occupations and its material conditions as they appear in work uniforms. In this research work, I see, in particular, three dilemmas that have effect on the production and dissemination of knowledge. This chapter will examine these dilemmas and, in doing so, scrutinize the implications raised by participation in a large scale research project. This chapter will also address challenges that can appear in a study at the intersection of research and product development. Some of these challenges are described in Article D, but this chapter will complement this article by looking directly at the dissertation's implications or dilemmas in knowledge production.

Applied research project

Applied research – or *applied ethnography*, which is a more suitable term for the research done in *Uni-Form* – uses ethnographic theories, methods and findings to solve human problems. It is a scientific attempt to add to useful knowledge (Pelto 2013: 7). Doing applied research in this project meant entering into a field where there was little knowledge, and conducting fieldwork to generate empirical understandings for both an academic audience and for stakeholders from private and public sectors (the workwear company and the Norwegian Defence Logistics Organisation). In addition, *Uni-Form* had a very specific purpose: to explore the potential for innovation, and, secondly, to contribute to innovation. This was the research mandate for the project, and it is upon this basis that this dissertation is written.

Engaging in an applied project that speaks to a wider audience is challenging in that it may set forth other claims than basic research. Among other requirements, an applied project often demands that the researcher is able to deliver and disseminate analysed results or preliminary analytical reflections within a short amount of time. This could be a challenge for meeting ethical demands for openness and independence and to provide valid and reliable research

results. However, if these demands are satisfied, engaging in applied research work can be rewarding in several ways. Firstly, collaborating with private sector companies can provide a broader perspective if both parties participate in and discuss the research work prior, during and after analysis. Secondly, having commercial interests may help increase the relevance of research outside an academic audience.

In the project work at hand, some preconditions have affected the empirical material and have consequently affected the analysis of this material, both after and during the research process. There are, as I see it, three main dilemmas related to science and knowledge production in this study. The first is tied to the production of knowledge about a given field of study that had its basis in an applied research project. This had predefined goals concerning what this knowledge had to generate. The second concerns an alternating relationship between research in the field, the analysis of research and the dissemination of results to the private and public sectors. This is described in detail in Article D, but here this is discussed in relation to knowledge production and dissemination. The last dilemma is concerned with the action-oriented part of the research in which new products were introduced and tested. Here the researcher initiated and participated in a change process in the field. I will address these dilemmas for the remaining part of this chapter.

Knowledge production – openness and independence

The research strategy in this doctoral study has been explorative, not in the sense that it has relied on secondary data but in the sense that the research process necessitated working out a research question, building a theory and moving between inductive and deductive thinking (Spjelkavik 1999: 125) in an unexplored field. The research thereby inhabits elements from both inductive and deductive thinking and can be termed as abductive or retroductive (Ragin 1884: 47). Knowledge production will always be socially constructed in the sense that research is not a neutral activity where data speaks for itself. We as ethnographic researchers will always enter a field with a preconceived understanding, and this is partly co-constructive for empirical knowledge. The interaction between the researcher and her surroundings is what brings forth knowledge. This is a social constructivist inspired approach to the philosophy of science and builds on the idea that social phenomena do not exist independently of our knowledge of them.

The outcomes of the project *Uni-Form* were to benefit the Norwegian society (improved integration of women), the workwear company (improved products, improved sales), the Norwegian Army's Logistic Organization (improved products, improved integration) and the research institutions involved (knowledge, scientific publications, a doctoral degree). In other words, there were many institutions and sectors involved, and thus many objectives to satisfy. In addition, the research description ensuring funding from the Research Council of Norway put forward several preconceptions about the field that placed gender, clothes and body in relation to the gender-segregated labour market. These are all part of the construction of the field and denote how social phenomena, human actions and their connections to the material must be understood in a context where the researcher is also involved. The contextual significance of the field in ethnographic studies is emphasized by Hammersley (2011) and is also reflected on in this dissertation. The study of work uniforms and women, and the development into competence-based products are dependent on this contextual relationship and its interpretation in order to be developed into apparel and to have an impact as a change agent for the gender-segregated labour market. Nonetheless, the research questions formulated prior to fieldwork reflect the preconceived notions of women and apparel that ensured project funding through the Research Council of Norway. In that way, the preconceived connection between gender, clothes, body and work clearly formed the basis of study, but did not steer the results or the conclusions made in the project. This is evident in Article D, which describes the ambiguity of the results in the development process.

Predetermined goals have brought about a discussion of knowledge production, in light of openness, accountability and independence. This is by no means restricted to applied research. Research communities interact with society in general, and when society funds research, it wants something in return (NHES 2016: 33). The ability to perform independent and open research is one of the most central ethical demands of research, according to the Norwegian National Research Ethics Committees (NHES 2016). This idea is also applicable to studies within applied research. In order for independent and open research to take place, NHES (2016) has set forth ethical guidelines, some of which highlight the relationship between the commissioner and the research institution. These guidelines state that the applier or commissioner has the right to "steer or influence the subject and issues addressed, but not the

choice of method, results or conclusions drawn by the researcher on the basis of the results” (NHES 2016: 33).

In the project *Uni-Form*, the Research Council of Norway acted as commissioner, and the workwear company acted as the formal applicant and project leader. The project – with its research and development plan – was nevertheless planned in collaboration between research institutions and the private sector. This means that the approach and objectives of the project were defined both scientifically and commercially. The scientific and commercial interests were manifested in a signed stakeholder agreement that ensured the research institutions AFI and SIFO the rights to the publications, results and methods. This agreement secured the commercial interests of the workwear company in that the publication and dissemination of results to the broader public had to wait a two year period until a majority of the product development process had been completed. The research work in project *Uni-Form* that concerned methods, results or conclusions was decided on by the research institutions. The choices of fields and the research questions and problematics are outlined in this dissertation so that it is clear what parts of the project has been steered by the workwear company, and in what ways. Altogether, this ensures that ethical considerations related to openness and independence in the research process at hand have taken place.

Knowledge dissemination – innovation in the making

Article D shows that the research results that came out of the study and were disseminated to the project manager and the project group of *Uni-Form* was neither driven by any particular project participants nor driven to satisfy a particular objective or confirm a hypothesis about a particular market for work uniforms. This is evident in the article’s description of the conflicting or ambivalent results that were presented to the company’s research participants. In addition, the research problematics in the project were open and the research question in this dissertation is explorative. The dissemination of results was done through presentations and discussions after a particular round of fieldwork and at the end of a series of fieldworks. These were labelled work meetings due to their informal nature and the way findings and preliminary interpretations were discussed among the research participants. There were seventeen work meetings in total, in fourteen of which I presented results from my fieldwork. In addition, a concluding project summary report was written.

The dissemination of results presented further in Article D shows how innovation and especially research and development projects can take place in practice. Much of the work done in applied projects consists of “a mixture of discoveries, suggesting some possible explanations, and a back and forth between theoretical thinking and getting more information” (Pelto 2013: 39). Article D describes this exchange as an alternate form of knowledge shared between fieldwork, analysis and dissemination. This had an influence on the one hand on the product development process for the workwear company and on the other hand on knowledge production for the research institutions. Article D shows that the interaction between work meetings and fieldwork enabled a mutual influence of perspectives for both product development and research. In Article D, this is referred to as a feedback loop.

The feedback loop led to a mutual influence that caused the issues discussed through the work meetings to be brought into the next fieldwork. These issues were also brought into the product development in that the social integration of people and things were considered in the development of new products. This contributed to the development of competence-based products, which was the main goal of project *Uni-Form*. For the fieldwork, this meant that the focus on things at work was heightened. I believe this contributed to a study that has been more focused not only on what was said and how things were done, but also on the role of the materiality of work uniforms. Yet, it is worth noting that the knowledge engagement represents both a challenge and an asset to the production of knowledge in this study. This is further elaborated in the next section.

Knowledge engagement – innovation and action

The last dilemma revolves around the problem of doing social science research in a field where new products were introduced and tested, and the way in which the researcher initiated and participated in a change process in the field. This resembles research as we find it in action research. In action research, according to Spjelkavik (1999: 118) the development of solutions to local problems is a primary goal. The aim of action research is also to advance social science through direct involvement in practical issues and to underpin democratic values in society (Emery 1986). Looking at both the explorative research questions set forth in this dissertation and the research problematic set forth in project *Uni-Form*, they resemble the aims and goals of action research, and also of applied research in general.

Much of the empirical material – in fact, most of it – was based on the fieldwork carried out before introducing and testing new products. The first round of fieldworks before testing was completed more traditionally, as described in the methods section in the previous chapter. In the second fieldwork, the individual testers mediated experiences about the products that were tested. In addition, the methods employed in the fieldwork (which was the same as those of the first fieldwork) contributed to an increasing understanding about the new products in use. Both these fieldworks could be characterized as studying “operating systems in action” (Spjelkavik 1999: 118), but in the last part the participatory change aspect of the methods distinguished it from applied research in general. This next step involved taking a more action-oriented approach. Here, workers from the field study, most of them being female, became co-constructors of their material surroundings, i.e., their work uniforms through the test period. This is not an uncommon trait in research belonging to the design discipline or for participatory action research, but it is a trait that often distinguishes applied research from action research. In a sense, this study has elements from both and in that sense some of the limitations are the same.

Involving the workers in developing a particular part of their material work surroundings created a problematic aspect related to the workers’ social relationships at work. This is particularly problematic for anthropological fieldwork with its emphasis on affecting the context as little as possible. In the study of work uniforms, the testing of work uniforms became problematic for the female workers when it had the potential of enhancing their alienation at work. The female workers did not want to be distinguished in the work context and giving them work uniforms that were different from the majority of the workers did not help. This was an explicit concern of the female workers. One way to solve this was to offer new or improved work apparel to both the male and the female workers. This both met their concern about standing out and provided a valuable basis for comparison of the new clothes in use. Issues related to action in the empirical context could as such be considered both a strength and a problem for this study, and is important to be aware of in terms of influencing the empirical context one engages in as a researcher.

This chapter has pointed to strengths and limitations of engaging in applied research, and has shown specific problematic aspects of the study at hand. It is impossible to do research, no matter the discipline, without having some knowledge or predispositions towards the field in

question, but it is important to enter the field with an open mind and not be directed by much other than the empirical material. In project *Uni-Form*, the way we moved “back and forth between reflection, collection of new materials, swapping crazy ideas and disciplining chaos into a finished project” (Ehn and Löfgren 2009: 39) is a way many work with colleagues in academia. Involving the commercial industry led to a nuance of perspectives in the study beyond those of typical academic perspectives. This limits but also provides opportunities for the study in the sense that it brings out experiences from different worlds. This project has been enriched from the combination of perspectives through the fieldwork and the feedback loop. Doing applied research and assessing the potentials for work uniforms to act as change agents for the gender-segregated labour market does not conflict with ethical guidelines for a research project. Rather, as Aubert (1985) points out, researchers are also members of society and not only observers. Thus, it is not strange for a research project to take active steps into the micro and macro dynamics of everyday life.

6. Article A

En borrelås til besvær. Kvinnelig uniformering på minefartøyer.

Bjerck, M. (2013) En borrelås til besvær: Kvinnelig uniformering på minefartøyer. [A Velcro that upsets: Female uniforms on Navy vessels.] In P. Strandbakken & N. Heidenstrøm (Eds.) *Hinsides symbolverdi: Materialiteten I forbruket*. [Beyond symbolic value: The materiality of consumption.] Novus forlag, Oslo, pp. 121-144.⁸

Det første jeg tenkte da vi fikk den innstrammingen, var gjerne sånn: Hva er vitsen med det? Altså, vi er ikke utstillingsdukker, vi er her for å jobbe. [...] Men det er ingen ting som er bedre enn å føle seg vel i arbeidsuniformen din, ikke sant. Så jeg prøver jo liksom å stramme inn litt sånn. Men da tenker jeg: Nei, off, da må du holde inn magen din hele tida (ler litt). Men det er jo kjempegreitt for de som ønsker å bruke det da, å ha den muligheten da. Og jeg skjønner jo det, hvis de har lyst til det, men så tenker jeg sånn: Hva er vitsen? Vi er her for å gjøre en jobb, ikke for å se bra ut. (Kvinnelig fenrik)

Det Norske Forsvarets Logistikkorganisasjon (FLO) hadde i 2010 gitt et utvalg av sin marine styrke ved et minefartøy i Norge en ny arbeidsuniform (M/04) til uttesting. Denne uniformen var blitt justert i forhold til sin forgjenger (M/2000) for å skape en bedre passform. Den kom i et nytt forbedret tekstil som skulle være mer behagelig og slitesterkt, og med nye detaljer som borrelås på lommene, skuldrene, brystet og livet. Det er borrelåsen i livet på uniformsjakken den kvinnelige fenriken omtaler i sitatet over. Den nye versjonen av jakken hadde fått mulighet for en mer kvinnelig form; med et kortere skulderparti og innsnevring med strammefunksjon i livet. Men denne innsnevringen var gjenstand for debatt blant kvinnene på minefartøyene, som vist i sitatet ovenfor; for hvordan kunne de vise sine kvinnelige former og gjøre en god jobb. Hvordan kunne de være “akkurat passe” kvinnelige?

Dette kapitlet tar utgangspunkt i én konkret materiell gjenstand; borrelåsen på jakken i arbeidsuniformen M/04, og materialet er hentet fra to av Det Norske forsvarrets minefartøyer. Debatten om borrelåsen avslører mange viktige diskurser rundt det å være kvinne på en

⁸ The Norwegian original version is presented here because this is the original version of the published article. A translated English version is attached in the back of the dissertation.

arbeidsplass dominert av menn. Fremfor alt peker den på hvordan kvinner og menn gjør kjønn gjennom bestemte bekledningspraksiser innenfor et fastlagt uniformsreglement. Borrelåsen brukes her som et eksempel på hvordan uniformering kan fungere som en forhandlingsarena for kvinnelighet i møtet med maskuline tradisjoner.

Hvordan kroppen føres og føles gjennom arbeidshverdagen i klær som er for lange, for brede eller trykker på ugunstige plasser, er viktige forutsetninger for arbeidstakernes hverdag. Arbeidsbekledning er en avgjørende del av arbeidstakernes fysiske og sosiale/symbolske forutsetninger som sjelden er særlig artikulert. Kapittelet har dette som utgangspunkt og spør dermed: Hvordan foregår forhandlinger om kvinnelighet gjennom uniformen og hvordan kan dette spores gjennom borrelåsen i arbeidsjakken M/04? Kapittelet vil vise viktigheten av å ta den materielle siden av forbruk på alvor, i tillegg til (og ikke i stedet for) å analysere uniformens symbolske aspekter. Ved å ta begge sidene inn i analysen vil det være mulig å produsere en tykk beskrivelse av hverdagsforbruket, slik det fremstår av uniformer i bruk.

1. Kvinner og uniformering

I forskningen på uniformering skilles det mellom uniformer, kvasi-uniformer og uformelle uniformer (Craik 2005). For arbeidsbekledningen i Sjøforsvaret er det begrepet “uniform” som er den korrekte benevnelsen, med sine karakteristikk av påbud og regelstyrt bekledning. I kontrast til dette er de Jennifer Craik betegner som kvasi-uniformer med standardisert arbeidstøy og “uformelle uniformer” som sportstøy. Begrepet omfatter dermed ikke bare arbeidsklær og militæruniformer, men også sportsbekledning. Uniformeringen har en rekke funksjoner; den gir bærerne et felles estetisk preg med mulighet til identifikasjon og rask gjenkjennelighet. I tilfellet Sjøforsvaret, hvor de har blå marineuniformer, er det lett for utenforstående å oppfatte tilknytningen til Forsvaret. Gradsmerkene angir også synlig rang i den hierarkiske strukturen.

Uniformen bidrar til en forming av bæreren i tråd med Marcel Mauss (1979) argumentasjon om kroppsteknikker og Daniel Millers “lived garments” (2005). Uniformene er med på å konstituere profesjonene, og omskaper sivilpersonen til den profesjonelle (Andrewes 2005). Janet Andrewes (2005) argumenterer for at klær har en evne til å omskape kroppen, mens John Harvey (2007) viser hvordan klær, gjennom å tildekke eller avsløre, kan fungere som en måte å kroppsliggjøre verdier. Gjennom dette får mennesket tilgang til ideer som er knyttet til klærnes form.

Uniformeringens funksjon er å gi bæreren en bestemt form for autoritet og posisjon, og å gi han/henne tilhørighet til en bestemt gruppe. Den visualiserer hierarkier og skyver til siden individuelle forskjeller. Forholdet mellom uniformering og femininitet er problematisk fordi det feminine er knyttet til den individuelle personlige kroppen, noe som ikke er forenelig med et abstrakt hierarkisk felleskap. Uniformenes lave sensibilitet i forhold til mote er også et større problem for kvinner enn menn, fordi mote er et viktigere element i kvinnedrakten. For menn er uniformering også en del av den sivile klesskikken, for eksempel i form av dressen (Pettersen 2004). Denne forskjellen skaper problemer i utformingen av uniformer for kvinner, spesielt i yrker der autoritet, fare og fysiske anstrengelser er involvert (Ewing 1975; Craik 2005).

Historien om kvinnelige versjoner av (manns-) uniformene viser hvordan skiftende syn på kvinners profesjonalitet har blitt gitt en materiell form. Uniformer for viktige samfunnsinstitusjoner som politiet (Finstad 2000; Young 1997; Steele 1989), militæret (Garber 1992; Kidwell 1989), postvesenet (Larsson 2005), brannvesenet osv. er også i utgangspunktet laget for menn. Egne uniformer for kvinner forsterker samtidig en tendens hvor kvinnen ses som annerledes, og mannen som det normale (de Beauvoir 2000; Moi 2001; Butler 1999). Kvinner i mannsyrker synes derfor å måtte fremvise en aseksuell femininitet i både handling og klesbruk (Garber 1992) som avviker fra kvinnelighet slik den normalt fremføres. Uniformer med skjørt har dermed vært upopulære både ut fra sosiale og praktiske hensyn. Dette kommer også fram i Liv Finstads studie av politiet (2000). Hvorvidt kvinner ønsker å skilles ut som noe annerledes, eller gjennom klærne vise tilhørighet til en profesjon der kjønn er nedtonet, er et viktig dilemma i studiet av kvinnelig bekledningspraksis.

2. Datamaterialet

Materialet som dette studiet baserer seg på er samlet inn i løpet av 2010.⁹ Forfatteren gjorde deltakende observasjon, intervjuer, praksisstudier og garderobestudier ved to minefartøyer: en minerydder og en minesveiper. Dette er metoder som innebærer etnografisk feltarbeid, men

⁹ Datamaterialet for denne artikkelen er hentet fra forfatterens doktorgradsarbeid som er del av et større Forskningsrådsstøttet prosjekt (Brukerstyrt Innovasjonsarena) gjort i samarbeid mellom Statens Institutt for Forbruksforskning (SIFO), *workwear bedrift*, Forsvarets Logistikkorganisasjon (FLO) og Arbeidsforskningsinstituttet (AFI). I dette prosjektet har forfatteren og to andre forskere ved SIFO gjort feltarbeid og/eller intervjuer i perioden 2009-2011 ved femten arbeidsplasser i Norge og tilbakevendende feltarbeid på seks av disse arbeidsstedene. Yrkene har vi plassert innenfor seks yrkesgrupper; sjøforsvaret, fiske, offshore, håndverk, bygg og anlegg og industriproduksjon. Denne artikkelen baserer seg hovedsakelig på feltarbeid og intervjuer gjort ved to av Sjøforsvarets minefartøyer. I dette er det kvinnenens praksiser og erfaringer som er i hovedfokus.

utvalget av metodeteknikker er annerledes. Intervjuer og deltakende observasjon er kjente metoder, mens praksisstudier og garderobestudier kanskje ikke er like kjent. (Klepp & Bjerck 2012).

Praksisstudiene ble gjennomført som observasjoner av kvinnene og deres mannlige kollegaer. Målet var å finne ut hvilke klær som ble brukt, men også hvordan klærne ble brukt av kvinnelig personell. Hovedfokuset var på hvordan kvinnene brukte klærne, men mennenes klesbruk ble også registrert. Her var den konkrete påkledningen i hverdagen viktig, men også hvordan klærne ble brukt i relasjonene mellom personellet. Hvordan kjønn ble kommunisert eller underkommunisert gjennom bruk av sivil og uniform bekledding, tilbehør, hårfasonger, sminke og smykker var viktig å gripe fatt i. Garderobestudiene (Klepp & Bjerck 2012) innebar å registrere hele eller deler av garderober. Gjennom garderobestudien ble all uniformsbekledding og annet tøy ombord på minefartøyene registrert. I tillegg snakket vi om klærne og hvert enkelt plagg under registreringen. Vi diskuterte hvilke valgmuligheter for pålagt uniformering personellet hadde, hvordan valg om bekledding ble tatt og hvordan Sjøforsvarets uniformsreglement ble overholdt eller brutt.

Det ble også benyttet klestesting av nyutviklede uniformer på minefartøyene. Dette ble gjort i to runder, først et mer ordinært feltarbeid med de ovennevnte metodene og etter flere måneders bruk av nytt tøy ble det gjort et nytt feltarbeid med større fokus på det nylig uttestede tøyet. Dette ga blant annet verdifull informasjon om gammel og ny uniform slik at klespraksiser knyttet til begge uniformene kunne sammenlignes. I Sjøforsvarets minefartøyer ble det gjort uttesting av to uniformer. Den ene uniformen var en spesiell fartøysbekledding beregnet på dekkmatrosene. Den andre var arbeidsuniformen M/04 som skulle erstatte M/2000. Det er denne arbeidsuniformen som i hovedsak omtales her. Datamaterialet ble samlet gjennom feltdagbøker med lengre utlegninger av dagens hendelser, samtaler og gjøremål, tapede intervjuer som senere ble transkribert, samt bilder og filmsnutter av bekleddingen og personellet i hverdagslige situasjoner. 5 kvinner og 4 menn ble intervjuet på minefartøyene, men i feltarbeidene var hele besetningen om bord inkludert.

3. Sjøforsvarets uniformer

I Forsvaret er det et klart reglement som bestemmer hvilken bekledding som til enhver tid er korrekt. Sjøforsvarets uniformsreglement sier at det er en plikt å bære uniform i daglig tjeneste,

ved formelle anledninger og ved sammenkomster av tjenstlig og sosial art hvor vanlig praksis tilsier at (uniform) er korrekt bekledning¹⁰. En hovedregel er at alle med samme eller tilsvarende arbeidsforhold ved en avdeling eller et fartøy skal ha ensartet bekledning og ved formelle oppstillinger skal bekledningen være ensartet for samme kategori personell (Vestvik & Bjerck 2012:13). Dette reglementet, og uniformene som deles ut til Sjøforsvarets soldater, setter imidlertid ikke funksjonalitet og individualitet for hver enkelt bruker i fokus.

Besetningene på Sjøforsvarets fartøyer brukte i hovedsak to typer uniformer om bord. Den ene var et tjenestantrekk for hverdag- og innendørs kontorbruk. Den andre var en mørk blå arbeidsuniform, som hadde et utseende de fleste forbinder med marinens klær. Tjenestantrekket fantes i egne kvinnemodeller, men disse var ikke spesielt vel ansett blant den kvinnelige besetningen.

Og så hadde de [jentebukser], men de er helt umulig [å bruke], for de e liksom mini i livet og størrelse esel i lårene, og så går de inn [som] spagetti i beina igjen. [-] De e helt rar. Så da går du for guttebuksene da, så kan du ha de litt lavt i livet og... De e bedre. Og så får du skjørt da te den ene uniformen, og det e jo for jenter spesielt. Men de og e veldig smal og høye i livet. (Kvinnelig offiser)

Denne kvinnelige offiseren fortalte at hun valgte å bruke herremodellen fordi den modellen som betegnes som «jentebukse» hadde en helt annen form som var mindre tilpasset hennes kropp og bruk. Dette er på ingen måte unikt. Arbeidsklær og uniformer for kvinner som jobber på typiske mannsarbeidsplasser er i dag enten klær som er produsert for menn, eller kopier av mannsklær der snitt og eventuelt estetikk er blitt tilpasset kvinnekroppen og kvinnelig klesskikk. Erfaringer gjort av arbeidsklærprodusenter, slik som Workwear bedriften, men også internasjonal forskning viser at dette sjelden er vellykket. Mange opplever at denne tradisjonelle uniformen er tilpasset et “upersonlig” hierarkisk fellesskap, mens det feminine er knyttet til individet, den individuelle kroppen, noe som er vanskelig å forene i et konformt antrekk (Vestvik & Bjerck 2012).

Arbeidsuniformen M/2000 var lik både til kvinner og menn med faste størrelser uten tilpasningsmulighet. Jakken og buksen var laget i flammehemmet bomull og kom kun i få størrelser. Generelt var det behov for større utvalg når det gjaldt størrelser av uniformene. Det ble etterlyst større variasjoner i bredde og lengde slik at personellet skulle kunne få bedre

¹⁰ Uniformsreglementet for Sjøforsvaret SAP-7 (F), 2007, s.19.

tilpassede klær. Det virket også som om tekstilene ikke hadde god nok kvalitet til de påkjenninger klærne ble utsatt for. Kvinnene hadde egne behov når det gjaldt klærne, og hvordan de passet og fungerte for dem, men de ønsket ikke en egen kvinnemodell som skilte seg fra mennenes. Bekledningen skulle være lik for alt personell, slik at de ikke skilte seg ut. Noen gjorde likevel justeringer på klærne ved å sy om litt på snittet, for å få dem til å passe litt bedre, og det var også tilfeller av annen tilpasning av bekledning blant begge kjønn.

Arbeidsuniformen ble brukt av alle om bord, fra maskinister til kommanderende på minefartøyene. Med så ulike jobber, fra maskinrom til bro, ble en felles uniform nødvendigvis lite funksjonell til de ulike arbeidsoppgavene, uavhengig av kjønn eller kroppsfasong og størrelse. I stor grad forble besetningens bekledning lik, og dårlig tilpasset, spesielt til kvinnenes kropper. Den nye arbeidsuniformen M/04 var ment å bedre uniformen for flere ved å ta tak i tilbakemeldingene. Forsvarets arbeidsuniform M/04 ble dermed en forbedret versjon av den tidligere arbeidsuniformen M/2000. Den var justert i snittet for å skape en bedre passform og i jakken var det lagt til en strammefunksjon med borrelås i livet. Den kom i et nytt forbedret tekstil som skulle være mer behagelig i bruk og slitestyrke og hadde en del nye detaljer. Den kom i flere størrelser fra 42-60. Både det mannlige og kvinnelige minepersonellet ga uttrykk for glede over at de endelig hadde fått en arbeidsuniform med en mer funksjonell passform. Kvinnene følte seg bedre og mer kvinnelige i denne uniformen sammenlignet med den forrige (Vestvik & Bjerck 2012:41), og borrelåsene i livet på jakkene var en av grunnene til dette. Likevel, det innledende sitatet i kapittelet viser at det å skulle vise sin kvinnelighet gjennom uniformen ikke var uproblematisk, hverken i forhold til egne preferanser, andres blikk, eller arbeidsgivers reglement.

4. Borrelåsens funksjon

Uniformsreglementet sier ikke bare noe om hva du skal ha på deg til enhver tid, den underlegger også bæreren en forpliktelse når det gjelder personlig holdning og oppførsel i uniform. Det er som regel ikke tillatt å kombinere sivile- og uniformsplagg, og det er bestemmelser som begrenser bruk av smykker og ur, hårfasong og kosmetikk (Vestvik & Bjerck 2012). Dette strenge reglementet gir ikke mye rom for å markere og kommunisere kjønn, men som vi skal se forekom det likevel en forhandling om kvinners bekledningspraksis. Som sitatet antyder er det stor kompleksitet i materialet om kvinners uniformering der borrelåsen er et materielt

utgangspunkt for en større diskurs om hvordan kvinnene gjør sin kvinnelighet gjennom arbeidsbekledning. Men borrelåsen er også et godt eksempel både på en symbolsk og på en rent praktisk funksjon for begge kjønns tilpasning av uniformen.

Uniformene fantes altså i ulike størrelser, men disse var få og basert på en maskulin standard kroppsfasong. Faktiske fysiske forskjeller mellom (de fleste) menn og kvinner gjelder i all hovedsak at kvinner har bryster, er noe mer innsvinget i livet og svaie nederst i ryggen enn menn. I tillegg har kvinnene smalere skuldre og ofte kortere armer og ben enn menn (Neumann m.fl. 2012: 244). Disse forskjellene speiles ikke i uniformene til Sjøforsvaret og arbeidstøy generelt. Mannens kropp er normen, og estetikken i uniformen er forbundet med maskulinitet. Tidligere erfaringer med uniformene, slik kvinnene beskrev, var nettopp at passformen var generelt dårlig. Borrelåsen på jakken i den uttestede arbeidsuniformen M/04 skulle svare på utfordringen med tilpasning til kjønn og størrelse. Avhengig av hvordan borrelåsen ble festet kunne innsvingen reguleres.

En konkret tilbakemelding var at den forrige jakkemodellen var for bred over magen og flere av de kvinnelige ansatte gikk derfor ned en størrelse for at den skulle passe. Dette førte i sin tur til at jakken ble for kort til ermene. Jakkens passform til mange kropper av begge kjønn var derfor feil. En av kvinnene som deltok i det første feltarbeidet fortalte at hun ville ta hjem den gamle arbeidsuniformen for å sy den inn i livet selv om hun ikke visste om det brøt med uniformsreglementet. På den måten kunne hun tilpasse uniformens snitt til sin bruk, uten å skille seg for mye ut fra de andres uniform. Hadde hun derimot hatt denne nye arbeidsuniformen kunne hun brukt borrelåsens innstrammingsfunksjon og sluppet å sy.

Et annet resultat av at jakken kunne reguleres med borrelåsen i livet var at den fulgte kroppens bevegelser bedre. Dette var spesielt viktig blant både de mannlige og kvinnelige dekkmatrosene som ofte trakk den vind- og vanntette ytterbekledningen over arbeidsuniformen. Det var likevel tydelig at borrelåsens funksjon først og fremst skulle benyttes av minefartøyenes kvinnelige soldater. De mannlige testpersonene i studien forklarte at de trodde borrelåsen var en fordel for kvinnene, og at kvinnene kunne benytte seg av den for å føle seg mer kvinnelige. Kvinnene bekreftet at de følte seg mer kvinnelige når de benyttet seg av strammefunksjonen.

Kvinnene var likevel blandet i responsen på borrelåsen og brukte i varierende grad strammefunksjonen i jakken. *“Altså, vi er ikke utstillingsdukker, vi er her for å jobbe”* sier den

kvinnelige fenriken i det innledende sitatet og peker på viktigheten av arbeidstøyet som symbol på motivasjon på arbeidet. De ønsket først og fremst å bli inkludert. Et av grepene for å inkluderes på arbeidsplassen var å se like ut, visuelt, som sine arbeidskollegaer. Det ble derfor stilt spørsmålstegn ved borrelåsens funksjon; var den virkelig *nødvendig*? Kvinnene følte seg mer kvinnelige, men det var ikke nødvendigvis en ønsket effekt av uniformen for kvinnene selv.

En av kvinnene mente at den nye arbeidsuniformen gjorde at hun følte seg finere på jobb enn hun gjorde tidligere. Arbeidsuniformen M/2000 ble til sammenligning omtalt som en «striesekk» og innstrammingen i den nye uniformen kunne dermed brukes for å få mer form på uniformen. At kvinnene som hadde testet uniformen likte strammefunksjonen, gikk ifølge dem selv ikke på det at de ønsket å vise frem sine kvinnelige former, men at borrelåsen førte til en bedre passform og mer bevegelighet i uniformen. Mennene, selv om de sa den ikke var i veien, så ikke helt hvilken funksjon den skulle ha for dem. De pekte derimot på at det måtte være fint for deres kvinnelige kollegaer å få strammet inn uniformsjakken slik at den passet bedre.

En av mennene i studien som testet den nye arbeidsuniformen hadde en smal kropp og var veldig fornøyd med borrelåsens strammefunksjon i jakken. Han brukte den nettopp for at den skulle passe bedre i livet og rundt magen. Han slapp dermed å velge mellom en jakke som enten var for vid i livet eller for kort på armene. Den nye uniformsjakken satt dermed (potensielt) bedre både på kvinnene og mennene. Likevel var denne borrelåsen ansett å være en funksjon tiltenkt kvinnene. Det er verdt å merke seg at denne mannen ikke ble ansett som mer feminin gjennom bruken av borrelåsen. Brukt av kvinnene derimot, og spesielt i kombinasjon med andre kvinnelige markører, ble det et visuelt tegn på kvinnelighet og feminitet som var diskutabel i denne arbeidskonteksten.

Tilbakemeldingene på uniformsjakkens borrelås peker mot en større debatt om kvinner og arbeidsbekledning. Hvordan være akkurat passe kvinne på arbeidsplassen? Hvordan kle seg deretter? Den kvinnelige fenriken som uttalte at hun ikke var en utstillingsdukke fanger denne debatten fint. For henne var arbeidskonteksten en plass for å gjøre arbeidet sitt, ikke for å se bra ut. Arbeidet og likheten med sine mannlige kolleger ble overspilt og utseendet (bekledning og øvrige kvinnelige markører) underspilt. Sitatet kan dermed tolkes tredelt: 1) hun er ikke der for andres betraktende blikk, 2) hun ønsker å bli tatt seriøst som en del av et arbeidsfelleskap uten for mye vekt på annerledesheten som kvinneligheten representerer i denne konteksten og 3)

kvinnelighet, slik den fremstilles her, ses som et hinder for inkluderingen i fellesskapet, for å bli det de kaller “en av gutta”. Sitatet sier også noe om hva det vil si å føle seg vel (“*ingenting som er bedre enn å føle seg vel i arbeidsuniformen*”), som ikke kun er en teknisk egenskap ved et plagg, og sitatet legger også føringer for kroppsidealer i samfunnet for øvrig (“*holde inn magen*”). På denne måten ble arbeidsuniformen brukt som et prinsipp for inkludering i arbeidsfellesskapet og en måte å balansere sin kvinnelighet i en kontekst dominert av maskuline tradisjoner. Uniformen blir slik en viktig tilpasningsfaktor i dette yrket.

5. Uniform som tilpasningsfaktor

Å bruke uniform i arbeidet ble ansett som praktisk av mange grunner. Blant annet var det enkelt med en fast bekledning som ble brukt på arbeid, noe som flere av besetningen om bord på de to fartøyene trekker fram. Ved å ikle seg en pålagt arbeidsuniform lettet det forberedelsene til jobb ved at de visste akkurat hva de skulle/måtte ha på seg. Flere av kvinnene i besetningen satt pris på å slippe å bruke tid foran klesskapet for å plukke ut et arbeidsantrekk. Det sparte også deres sivile bekledning for smuss fra arbeidet og kostnader ved innkjøp av nytt tøy. Enda viktigere var det likevel at alle om bord benyttet samme bekledning fordi det satt rammene for arbeidsfellesskapet, uansett kjønn. Samtidig var det generelt et problem med å få klær som passet fordi det var få størrelser å velge mellom.

Den kvinnelige offiseren som i sitatet ovenfor forklarte at hun syntes det kvinnelige tjenesteantrekket var rart og passet dårlig, antydte også at den kvinnelige formen forsvant helt gjennom mannsuniformen. Den ga henne ikke anledning til å vise at hun var kvinne. I en studie av Gro Beate Drege og Beatrix Nyttिंगnes om kvinner i politiet uttalte en av politikvinnene: “Får på deg vesten, du blir veldig kjønnsnøytral, slips, vernestøvler og belte fullt av ditt og datt, du er ikke mye kvinnelig i uniform. Uniform er maskulint” (1999: 43). Uniformene kler således menn til profesjonelle menn, mens kvinner kles til profesjonelle personer gjennom feil kjønn. At uniformene i Sjøforsvaret kan sies å ha som effekt at kvinner ikles feil kjønn, bekreftes gjennom sitatet fra den kvinnelige offiseren. Dette dreier seg likevel ikke kun om passform og funksjonalitet; sosiale og symbolske aspekter spiller også en stor rolle.

Et gjennomgående trekk blant kvinnene på minefartøyene var evnen til å kunne tilpasse seg sin arbeidskontekst. Å kunne gjøre viktige fysiske, sosiale og profesjonelle tilpasninger til den mannsdominerte arenaen var viktig for å bli akseptert som en likeverdig arbeidstaker. Når det

gjaldt den sosiale tilpasningen fortalte kvinnene på hver sin måte om en krevende arbeidshverdag. Når kvinner entret den mannsdominerte sfæren, skjedde det noe – både med kvinnene og med mennene. Kvinner fortalte historier om hvordan de følte at de hadde måttet jobbe ekstra hardt for å vise at de kunne gjøre jobben de var satt til å gjøre like godt som mennene. De hadde måttet “tåle” et hardere miljø med griseprat, historier om “typiske kvinnfolk” og en til tider ekstremt direkte språkbruk. Samtidig måtte de bruke den samme uniformen som menn til tross for at det ikke passet deres kropper. Tilpasningen var dermed av både fysisk og sosial art.

Menn fortalte på sin side om hvordan de forsøkte å begrense praten sin, og ta de tyngste takene og oppgavene, for å gi sine kvinnelige kollegaer en hjelpende hånd. I dette skildres en endringsprosess som best kom til uttrykk i beskrivelsene av, og fra, den kvinnelige delen av besetningen. Vanskelige perioder i starten av et arbeids- og/eller utdanningsforløp, hvor kvinnene var i mindretall, hadde formet dem og deres syn på seg selv. En av kvinnene om bord beskrev det på denne måten:

... jeg tror jeg er blitt mye tøffere i trynet, mye mer hardhuda. Så jeg vil jo egentlig kanskje beskrive meg sjøl som gjerne litt mer... tøffere i kjeften enn mange andre gutter ombord. Og det kan jo veie for og imot for all del, men du blir litt sånn at du bare ikke blir tråkka på så lett. Når du da kommer i sivilt, og du merker forskjell på mine venner hjemme i samme aldersgruppe som jeg er i, jeg føler ikke nå lenger at vi er helt... jeg føler meg veldig mye eldre. [...] Ja, jeg tror det er som kvinne og, med erfaringer, alle opplevelsene jeg har hatt, all motgangen og medgangen og sånn, har formet meg som en person (Kvinnelig fenrik).

Kvinnene oppga også at de følte de måtte jobbe mye hardere enn sine mannlige kollegaer for å vise at de kunne gjøre en god jobb. Dette ble bekreftet av mennene om bord på fartøyet. Når det kom en kvinne om bord ble hun ofte vurdert strengere ut fra om hun var skikket til arbeidet, og tålte en ekstra stor arbeidsbelastning. En mannlig matros uttalte at dersom det kom en kvinnelig matros om bord fulgte han litt ekstra med på henne. Han forventet ikke det samme av henne som av en mannlig matros, men kravene til henne var høyere. En kvinnelig matros som ikke innfridde kravene ble veid ut i fra at hun var kjønn, en kvinne; “ja, ja, jente!”, mens en mannlig matros ble veid ut ifra sin personlige egenskap, “latsabb”.

At det var innført kvotering av kvinner i Forsvaret gjorde dette spesielt utfordrende for kvinnene. De måtte i enda større grad enn i andre mannsdominerte yrker bevise sin kompetanse og forsvare sin rang. Dette var grunnen til at noen av kvinnene var imot kvotering. Igjen ble ønsket om å ikke skille seg ut gjeldende:

Eg e mot kvotering og imot eget jente/kvinne-opptak, fordi eg syns det setter oss til siden og i en særstilling, som vi ikkje har behov for når du jobber i det yrket til vanlig. Da har du på en måte lyst til å være likestilt. Og jo flere sånne ting som blir gjort, som roper ut: Nei, dokker en annerledes... Jo verre syns eg egentlig det e. Eg syns det gjør oss en bjørnetjeneste (Kvinnelig offiser).

Kvinnene var i utpreget mindretall på minefartøyene; fra tre til fem kvinner blant femti til seksti menn, og det var heller ikke gjort spesielle tilpasninger eller reguleringer til dem om bord på båtene. Det var ingen rene kvinnelugarer, og de delte lugar med opptil fem mannlige kollegaer. Dette var både fordi kvinnene selv ønsket det og fordi det vanskelig lot seg gjøre på en annen måte i et ellers trangt bebodd fartøy med lugaroppdeling etter rang. Å passe inn ble derfor en viktig faktor. Med dette som bakgrunn var det forståelig at kvinnene selv ikke tok til orde for å fremme sin posisjon som kvinne i en mannsdominert kontekst, men heller jobbet for å få aksept i det fysiske og sosiale arbeidsmiljøet. I hvert fall i begynnelsen. Det å dele lugar og å bruke samme arbeidstøy som sine mannlige kollegaer ble sett på som en viktig del av arbeidslivet om bord og beskrevet som “*en del av opplegget*”. Kvinnene som søkte seg til Sjøforsvaret burde “*vite hva de går til*”. I dette synes samspillet mellom det materielle og ikke-materielle å ha stor betydning.

Vektleggingen av fellesskap, og arbeidet med å etablere en likhet mellom den kvinnelige og mannlige besetningen gjennom arbeidet om bord, gjenspeiler mye av det Anne Iversen (2006) fant i sin studie av verkstedindustrien med kvinnelig ansatte. Hun identifiserer to aktive diskurser i denne konteksten; arbeiderlikhet og kjønnsulikhet. Arbeiderlikhet viser til fellesskapet som etableres mellom arbeiderne som resulterer i trygghet, samhold, lojalitet og beskyttelse (Neumann m. fl. 2012: 244). Opplevelsen av en felles skjebne gjennom arbeidet gir en opplevelse av likhet og et grunnlag for et “vi” som ikke er kjønnsnøytralt, men som derimot har en maskulin slagside (Iversen 2006: 28). At kvinnene i større grad enn mennene må bevise

sin kompetanse og endre seg til å bli tøffere i kjeften, og tåle mer for å bli inkludert i fellesskapet, viser til denne maskuline slagsiden.

På minefartøyene var det også en utbredt forståelse av kjønn som grunnleggende forskjellig, noe som viser til kjønnsulikhet som var den andre aktive diskursen Iversen fant i sin studie. Dette resulterte i “en forståelse om at kvinner og menn gjør forskjellige ting, passer til å gjøre forskjellige ting, tenker forskjellig og ikke minst handler forskjellig” (Iversen 2006:29). Om bord på fartøyene kom dette til uttrykk gjennom en grunnleggende forståelse av at arbeidet som ble utført var av maskulin art og at kvinnene derfor var mindre skikket til å utføre arbeidet enn menn. Det ga også utslag i et syn på kvinner som i sin natur var utpregede ordensmennesker, tålte mindre tilsnakk, var jålete og opptatt av sminke og interiør. Mennene derimot var i følge dette synet grove i sine uttrykk både av verbal og fysisk art, og de likte å snakke om damer og biler. I sin rendyrkede form synes det dermed som om kvinnelighet faktisk er en hindring for inkluderingen til fellesskapet. Anstrengelsen for å bli “en av gutta” og å passe inn speiler dermed tilpasningen kvinnene gjør og understreker betydningen av denne diskursen om arbeiderlikhet i en kontekst av kjønnsulikhet (Neumann m. fl. 2012: 245).

Tilpasningen som kvinnene hadde måttet gjøre gjennom skolegang og yrkesvei danner således en viktig kontekst for arbeidstøyet. Ikke minst var den fysiske tilpasningen ved bruk av uniformer en avgjørende forutsetning. Å kle seg i en arbeidsbekledning som var beregnet på menn og maskuline tradisjoner var forventet av dem. Ikke minst var dette noe kvinnene selv påla seg for å bli tatt på alvor som en profesjonell arbeidstaker og del av fellesskapet. Ansvar for å passe inn falt helt og holdent på kvinnene selv, mens det var opp til de mannlige kollegene å avgjøre om kvinnene passet inn eller ikke. Først når kvinnene hadde vist at de var en av gutta, ville de kunne motta sine mannlige kollegers anerkjennelse (Neumann m. fl. 2012:248).

6. Uniformen som taus tilpasning

Materielle objekter fungerer som en setting, skriver Miller (2010:50), de gjør oss klar over hva som er passende og upassende. Men som mye annen taus kunnskap virker de best når de er uartikulert og utfordret. Som et resultat av tilpasningen til yrket og den sosiale konteksten hadde kvinnene selv vent seg til dette og reflekterte i mindre grad over tøyet som ble gitt dem. Taus kunnskap, teoretisert av Michael Polanyi (1966), er en type kunnskap som ikke lett lar seg artikulere, men som ligger som forutsetning for menneskelig handling, væren og viten. Gram-

Hanssens begrep om “kroppsliggjorte vaner” og “institusjonalisert kunnskap” (2011:65) innenfor praksisteori favner likeledes denne ikke-refleksive “kroppsliggjorte” interaksjonen med det materielle. Uniformen er del av en slik taus setting, de er noe som blir tatt for gitt og danner ved det rammen for arbeidshverdagen i yrker som ikke har for vane å artikulere sin kompetanse på klær.

Andrewes (2005: 32) hevder at det ikke er kun kroppens utseende som endres av klærne, men at noe også endres innad i kroppen. Dette gjør klærne desto mer kraftfulle. De bestemmer store deler av arbeidet som gjøres, men vies ikke mye plass i diskusjonene rundt hva som utgjør arbeidslivet, annet enn når det dreier seg om sikkerhet og helse. Det kan tenkes at kvinnenes bruk av uniformer ikke kun utgjør en visuell likhet, men også at det er med på å kle kvinnene sosialt og kroppslig inn i et fellesskap. Det materielle har på denne måten en viktig funksjon, både i en sosial-symbolsk og praktisk sammenheng, som ikke kan skilles fra hverandre.

Både den kvinnelige og mannlige besetningen reflekterte i svært liten grad over uniformene som bra eller dårlig. Det var derfor tidvis vanskelig å snakke om uniformene de bar hver dag, fordi kunnskapen var stum og lite artikulert og reflektert. Dette løste vi gjennom metodene i garderobestudiene, ved å knytte fortellinger om uniformene nærmere de konkrete arbeidssituasjonene de tok del i. Det faktum at svært få, om noen, hadde spurt etter annet og mer passende tøy, uansett hvor lite fornøyd de var viser en utbredt oppfatning om at de tok til takke med det de fikk utdelt og kunne bestille. Det var også slik at de kvinnelige arbeidstakerne helst ikke ville skille seg ut ved å be om spesialtilpasset tøy fordi de var kvinner. Dette føyer seg inn i tilpasningsdiskursen – hadde de valgt dette yrket, måtte de ta de forutsetningene som kom med det.

Et av de viktigste symbolske trekkene ved uniformen var således at den fungerte som en måte å kle seg inn i et fellesskap både fysisk, sosialt og profesjonelt. Dette betegner Jennifer Craik (2005) som uniformens “åpne” betydning. Det ga dem en enkel måte å kle seg visuelt som “en av gutta” og ga dermed en mulighet til å skille seg minst mulig ut. Dette var en vel så viktig funksjon ved uniformen, som at den skulle sitte godt, føles god og ha en optimal funksjonalitet. Vi fant at dette ofte førte til at kvinnene selv underspilte en side av dem som tenderte mot å fokusere på deres eget utseende på arbeidsplassen. En utbredt holdning var, av både av menn og

kvinner, at “jålete jenter passer ikke inn, man må tåle å bli møkkete” og at dersom kvinnene viste seg å være for opptatt av hvordan de så ut så passet de ikke inn.

... e syns ikkje du bør blande inn altfor mye personlige ting. I hvert fall ikkje som jente heller. Det e noen som gjør veldig mye utav det liksom. [...] Store øreringer og veldig mye sminke, veldig oppsatt hår... [...] Og e vil ikkje ha en uniform som e helt annerledes enn det alle andre går i liksom. Da tror e e hadde følt meg mer utenfor. ... Så e syns det e helt greitt å ha enkelte ting som sier at du e en kvinne, det e ikkje dumt å skille seg ut sånn, men ikkje for mye heller. (Kvinnelig offiser)

Å være innenfor og utenfor på samme tid illustreres godt i dette sitatet fra den kvinnelige offiseren. Hvordan man ikke burde være blir her beskrevet og begrunnet som en oppvisning i måtehold og mestring av å balansere kvinnelighet. Bruken av uniformen var en måte å signalisere ønsket om å passe inn og klare seg selv, samtidig som den tok avstand fra kjønnsstereotypen “jålete kvinnfolk”.

Flere av kvinnene som pekte på viktigheten av å passe inn blant sine mannlige kollegaer hadde likevel langt hår, brukte smykker og sminket seg. Dette kan sees som en måte å feminisere uniformen og sitt utseende. Borrelåsen ga en mulighet til å fremheve kroppslige kvinnelige trekk med innstrammingen i livet eller den kunne forbli uinnstrammet og dermed gi en tilnærmet lik silhuett som de mannlige kollegaene. På den måten kunne man regulere etter hva som føltes vel.

7. Velkledd og velsett

Den kvinnelige fenriken som siteres i kapittelets innledning presenterer sine tanker om bekledding som kvinne om bord på minefartøyet. Det gjenspeiles gjennom borrelåsen; en relativt beskjeden funksjon i et uniformsplagg, men som likevel viser til to viktige tanker om å bære uniform som kvinne på en mannsdominert arbeidsplass. Den ene peker på motivasjonen for arbeidet i seg selv. Det bør ikke legges for stor vekt på utseende og å ta seg bra ut i arbeidstøyet, men å få jobben gjort på lik linje med de andre ansatte på samme arbeidsplass. Det andre knytter komfort opp mot utøvelse av arbeidet, klærne som bæres bør være funksjonelle og føre til at arbeidstakeren føler seg vel i uniformen. Dette kan både være motstridende og forenende.

At klærne ikke strammer eller på andre måten er i veien for aktiviteter handler om velvære, men velvære er ikke (bare) et spørsmål om behagelige klær, som Ingun G. Klepp (2008, 2009) viser i sin studie av hva det betyr å føle seg velkledd. Hva vi oppfatter med velvære kan knytte seg til flere forhold. Formmessige ubehagelige klær kan også gi en følelse av velvære avhengig av blant annet kontekst og anledning; målet med det uttrykket kroppen og klærne danner sammen. Uniformer, basert på en maskulin tradisjon og helt standardiserte størrelser uten tilpasningsmuligheter føles ikke nødvendigvis formmessig komfortabelt, men kan likevel føles riktig. Dette kommer av tryggheten en uniform bekledning og en uniformert kropp gir. Å være kledd som alle andre på arbeidsplassen betyr at du som kvinne deltar i fellesskapet i form og klesdrakt. Det er det som utgjør følelsen av velvære i denne konteksten.

Følelsen av velvære og komfort vektlegger forholdet mellom kroppen og kroppens nære omgivelser (Crowley 2000: 89). Således omfatter følelsen av velvære forhold som bidrar til at denne tilstanden oppnås (Klepp 2009: 77). Uniformen er et slikt materielt forhold som bidrar til velvære, sett i forhold til inkluderingen i et fellesskap. *“Det er ingenting som er bedre enn å føle seg vel i arbeidsuniformen din, ikke sant. Så jeg prøver jo liksom å stramme inn litt sånn. Men da tenker jeg: Nei, off, da må du holde inn magen din hele tida.”* Den kvinnelige fenriken i innledningssitatet fremhevet at det var viktig å føle seg vel i arbeidsuniformen, men knyttet samtidig ikke velvære opp til bruken av borrelåsen, noe som nettopp var FLOs hovedmålsetning med å inkludere denne innstrammingsfunksjonen i jakken. Hvorfor er det slik?

Borrelåsen ga muligheten til å tilpasse uniformen til kroppen og kroppens bevegelser. Men ved at den hadde potensialet til å gjøre den uniformskledde kroppen annerledes enn fellesskapet ville den også være gjenstand for en motstridende betydning om velvære. Den kvinnelige fenriken forholdt seg til klesnormer som sa at hun ikke burde overdrive og at det å vise for mye av sine kvinnelige former om bord på fartøyet ikke var heldig i en inkluderingsprosess. *“Skal ikke ha følelse av å være på ball med en litt ubehagelig kjole. Det skal være en uniform som er behagelig å ha på”* sier den samme kvinnelige fenriken. Følelsen av velvære synes å være todelt; andres blikk på deg i uniformen og følelsen av uniformen på kroppen. Betydningen av å være velkledd og føle seg vel skiller ikke disse to klart fra hverandre. Kroppen har lært å føle ubehag når normene brytes, samtidig som normene i seg selv har blitt usynlige. I følge Klepp (2009: 90-91) er klærne i så måte ikke kun bærere av en betydning, men også instruerende for

bæreren. Vi lærer om hva det vil si å være kvinne og del av besetningen på et minefartøy gjennom å bære uniformen.

8. Akkurat passe kvinnelig

På samme måte som kvinnene i besetningen om bord på minefartøyene måtte vise at de var verdige jobben, måtte de vise at de mestret kunsten å være velkledd og “akkurat passe kvinne”. Tendensen til å underkommunisere kjønnsulikhet (Iversen 2006: 27-29) var nødvendig for å bli inkludert som en av gutta. Å gjøre seg lekker for den mannlige besetningen var tilsynelatende ikke viktig, eller riktig, slik den kvinnelige fenriken i innledningssitatet pekte på. Det var viktigere å fremme at hun først og fremst var lik i kraft av å gjøre det samme arbeidet enn at hun var av et annet kjønn. Slik kunne det virke som at minefartøyene var en kjønnsnøytral arbeidsplass, men tar en hensyn både til det som ble sagt og det som ble gjort gjennom bekledding viste det seg at arbeidsplassen var gjennomsyret av kjønnsulikhet og heteronormative forventninger (Neumann m. fl. 2012:248).

Om bord på fartøyene var “proper bekledding” et mye brukt uttrykk. Dette dreide seg først og fremst om å være korrekt antrukket i henhold til uniformsreglementet. Ved å være propert antrukket ble det båret riktig uniform til riktig anledning, og her var skillet mellom formelle og uformelle anledninger viktig. Av andre ting innebar det å bære velstelt og rent tøy, at gradsmerkene skulle være plassert både riktig og synlig, og at håret ikke skulle stikke nedenfor luen eller baretten. Altså, at de skulle bære passende tøy til passende anledninger. Å kle seg etter anledning er et viktig premiss også i det sivile liv (Klepp & Bjerck 2010), men med unntak av skikk og bruk bøkene fra 1960 tallet (Døving & Klepp 2009) er det ikke like strengt reglementert og nedskrevet som i Forsvaret.

Kvinner kan verken ha hestehale eller løsthengende flette om bord. I følge uniformsreglementet skal håret være arrangert slik at det ikke faller nedenfor øvre kant av jakken eller skjortekragen. Diskret bruk av smykker og kosmetikk er tillatt. I realiteten betydde det at kvinnelige markører, som sminke, smykker og hårfasong kan sies å være, var tonet ned når de var på oppdrag med fartøyet. Selv om det ikke var vanlig å bruke mye sminke og mange smykker, ble ikke slike markører droppet helt. To av informantene brukte lilla/grå og hvite perleøredobber. En av de kvinnelige informantene som brukte øredobber og ring fortalte at det hendte hun også sminket seg litt ekstra:

Det er mest fordi jeg går med det til vanlig da at det bare er der liksom. [...] Jeg er vant til å bruke det. [...] Av og til så pleier jeg å legge fransk manikyr, ikke sant. Jeg gjør det sjøl.[...] Når jeg seiler, så er jeg ikke så nøye. Da orker jeg ikke å... Da er det for mye, jeg har ikke tid til å jobbe med sminke og fjerne og... Det tar lenger tid da når du går lange vakter og mye å gjøre. Og håret, det... ja, det bare er der. Prøver å få det unna.
(Kvinnelig radiomatros)

Hun var til vanlig opptatt av utseende og brukte ofte tid på det, men la mindre vekt på det når hun var i tjeneste. Denne informanten var representativ for kvinnene når det gjaldt lite bruk av smykker og sminke. Kvinnene hadde langt hår som de pleide å sette opp, gjerne som en løs knute. En av de kvinnelige informantene flettet håret ved en anledning, men lot det ellers henge i hestehale, som i følge reglementet ikke var tillatt. Uniformsreglementets krav om diskresjon i bruken av sminke og smykker ble som regel fulgt, selv om hva som forstås med diskresjon kan være relativt, men kravet om at håret skulle være satt opp slik at det ikke falt ned på uniformskragen, ble derimot ikke alltid fulgt.

Når vi i løpet av feltarbeidet snakket om hvordan kvinnene *burde* være for å passe inn fastholdt den kvinnelige fenriken i innledningssitatet at hverken hun eller andre kvinner kunne komme på arbeid med altfor mye sminke og ordnet hår. Det var vanskelig for henne å forklare hvorfor, men hun fortalte ved en senere anledning at hun var opptatt av hva andre tenkte om henne og var redd for å sende ut feil signaler om hennes motivasjon for å arbeide blant mange menn. Med dette mente hun ivaretagelse av ryktet sitt på arbeidsplassen i Sjøforsvaret, og at hun ved å nedtone sin seksualitet på arbeidet ønsket å vise at hun var på jobb for å gjøre jobben sin på lik linje med sine mannlige kollegaer.

Det var tydelig at det materielle utgangspunkt for symbolsk å vise (eller skjule) sin kvinnelighet lå i den rent praktiske anvendelsen av uniformen og detaljer rundt eget utseende. På den måten viser proper bekledning også til en måte å ikle seg uniformen som ikke var nedfelt i uniformsreglementet. Dette var knyttet spesielt opp til kvinners arbeidsbekledning. Kvinnene måtte vise at de mestret det å kle seg propert i arbeidet om bord på fartøyet. I dette var det ikke rom for bruk av sivil bekledning, utringninger, leppestift, langt utslått hår, neglelakk og andre typiske feminine markører. På minefartøyene måtte kvinnene generelt balansere mellom det å ikke være for feminine eller for maskuline. Selv sa flere av kvinnene i besetningene at det ikke

var tid til stell av hår og påføring av sminke og neglelakk da det uansett ikke holdt etter en dags arbeid. Det ble ikke ansett for proper bekledningspraksis om bord og var noe kvinnene heller tok ut i det sivile liv eller ved tilstelninger som det årlige julebordet for minefartøyenes besetning.

Når det gjaldt pynting og å utvise femininitet så ble det av den kvinnelige besetningen ikke bare skilt mellom jobb og fritid, men også mellom jobb som arbeidshverdag; med uniform og begrenset utøvelse av personlige egenskaper og bekledning, fritid med arbeidskollegaer, hvor de passet på hva de kledde seg i, og fritid med sivile hvor de kunne “være seg selv” eller en ekstremutgave av seg selv (som å pynte seg på byen).

Det jeg merker det på, det er gjerne når vi er ute, så er det alltid et vorspiel ombord, og vi som hører til offiserene, sitter der, og de menige sitter nede. Og da klart er uniformen av, og så er det sminke på, og så er håret løst. Og så har du gjerne en helt annen type sko på, og du har en helt annen type klær. Og da tenker jeg at du blir en helt annen type person. [...] Og de ser på meg på en helt annen måte da. Det er mer sånn at de blir litt sånn skremt... ikke skremt, men bare: Oi, hun er jente, ja. Ok. (Kvinnelig fenrik)

Det årlige julebordet var så å si den eneste anledningen hvor grensene for bekledning og oppførsel mellom jobb og sivilt liv ble overskredet. Dette var den eneste dagen i jobbsammenheng hvor femininiteten fikk fri utfoldelse. Jeg deltok i den siste ukens forberedelsene til årets julebord i det siste feltarbeidet. Det hadde allerede vært planlagt og snakket om i lang tid, men tilspisset seg nok uken før julebordet. Jentene snakket mest om antrekk og tilbehør, mens guttene snakket om maten og drikken, men også noe om klær. Jentene kjøpte inn kjoler, smykker, sminke, strømpebukser og sko. I tillegg tok de spray-tan og fikset neglene som en del av planleggingsfasen. Den ene av kvinnene som snakket om kjolevalgene brukte uttrykk som “*vi kommer til å være såå deilige i kveld*”, noe som aldri før hadde blitt uttalt foran hverken kvinnelige eller mannlige kollegaer.

Det er et paradoks at kvinnene kan legge så stor vekt på utseende på julebordet, men samtidig ha relativt rigide betraktninger om utseende og utøvelse av femininitet og kvinnelighet på jobb. Hvordan kan vi forstå dette? Jeg skal ikke analysere diskursen rundt julebordsarrangementet, men bruker det her for å belyse en kontrast som faktisk finner sted i kvinnenes arbeidsliv. Samtidig som det ikke var viktig å vise at de var kvinner om bord fastholdt kvinnene at de faktisk var kvinner og “*ikke sluttet å barbere leggene bare fordi de hadde kommet inn i*

Forsvaret”. Det dreiet seg dermed om en annen type feminitet i selve arbeidet som ble gjort, nemlig det å være “akkurat passe kvinnelig”.

9. Uniformen som forhandlingsarena

Kvinnene var opptatt av at de var kvinner, og dermed ulike, og annerledes, enn deres mannlige kollegaer. Dette var forskjeller som gikk langt forbi det fysiske arbeidet. Ingen av kvinnene ville bli forvekslet med å være menn, men mente at det i kraft av deres kropp, utseende og stemme likevel var tydelig at de var kvinner. Forskjellene lå ikke bare i kroppslige attributter, men også i små subtile markører på kvinnelighet. Flere av de kvinnelige arbeidstakerne brukte øredobber og kjeder i tillegg til lett sminke. Mascara var mye utbredt, noe som ble forklart med mascaraens evne til å fordekke trøtthet. Med ett unntak hadde alle de kvinnelige arbeidstakerne langt hår. Det lange håret var som oftest løst satt opp i hestehale om det ikke var satt i en knute høyere på hodet i mer formelle anledninger. Således forhandlet kvinnene i besetningen mellom å være en av gutta og markere at de var kvinner. En av kvinnene var helt klar på sammenhengen mellom kjønn og utseende og uttalte følgende:

Selv om jeg jobber her, så er jeg jo jente og jeg liker [klær]. Det er bare sånn vi er, de fleste av oss i hvert fall. Du vil jo gjerne ta deg godt ut da. Så det er klart, det gjør vel noe med trivselen sikkert. [...]. Selvfølelsen. (Kvinnelig OPSOFF)

Denne uttalelsen setter en klar sammenheng mellom arbeid, kjønn, bekledning og selvfølelse. Ikke minst bekrefter den en forståelse av ulikheten mellom kvinner og menn gjennom å henvise til bestemte kjønnsstereotyper om kvinner og menns natur.

I følge Craiks (2005) teori om uniformens åpne betydning og skjulte liv har uniformen evnen til å lette kvinnenens muligheter til sosial integrasjon på arbeidsplassen, samtidig som at det innebærer en nedtoning av det kvinnelige kjønn. Dette viser til en viktig ambivalens i ønsket om å bli inkludert som “en av gutta”. De fremholdt at de ikke var på arbeidet for å vise seg frem som kvinner, de ville bli tatt seriøst som en del av arbeidsfellesskapet. Allikevel var det tydelig at nettopp denne kvinneligheten, som synes å være et hinder for den fullverdige inkluderingen, var viktig for kvinnene. Kvinnene var klare på at de kunne bli hindret av sin egen feminitet for å inkluderes som fullverdig medlem av det maskulint dominerte arbeidsfellesskapet, men

samtidig ønsket de å bli sett som kvinner og ikke som menn. En slik ambivalens ble uttrykt av de fleste av kvinnene om bord på fartøyene.

Det å være “passende kvinne” var mer åpent for tolkninger enn først antatt, og det var noe som varierte fra kvinne til kvinne. Noen var mer opptatt av, og brukte i større grad, typiske feminine markører; men alle var klare på at det var viktig å føle seg vel i arbeidsuniformen og at dette hadde innvirkning på trivsel og selvfølelse. Dette gjaldt både som kvinne og som del av minefartøyet. For å inkluderes var det altså viktig å være akkurat passe kvinne og feminin på arbeidet. Proper bekledning kunne dermed relateres til korrekt bekledning både i henhold til uniformsreglementet og som passende kvinne i arbeidskonteksten. På denne måten var det andre som avgjorde om kvinnene lyktes i tilpasningen, mens de selv hadde det fulle ansvaret for gjennomføringen. Gjennom å utfordre, som i julebordkonteksten, eller bekrefte, gjennom daglig uniformering, den propre uniformeringen satt de konteksten på prøve. Den ble ikke den samme som før, selv om kvinnene sørget for å endre og tilpasse seg det eksisterende arbeidsstedet.

Storm-Mathisen og Klepp (2006) hevder i sin artikkel at en riktig klesnorm for kvinner er kravet om kledelige klær og at dette vil si klær som får fram det ved kroppen som er mest i tråd med gjeldende skjønnhetsidealer. I dette brukes også uttrykket å føle seg vel som en rettesnor. For kvinnene om bord på minefartøyene brukes også argumentet om å føle seg vel, men dette regnes i forhold til deres tolkning om å være en passende kvinne til arbeidskonteksten heller enn i forhold til gjeldende skjønnhetsidealer. Her spilte narrativer som ble fortalt om andre kvinners bekledning i yrket en stor rolle og fungerte som en rettesnor for bekledning. Historier som ble fortalt av både kvinner og menn om lettkledde kvinner og overdrevent fokus på utseende; sminke, hårfrisyrer og velstelte negler de var redde for å brette ga uttrykk for hvilken type kvinnelighet som ikke burde utvises på jobb.

Opplevelsen av ubehag knyttet til balansegangen mellom å kle seg slik en selv har lyst til og å kle seg som omgivelsene, var noe de fleste av kvinnene i Klepps studie oftest fortalte om i relasjon til yrkeslivet (Klepp 2009: 88). Innsatsen i å finne klær de føler seg vel i gjaldt i mindre grad kvinnene om bord på minefartøyene, fordi de måtte forholde seg til et fastlagt uniformsreglement. Likevel var det tydelig i den kvinnelige uniformeringen at det foregikk en stadig forhandling om bekledning om bord. Denne hadde selvsagt uniformen som forhandlingsarena, men bruken av feminine markører var en viktig del av det. Borrelåsen i den

nye uniformsjakken kan sies å være et *resultat* av en fremforhandlet kvinnelighet i uniformen, sett fra FLO. Men den ble også en del av den stadige forhandlingen om kvinnelighet om bord.

Karoliina Ojanen (2009) skriver i sin studie om finske stalljenters bekledning om hvordan grensene for stalljentenes fellesskap reguleres symbolsk ved hjelp av utseende og bekledning. Heller ikke i stallen var det sosialt akseptabelt å se pyntet ut, til tross for fraværet av menn. Femininitet eller kvinnelighet var ikke uvesentlig, det måtte bare utvises på riktig måte, og til riktig tid. Dette krevde en egen skjønnsmessig vurderingsevne og kompetanse som kvinnene opparbeidet seg gjennom erfaring. Det som er interessant når man legger kjønn til grunn for begge analysene er at både fraværet og tilstedeværelsen av menn ga to så like uttrykk. Arbeidskonteksten i Sjøforsvarets minefartøyer og i den finske stallen tolkes som kontrollerende rom der kjønn gjennom bekledning stadig utfordres. I tråd med det Ojanen (2009) fant i sine studier kledde kvinnene om bord på minefartøyene seg i henhold til gjeldende normer på arbeidet og opprettholdt slik den interne ordningen i fellesskapsfølelsen. Dermed ble andres kontrollerende blick avgjørende for hvordan uniformen følte på kroppen, uavhengig av om det var et mannlig eller kvinnelig blick.

Borrelåsen synes å være en løsning for dilemmaet om å ta seg godt ut som kvinne, føle seg vel og samtidig bli inkludert på arbeidet. For dem som ikke synes borrelåsen tråkket over grensen for det propre og passende var den en subtil materiell funksjon som gikk forbi enhver symbolverdi. I kraft av sin innstrammingsfunksjon gjorde den det mulig å ta seg godt ut, men samtidig delta i fellesskapet ved at uniformen ellers var identisk med resten av minefartøyets personell. Borrelåsen gjorde det mulig å variere innstrammingen fra tid til annen. Den la også til rette for en romlighet i uniformen som ellers var bundet av et strengt og fastlagt reglement. Således fungerte borrelåsen som en forhandlingsarena for kvinnelighet.

Romligheten, som kunne brukes både av kvinner og menn, ble tolket og brukt mer strategisk av kvinnene som en oppvisning i femininitet. Det var dette som også gjorde borrelåsen så farlig. Ble den brukt kraftig innstrammet og av en kvinne som allerede inkorporerte flere feminine markører, kunne den tippe lasset fra det propre til det upassende. Dette ble tydelig i det den kvinnelige fenriken uttrykte i innledningen; den kan gjøre kvinnene til utstillingsdokker. Og det var ikke derfor kvinnene arbeidet i Sjøforsvaret. Om ikke kvinnene passet på å være akkurat passe kvinnelige gikk det på bekostning av inkluderingen til arbeidsfellesskapet. På den måten

kunne de heller ikke bli “en av gutta”. Historien om borrelåsen til besvær synes dermed å være en historie om ambivalens. Å være innenfor, men samtidig på utsiden. Å være for mye eller for lite. Spillet om å være *akkurat passe*. En ambivalens som kommer til uttrykk i en liten, men absolutt ikke ubetydelig materiell detalj.

7. Article B

Clothes Matter. Work uniforms in Norwegian male-dominated manual occupations.

Bjerck, M. & Klepp, I.G. Clothes matter: Work uniforms in Norwegian male-dominated manual occupations. Submitted to *Journal of Material Culture* in May 2016

1. Introduction

Clothes are involved in a number of everyday routines (Gronow & Warde 2001) that, among other things, can be characterized as automated and thus invisible even to the person who practices them. The importance of material conditions and artefacts – uniforms and work clothes, in particular – for working life is only to a limited degree taken serious in working life studies. This article will try to fill this gap by asking: What relevance does materiality, in the form of work uniforms, have for workers' everyday work lives? This article addresses this question by comparing some of the structural conditions and constraints framing such clothing with the particular meanings they carry for their everyday users. This article will discuss how work uniforms operate within work practices, and how they affect one another. By doing this, we hope to show that studying work practices through clothing might provide new knowledge about the physical and social aspects of work.

Craik (2005) points to the fact that uniforms signal equality, community, regulation, hierarchy, status and roles, but that they also have “open” and “hidden” lives, or explicit and tacit meanings. One of the explicit meanings may be affiliation to an occupation or company, while a tacit meaning may be male dominance. Uniform and workwear is in many male-dominated manual occupations constructed on the basis of the male body and masculine norms and traditions. This gendering, according to Craik (2005), goes against the intentions of the uniform, which is to visualise hierarchies and push aside individual differences. Looking closer at work uniforms reveals these tacit and explicit relations between work practices, gender constructions and uniformed workwear.

This article is written within a larger ethnographic study that investigates uniform workwear in fifteen different work sites that falls under the categorization *male-dominated manual occupations* in Norway. Here, we will use four occupations spread out across seven work sites. These four are typical skilled manual work occupations based within different work spheres: *carpenters* at construction sites, *process operators* in industrial production, *electricians* in industrial production and *mechanics* in offshore oilrigs. The workwear in the three first work sites have relatively informal structures tied to safety, health and physical work environments. The last have strict demands for workwear and safety that is incorporated into handbooks on safety regulations as well as into on-site, well-established structures tied to the acquisition, redistribution and maintenance of work uniforms.

We want to use these four occupations in order to see if regulation and structures surrounding the work uniforms affect the context-specific uses of work uniforms. Firstly, we will elaborate on the structural conditions and involvement of employers in the implementation, redistribution and ownership of work uniforms. This treats the physical structures surrounding these garments and describes the work uniforms in detail. Secondly, we want to discuss how work uniforms function for the users, namely the workers. Having done that, we will then discuss the implications of using work uniforms and how this challenges work practices and gender constructions at work sites, as they are tied to notions of workers' well-being and appropriate dress. We hope to show how material conditions in the form of uniform workwear have implications for workers' everyday lives.

1.1. Workwear and working life studies

Few, if any studies of have been concerned with workers in outdoor-based male-dominated occupations at the intersection between work, clothes, body and gender. Wolkowitz (2006) analyses body, work and gender in her book about the industry worker, the prostitute and the service worker, but here, unfortunately, clothes are taken out of the analysis. In working life studies in general, concrete bodily experience is given a voice, so to speak, first when it is connected to health and safety. Two examples are Klemsdal's analysis of the construction industry (2003) and Frøyland et al. (2004) whose study concerns dropouts and exclusion in that same industry.

The marginal position of clothes in research on working life can be seen as a result of two different factors. One is that clothing is considered to be a topic of female interest and tied to the domestic sphere (Svensson & Waldèn 2005; Turney 2009), and is therefore omitted in such studies. The other is that clothes have been understood and studied through a particular lens, namely fashion (Klepp 2014; Skov & Melchior 2011), and workwear is not encompassed by this term. This is in line with Simone de Beauvoir's (2000: 13) view of fashion as something that keeps women pinned to a superficial life, away from matters of importance. Still, there are some studies of the relationship between clothing and work. These are mainly within a culture-historical approach, either as studies of the development of clothes for individual groups such as postal services (Larsson 2008), male politicians (Pettersen 2004) or for the police (Finstad 2000; Drege & Nytingnes 1999), or studies where clothes are included as just one of many elements (Conradson 1988).

That there was little or no knowledge of the functional demands and esthetical expectations employees had to their workwear, as well as of the socio-cultural sides of the work clothes in use, was the background for our study of workwear and uniforms in male-dominated occupations. Workwear is an essential part of all workers' physical, social and symbolic daily life. Even so, this is seldom articulated. Research has mainly focused on the way clothes are talked about, rather than the actual use and practice of the clothes. In order to surpass this need for knowledge in such an unarticulated and tacit field, we used methods that put focus on work practices and relations to clothing.

1.2. Practice study and methods

The choice of methods is based on an understanding of practice where materiality is in the center. The term practice is here understood as a fundamental unit of social existence. It is redeveloped from central works of a range of researchers, such as Bourdieu (1977, 1984), de Certeau (1984) and Giddens (1984) who have in common that they pay special attention to routine, shared habits, techniques and competence. The fruitfulness of a practice-oriented approach is that it decentres the key objects of dominant social theories – minds, texts, and conversations – and instead emphasizes bodily movements, things, practical knowledge and routines (Reckwitz 2002: 259).

Reckwitz can be useful in this context as his definition of practice includes materiality: “A routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities ‘things’ and their use, background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge” (2002: 249). Theories of practice aim at overcoming the limitations of the classical models of human action and social order where the social can be understood as more than mental qualities (Shove et al. 2007). For practice theory, “objects are necessary components of many practices – just as indispensable as bodily and mental activities” (Reckwitz 2002) and particular things are indispensable resources for the practice. Shove and Pantzar’s (2005) attention to the Nordic walking sticks show us not only how things are acquired, appropriated and used routinely, but also how the uses of these items allow actors to be actively involved in reproducing and re-inventing the practice itself. Much like the broader scope of this article, they point to the importance of materializing social theories of practice.

In our study of work uniforms, we hope to contribute to the relationship between materiality and practice. When we wanted to gain insight into the practices of work and dress, it was important to be present in the “natural context” where workers performed their daily routines. This made fieldwork a natural choice. We employed three main field strategies: participant observation, interviews and wardrobe studies. These were used in order to gain access to the tacit dimensions of work practices. Tacit knowledge, theorised by Michael Polanyi (1966), is a type of knowledge not easily articulated, but a predisposition for human action, being and knowledge. Gram-Hansen’s notions of embodied habits and institutionalised knowledge (2011: 65) within practice theory also encompass this non-reflective, embodied interaction with the material. Workwear belongs to this tacit dimension as it is taken for granted and thereby forms the frame for everyday work.

Focusing on work practices implied being a participant observer (Bernard 1994) of how workers used their workwear. The practical and functional aspects of workwear in routine work life were important, but also how the clothes took part in relations between workers. In the participant observation, we acted as apprentices and followed workers around in their work sphere, helping with the work they conducted and their daily routines, taking coffee breaks with colleagues and getting dressed in unisex wardrobes. We moved in and out of the participant role to observe and

register behaviour and movement in relation to the clothes at work. In that, we internalized experiences related to the socio-cultural structures of work spheres and had the opportunity to share the experience of working life, even if it was only for a short while.

The research interview is a well-known method. We made use of semi-structured interviews that helped us gain insight into the informants' own world views (Kvale 1997), here focusing on experiences with workwear. We interviewed male and female workers and those who dealt specifically with the acquisition of workwear at work sites. Within the four occupations in this article, we conducted fieldwork at six different work sites: three construction sites, two industrial sites with process operators and one industrial site with electricians. At on- and offshore oil production, restricted access to work locations only allowed us to perform interviews and review photos of what the workers saw in typical work situations. All said, we interviewed 39 workers – of which 22 were women and 17 were men – at eight different work spheres within four occupational groups. However, many more contributed through observation and conversation in the participant observation.

While the first two methods are well known, *wardrobe studies* are probably an unfamiliar strategy for many researchers. Clothing researchers developed it as a direct response to the challenge of overcoming some of the tacit or unspoken dimensions of clothing (Banim et al. 2001; Woodward 2007; Hansen 2008; Klepp & Bjerck 2014; Skjold 2014). This methodological approach facilitates research that grasps the materiality of clothing as an active element in practices. Tying clothes closer to practices and analysing the ways in which clothes interplay with the whole or with parts of the wardrobe can reveal the unarticulated, tacit dimensions of clothing practices. We conducted wardrobe studies of all workwear and private clothes (where possible) by talking about each garment and discussing options for obligatory workwear, how they decided on every day dress, and how work site rules and regulations were abided by or broken.

This enabled a closer look into the repertoires of movement, or the “techniques of the body” as Mauss (1979) would term it. We noted how workwear was used in the work context, how it was integrated with the work and what social relations it enacted. We also registered how men or women wore outfits and how gender was facilitated at the work spheres through garments,

bodily movements and accessories. This revealed tacit knowledge and embodied structures evident in the use of particular work clothes, such as the fact that women internalise bodily repertoires of their male colleagues and that the values embedded in the workwear identify you as an appropriate member of the work environment (Bjerck 2013). Enabling identification and exhibiting (correct) values in a work context was an important issue for the employees' implementation of uniform workwear in the occupations in our study. Descriptions of uniform workwear and the implementation and structures surrounding appropriation, redistribution and ownership will be the focus of the following section.

2. Implementation, redistribution and ownership

Uniforms are, in clothing research, divided into uniforms (such as those for the military), quasi-uniforms (like standardized workwear) and informal uniforms (such as sports equipment) (Craik 2005). This article's concern is the quasi uniforms, which we have termed "work uniforms." The work uniforms at our work arenas were standardized so that management decided what trousers, sweaters, jackets or other garments the workers should wear at work. The work uniforms took part in complex routines and interactions between different owners and users, work environments and social relations, as well as material structures such as wardrobes, washrooms and other facilities.

Small, but important variations could be observed in the workwear that the workers wore in the four occupations studied. At construction sites, most had a two-split dress with work jacket or sweater and work pants, as opposed to a whole jumpsuit. High visibility clothing dominated the workwear for outdoor use, and darker or more greyish colours were frequent for indoor work. This was an occupation where there was much alternation between indoor and outdoor work either on a daily basis or periodically. In industrial production, workwear was also mainly two-split and dominated by required garments. Dark colours, such as black and dark blue was most often used in this occupation, with the exception of the colour red, which was the signal colour for the representatives of industrial safety. This was mainly indoor work without being subject to frequent changes in temperature or weather. Workwear in the electrical industrial site was very similar to that of construction with the same amount of pockets and loops on the trousers, as well as knee paddings and a hammer holder. However, here there were fewer high visibility garments as it consisted of mostly indoor work.

We saw a stark contrast of uniform workwear within the occupations in oil and gas production. Much of the work happened outdoors, but the workers also alternated between indoors and outdoors work. The work also required challenging tasks like climbing in high drill towers to repair and maintain equipment offshore. Here there were strict demands on safety, such as requiring highly-visible and flame-retardant jumpsuits, rules for use and specific regulations for the garments provided by the employers. It seems that the overall intention of the workwear in this specific occupation was to protect the workers in different ways against weather and shifting temperatures, and against accidents and injuries at work.

Much of this resembles uniforms found in the military. What differs is that the military has written rules and regulations concerning its contextual uses and uniform outfits that facilitate proper dress (Bjerck 2013; Vestvik & Bjerck 2012). By regulating how to dress and what to dress in, the employers made choices of the workwear used in everyday work on behalf of their employees. Most of these rules and regulations were less formalised and more implicit in the occupations in our study. Workwear that bear such a close resemblance to regular uniforms was primarily implemented in order to dress their employees similarly. The regulations formed their company profile, a common visual expression for the company's external representation.

The implementation of everyday work uniforms was a relatively new development in many of the work spheres in our study, dating back only a few decades. It was initiated when the workers and work sites became visual to clients and the public, and in at least two cases, it was directly motivated by what was described as unwanted attention towards dress and appearances. The industrial plant producing electrical cabinets introduced obligatory work uniforms when the production site opened up for client and company visits. This led to new demands on the cleanliness and tidiness of the physical work sphere, and came at the same time as a stronger focus upon health, environment and safety at the work site. The production site had previously been home to wet clothes, jackets and other clothing items, as well as a large collection of work items. Demanding predefined uniformed workwear for all workers led to rules about leaving private clothing at home and requiring work clothes to be confined to on-site wardrobe facilities. Rules were also established for keeping work spaces clean and for workers apparel to keep neat through the workday. In this way, the company's managers were able to control what was

displayed and what was hidden, both at the production site and through what employees wore to work.

Uniforms were similarly introduced in the industrial plastic production site in the 1990's in an effort to broadcast the values that the company felt was fitting for their occupation. Many of their industrial workers at that time had developed what the current manager termed an "unhealthy dress behaviour" in that the male and female workers competed in dressing the most sexually offensive. At one point, a female worker arrived without underwear and revealed private parts of her body. This caused a great disturbance, and the male workers responded to her behaviour by dressing in t-shirts with sexual messages printed on them. After claiming that this distracted attention away from the work and thereby decreased productivity, and after a company visit at to the work site in which guests commented on these dress practices, the management decided that it was time to dress their employees alike. Managers at this industrial site introduced long work pants, t-shirts and sweaters for all workers with company logos as the obligatory work uniform. Dressing employees in predefined garments was a way to neutralize gender aspects by removing clothing distractions and steering attention towards work.

In summary, regulations set by employers in all four occupations that decided for workers what clothes they should wear everyday to work was intended to steer workers' attention towards work and to protect them physically from harm. Work uniforms was generally characterized through high-visibility and flame-retardant fabrics, functional garments with zippers, pockets, loops, knee pads, double fabrics and seams, as well as equipment such as gloves, helmets, protective boots and goggles. However, the uniform workwear we saw also consisted of non-protective work pants in cotton and polyester, cotton t-shirts and sweaters with company logos, plain sweaters and hoodies. Coupled with private, civilian garments and personal hair accessories, this completed the work wardrobe of a worker in the occupations of our study.

Andrewes (2005) argues that clothes have an ability to redefine the body and claims that uniforms constitute the profession and redefine the civil person as the professional. Harvey (2007) likewise shows how clothes, by covering or revealing may work as a way to embody values. The narratives above are examples of how employers use clothing to try to control their employees and show not only examples of decent and indecent workwear, but give direction on

how to be an appropriate woman and an appropriate man in the work context. These narratives are a useful source of knowledge about dress and behaviour, and point to the production of specific work practices through material objects. Furthermore, they illustrate how the implementation of uniform workwear disciplines the individual into forming who we are and how we practice our identities (Craik 2005: 4). The next part of this article will deal with how the structures surrounding work uniforms reproduce practices that keep workers' behaviour and dress under the control of the employers/management, ensuring employees are dressed accordingly and focused on work tasks.

2.1. Acquisition and redistribution

In all occupations presented in this article, the employer acquired the garments for their employees, but the way that this was organised varied. Some had all work clothes taken care of by the employer. Others had a defined budget and ordered at set timeframes from catalogues provided by specific clothing manufacturers. Others had neither a set timeframe nor a fixed budget, but ordered within the budgets connected to specific projects or according to ongoing needs. It was common for all of those who had most or part of the workwear paid for by the employer to have someone higher up in the administrative system, management or department make the overall decisions about the acquisition of workwear. These decisions concerned the choice of clothing manufacturer, economical frames, the overall appearance and specifics of the acquisition such as colours, types of garments, quality of fabrics as well as additional equipment such as gloves, protective boots, helmets and high visibility vests.

In the offshore oil platform, those who worked with the production of oil wore orange jumpsuits with the company's logo. These jumpsuits took part in a complex system for acquisition and redistribution. The acquisition of the jumpsuit and decisions regarding form, size range, fabrics and colours took place far away from the platform and its employees. About every four years, the large operating company developed a specification for the jumpsuits and placed the production and distribution of them up for public bidding. Those who won this bidding produced and delivered jumpsuits for the entire span of the four years according to the standards and prices set by the operating company.

The operating company's central office was responsible for services related to washing, maintaining and redistributing these jumpsuits to all their offshore and onshore oil-producing plants. For example, a female rig mechanic who worked offshore would receive a jumpsuit when she arrived for her two-week work turn at the oil platform. She would pick a newly washed jumpsuit from a large depot of jumpsuits arranged only by size (not length) in a container placed on the oil platform. At the end of her twelve-hour shift, she would dispose her used jumpsuit; and at the start of her next shift, she would pick out a fresh one. Sometimes she would also change jumpsuits several times a day depending on the amount of oil spilled on the jumpsuit. The system of acquisition and redistribution is significant in this work context. With the responsibility for washing, maintaining and redistributing jumpsuits located at a distance at the company's central office, the female worker had little to no influence over the work uniform she wore every day. As such, the jumpsuit took part in a system of circulation that ensured that the oil workers on the platform were visually dressed alike and had clean and secure work uniforms every day, but which distanced the work uniform from its wearers..

Even though there were differences in the acquisition and redistribution of work uniforms within these different occupations, the process of acquisition was out of the hands of those who wore them every day. Systems of uniform workwear were set up in order to enable employers or management to control how employees dressed with control over form, function and aesthetics. As such, they were able to keep an ongoing control over their workers' everyday lives through their work uniforms. However, this created a distance between producer and the end user, in which the workwear would not be optimal for users or work tasks. This was evident in the observation of work positions and occupational-specific work tasks, physical work environments, work arenas (with regards to inside/outside locations, temperature, and weather), specific equipment used in the work tasks, and shape and form of the workers' bodies.

That the workwear was not always an optimal fit to occupations and everyday work tasks was evident in the oilrig and particularly when compared to their safety instructions. The rig mechanics' work jumpsuits lacked basic functions that were necessary for them to do their jobs *and* maintain safety for themselves and for others. The main job of an oilrig mechanic is to maintain and repair drilling equipment on the oilrig. Among other things, this implied that the mechanics needed to climb high in drilling towers with the equipment they needed, sometimes

in storms and heavy rain. Climbing up the stairs of the high towers was challenging but this was less due to the weather conditions and more due to the jumpsuits lacking specific functions and solutions needed for securing equipment. The rig mechanics often carried tools, oil bottles and safety equipment. Dropping some of this equipment from above was a huge safety risk as they were high up and there could be people on deck below. They were therefore obliged to secure their equipment. Without suitable loops, pockets and other ways to secure their tools on their jumpsuits, the rig mechanics solved this problem by zipping the tools and equipment inside their jumpsuits and private undergarments. By doing this, they risked dropping the tools and being penalized by their employers. The distance between the design of secure equipment and workers' abilities to be secure in practice shows that abstract notions of safety do not take into account the importance of work uniforms when it comes to on-the-job security.

It seems that the visually unifying profile that the work uniform provides is more important than securing employees. The example above shows how work uniforms function when they are designed to cover a broad spectrum of occupations, work tasks and employees in all shapes and sizes. The work uniform's failure to meet safety demands and safeguard the workers' good health was not unique to this occupation. Although organizing acquisition and redistribution of work uniforms might secure a visually similar aesthetic profile, it also seems to stifle the goal of providing garments that are specific to the workplace and to the individual worker. The fact that these garments based their design on masculine norms, shapes and sizes exacerbated the above problems for female workers.

The challenge with the organisation of the acquisition, redistribution and ownership is that it complicates everyday work life for the workers. It limits access that workers have to functional workwear. By *functional* we refer to garments specifically designed for an occupation or an individual. The companies decides on the apparel for work, which again affects workers own ideas, knowledge and experience about the work uniform in use. Work uniforms provided by employers who had no specific knowledge of or interest in clothes and equipment may negatively affect the security and physical well being of workers on the job site. This kind of (distanced) oversight does not take into consideration how work uniforms participate in complex practices at work. The contexts in which work uniforms are used are therefore important to look closer at. This is the focus of the next part of this article.

3. Socio-cultural implications

Socio-cultural implications refer to the part of work that involves a combination of social and cultural factors. Here, work is a socio-cultural entity where we consider the material, in terms of uniform workwear, to be central in the affiliation and sense of belonging to a work sphere and occupation. In this, work is a context-bound social and cultural space that forms different work practices. We do not contrast the socio-cultural to physical implications at work. On the contrary, these two are empirically engrained in the understanding of what makes up every day work for the workers. While the section above dealt with the conditions that structure work uniforms ensuring that workers dressed similarly and according to employers' intentions, this part will look closer at some of the socio-cultural implications of work uniforms. More specifically, it looks into notions of how to dress appropriately in the work context, with specific emphasis on gender constructions.

Workwear constitute work for its workers. Without workwear, it is hard to envision the practices of work. The implicit and explicit practical knowledge stored in uniform workwear is "central in the process of creating interaction, continuity and reality" (Halkier et al. 2001: 6). As such, there are specific socio-cultural implications of dressing in workwear that give directions to workers' habits, routines and bodily repertoires. In the way that clothes are carried on the body and are decisive for the way the body is seen and understood by ourselves and by others can be considered personal. Even so, focusing on shared, collective practices show that few things related to wearing work uniforms are simply individual and personal.

When comparing garments used in "one-gendered jobs" (Dahlerup 1989), it becomes apparent that workwear is an important part of defining occupations and workers in their everyday lives. One of the three female carpenters in our study had two jobs. She worked as a carpenter during the daytime, dressing in high visibility garments including an orange jacket and pants, protective boots, a helmet, gloves and, at times, protective goggles. In the afternoon, she worked as a waitress in a formal restaurant, dressing in a white shirt, black skirt and high-heeled shoes. These are different gendered jobs¹¹ and this is reflected in the work garments she wears in the different work contexts. The female carpenter/waitress explained that she felt that dressing in

¹¹ «Gendered jobs» are used here to refer to the horizontal segregation in the Nordic labour market where certain occupations are dominated by and associated with one sex (Bloksgaard 2011, Dahlerup 1989).

the work uniform as a carpenter was a way for her to dress in character where she became a bit tougher in the masculine work uniform. It was a way to adjust to the male world. Both work uniforms felt comfortable, but she was very explicit about changing character and that the dress had significance for “how she behaved in the roles.” In other words, workwear became a way to embody work practice.

Embodied habits tied to clothes consist of all the unconscious routines that we teach, carry with us and perform every day without consciously reflecting upon them (Strandbakken & Heidenstrøm 2013). Employees within the occupations we studied silently appropriated their obligatory work uniforms. They appeared to reflect little on the garments provided for them and the ways that the work uniform affected their life at work. Workwear based on masculine traditions and standardised sizes and lacking the possibility for making adjustments may not feel comfortable for female wearers. However, learning a work practice also implies learning that comfort may depend on the unifying feeling that a uniform provides. That the clothes intended for work were not too tight or in other ways prevented activities in the work context was a question about well-being, but well-being was not (just) a question of comfortable clothes (Klepp 2009; Klepp 2008). *Comfort* is connected to concepts of correct normative dress, something that has different content according to the work contexts it appears in. Uncomfortable clothing can produce a feeling of well-being depending on the context and occasion, and in the expression that the body and the clothes form together.

Andrewes (2005: 32) claims that it is not just the appearance of the body that changes through clothing, but that something changes inside the body as well. This empowers the clothes even more. The learning process of being a female worker in a male-dominated occupation assigns dress the role of a silent structure. This allows the wearer to participate in work practices that amongst other things governs conduct and assigns appropriate dress. However, ideas and statements of the uniform workwear were ambiguous. They were both attached to notions of well-being when dressing to be a part of a community at work, but could also be appropriate and inappropriate at the same time, depending on the context within which they appeared. We will discuss this further in the following section on appropriate dress.

3.1. Appropriate dress and gender

Dressing the body in work uniforms implies incorporating knowledge of how to be an appropriate worker. This reproduces a social order and shows “which desires are regarded as desirable and which norms are considered to be legitimate” (Reckwitz 2002: 245). For the women in the study, the argument for comfortable dress related to focusing on work tasks and being an appropriate woman. As a manager at an industrial production site claimed, if workers were too occupied with how they looked and what they wore, they had no place in a male-dominated occupation. The work they did was much more important than the clothes they wore, she stated. Appropriate dress implied the use of workwear that did not attract too much attention towards the wearer and his/her appearance.

A female carpenter expressed the embodied know-how of her work practices by comparing dressing for work to dressing in her private life. She told us that while in her spare time she would wear a tight fitting tank top with narrow straps on a hot summer’s day, she would immediately change into a t-shirt that covered most of her upper body and parts of her upper arms when she entered work. This was explained by referring to a feeling of appropriateness in work practices; she did not want to remove too much of her work clothes nor reveal much of her body at work. Her boss at the construction site similarly described limitations for female dressing at work in that they should not reveal too much of their bodies and cover themselves in workwear. Otherwise, male workers might not be very productive at work and female workers could get a bad reputation, he claimed. This resembles the motivation for implementing workwear at one of the industrial production sites. It points to learned bodily and mental behaviours connected to concrete physical objects that place comfort and well-being as mental and embodied flexible categories.

There are no observations that show that male employees are not able to do their job properly if women show off parts of their body, but it is a fact that both women and men in our study hide their bodies in workwear (see also Neumann et al. 2012). Work uniforms show a distinct affiliation to a company or occupation and enable the workers to dress into an occupational category. This is one “open” and explicit meaning of a uniform (Craik 2005). However, participating in the work practice also implied that performance related to the heteronormative¹²

¹² Judith Butler’s (2006) term heteronormativity refers to an empirical understanding of how women and men deal with gender in the work practice where social norms and institutionalized assumptions treat heterosexuality

female gender had to be toned down. This is part of the “hidden” and tacit life of the uniform (Craik 2005.). It has as a discursive function to curb men’s desire and, in doing so, secure effective productivity (Neumann et al. 2012: 250). Being dressed as all the others in a work sphere meant that workers reproduced the work practices in form and attire. This is what shaped the feeling of well-being in this context.

To point to the cultural and social expectations we have towards women and men at a generalised level (Neumann et al. 2012: 243), the terms “masculine” and “feminine” make sense when they are interpreted in relation to each other (Connell, 1995: 68). Gender is here understood as relational (Connell 2002), and as process, something that is done (Butler 2006; West and Zimmermann 1987). Butler’s term “heteronormativity” show how ideas about heterosexuality organise people’s lives in modern society (Butler 2006). This is particularly true when it comes to occupations that are segregated as masculine or feminine, so-called “horizontal segregation” (Dahlerup 1989). Certain occupations are dominated by and associated with one sex, which attracts higher status and more prestige to the jobs men do (Bloksgaard 2011). The occupation of electrician is one such gendered-dominated, male occupation in Norway¹³. Even though, in the constructivist gender perspective that we follow in this study, you can be a man or a women in several different ways, it is nonetheless central that there are very specific frameworks as to how we can act as men or women if we want to be perceived as meaningful in society (Bloksgaard 2011). These cultural ideas forms expectations related to behaviour that are appropriate and inappropriate depending on whether you are a man or a woman (Bloksgaard 2011; West & Zimmerman 1987).

In the industrial plant producing electrical components, one of the two female electricians described the use of the company’s workwear as a burden. This was related to the workwear in itself and in what the clothes represented to her and to others who observed her. For her, the work uniform was primarily problematic when she moved outside of the production area, which was her everyday work sphere. An arena where this was particularly visible was in the canteen where everyone in this particular electrical company gathered to eat their lunch. Here top-level managers, lower-level managers, general administration, engineers and electricians congregated.

as the norm and variations from this norm as deviant. Butler uses the term “heterosexual matrix” as a way to explain the cultural process that neutralizes body, gender and desire (Butler 2006).

¹³ As opposed to in Romania where it is a gender-mixed occupation (Bloksgaard 2009)

In this large, open-aired space, all variations of daily work clothing was visible: suits, ties, jeans, shirts, jackets, t-shirts, skirts, knit sweaters, sweatshirts bearing the company logo, different elements of uniform workwear in combination with private garments and full uniformed workwear. The garments in the room varied, but the division between private work clothes and uniform workwear was most visible. The female electrician was very preoccupied with the number of garments that were private (optional) and those that were uniformed (forced), and that this amount was associated with the type of work position within the company. She claimed that the higher up in the hierarchy you are, the higher number of private garments you can wear.

The division between areas where the female worker found her workwear appropriate and inappropriate became apparent both through observation and during conversations. The female worker rarely ate her lunch in the canteen and she changed her clothes before and after traveling to and from work. For her, the uniform workwear's appropriateness was confined to the particular work sphere of the production area. She explained that she did not run personal errands like grocery shopping in her workwear. To her, the choice of work and its connected status became too visible and shameful. Her younger male colleague, on the other hand, explained that he did all sorts of private matters wearing his uniformed workwear. He claimed that it provided him with positive feedback from women and he seemed to be proud of the status and attention he claimed by wearing his work uniform. That the exact same uniformed workwear could have two such different implications for the wearer signify a connection between gender and the socio-cultural connotations that workwear represents.

Being dressed in uniform workwear outside the work context could be problematic for the female electrician because it broadcasts to observers an untraditional choice of occupation and a kind of femininity that does not comply with heteronormative expectations in society (Butler 2006). The expression that workwear and work practices form *together* is thereby what determines whether the apparel is considered appropriate and comfortable for this female electrician. This shows that uniform workwear is interrelated and depends on the work practice and its context in order to be appropriate. Material objects themselves also work as a setting in that they make us aware of what is appropriate and inappropriate, Miller (2010: 50) writes. However, as much other silent knowledge it works best when it is unarticulated and unchallenged. As practices are routinized bodily activities, a social practice is the product of

training the body in a certain way so that when we learn a practice, we learn to be bodies in a certain way (Reckwitz 2002: 251). To our female electrician, this learned practice restricted her to a very specific work context.

The use of obligatory workwear contributes to reproducing work practices and silent structures that surround work clothes. Ultimately, these are important aspects in how workwear impacts the everyday lives of workers. Clothes are of central significance here, as a way to subordinate and establish community. As such, workwear has an important function for practices at work, both in a social-symbolic and practical connection that cannot easily be separated. In this way, work practices have been tied to notions of comfort and appropriateness that reproduce practices through materials such as those found in uniform workwear. Work practices denote ways of being and doing work in a specific context, and at the same time, set guidelines for how to embody and act out gender according cultural and societal expectations. Practices are reproduced through imitation, but they may also involve adjustment, interpretation and alteration (Halkier 2011: 9). Work practices and the notions of appropriate workers was in this way challenged and negotiated through workwear.

4. Conclusion

This article has tried to answer what relevance work uniforms has for workers' everyday lives. Initially, it seemed that the primary function of uniform workwear was to provide the wearer with a specific form of authority and affiliation with a group. It had the potential of giving the wearer a common aesthetic, an ability to identify with an occupation and rapid recognisability. However, clothes should not be reduced to wearers of symbolic messages, for as Miller formulates, "The sensual and aesthetic – what clothes feel and look like – is the source of its capacity" (2005: 1). Systems surrounding work uniforms were arranged so that they complied with the motivations for implementation. This means that decisions surrounding acquisition, structures surrounding redistribution and ownership of the garments were placed out of the hands of the end user. This enabled the employer to maintain control over the specific form, function and aesthetic character of their workers' clothing. Through that, employers continuously renegotiate everyday work on behalf of their employees.

This complicated daily life for many workers. In particular, the tacit meanings they attached to their work uniforms through their ways of using them denote negotiations of gender and constructions of appropriateness. Comparing how the garments were supposed to function in everyday work life and the structural conditions for this predefined work uniform with their significance in the work context, makes evident that the way work uniforms are dealt with and what garments are made available to the employees has connotations for how workers understand themselves and others in their everyday work. We might say that material preconditions lay the foundations for one's socio-cultural understandings of work life.

Altogether, this article point towards important factors in how clothing functions in work practices. Clothing matters within a work sphere as it sets particular frames for work practices, both in how it is structurally conditioned and how workers appropriate it. It is a shame that clothing remains a "ghostly presence" (Woodward 2005: 131) both among people in the occupations in the study and within much materially-oriented work research. As much as clothing is a promising topic for the study of practices, practice theory is opening up exciting new ways to understand clothing.

8. Article C

A Methodological Approach to the Materiality of Clothing: Wardrobe Studies.

Klepp I.G. & Bjerck, M. (2014) A Methodological Approach to the Materiality of Clothing: Wardrobe Studies. In *International Journal of Social Research Methodology*. 17 (4), 373-386

1. Introduction

In this article, we will discuss analyses of relationships between clothes, and between the clothes and the user through a method, which we call the wardrobe studies. More specifically, we will discuss how this method can contribute to increasing the material element – as opposed to the symbolic element – and how this method may be a fruitful approach to other research fields. Wardrobe studies are a methodological approach that analyses the way in which clothes relate to each other on the whole or in parts of the wardrobe. The term wardrobe may be taken literally or metaphorically as one may have a number of wardrobes for various occasions and situations. Some may be for social functions, work, or exercise. Others may be for different aspects of ourselves, as indicated by the expression “out of the closet” in relation to homosexual men. These different wardrobes may, but will not necessarily, be physically distinct or mutually exclusive.

We will begin by discussing developments within the study of dress and fashion. In the effort to make these studies more based on the material and physical as opposed to symbolic element, the focus is on the relationship between the body and clothes. As an alternative approach, we propose the study of the relationship of clothes to other clothes within a greater whole (the wardrobe) as a way to highlight the materiality of clothing. The theoretical point of departure for this approach is a practice theory in which the material enters as an integral part (Shove & Pantzar 2005). Second, the methods combined and developed in wardrobe studies are discussed. This is illustrated with examples from studies from The Norwegian Institute of Consumer Research (Statens institutt for forbruksforskning [SIFO]). The project touches on different kinds of wardrobes; workwear in male-dominated manual jobs, sportswear and leisurewear, and clothes that are no longer used.

2. Clothing and materiality

In just a few years the study of dress and fashion have changed from being scattered between a number of disciplines and institutions, into a field of study with a high degree of international exchange, unifying institutions, and publishing channels. At the same time as fashion studies were changing, focus on materiality and the human body increased. The connection between the material and the body, both developing as a research area around the same time, inspired the emerging field of dress and fashion studies and opened a rich field of research. Dress and fashion studies are now an interdisciplinary field that encompasses a number of different approaches and therefore also a variety of methods.

Clothes are a suitable subject for the study of the relationship between the body and materiality as they break down the distinction between nature and culture (Wilson 1985). In social theory, interest in the body has in part been attributed to the rise of consumer culture (Fraser & Greco 2005; Howson 2004; Shilling 2004). This development sparked renewed interest in earlier research on the importance of the body for social interaction (Bourdieu 1984; Elias 1982; Foucault 1979; Goffman 1963; Mauss 1979). Clothes have the ability to transform the body (Andrewes 2005) and can be seen and studied as 'lived garments' (e.g. Kuchler & Miller 2005; Miller 2005). Anthropologists, such as Tim Ingold, Igor Kopytoff and Arjun Appadurai contributed to an understanding of the biography and commoditization of 'things'. Within consumer research, books from Campbell (1987), Douglas and Isherwood (1979), Miller (1987), and Slater (1997) were important in increasing the understanding of consumption as a relationship between the social and the material.

The focus on the body in exploring the materiality of clothes has contributed to the exclusion of other perspectives of the material. According to Lou Taylor (1998: 238), an important divide is between the object-centred methods; the curator/collectors vs. 'academic' social/economic history and cultural theory approaches. Like much other social research, the latter has been dominated by textual analysis and qualitative interviews, methods are dependent on verbal statements. Since the material is verbal, analysis and text production seems easier, but it also limits what these methods are suited to analyzing.

Moore and Sanders (2006: 11) recognize the translation of the non-linguistic, such as practices tied to clothing, through the medium of language as a main challenge. Much of what concerns our clothes practices will be 'tacit knowledge'. Clothes are involved in a number of everyday routines (Gronow & Warde 2001) that, among other things, are characterized by being automated and thus invisible even to the person who practices them. Our 'body' feels when something is wrong, but it is to a lesser extent able to explain why (Klepp 2008). One of the scientific problems in studies of materiality is to grasp the nonverbalized experiences and to translate the non-verbalized experiences of clothes in use into written academic language.

3. Wardrobe studies

In English the term wardrobe has two meanings: one refers to spaces of storage, and the other to a collection of clothes. The first meaning is also covered by the term closet (Hansen 2000: 102). This duality points to the clothes, but also points to the material frames within which they are kept. These frames refer not only to the physical walls of the closet, but to an entire structure of different storage spaces with corresponding criteria for where and what clothes should be kept and how clothes should be moved between them. Maintenance, cleanliness, acquisition, and disposal are parts of that structure, as is the practice of dressing in which garments and accessories are chosen and put together.

Wardrobe studies as a method is developed within an understanding of practice where materiality is at the core. The term practice is here understood as a fundamental unit of social existence. It is redeveloped from central works of a range of great social researchers such as Bourdieu (1984); de Certeau (1984); Giddens (1984); Foucault (1979). Reckwitz (2002: 249) has defined practice in relation to materiality as 'a routinized type of behaviour which consists of several elements, interconnected to one another' in which 'things' and their use is an integral part. As Shove and Pantzar (2005) write, 'all practice has a material aspect'. Practice theory therefore decentres the central objects of dominant social theories – minds, text, and conversations – and instead emphasizes bodily movements, things, practical knowledge, and routine (Reckwitz 2002: 259).

In order to get a better understanding of how clothes are used and why, we need better knowledge of the material framework of everyday dress practices, whether for work, leisure,

sports, or social events. Our contribution is to address this as a methodological challenge where we build on well-known methods and close dialogue with a network of interested and competent researchers¹⁴. Due to its emphasis upon practices and attempt to grasp materiality, this combination of methods may also be used within consumer studies, design studies, business studies (marketing, user-centred innovation), cultural studies, sociology, anthropology, and by anyone who is interested in the micro-dynamics of everyday life. The material is not just ‘a carrier’ of different types of symbols, but an active element in the practices (Latour 1996). Bringing this to the fore requires new methods.

4. A four-cornered closet

The wardrobe study consists of an inventory of clothes in a wardrobe. Much like Sophie Woodward (2007) has done by studying the process of finding clothes that fit through a fieldwork entailed sitting on a bed and observing young women getting dressed. We follow the material frames for practices; the clothes, the wardrobes, laundry baskets and uniform storage rooms. The goal is to look at the relationship between the individual item of clothing and the larger material totalities. This approach is of course not new. It is at the core of what is called the Diderot effect (McCracken 1988): if you paint the wall you immediately notice that the floor looks more worn. Yet the focus on the relationship between individual objects and series is also very relevant in a more concrete sense (Brük 1995). A first rate ski boot is useless without its twin, just like a suit jacket without its matching trousers.

Table 1. An overview of the methods combined in wardrobe studies

Method	Dominant discipline	Limitations	Scope
Interview	Sociology	Language based	Narratives, interpretations
Fieldwork	Anthropology	Generalizability, access	Context
Inventories/records	Ethnology	Relationship between	Relationship between

¹⁴ Researchers at SIFO; Kirsi Laitala, Silje Skuland, Marie Hebrok. Important international participants have been Kate Fletcher, Sophie Woodward, Joanne Turney and Karen Tranberg Hansen. Read more about the network and its participants at:

http://www.cbs.dk/forskning/institutter_centre/projekter/wardrobe_network/menu/wardrobe_netvaerk

		part and whole	part and whole
Laboratory testing	Textile engineering	The isolated reality of the laboratory	Technical qualities

The method combines and preserves well-known methods such as qualitative research interviews, field work, inventories, and laboratory testing. In Table 1 they are presented in order from the most language based to the methods that use clothes as study objects. Inventories and records are methods that are particularly important in museums and collections. In our use of these methods, we refer primarily to the ethnological tradition. We will look at some of the limitations of these methods along with the contribution of wardrobe studies.

Table 2. An overview of the projects from which the examples in the text are taken.

Project name	Goal	Scope
Clothing Disposal <i>Why are clothes disposed of? Disposal seen in relation to women's clothing habits</i>	Why and how do Norwegian women around the age of 40 dispose of their clothes?	Clothes that women have stopped using
Textile Waste <i>From waste to material resources in a cradle to cradle perspective - A stakeholder approach to the textile value chain</i>	How can a multidisciplinary approach to waste reduction contribute to reducing the material flow and turning waste into material resources?	Clothes that families have stopped using
Leisure Wear <i>Leisure and Sustainable Development: part of the problem or part of the solution?</i>	Explain the increase in consumption within the sports and leisurewear market in Norway. Map the environmental discourses and discuss the barriers for participation	Clothes used in families for three main activities: Skiing, bicycling, walking/running
Uni-Form <i>Work clothes for women in</i>	Develop competence based products for women in construction, industry,	Clothes used for work in the relevant occupations

<i>male-dominated occupations</i>	offshore, fisheries, handicraft and the army	
Norwegian Wool <i>Valuing Norwegian Wool</i>	How is wool used in Norway and England?	Clothes made of wool or wool blends in the wardrobes of whole families

Concrete examples are taken from four studies conducted at SIFO. An overview of this material is found in Table 2. Since wardrobes by their very nature are changeable and complex and therefore hard to pin down, we have made an effort to establish a fixed point or a scope for all the projects. This makes it easier to set something in relief against a broader context and to make comparisons.

4.1. Interviews; Narratives and interpretations

Interviews provide a great amount of information and a rich access to people’s knowledge, experiences, perceptions and discourses. However, interviews only produce material on how clothes are discussed in the context of the interview. The fact that other contexts may produce different discussions about the same clothes (Storm-Mathisen 2008) and that conclusions of actual use cannot be drawn from these interviews is frequently discussed in methodology literature, but easily overlooked. In wardrobe studies, interviews are used both as a supplement and as an integrated part of the method.

The use of audio recording, interview guides, transcriptions, descriptions of the interview context and different qualitative and quantitative analytical tools are all part of the wardrobe study and taken from this specific methodological tradition. However, in the wardrobe study questions are directly tied to each individual garment and asked again and again. In this way the conversation with the informants is directed from the general – and therefore often more ideological – to something concrete and related to practice. The wardrobe study is less a conversation about abstract issues and subjects and more narratives of individual garments and specific events. With their physical presence they remind the informant about specific considerations, experiences, emotions etc. A parallel to this is “Talking-whilst-walking interviews” (Hitchings & Jones 2004). These also allow for a co-fabrication of data between researcher and subject, with a reference to the material surroundings. Researching a topic that

involves encounters between humans and their material surroundings, while moving together in the actual surroundings under scrutiny, help to stimulate communication and the ability to describe experiences (Waite, Gill & Head 2009).

An example of this ability of wardrobe studies to stimulate rich descriptions and stories comes from the study of leisurewear, where the researcher asked the informants to show him/her all the clothes they had in the house for the selected activities (see Table 2). Faced with a mountain of gloves, all for downhill cycling, the father tries to answer the question of who owns what. 'No, some of them are mine and some of them are Christopher's (the son). I don't really remember.' Mother then adds: 'Christopher remembers everything. He (the father) is not allowed to use his. He is really strict: 'Have you taken my gloves!' (the mother). The information that emerges is concrete and rich. It is unlikely that we would have thought to ask in an interview situation whether there were different perceptions of who may use what in the family, and if we had, it is quite likely that the information would have been more general.

In anthropological discussions of notation techniques and their significance, one of the debated issues is the way in which our memory makes recollections more general and less specific and concrete (Nielsen 1996). In the same way that notes help evoke memories from fieldwork it is possible to use objects and photographs to evoke informants' stories and memories, as we saw in the example of the gloves. This has also been discussed in connection with ethnological analyses (Ljungström 1990) where the point is that the objects, which are historical and contemporary at the same time, evoke memories, emotions and thus produce thicker descriptions. A related idea is found within recent materiality studies in the form of presence theory (Damsholt, Simonsen, & Mordhorst 2009). Literary historian Hans Ulrich Gumbrecht (1997) tries to show how our experience of our surroundings is not only formed by the significance we attach to it. A different and more fundamental dimension is the way in which we 'perceive' our surroundings on a nonverbal level. Wardrobe studies use the presence of the object in two ways. The clothes are present and thus influence the informants' memories and narratives. Secondly, recording, photographing and even handling the object itself contribute to the researcher's recollection and empathy, and provide opportunity for new knowledge.

Another characteristic of the wardrobe study is that the same information is gathered for many pieces of clothing, which enables a quantitative analysis of the material. One example of this is

the study of clothes that women have discarded wherein they have estimated the time of acquisition for all clothes and when they were last used. Against the background of this information, the lifecycle of the piece of clothing is constructed. Different lifecycles can be compared to each other within the wardrobe or to other clothes. There is little reason to believe that people know how long their clothes, on average, sit idly between uses or what percent of the discarded clothes have never been used, even if we had asked. Interviews vs. wardrobe studies paint the picture of the wardrobes differently. An example of this can be found in the wardrobe studies connected to “Valuing Norwegian wool” (see Table 2). In the interviews sweaters, above all other garments, were most connected to wool and were the first garments both the Norwegian and British informants talk about. However, when we took a closer look into the wardrobes in Norway, it was clear they were actually dominated by woollen long underwear. Undergarments and socks made up 43% of the wardrobes, while sweaters and jacket/cardigans only consisted of 22% of the clothes in the three Norwegian wardrobes. Woollen undergarments do not exist in the British wardrobes. The interviews therefore give a more similar picture than the wardrobe studies when comparing the families of the two countries (Hebrok, Klepp & Turney 2013).

4.2. Fieldwork; generalization and access

The anthropological fieldwork encompasses a range of different methods. Fieldwork is well suited to ‘getting beyond the words’ (Hastrup 1992). A lot of the technique concerns acquiring knowledge of the ‘secret society,’ be it invisible, hidden, unconscious, wordless, dispersed, buried in the body, repressed, denied, or managed (Nielsen 1996). The fieldwork thereby solves some of the problems that the interview raised.

Fieldwork can be used both as a part of and as a method in combination with the wardrobe study. The study of workwear and uniforms involves this combination of methods. The fieldwork in ‘Uni-Form’ (see Table 2) was done in different male-dominated, manual occupations, such as construction, industrial sites, handicraft, fishing, and onboard Norwegian Navy vessels. These sites enabled observation of variation in dress and types of workwear – in addition to the relations that the clothes engaged in – gender, work, and social integration. In the wardrobe study ‘the field’ consisted of wardrobes, hangers, lockers, and drawers limited to the

work site. Here the different clothes used at work were brought forth, registered, photographed, and discussed.

In this study, female workers generally downplayed the importance of femininity and appearances in the work context during interviews. However, facing the clothes directly showed that the clothes most often in use were those they felt looked good on them both in terms of fit and esthetics, leading the female workers to stress the importance of being feminine and wanting to 'look as good as [they] could'. As such, appearance and gender, though initially found to be subordinate qualities, turned to have a great impact upon the female workers' dress practices. Focusing on the wardrobe and tying verbal expressions of the clothes in use closer to the actual garments leads to a study that incorporates material realities to a much larger degree.

One problem with fieldwork is that rich descriptions and analyses are difficult to compare and use for generalizations. Another problem is that fieldwork presupposes a particular access to a particular kind of 'visibility', namely what can be observed, smelled, tasted etc. somewhere (field), be it physical or virtual. Woodward's (2007) fieldwork where she has sat on the bed and observed the informant's getting dressed, was a method that would not have been possible if the subjects had been middle-aged husbands and wives. She pushed frontier of what is closed to direct observation in our culture. In wardrobe studies, access is a problem and it has not only to do with the borders of intimacy. The wardrobe is also closed in a more literal sense. What is taken out of the wardrobe has a relation to what is hidden within. Access to the field may be closed for other reasons, too, such as security policies on an oil platform.

Generalizability is a problem in the fieldwork method that is not specific to wardrobe studies. However, it may be the case that the need for comparable knowledge is greater. The study of dress and fashion is a relatively new research field and statistics are not particularly developed. There will hence be less common knowledge to which studies can be related. The textile industry and fashion are global phenomena, whereas clothes practices are indeed one of the things that constitute differences (Melchior 2008). As the example of wool in the Norwegian and British wardrobes shows, such comparisons reveal fewer differences when they are based solely on the way clothes are spoken of in interviews and other language-based sources.

In the work of going through the clothes, it becomes clear where the borders for other people's access are laid. In this way, we not only gain knowledge about the categories and distinctions that the informants are consciously aware of, but also about how the clothes are actually categorized and prioritized spatially and mentally. This process makes the informants aware of the clothes in new ways, as the example of the man with clothes for cycling showed. They had more cycling gear than he was even aware of.

4.3. Inventory and catalogue; traces of practice

Object-based research consists of the meticulous study and recording of objects' form, material, condition, and distribution. This gives information about the production, such as whom, where, and when objects are made as well as what has happened since. Critique of such studies focus on the lack of theories and perspectives. This kind of critique also applies to ethnology, a research field that was developed in close relation to the cultural history museums and the idea of saving and conserving the popular culture.

In the modernisation of ethnology there has been a great deal of discussion around the relation to the material, both in terms of the extent to which the field has moved away from the material cultural objects as sources and to what extent the material is interesting in itself or just a means of acquiring knowledge about people (Brück 1995). Both questions are rendered superfluous by the insistence of practice theory on the material as an inherent part of practice. Nascent elements of this thinking can be found in early ethnology's view of the material as a 'result of action and part of action', without the consequences being fully realized. An important lesson from ethnology is how material objects pass on culture (Grimstad 1991; Klepp 1980) and traditions are created culturally, without direct contact between people. Objects are 'direct remnants of a cultural situation and historical reality' (Pedersen 1991). Therefore, they can provide information about actions that took place in a different time. This aspect, too, is addressed in newer studies of materiality and presence by Gumbrecht (1997) and Runia (2006).

The anachronistic aspect of the material makes it suited both to studies of contemporaneity and cultural inconsistency as well as to the tracing of ideologies and practices from other times and places, as is done in both archaeology and forensics. Even if cataloguing has a scientific-historical place in abandoned positivist ideas of charting the cultural totality, many studies with

a more hermeneutic approach could benefit from increased systematic registration. This allows for a reduced distinction between quantitative and qualitative research.

Registration within wardrobe studies may include everything from simple numbering and photography to a full gathering of clothes that enable different forms of further analysis. In the registration process, the informant's stories about the individual garments and combinations are central, but so is information such as the state of the garment, its brand, and where it is placed within or outside the wardrobe. The wardrobe study of women and uniforms entailed registering each daily outfit, taking the women aside from their work to talk to them more intimately about their work clothes and looking into their wardrobes. The latter allowed us to see the variation of clothes as well as the physical form of the wardrobe in order to address a number of related questions: where were the clothes kept – in a locker, in a dressing room? Did they have their own dressing rooms? Were the clothes locked up? Were there separate places for dirty and clean clothes? What did the wardrobes contain and were the clothes taken home or kept at work? Were there any differences between the male wardrobes and the female ones?

The registration process ensures a minimum amount of common information about all garments included in the analysis. This makes it possible to see the garments in connection. Yet, one problem in all of the projects is the scope of this work and the wish for both systematic order and totality. We experienced difficulties in making clear delimitations. Still, we think that the efforts to do so have yielded great opportunities. There are surprisingly large variations between the different wardrobes. In the Textile Waste project, for example, discarding was registered for a period of six months (see Table 2). On average, informants discarded 18, 4 garments, yet one man in his 50s did not discard a single garment, whereas a seven-year-old girl stopped using 54 garments. In the study of sportswear, there were great variations as well. One family who were actively pursuing outdoor activities still did not have the right 'specialized' gear, but borrowed or used their everyday clothes. Those who had the most clothes had up to 40 garments per person for one single activity. One family of four had around 200 garments in total for the walking, running, biking and skiing. As mentioned above, there were differences between British and Norwegian families when it came to amount of undergarments and total woollen objects in general. While three Norwegian families had a total of 522 woollen garments, the British families of the same size and economic background had only 91 (Hebrok et al. 2013)

All clothes contain traces of the ways in which they have been used. These traces shed light on the story of their use, particularly in the context of repair and mending. Repairs of clothes are an important question in terms of environmental impact. When asked, 'Do you repair clothes?' responses are often characterised by general assumptions that 'nobody' repairs clothes 'anymore' (Klepp 2001). Yet by going through a larger number of discarded garments in order to see what and how they have been repaired, we learn what kinds of repairs have been carried out and on which kinds of garments. Questions of who have done the repairs and why will not be answerable by the study of clothes alone, but the wardrobe study allow us to combine questions with a registration process and therefore link between the material and the explanations. Furthermore, by registering the degree and the type of wear and tear for a larger number of garments it is possible to say something directly about practice. This, in turn, may then be analysed in conjunction with what informants have said about the clothes or their clothes habits generally (Klepp 2004).

4.4. Laboratory testing; artificial repetitiveness

The laboratory is the ideal of positivist knowledge. Here the phenomenon that is to be studied is isolated from all contextual influence and the study thereby becomes positive and repeatable and by the same token removed from reality. In order to conduct laboratory tests we must acquire clothes from the informants and physically move them to the laboratory. The connections the wardrobe studies make between concrete objects and practical use and associations makes it possible to connect knowledge from laboratory back to real examples.

Testing provides knowledge about the textiles' actual properties in relation to predefined scales and measurements. They can therefore easily be compared to each other or to demands defined in regulations, labelling systems, or in tenders. What we do not know as much about, however, is the relation between these abstract scales and the reality they simulate. Since we study practice, we either have to find methods to translate between abstract measurements and real life or use the knowledge about clothes that testing provides together with other information. When we have both clothes and knowledge about their social life, we will be able to combine these two perspectives and extend our understanding of the tests' relation to practice as well as the material preconditions and consequences of practices. A number of questions which are important for developing better life-cycle assessment analyses and other tools which are used in

environmental research are dependent of this kind of knowledge. Today the question revolves around product lifetime both as a limited social and technical phenomenon (Environmental Resources Management [ERM] 2010; Resource Recovery Forum 2004). One example of laboratory testing to increase the understanding of practice can be found in the project Uni-Form, where one woman's story about her work clothes went contrary to assumed truths about the actual properties of the textiles. The woman had a high-risk occupation with strict safety measures and extensive contact with toxic crude oil. She said that the oil constantly seeped through the clothes and onto her skin. She therefore changed several times a day. Her constant clothes changes could easily be interpreted as an example of women not fitting in workplaces where you have to 'get your hands dirty'. The employer had generally strict demands regarding safe clothing for his employees, and there was no reason to doubt that the requirements for oil resistance were also under control. The woman's experiences then contrasted with the assumed properties of the employer's clothing. The tests showed that the boiler suits did not pass the tests for oil resistance that apply to such clothes (Almgren & Schander 2010). By providing information about some of the material elements in practice, tests like these give us greater opportunity to understand what motivates actions.

Among the various projects, Textile Waste is the one that most systematically uses laboratory tests as part of the wardrobe study, where as many discarded garments as possible will be collected and analysed further at SIFO. We will, as far as possible, use standardized scales to describe the clothes' condition, and this information together with information about the use and age of the clothes will be used in comparison with tests of corresponding garments. In this way we seek knowledge about the relation between tests and actual use. We will gain a better understanding of what kind of technical ageing contributes to short stage of use and thus how this can be prevented, as well as how clothes are worn out, through washing or through use. The analysis will contribute to the project's overall questions concerning what may contribute to reducing the material flow (Laitala & Boks 2012; Laitala, Klepp & Boks 2012).

5. New questions require new methods

Despite the fact that the study of dress and fashion is a growing discipline, much still remains to be done. We have increasing knowledge of how people think, talk, and write about clothes, and about the production of clothes and fashion. Important methodological approaches include

discourse analysis, qualitative research interviews, and ethnographic fieldwork among academic researchers. Within the museum world and folk costume studies, analyses of preserved costume material have been conducted. While stability, authenticity, reconstruction and revitalization, or style historical periodization have been central perspectives in this type of research, fashion, change, identity and body have been dominant in the other.

We still know little about how women and men, young and old, actually dress and why. Costume research has addressed a very narrow field of current – and past – clothes practices and in a too limited degree been able to relate what they call costume to the study of dress and fashion more generally. The problem with much of the academic research is that the perspective has been too narrow. The focus on explaining clothes as fashion, and thus change, has provided little critical distance to the industry that gets its livelihood from telling us just this; that we constantly have to buy something new to be beautiful and happy. It has given us little capacity to recognize stability and problems with developing perspectives on sustainable clothes consumption. We hope that wardrobe studies can inspire research that to a greater degree manages to integrate different perspectives and methods – and thus contributes to opening up new perspectives.

The theoretical work concerning practice breaks down the distinction between subjects and objects and between nature, culture, and society. It opens up new possibilities of uniting natural and social sciences. We have very different methodological traditions, and it will take time to fully see them in context. Method triangulation has so far been about using several (often language-based) social scientific methods, both quantitative and qualitative. Compared to the major changes that the theories of materiality actually try to accomplish, these are quite modest steps. We hope that wardrobe studies can inspire the exploration of methods that to a greater degree capture materiality, not limited to studies involving clothing.

The very challenge wardrobe studies take as a starting point is a desire to incorporate the materiality and practice common in a lot of research today. It has been referred to as an ‘ontological turn’ that has swept the social sciences reviving the concern among anthropologists for the relations between theory and practice. Recent discussion of ontology can be seen to represent a turning back to practice in response to a prolonged period of debate around representation and discourse, influenced by philosophical concerns with ‘anti-

representationalism'. In the article we have drawn similarities with methods developed for other research fields that do not include clothing, such as talking-whilst-walking interviews relating to gardens, and natural environments (Hitchings & Jones 2004), and interviews related to items such as the study of what people have on their walls (Londos 1993). Experiences from the wardrobe studies will be able to be further developed for studies of subjects other than clothing. Studies such as those inspired by Latour, who sought to pursue things and their practices, and in studies of sustainability.

In the understanding of consumption we have more knowledge of the market itself — what is bought and sold and what people say they do — than we know about how things are actually used. Things are drunk and smoked more than they are bought and sold and people have the tendency to respond 'politically correctly' to questions that are asked of them. Studies of materiality's frames and slots can therefore contribute to paint the full picture. One area, for example, can be the use of medications and different forms for health and appearance-related preparations. A 'wardrobe study' here can reveal what a family has, how old they are, the relationship between the preparations and the information that comes from the Health officials, and how they are stored both in relation to temperature, availability, and categorization. This is a typical theme where one can expect many right answers about what one asks, and where researchers can also reveal patterns that the informants themselves were not aware of (such as connections to expiration dates and age).

Sustainability is the other field worth mentioning here. Sustainability stands out because it so obviously encompasses both what we as humans do and the way that 'nature' is influenced by these actions. The issues are therefore inherently multidisciplinary and methods suitable to break down the distinction between these sciences are therefore particularly relevant. Methods inspired by wardrobe studies are particularly relevant here in relation to seeing how the way things are used fits together and depends on each other. This can be studied with a starting point in special leisure interests such as leisure boats, pets, fishing, or golf, but also in connection energy use. Such perspectives show the relationship between assets and activities. If we look at the relationship between children's toys and access to toys, this is quite evident. Toys not only have an environmental effect in production, but they also influence the indoor environment and pollutants. What children have, where and how often they are played with, whether they are

used for show, or simply take up space is therefore relevant for understanding the consumption patterns.

Research, like all other practices, is not just about what we say and think, but also about what we take for granted, do and have. Research, too, has a spatial organization and an infrastructure. Interdisciplinary collaboration and access to both social and natural scientific traditions and infrastructure provide the possibility to develop methods that allow for the updated understanding of reality that is found within practice and materiality studies. Just as the material culture that is the object of our studies carries in it distilled ideology, so does the materiality of the research world. These material structures contribute to constraining and opposing the changes that these theories open up.

9. Article D

Developing work uniforms for women: The role of ethnographic research

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1. Introduction

In innovation research, particularly within science and technology studies, the design process has been focused on technological objects and systems. This may produce scientific and technological knowledge that leads directly to the design of new products, systems, processes or services, but research involved in the design process need not be technological in its form. The ways justifications, perceptions, practices, considerations and structural conditions for how products and services actually figure into people's lives are challenging to grasp, taken for granted and neutralized. When it comes to clothing and work uniforms, which is the topic for this article, the articulation of embodied knowledge falls short. It is common to be able to express what feels wrong or right, but articulating *why* it feels that way is far more complicated (Klepp 2008, 2009).

Research on uniforms and uniform dressing have to a large extent documented that women dressing in uniforms is problematic in practical, functional and social-symbolic terms (Joseph 1986; Craik 2005; Kidwell 1989; Barnes & Eicher 1997; Larsson 2008). For men, uniforms (like the business suit) are a part of a civil clothing practice (Pettersen 2004; Rubinstein 2001), but for women, clothing is both closer to the body and mutually different from men's clothing (Klepp & Storm-Mathisen 2005). The complex relationship between gender, dress and work is at the core of designing work uniforms, and can be problematic when designing for occupations where authority, danger and physical strain is involved (Ewing 1975; Craik 2005).

Making use of ethnographic methods and analyses can be valuable in showing how users' experiences and practices can be studied as well as in identifying where there is poorly developed language and concepts for formulating and discussing products. Ethnographic methods may contribute substantially to translating this knowledge into a business world whose

focus is to innovate and develop products, services, strategies and markets. Understanding people and things in their everyday relations *and* achieving action-oriented results are challenges within the innovation and development processes. This article aims at answering *how ethnographic studies may contribute to the development of products and services*. It explores the challenges that lie in studying the use of clothing in specific work contexts as well as capturing and mediating this experience with workwear in use.

This article is concerned with the ethnographic research done in a Norwegian product development project aimed at developing workwear for women in male-dominated manual occupations. It was initiated due to the fact that previously-designed workwear for women in male-dominated occupations had not been successful (it did not sell well when launched on the market). A Norwegian workwear and sports company wanted to learn why this initiative failed in order to improve future releases of workwear designed for women. This company had successful traditions for handling user-driven innovation in their sports- and leisure-wear section. Even so, they were not able to answer this question by themselves. Therefore, a project consortium was assembled and an application was sent to the Norwegian Research Council's program for User-Driven Innovation (BIA) in order to find out if there was any unexploited potential in work uniforms for women. Together with the Norwegian Defence Logistics Organization (NDLO)¹⁵ and two research institutions, the Norwegian National Institute for Consumer Research (SIFO) and the Norwegian Work Research Institute (AFI), the project was accepted and received a three-year funding. This project started in 2009 and ended in 2013.

This article's concern is not whether the products or the development process was a success or not. It simply discusses the use of ethnographic research in the product development process and shows possible ways to employ methods, as well as interpreting and communicating results that invite and bring forth tactile, silent structures. The article will start with a description of the ethnographic research that was done in the project, after which it will answer what, how and why this research work was done. This article will point to *why* designing work uniforms was

¹⁵ The Norwegian Defense Logistics Organization (NDLO) is responsible for procuring, developing, maintaining, updating and eventually decommissioning all Norwegian Armed Forces materiel. In this article, the research of SIFO and the product development of the larger workwear company is in focus, which means that AFI and NDLO has been left out of the analysis. Two researchers with anthropological backgrounds carried out ethnographic research while the writer of this article was most actively involved with the development process and conducted most of the fieldwork that appears in this study.

challenging against the background of empirical findings in the field, *how* knowledge of these empirical findings was shared with product developers, and *what* product and service solutions came out of the work and collaboration between ethnographers and product developers. Ultimately, this article will add to the discussion about whether ethnography adds value to product development and innovation at large.

2. Ethnographic research

This part will deal with the ethnographic research that was done in the study as a response to the challenge of designing work uniforms for women. From the outset, the research was designed employing methods not dependent on verbal statements, which have been dominating social research and clothing research. Thus, the study mostly focused on the actual uses and practices tied to clothing rather than the way clothes were talked about. Much of our clothing practices function as tacit knowledge as they are involved in everyday routines (Gronow & Warde 2001), which, especially in the use of workwear, are characterized by being automated and invisible even to the person who practices them (Klepp & Bjerck 2014). In selecting methods, it was important to choose methodological techniques that grasped the non-verbalized experience and practice of the work clothes in use.

Collins, Green and Draper (1985: 329) identify the articulate and the tacit as crucial division in knowledge. In design processes, user needs are articulated on behalf of the user in several ways. Most often needs are articulated as user representations in which certain claims are made as to who the supposed users are and what they want. Even though innovators are constantly interested in their future users (Akrich 1995), Stewart and Williams claim that technological studies tend to “inscribe particular views of the user, user activities and priorities into the artifact” and that these views are based on an “inadequate or misleading view of the user and their requirements” (2005). In selecting methods, it was important to choose methodological techniques that grasped the non-verbalized experience and practice of the work clothes in use, by actual users of work uniforms.

Grasping and communicating knowledge of experiences that are tacit in their form may be problematic to the extent that they are neglected in the innovation process. Specialists and non-specialists, here represented by a workwear company and users of workwear, express

themselves in different ways. Much of the knowledge that users inhabit is incorporated in different repertoires of body techniques (Mauss 1979). Body techniques, simply put, refer to ways to use the body that may seem natural but are in fact culturally bound. It points to the fact that much of what we know, we know with our bodies and sometimes we do not even know that we know (<http://hyllanderiksen.net/Natur.html>). The aspects of what we know with our body, such as the ways we use work uniforms and how uniforms on the body integrate with the socio-cultural work environment, cannot always be verbally accounted for. In this, the use of methods had to take into account ways to integrate with, internalize and observe the dressed body in action. This was done through fieldwork at fifteen selected locations within six male-dominated manual occupations: construction, handicraft, industrial production, petroleum production, fishing and the Navy.

We gained access to and conducted fieldwork at two Navy vessels in the Norwegian Armed Forces, one land-based petroleum production site, one offshore petroleum production site, an industrial fishing vessel, three different construction sites, one roadwork site, one cellulose production site, one plastic industrial production site, one roadwork company, one electrical production and installation site, one stone production site and an auto mechanic's garage. Due to difficulties with access to the petroleum production sector, we had to make use of alternative methods of interviewing and talking about pictures taken by the workers themselves that described different aspects of everyday work. These occupational categories were chosen on the background of the types of occupations that the workwear company was interested in. The choice of locations and work sites were made by SIFO and made on the basis of having at least one female employee. These locations were not easy to track down. When the necessary permissions were acquired, we¹⁶ spent anywhere from a couple of hours (at the oil and gas land-based production) to up to two weeks at each site. The workwear company was not involved in the fieldwork at any time.

Fieldwork was carried out by three different techniques in this study: *participant observation*, *practice study* and *interviews*. These were chosen in order to account for the tacit structures at the work sites and embodied experiences related to the work uniforms in use, as well as the

¹⁶ We refers here to the three researchers from SIFO who conducted fieldwork within this project: Mari Rysst (associate professor), Marit Vestvik (researcher) and the author.

verbal accounts and material objects observable in the field. By conducting participant observation in the field, we acted as participant observers (Bernard 1994). This specifically involved following women around in their work spheres, helping out with the work they performed, following their daily routines, taking coffee breaks with their colleagues, using workwear similar to what they wore, getting dressed in unisex wardrobes and sharing cabins with other employees. In this way, data related to the socio-cultural structures of the work spheres were internalised. Fieldwork also enabled a movement in and out of the participant role in order to observe and register behaviour and movement in relation to the clothing. This is called practice study. Here we registered how clothes were used, how it integrated with work tasks and social relations. We also registered how men or women wore outfits differently or similarly, and how gender was communicated or under-communicated in the work spheres through the garments, bodily repertoires and accessories that were used but also in verbal communication. Being present in the different work contexts enabled experiencing working life as a female worker in a male-dominated occupation, even for just a short while.

Ethnographic studies are considered immensely useful in their ability to gather a large amount of empirical data and, by that, enable comparison. In addition, the ethnographic method of fieldwork provides the opportunity to experience relations in real life, or “in vivo” as Glaser and Strauss (1967: 40) put it. Doing an ethnographic study provides the possibility for collecting as much comparable data as possible in a short amount of time on relevant issues to satisfy aims for both a commercial industry and academia. Qualitative interviews were also an important supplement to this fieldwork. These interviews facilitated a deeper understanding of the world views of male and female workers (Kvale 1997), which were tied to experiences with work, workwear and gender. Both male and female workers were interviewed in addition to those who dealt specifically with the acquisition of workwear at the work sites. A total of 67 interviews were conducted, with 36 women and 31 men, but many more contributed to the participant observation part of the study.

These methods were chosen in order to allow the workwear company to benefit from including users’ experiences and user knowledge in the development process of improved workwear. In order to do that, it was crucial that the design and development team put aside silent and explicit assumptions about users’ wants and needs and integrate the experiences of real users into the

process. This allowed for extensive information from the field to be integrated into the design and product development process. Some of the findings from the fieldwork that were most relevant for the development of female work uniforms will be presented in the next section in order to show why designing work uniforms for women may be challenging.

3. Why designing work uniforms for women is challenging

The findings made in the fieldwork pointed towards several aspects in the intersection between work, gender, body and work clothes. Gender is here understood as relational (Connell 2002), and as a process, i.e., something that is done (Butler 2006; West & Zimmermann 1987). How gender is performed varies between women, between men, and between women and men (Neumann et al. 2012: 243). However, certain things and facilities ensure that potential users are left with wrong or inappropriate gender (Mühleisen & Lorentzen 2006: 278), and work uniforms are one of those. One of the challenges for women in wearing work uniforms is that they are made on the basis of a standardization of the masculine body, stemming from a ready-to-wear industry. This industry, which work uniforms is a part of, creates clothes in a particular size range based on what size and form appeal to most of their potential wearers. Naturally, women are not the primary potential wearers of workwear in male-dominated manual occupations, as statistics show that more than 80% of the workers in these occupations are male (Meld. St. 7 (2015-2016)).

There are in fact physical differences between women and men that are relatively stable. This point to a need for different form and size range of clothing. According to Neumann, Rysst and Bjerck (2012), these physical differences essentially come down to the fact that women have breasts and have a more curved shape along their waistlines and on their lower backs. In addition, women usually have narrower shoulders and shorter arms and legs than men do. The relative measurements for the ratio between the length of the back, the waistline and the hips are also different between women and men, they (Neumann et al. 2012.) claim. This is often (though not always) taken into account in the design of ordinary clothing, but is very seldom considered when it comes to workwear and uniforms. This is an aspect that is related to the physical nature of male and female bodies that has implications for what and how clothes are worn every day at work. However, there are other socio-cultural aspects of clothing that challenges both the use of these work uniforms and how to design them better.

Two of the findings from the fieldwork were particularly relevant to the challenges of developing workwear for women, as they were not transferrable to clear-cut or hands-on solutions. The first is related to an ambivalence both in the use of work uniforms made on the basis of masculine norms and the gendered position at work that the female workers found themselves in. This ambivalence was further related to their status as workers, in which they wanted to be seen as equals yet their gendered position as women in the work space was often a hindrance for their ability to be fully included. This integration process happened socially, physically and materially through the work uniform. In this way, women made a greater effort to be taken seriously as an equal part of the work community, and as “one of the guys” (Neumann et al. 2012; Bjerck 2013). According to Jennifer Craik (2005), the uniform possesses characteristics more than those that are tied to authority or affiliation with a group, what Craik calls “open lives”. A uniform may also possess “hidden meanings” (Craik 2005). For example, the gendered qualities of a uniform that has been made in a masculine-defined world constitute a part of the uniform that contains hidden meaning.

The work uniform has the ability to facilitate the integration of women in the workplace. At the same time, this necessitates a downplaying of the female gender as we often find it aesthetically produced in popular culture. Female workers in our study wanted to be included in their workplace on equal terms as their male colleagues, but they were also unwilling to let go of their femininity. This manifested itself through the discreet use of makeup, hairdo, nail polish, jewellery, colourful undergarments and the like. Work uniforms were modified by cropping or sewing, and were supplemented with personal items. The work uniforms that women wore were mainly the same as their male colleagues, but certain elements were different. In addition, the overall look that the uniformed workwear and the gendered body formed together revealed that the person wearing the work uniform was not male.

There was a widespread belief that feminine markers reflected a focus on clothing, body and personal appearance that did not belong in the workplace. Uniform regulations as found in the Norwegian Armed Forces (Vestvik & Bjerck 2012) did not allow the use of such feminine or individual markers to be added to the uniform. This was neither formally accepted in other occupations nor an accepted part of the informal regulations. Nonetheless, feminization occurred. Therein lies a strong ambivalence that can be difficult to grasp. How can workwear

companies develop work apparel for women when it is an ambivalence in how women want to appear? Women say they want to be included in the workplace on equal terms and carried their uniform everyday, yet in observing and participating in the work contexts, one can see that the picture is complicated. In the presentation of this ambivalence to the workwear company, much time was spent discussing how this could be understood and especially how this could be transferred to the specific products in a workwear collection.

A second finding was tied to the organization of acquisition and routines of redistribution and ownership of the work uniforms. Common for all occupations (except fishing) was that they had most or part of the workwear paid for by their employer. This came with the stipulation that someone higher up in the administrative system, management or department would make the final decision about acquisition. Decisions were made about choice of clothing manufacturer, economical frames, the overall appearance of the uniforms (colours, types of garments, quality of fabrics and other minor details of the acquisition), as well as for additional work equipment. These structural conditions created a distance between the decisions being made and the end users, and limited workers' access to functional workwear on the free market that suited their body shape, preference and the nature of the work they conducted.

Many of the work uniforms in larger companies were acquired through a processes of public bidding where the winning workwear company was given the opportunity to provide all workwear for the company through a predetermined several year contract. The process in the different companies that decided what work garments to purchase and redistribute worked as a bottleneck and blocked workers' access to well-functioning clothing. It also hindered a flow of information and contact between the producer, distributor of workwear and the end user. In short, when the procurer and the user are not the same, it can be assumed that something will get lost along the way.

Entering contexts where work uniforms are used with an open mind allows the ethnographer to gain a fuller picture of the clothes and its users. However, this provides issues that are not easily transferrable to products and services because, in the words of Brian Moeran, "What anthropology has to say is multi-faceted, complex, nuanced and revealing; it shows how difficult it is to separate 'right' from 'wrong', which is a total anathema to business managers charged with making quick decisions" (2006: 120). This points to how ethnography may complicate the

product-development process. Ethnography helps understand patterns of behaviour and beliefs from the point of view of participants (Howard & Mortensen 2009: 19). It may therefore be challenging to accept or even understand findings considered different, strange and contradictory. Dealing with ambiguous results presented by the researcher in the process of development can therefore be a challenge both for the anthropologist who tries to get her views and understandings of the context right and for the product developers who try to transfer their understandings into concrete products.

Everyday practices are not a coherent and rational set of acts quantifiable into categories and schematic structures directly transferrable into products and services. As Cefkin stresses, “Realities that matter on the ground need to be understood as situated, dynamic and often negotiated and even contested” (2010: 47). Transferring and communicating understandings from the work context in a business context puts the ethnographer in juxtaposition between complex, context-bound data and the need for information that can be converted to products and services. Understanding and making use of what may be seen as contradictory findings could nonetheless provide opportunities for successful innovations and lasting products. The next part of the article will deal with how insights into the use of work uniforms gained from fieldwork were passed on from ethnographer to product developers in the meeting between ethnographic researchers and a product development team.

4. How to share knowledge - ethnography meets product development

The researchers’ contribution to the innovation project was not simply to pinpoint the challenges in developing and innovating work uniforms for women. It also required finding ways to work around and solve these challenges. This depends upon the ability to 1. Present information from fieldwork and ethnographic analysis in an understandable form to benefit product development, and 2. Grasp extensive contextualized information and turn it into relevant theoretical models presentable to an academic audience. In this article, this is treated as an issue of challenges to communicating knowledge, which in the project at hand was solved by establishing a platform of communication at the very beginning.

In order to feed information from ethnographic work into product development, the project team developed informal meeting points in between fieldwork and analysis, sketch boards and

strategy planning. The informal meeting points in which ethnographic understandings met product development were labelled *work meetings*. Engaging the whole project team in work meetings was done to try to close the gap between user and product developers. These meetings also enabled an exchange of perspectives and knowledge of the concrete material properties of the garments (as informed by the workwear company) and the garments in the work context, on the body and in social relationships (as informed by the researchers).

Work meetings were arranged in between fieldworks where findings from the latest fieldwork were presented. These were held every or every other month with a total of thirteen meetings. Some were directly related to one work arena, while others had a more summary form related to several work arenas within one specific occupational category. When all the fieldworks had been completed, a final summary and a finishing presentation were offered. These work meetings were carried out via verbal presentation from the researchers at the location of the workwear company, who were supplied with bullet points, quotes and anonymized photos in a PowerPoint format. The internal project leader from the company's research and development department, a marketing consultant, several designers, fabric experts, the category manager, and others that had the time and interest to participate were present at these meetings. In these meetings, all participants were given the opportunity to discuss the findings presented and query the details of user contexts, garments in use or the work settings. Due to methodological techniques that left room for a wider perspective of workers and workwear, it was possible to present user contexts that took all workers into account, and not only women. Routines of acquisition and problematic issues related to ownership, information strategies and ideas about proper dress at work (Bjerck 2013; Neumann et al. 2012; Vestvik & Bjerck 2012) were also presented.

The development team used these meetings to discuss main findings, but also small details uncovered in the presentation both amongst themselves and with the researcher. They talked through design-based solutions and practicalities around garments, labelling, size range, marketing and information strategies, sales pitches, communication strategies, and more. This led to possible solutions for products, concepts or services. It also led to a development in perspective that the researcher brought back into her subsequent fieldwork. As such, fieldwork could accommodate issues that both researchers and those involved in the design process were

interested in. This way of exchanging back and forth between the contexts of the user in ethnographic fieldwork, scientific analysis and presentation in a business context could be considered a *feedback loop*. This feedback loop ensured that it not only fed information to the workwear company through findings and discussions in the field, but that the discussions, questions and constructive critiques also fed back into the fieldwork.

The work meetings and feedback loop affected the fieldwork in that it sharpened the researcher's eye for material realities that surrounded the workers. It also forced a clearer and more reflective view of materiality in the analysis – both of that which was presented in scientific publications (Bjerck 2013; Neumann et al. 2012; Vestvik & Bjerck 2012) and that which was presented to the business world. This was also reflected in the analysis of data in which early on the researcher had to transform findings into analysed material presentable to the clothing industry. This feedback loop brought about developed perspectives both in the work of the ethnographer as well as in the design process.

Work meetings enabled ethnographers and product developers to work together despite the differences in *time* (the rapid product development against a slower, ethnographic serendipity approach), and *expert knowledge* (the high level of knowledge of products and design against the deeper understandings of user context). The researcher's intermediary position between the user and those involved with the product development became a guiding position where perspectives were developed in juxtaposition between these two parties. This provided information that was ambiguous and not easily transferred into physical products and services. In this sense, the use of ethnography has the potential to complicate the product development process. Work meetings functioned as an arena where products and services could be designed on the basis of grounded ethnographic fieldwork. As will become clearer in the next section, the ethnographic research carried out in the project was converted into both products and services.

5. What solutions come from ethnographic work and collaboration

The product development team from the workwear company discussed their understanding of the findings from fieldwork. For them, the ambivalence in the female workers' dress practices was particularly difficult to understand, relate to and convert into design-based solutions. Another obstacle was the structural conditions of the acquisition, redistribution and ownership

of the garments. Issues surrounding the findings presented above were discussed in almost every work meeting, more directly related to the type of work arena and occupation that was presented, though it was not the task of the ethnographer to come up with a concrete solution for how to transfer the ethnographic research into products. In the last summary work meeting, the top manager for the workwear company participated and was apparently upset over the presentation of the finding that concerned women's relation to the work uniform. With regards to gender and work uniforms in particular, he wanted a direct answer to whether or not the female workers wanted to be women or not, i.e., whether they wanted to be feminine at work or not, whether they wanted their own feminine work uniforms or not. Not having participated in the other work meetings he did not have the same understanding of this ambiguity as those who had discussed this earlier. This is where expectations of clear-cut answers were most apparent. However, many of the perspectives from the fieldwork were easy to trace back to improved or new products and services launched on the market.

The main question that the workwear company was interested in exploring was if they should make their own female workwear line. The ambiguity of workwear complicated the decision and made them doubt the market potential of making a workwear line especially designed for women. In addition, several of the findings that were made about women and workwear in the study also applied to men in the same occupations. This applied to size range, shape and functions, in particular, as well as uses of that same workwear. Initially, a decision was made on the basis of the findings and market potential not to make a collection of workwear dedicated to female workers. However, due to the structures of acquisition and in particular due to the public bidding, the workwear company felt obliged to offer female workers products that were directed specifically towards them. These garments were not particularly visible as feminine, neither in form or in appearance.

The workwear collection was in general dominated by dark and grey colours, with a splash of orange or yellow on high visibility garments. The female workwear had seams or details hidden or discretely placed inside garments, pockets, zippers or buttons. Undergarments in wool, cotton or more technical garments were also offered in different colours inspired by the company's sports collection and not used in the outer layers of workwear. The shape and sizes of these garments were also discretely more female in form with a more narrow shape, but one that left

room for hips and breasts. The challenge here was to create a shape that was not too narrow and tight fitting as to draw attention to the female workers.

Solutions were also made to improve work uniforms for both men and women. A greater variation in size range in the work uniforms was among the first solutions derived from the study of women and men's use of workwear. This made it easier for workers of all sizes to find a size that fitted. Having a more gender-neutral sizing system meant that sizes were communicated in a way that was more comfortable for female workers. They did not, for example, have to choose "small man" when selecting a size. The shape of the different garments was also improved for both sexes and made according to feedback gathered in the fieldwork. In the work meetings, it was also discussed as to whether or not to offer variations in the length of the work pants and jumpsuits so that variations in length, placement of kneepads, pockets and other technical functions were placed correctly on the lower parts of the body. This was not done, however, due to the fact that along the way the workwear company came up with a solution to the garment design, which made the garments more flexible. This meant that, among other things, length could be solved by incorporating the ability to easily fold down or fold up the lower parts of the pants.

Increasing the possibility for variation and creating flexible solutions in the workwear products became a solution to the problem of getting clothes that better fitted the body not only of women and the work that was done every day. Designing flexible garments were related to the placement of pockets and the use of zippers and buttons, but also incorporated uses of particular textiles for the different garments. Labelling of the garment to accommodate information for all users was also discussed as part of a flexible solution. Solutions included using images to quickly grab the attention of the wearer. This solution accommodated for the problems in the transfer of knowledge between those who purchase and redistribute the products and the end users.

In addition to design solutions of work garments, more structural changes in marketing, information and sales were discussed. One discussed option was to offer sales channels where users of workwear and not just the representatives from different male-dominated occupations could purchase garments directly from distributors. Offering products directly to workers was a response to increasing the access of work uniforms for workers in all occupations and a way to

cut down on the supply chain. In this way, the ethnographic production of knowledge on user contexts was incorporated in design-based solutions to workwear and services.

6. Ethnographic research as added value

The background for the study of work uniforms in male-dominated occupations offered little or no knowledge about the functional requirements and aesthetic expectations employees had towards their workwear, nor about the social and practical aspects of workwear in use. Workwear is an essential part of all workers' physical, social and symbolic daily life, but this is seldom articulated or studied. Ethnographic research was used to overcome the challenge of translating between non-verbalized, tacit knowledge and experiences of the work clothes in use through language, and in assisting the developers and designers with guidance towards design-based solutions. At the same time, Stewart (2014: 140) has identified the application of complex and contextualized ethnographic findings as one obstacle for ethnography in management studies. In juxtaposition between the various users and the product developer, the ethnographer may find himself/herself in a tricky position between the users' ambivalence and complex feelings towards their work and workwear, and a need for rapid, clear-cut and easily transferrable knowledge about the clothes in use.

Likewise, Howard and Mortensen have identified "the handoff from ethnographers to designers and business decision makers" as "the biggest challenge to success" (2009: 17). They claim that although the use of ethnographic methods has grown in the business world, the outcomes have not grown at the same rate. In an attempt to "make the research stick and have long-term impact beyond any individual project" (Howard & Mortensen 2009: 20), they stress the fact that ethnographers have to act as guides to discovering customer insights instead of gurus who know more about people than anyone else (Howard & Mortensen 2009: 21). Along that same line of thought, it could be said that the work meetings and feedback loop that the researcher was involved in enabled the ethnographer to act as a guide to the contexts and understandings of workers' dress practices.

Acting as a guide to users and user contexts can be a challenging and daunting commitment. But, it is not a position that the ethnographer is unfamiliar with. The role of the ethnographer has always been to speak on behalf of others, and translate the understandings gained in the course

of fieldwork into a scientific or academic language. The difference in relating to the business world is that the transfer of knowledge from users to designers cannot be communicated in an academic language, but instead must be articulated in a way that is understandable to the business world. The ethnographic fieldwork not only provided information about the work uniform and the workers, but also studied the contexts, practices and work relations these male and female employees were involved in. Through that, ethnography became a valuable tool for improving products both in regards to the design and the structural systems that enclosed these products. Analysing the findings that are ultimately incorporated into the development of products and services (and those that are omitted) tells us something about the handoff of ethnographic research. It points to the ways in which ethnographic research can contribute in making products better and possibly also improving lives of the people involved in the fieldwork.

10. The work uniform's potential for gender-segregated labour

The overarching research question in this dissertation is what potential lies in the work uniform as a change agent for the gender-segregated labour market. This chapter discusses the research findings in a wider context of the gender-segregated labour market in Norway. Doing so it makes use of the four sub-questions set forth as a framework in the introduction. These four questions are: 1. *What is the work uniform's potential for including and excluding female workers?* 2. *How do work uniforms have the potential to challenge and reproduce work practices and gender constructions?* 3. *In what way do work uniforms have the potential to reveal tacit and embodied understandings of work environments?* 4. *In what ways does the innovation of work uniforms provide potential for change of the gender-segregated labour market?* These questions make up the four sections in this concluding discussion in which I will summarize the main findings from the articles and discuss the work uniform's potential. I will conclude the last section by answering the main research question of whether the work uniform has potential as a change agent for the gender-segregated labour market. I will also suggest the further studying of material preconditions in the workplace, and comment on why and how this is important.

Inclusion and exclusion at work

Through the presented articles, I have pointed out how work uniforms function in ways that could be described as social, physical and material. In Article B, I point to work as a socio-cultural entity where we consider the *material* in terms of uniform workwear and its conditions, the *physical* in terms of the tactile environments that surround the workers and the *social* in terms of human interaction between workers. The work uniforms took part in complex routines and interactions between different owners and users, work environments, and social relations as well as material structures such as wardrobes, toilets and lunchrooms. These elements are not contrasted but empirically engrained in the understanding of what makes up everyday work for the workers. In this, work is a context-bound, social and cultural space that forms different work practices, and the work uniform functions as a mechanism for inclusion and exclusion.

The above-mentioned elements are closely connected and work through what I regard as an *equality discourse*. Women worked hard towards adapting to the male work environment in order to be considered equal to their male colleagues and thus be included in the work community. This is described in detail in Article A. Through an equality discourse it is possible to pinpoint how the work uniform functions socially, physically and materially in female workers' everyday lives. The work uniform was formed through efforts to establish equality in the workplace and to emphasize a sense of community with their male colleagues at work. Simultaneously, the work uniform functioned as an implicit connection to the male-dominated work environment that was taken for granted and not particularly challenged. My study confirms what Røthing and Aarseth (2006: 183) point to, that when someone tries to cross the gender boundaries in the labour market, which in Norway is still traditionally-based in female and male occupations, they feel neither very well or welcome. The work uniform is a contributing factor to this.

Article B shows that by introducing standardized uniforms for all workers at certain companies, workers appeared as an equal unit externally. In regulating how to dress and what to dress in, the employers made choices on behalf of their employees for the workwear that would be used in everyday work. These regulations promoted the company profile, a common visual expression for the company's external representation. They set materially grounded standards for not only decent and indecent dress, but gave direction on how to dress and be an appropriate woman and man in the work context. In this way, work uniforms function as a useful source of knowledge about dress and behaviour that is usually silent. It also points to the production of specific work practices through material objects. The effort to promote equality in the workplace was evident in the establishment of structures in the workplace that enabled a standardization of work uniforms. It was also visible in what the workers said about their use of the work uniforms and the observations made about work uniforms in use.

One of the guys

The standardized work uniform gave female workers a specific way to dress as “one of the guys” and an opportunity to distinguish themselves as little as possible. It provided women a useful tool for inclusion in the work community. According to Craik's (2005) theory about the open meaning and hidden lives of uniforms, uniforms have the ability to facilitate women's

integration into the work sphere while at the same time downplaying female bodily attributes. However, the work uniform also enabled the negotiation of gender constructions at work. This points to an essential ambivalence in the work uniform's ability to empower women to be included as "one of the guys".

A good example of this can be seen in the workwear of female carpenters at one of the construction sites in the study. This example is also reproduced in Neumann et al. (2012). This particular woman made her own version of the work uniform she dressed in every day. She had to use work pants that were one size larger than she would normally wear, because the pants were not made to accommodate her hips and the bodily shapes often associated with a woman. A consequence of this was that the kneepads fell to the lower part of her knees, thereby losing their protective functions. At the same time, due to the ill fit of the uniform, her buttocks could be seen when she bent over to grab something off the ground. As she did not want to show off this part of her body, this led to a need to incorporate other garments than what was provided for her at work. She wore a personal uniform of sorts – a pink tank top with a low-cut neckline that showed off her cleavage combined with a camouflage hoodie, a large necklace and huge sunglasses. In this way, this female carpenter had made a private uniform that both hid and revealed chosen parts of her body.

This is a good example of how women in the study used work uniforms as a material base to negotiate their position in the gender-segregated work sphere between being "one of the guys" and signifying that they are still women. The female carpenter referred to above said that she was concerned with being included as an equal member of the work community, and that she did not want to show that she was a woman at work. This statement was in direct conflict with the way she had made her own uniform and points to an essential ambivalence found in the apparel at work. This ambivalence could both include and exclude female workers. Female workers maintained that when at work they did not want to show themselves off as women, but wanted to be taken seriously as part of the work team. These women stated that they were not concerned with the workwear, which was reinforced in the employer's and employees' common understanding that appearance and body should not be of central focus in the workplace. Yet, it became evident in the course of our study that certain visual aspects of femininity acted as obstacles to being fully included in the work community – something that was important for the

women we studied (see also Neumann et al. 2012). As a result, what the women in this study said and what they did was not always consistent.

It is reasonable to assume that the work uniform contributes to creating a workplace that is based on gender neutrality. Yet, the community that was established through the work uniform was certainly not gender-neutral. This is illustrated in the example above and through the article concerned with the Velcro strap (Article A). This article points to how many of the women who said that they did not want to stand out still styled their long hair, used jewellery, dressed in private t-shirts or sleeveless shirts and wore makeup. This can be seen as a way to feminize the uniform and their appearance. In the Norwegian Armed Forces, for example, women can have neither a ponytail nor loose braids on board mining vessels. According to uniform regulations for the Norwegian Defence (Uniformsreglement for sjøforsvaret 2007), the hair should be arranged so that it does not fall below the upper edge of the jacket or shirt collar. Discreet use of jewellery and cosmetics is permitted, however. The female workers wanted to be both within the community and outside of it by virtue of being female. The use of the uniform was a way to signal the effort to fit in while at the same time denouncing the gender stereotype often tied to women being *vain*. In this way, the mining vessels seek to appear as a gender-neutral workplace, but taking into consideration both what is said and what is done through clothing, it turns out that the workplace is infused by gender inequality and heteronormative expectations (Neumann et al. 2012: 248).

Work uniforms as such have a strong masculine bias. This is expressed through the standardization of work uniforms that are based on male norms and an association to male/masculine characteristics (Craik 2005). The masculine bias is connected to gendered categories where women and men are understood as fundamentally different. This understanding of gender is at the heart of what Iversen (2006: 29) calls gender inequality, which points to the understanding of gender as difference, that there are two genders, men and women, that naturally fit different occupations. This is an essential aspect of understanding the gender-segregated labour market. Another aspect that women relate to largely by dressing in work uniforms is what Iversen understand as worker equality (2006: 28). This is explained as a sense of a putative common destiny among the workers that results in a sense of security, unity, loyalty and protection, a sense of *we* versus *them*. The worker equality is what the female

workers are hoping to achieve by dressing in and not problematizing work uniforms, while actively denouncing stereotypes of the female gender. Together worker equality and gender inequality accommodate the ambivalence that I find working in the work uniforms and points directly to the challenges we find in the gender-segregated labour market in Norway.

This thesis shows that the work uniform facilitates the inclusion of women in the workplace by functioning as a visual and physical manifestation of their equal status with men. Even so, the work uniform can also be excluding when the female body is dressed in it. This refers to the ambivalence I find working through the uniform, which I also mention in Article D. As Mühleisen and Lorentzen (2006: 280) writes, everything from dress, makeup, perfumes, accessories, greet - and communication patterns, body language, use of the room, gaze conventions, physical distance, choice of conversation topics or tone of voice and intonation orchestrate the female or male cultural manuscript - or forbear to do so. In this, it is clear that the dressing for work manifests discourses of masculinity and femininity. Women are obliged to wear the same uniforms as men, but many feminize them. Even down to small details such as the Velcro straps referred to in Article A, the work uniform has an ability to mirror gender, work and clothing discourses. These discourses are important embodiments of the work uniform in that they assign statuses as “appropriate dress” and “appropriate workers”. It is up to the male colleagues to determine whether the women fit in or not while the responsibility to fit in fall entirely on the women themselves.

The ability of the work uniform to act as a mechanism for inclusion and exclusion reveals its potential as a change agent. Given the work uniform’s importance in the work sphere, and given its gendered character, it can contribute to solve the challenges of gender equality in the labour market. The clothes are worn on the body every day and can be used to change employees' everyday work. However, it appears that efforts are being made more at the political level to establish social structures and personnel policies than with establishing material and physical conditions that include women in these occupations. For the work uniform to have the potential as a change agent, it is crucial to look at the material structures at work and how the equality discourse works contextually. This applies not only to work uniforms, but, to some extent, also to other physical and material structures such as toilets, changing rooms, and cabins. For, as the next section will show, these conditions reproduce and challenge work practices and gender

constructions at the work spheres in a way that may be immensely important for the inclusion of women in male-dominated manual occupations.

Reproduce and challenge conditions at work

This dissertation considers work a socio-cultural entity and holds the material, in terms of uniform workwear, to be central in the affiliation and sense of belonging to a work sphere and occupation. The previous section showed how work, gender and clothing are crucial in terms of the inclusion and exclusion of female workers. This section will show how the work uniform both reproduces and challenges work practices and gender constructions. Both sections address specific constructions of gender. Constructions of gender in these male-dominated occupations are closely connected with Iversen's (2006) understanding of gender inequality in which men and women are gendered through their biological sex, and that these genders fit naturally into different occupations. In this way, gender is what makes a difference at work.

The reproduction of work practices and gender constructions happen through the daily uniformity and control that is exercised over employees at work. Article B shows that the standardization of apparel for work is closely connected to the implementation of work uniforms and the structural requirements for the acquisition and redistribution of work uniforms. These routines allow the employers to reproduce their control over workers' practices in their daily work related to apparel and conduct in a work context. Moreover, these conditions reproduce gender constructions through what I refer to as *bottleneck* in Article B and D. This recurring structural issue, that the user is not the same as the procurer or decision maker, hinders women's influence and jurisdiction over their own clothing, which causes the reproduction of work and gender practices. Female workers do not want to explicitly announce their differentness, and are therefore unlikely to ask for different work clothes adapted to their bodies if these are not provided to them beforehand.

The conditions surrounding the uniform in the work sphere lead to women under-communicate gender inequality in what they say and how they dress. This is an essential component for them in order to be included as "one of the guys". The solution to the ambivalence between work equality and gender inequality thus seems to be gender neutrality. This is clearly expressed through what the workwear suppliers call *unisex* clothing. Unisex is a terminology used on uniforms intended for both genders. In reality, though, these clothes are neither particularly

different from the other work uniforms nor more suitable for either women or men. Few of the uniforms that exist on the market today are in fact *uni-form*, that is one for all, or *uni-sex*, that is pieces of clothing that can accommodate both sexes. Moreover, while these work uniforms dress men as professional men, women are dressed as professional persons via the opposite sex (Drege og Nytingnes 1999: 43). Unisex thus becomes a tangible manifestation of the male universal standard, while women rank as “the second sex” (deBeauvoir 2000).

Occasion and context

Clothes work differently depending on context, or *occasion*, as it is usually referred to when associated with clothing. The significance of clothing changes based on where you are, what you do, and who you spend time with (Klepp & Bjerck 2010). Work uniforms are designed for use at work, but the occasion for work can also change. Clothes are in use not only in the work itself, but also during breaks in the canteen, and on the way to and from the work place. This study has shown that the significance of apparel for the individual is not only determined by the way it is used in the work sphere, but also in these other contexts. In this way, the work uniform is dependant on a certain social context to be reproductive. This is evident when it is taken out of its usual context. One vivid example of this is the annual Christmas party referred to in Article A. Here the female workers seemed to challenge the work context’s usual expression of gender and its connecting values through the use of clothing that had another expression of femininity. The masculine normalized work uniform was replaced with short dresses, jewellery, lots of makeup, spray-tans and long, lacquered fingernails. This was a rare occasion in which the boundaries of clothing and conduct between job and civilian life was exceeded. It thus seems that the equality discourse is challenged when it participates in other occasions and contexts than the one initially intended. There it not only challenged the work context, but also the social and structural conditions of gender.

Article B tells another story of occasion. This is the story of a woman who rarely uses her work uniform outside her work sphere. For her, the uniform workwear was appropriately confined to the particular work sphere in the production area. This was a rather strictly-defined context. She explained that she did not run her personal errands, like shopping for groceries, in her workwear. Nor was she fond of appearing in her work uniform in the large cafeteria at her workplace where she might meet other groups of better-paid and better-educated employees.

When she is dressed in her work uniform to go shopping she feels that other people gaze at her. To her, her choice of occupation and its status as a male job only requiring a low level of education became too visibly manifested through the clothes she wore. This indicates that the feeling of well-being and comfort in a work uniform is tied to the relationship between the body and its surroundings (Crowley 2000: 89). Thus, the feeling of well-being includes conditions that contribute to the achievement of this condition (Klepp 2009: 77). The work uniform did not provide this female worker with the feeling of well-being outside her specific work context. This appeared to have further consequences for how she saw herself dressed in the uniform at work.

In Article B, this is contrasted against her male colleague who has a completely different perception of how others see him and consequently has a very different self-perception, even though he is dressed in the same work uniform. He explained that he did all sorts of private matters wearing his uniform workwear because, as he claimed, it provided him with positive feedback from women. He seemed to be proud of the status and attention he attracted by wearing the work uniform. For the male worker, his work uniform represented a typical occupational choice, but for the female worker, this way of dressing reflected an untraditional choice of occupation. This brings to attention two important aspects of the work uniform: 1. it has the ability to reproduce and confront occupational choices, and 2. it materializes a way to perform femininity that is not cohesive with the way it is usually performed in society. In other words, it confronts the heteronormative expectations that exist in the society as a whole (Butler 2006).

Altogether, these are important components for understanding the gender-segregated labour market. Women and men take different gendered subject positions that vary depending on the social context they find themselves in and depending on the hierarchical status of gendered positions (Neumann et al. 2012). Connell (1995) challenged this idea with particular attention to its relation to masculinity and class. It may seem that the way work uniforms are perceived in other occasions and contexts have consequences for how both the male and female workers see themselves in uniform. Here it reflects an equality discourse that is different than in the work context and challenges an established heteronormative expectation (Butler 2006) to women in society.

That work uniforms fit poorly into all types of occasions and contexts that women dress for also show the potential for change that lies in changing working uniforms and/or conditions around these clothes. It is possible to change practices related to acquisition and ownership of the work uniforms so that employees have more jurisdiction over their own clothing. This, together with better clothes, can help stop one of the reproductions of gender segregation in the labour market. The clothes can be made less masculine with fewer ties to work and with options for variation and customization. This could potentially contribute to more women choosing these occupations and ensure that women to a larger extent remain in these male-dominated work spheres. More concrete suggestions will be outlined in the conclusion of this dissertation. The next part of this chapter will discuss the work uniform's ability to reveal tacit and embodied aspects of work environments.

Tacit and embodied dimension at work

Uniforms act as a frame for everyday work, present in the body's every little movement and in all work tasks and yet often taken for granted. In that sense, work uniforms are a tacit dimension at work. That the work uniform is in itself so embodied and silent may explain its marginal role in work life studies and in studies of the gender-segregated labour market. That clothes in a modern Western context been considered a topic of female interest and tied to the domestic sphere (Svensson & Waldèn 2005; Turney 2009), may also explain the work uniform's marginalization, as suggested in Article B. Clothes have been understood and studied through a particular lens, namely that of fashion (Klepp & Laitala 2015; Skov & Melchior 2011), a discourse that falls outside of the scope of work life studies. Little research is done of work uniforms and material conditions that involve workers in male-dominated occupations. I will claim that this is due to its "non-reflective, embodied interaction with the material" (Gram-Hansen 2011), which in this sense point to tacit and embodied dimensions of work.

Michael Polanyi (1966) first wrote about tacit knowledge as a kind of knowledge that is not easily made articulate, but which nevertheless is a prerequisite for human action, being and knowledge. Marcel Mauss (1979) was influential in focusing on the body and action, and in considering nature as a social construction, in particular. He described body techniques and how these are created through learning and socialization processes in society. Collins, Green and Draper (1985: 329) identify the articulate and the tacit as a crucial division in knowledge. This is

true both for the local dimension of scientific knowledge and for the tacit dimension of workers' knowledge and experience. Gram-Hansen (2011) connects practice theory, materiality and the concept of domestication in a way that facilitates a study of embodied knowledge through particular material assumptions. In this dissertation, one way of approaching this silent, embodied knowledge has been through *wardrobe studies*, which is the subject for Article C.

In the study at hand it was important to grasp the open and hidden, explicit and tacit meaning of the uniform that Craik (2005) points to. It was also important to illuminate the everyday routines (Gronow & Warde 2001) that clothes are involved in – routines characterized by being automated and thus invisible even to the person who participates in them. This issue has been treated in various degrees in all four articles of this dissertation. Through a study of wardrobes, Article C highlights tacit and embodied knowledge about the clothes in use which enables bringing materiality to the core. Understanding tacit and embodied notions of workwear brings forth an emphasis on bodily movements, things, practical knowledge and routine (Reckwitz 2002: 29). This is reflected in the choice of methods chosen for this dissertation, and has implications for the analysis presented herein.

Silent links between gender, work and materiality

The underlying links between gender, work and materiality are present in all four articles, but this is not always obvious. In Article A, an initial quote is analysed in light of discourses related to gender and the perceptions of work, but it is firstly when studying the embodied integration with the work uniform that the tacit dimensions become revealed. The militarized work uniform functions as a tacit structure for adaptation because, at first sight and without uttering a word, it signals belonging to a certain occupational group, independent of gender. Work uniforms, through the help of regulations, provide male wearers with a specific form of attitude and control. Yet for female workers, the uniform conveys the message that they are dressed as the wrong biological gender. The silent and embodied aspects of the interaction between the material and non-material are significant.

Andrewes (2005: 32) argues that it is not only the body's appearance that changes through the clothes, but that something changes within the body as well. This empowers the clothes even more. Work uniforms determine much of the work being done but are not devoted much space in the discussion surrounding what makes a difference in working life. One of the common traits

discovered through fieldwork and interviews was that both male and female workers seldom reflect explicitly on their uniforms, even when being asked about it. It was therefore often difficult to talk about their uniforms because the knowledge appeared to be silent, unarticulated and non-reflexive. Work uniforms dress the workers every day but are a silent link that is taken for granted. Kirsten Gram-Hansen (2011) describes this phenomenon as part of an internalised practice, a process where a habit becomes embodied. This is directly related to the notion of *domestication* where individuals interact with, appropriate and domesticate technologies in their everyday lives (Gram Hansen 2011: 66).

In the appropriation process of work uniforms, the apparel becomes internalized during the course of education, apprenticeship and finally as a worker within these occupations. This can be considered a cognitive, physical and material process of adaptation: the cognitive notion relates to the idea of being dressed as part of a work community; the physical process relates to the suitability of the work uniform to accommodate work tasks to be performed; and, finally, the material adaption that occurs when the work uniform links together body, mind and work. In this way the work uniform goes from being an "objective understanding to subjective mind in [their] relation to the thing" (Gram-Hansen 2011: 66). Through this process of appropriation, clothes are being configured through use so that they become a part of the wearer and a way of extending ourselves and establishing territory around our body (Nippert-Eng 1996: 34; Lupton & Noble 2002: 7; Gram-Hansen 2011: 66). The concept of domestication thereby points to how the work uniform becomes a link for women to their work lives that is taken for granted. Domesticating the work uniform enables a work practice to be shaped over time so that work uniforms become routinized and just a part of what they do at work (Gram-Hansen 2011: 66).

The implicit can be made explicit through dialogue and qualitative interviews but that does not mean that all knowledge can be expressed in words. Much of what we know is something that we know with our bodies, and this is not always possible to put into words. This is particularly relevant to the verbalisation of clothing within the male-dominated manual occupations in this study. It is not easy to put into words the ways we understand the clothes we wear on our bodies. This is particularly challenging for an occupational group that does not focus on clothing and

does not express its expertise in clothing¹⁷ and for female workers within these occupations who would rather not accentuate themselves – particularly not with regards to clothing and appearance. It is not surprising then that the apparel within these occupations has not been the subject of empirical studies. Despite this, researching the labour market from this perspective has offered fresh insight into labour practices. Incorporating alternative ways to study work environments through the work uniform as such may have great potential in revealing existing conditions that challenge and reproduce work practices and gender constructions, and that further have effects on inclusion and exclusion of female workers in a gender-segregated labour market. The next part of this chapter will therefore focus on the potential for change through innovation and product development.

Changing work conditions through innovation

This section deal with the last sub-question of this thesis, which is concerned with the potential of work uniforms for change and innovation that may have further effects for the gender-segregated labour market. The three previous sub-questions looked at the potential for work uniforms to provide an increased understanding of the gender-segregated labour market, and offered ways to study this through embodied material conditions. In project *Uni-Form*, a central objective was to translate this knowledge into specific advances in product development for what was termed *competence-based products*. This section is based on the last research problematic and will address the potential for changing work conditions by developing such competence-based clothing. The process of developing improved work clothing is specifically described in Article D.

Competence-based products relate to an idea or a belief that it is possible to build a comprehensive understanding of clothing in use that would contribute to new or improved workwear for women. The aim of this would be to enhance the quality of working life for female workers and provide the workwear company with a competitive advantage. In addition to their potential for innovation, competence-based work uniforms also possess the ability to act as change agents for the gender-segregated labour market. This potential can be directly linked to

¹⁷ This is reflected in their choice of occupation where practical knowledge was more attractive than written or verbal knowledge as we find it in academia. See more in Neumann et al. 2012.

the ability to understand and exploit the relationship between standardization and use, as understood through the analytical terms *scripts* and *domestication*.

To understand a product's use and present its contextual meaning, as was done through the innovation work in the project *Uni-Form* and as shown in Article D, it may be useful to see which scripts contain a product. Users – here, female workers – are constrained in their involvement with the work uniforms they use in that there are certain scripts and intended uses built into these artefacts (Rohracher 2005: 11). The work uniform was based in apparel that was to be used by men in occupations dominated by masculine norms and traditions. The clothes did not fit the bodies that fell outside this normalized system, but were not an optimal fit for male users either. The normalized system I am referring to here made up the standardization of these work clothes as they came into being through size, form and function or according to the specific work tasks within each of the occupations. This is an important part of what was designed into the work uniforms and what constitute their script.

At the same time, wearers of these work uniforms create specific social practices in their use of the uniforms that may not be intended or planned on in the product development process. This is called *domestication*. Here the clothes are domesticated in everyday life through a process of appropriation, described by Gram-Hansen (2011) in the section above. According to Rohracher “appropriation of products emphasizes the active sides of product use, where people do not just submit themselves to the scripts or preferred readings of a technology but actively define their manner of usage” (2005: 11). This may in particular be true for more technical products, but this is also a valid point in the incorporation of workwear into workers’ everyday lives. Here, users find their own ways to adjust and fit their work uniforms to their bodies, work tasks and social-symbolic structures.

When women entered the male-dominated spheres and dressed in the work uniforms, it seemed to make the ill-fitting clothes even more visible. The appropriation process took the form of a negotiation process, one in which the women negotiated their gendered positions at work through their use of their work uniforms. This is directly related to the socio-cultural aspects mentioned above such as the equality discourse that both included and excluded female workers and the work uniform’s ability to reproduce and challenge work practices and gender constructions. In addition, there were negotiations where these aspects had a tangible form. The

Velcro strap discussed in Article A is a great example of that. In addition, many of the female workers adjusted their workwear where it did not fit, cutting, sewing, folding and taping. Some of their reasons for making adjustments were functional, but practical motivations were mixed with other, more social and symbolic sides of dress practices.

This brings us back to the example with the female carpenter from the first section of this chapter who had made her own version of the work uniform that she dressed in every day. In her way of dressing, there is a discrepancy in the user script that was intended for the work uniform(s) set in the regulations of work uniforms at her construction site. The intentions of the standardized work uniform were tainted and the scripts of the garments were altered. The clothes had become domesticated and formed the basis for the development of a private uniform. This uniform expressed both individualization and femininity in a context that explicitly sought out gender neutrality. Every day during fieldwork, she dressed her upper body in a variety of colours and arrangements, while maintaining the basic principles of her private uniform. In that way her way of dressing differed from that of her male colleagues who mainly wore work clothes provided by the employer such as a dark work pant, a high visibility orange t-shirt, sweater or jacket a helmet and protective boots.

The example of the female carpenter's private work uniform is a good illustration of how the relationship between standardization and use, scripts and domestication, in the uniforms of (female) employees links to a socio-cultural, physical and material base in the workplace. It shows how the expectation that work uniforms will act as a material basis for a gender-neutral sphere is challenged through 1. the script of a masculine normalisation that underlies the work uniform, and 2. the domestication that occurs over time through the uniforms in use. Articles A and D show how the development of work clothing is infused with ambivalence precisely because it is so closely linked to the relationship between gender, body and work in the way that it is expressed through the equality discourse presented above. The work on developing improved work uniforms as it appears in Article D shows, however, that embodied knowledge cannot easily be turned into new products and services – especially not for female workers. This was why the workwear company involved in the *Uni-Form* project found it best to develop work uniforms that were not primarily based in gender, but on flexible solutions related to size, function and detailing.

The potential for innovation in work uniforms within these male-dominated, manual occupations are closely linked to the possibilities for developing a competence-based clothing. If we can base product development and innovation on studies of real people in real contexts dressed in existing work uniforms and not as representations of a user base (Akrich 1995; Rohracher 2005; Stewart and Williams 2005;), *and* do this in collaboration with industry and qualitative, ethnographic research, there is a real potential that both women and men can get work uniforms that will fit them and the work they do better. That work uniforms are standardized for all representative users in a wide range of occupations make up this apparel's biggest challenge. In this way, the standardization of clothes is also a major challenge to the gender-segregated labour market. At the same time, this represents a great potential for change. Firstly, there is fertile ground for additional, material-based studies to be carried out within the gender-segregated labour market, such as the study of work uniforms. Secondly, there is a great potential for change in innovating work uniforms within these occupations. One way to do this could be to strive for competence-based work apparel that offers an alternative to standardization.

Conclusion

The overall objective of this thesis has been to discuss whether work uniforms in male-dominated manual occupations have a change potential for the gender-segregated labour market. In these occupations, there seems to be a dominant material form of masculinity that is limiting diversity and equality in the work sphere. Most women in this study experienced work environments rooted in masculine systems where men are considered the norm and to which they must adapt. Such systems give the impression that women do not belong. That the workplace's physical or material conditions do not facilitate women confirms this impression. The fact that women are trying to adapt to masculine-based workplaces allows uniformity (being "one of the guys") to become the main focus. Here, it seems that differences are not appreciated as a basis for a balanced working environment. This does not help in recruiting or retaining women in male-dominated occupations. Making arrangements for both male and female workers at work allows men and women to participate in the labour market on equal terms. Improving the work uniform could be a step towards facilitating diversity and equality in these workplaces.

For a work uniform to have potential as a change agent it is crucial to examine the material conditions and the ways that the equality discourse works in an alternating relationship between material and socio-cultural dimensions. The potential for change is in this dissertation related to the work uniforms' context-specific use and the effects of standardisation and system for acquisition and ownership. If studies of work life and the work on gender equality in practice could include or base their understandings in material realities as this dissertation indicates, it might be possible to obtain a more comprehensive picture of male-dominated occupations and identify barriers and opportunities for participation. The structural organization surrounding work uniforms give workers little jurisdiction over their own everyday clothing. As an effect, it produces and reproduces specific practices related to clothing and gender in the workplace. This is, of course, possible to change. Article A with its close analysis of the Velcro strap refers to just that. It points to contextual understandings of the relationship between gender, body, clothing and work. Considering these contextual understandings, it becomes possible to see how

the design, modification and negotiation of discourses and practices often occur based on material realities.

Work uniforms have great potential to reveal understandings of a work environment that at first glance may be difficult to grasp, such as the work uniform's importance as a mechanism for inclusion and exclusion and its ability to reproduce and challenge work practices and gender constructions. This dissertation shows a clear connection between the physical, socio-cultural and material aspects embodied in the work uniform. It strives to contribute important insight into and contextual knowledge of women in male-dominated occupations that have not previously been presented while simultaneously pointing to concrete solutions that might better include women in male-dominated occupations. Developing work uniforms in a way that empowers women to be incorporated into a workplace on their own terms, rather than on physical, social and material terms grounded in male standards and masculine norms is a concrete solution that can help minimize gender differences in the workplace.

By offering alternatives to standardized, ready-to-wear work apparel, the potential to include more people in these occupations increases. It can also contribute to including a wider range of people of all shapes and sizes, and that those who deviate from the masculine norms embedded in the work uniforms experience the male-dominated manual occupations as good places to work. Greater investment in uniforms can contribute to greater job satisfaction and improved self-image for the workers, and it may improve recruitment to these occupations. This can enhance the chances of building a more long-term and stable workforce in these occupations. As such, work uniforms have the potential to positively stimulate the gender-segregated labour market in the longer term.

Limitations and further studies

This dissertation is concerned with work uniforms for women in male-dominated manual occupations. As such, it has analysed parts of the gender-segregated labour market in light of material conditions that dress workers every day. This fills a knowledge gap in work research and political debates about recruiting and keeping women in these occupations. It also contributes to a discourse that seeks to increase the importance of material elements within different studies. Nonetheless, there are different ways to understand and study this gendered labour market and different fields of study and disciplines where an emphasis of material can be fruitful. In this section, I will point out limitations of the study herein, and indicate possible directions for further study.

One important limitation of this study is its lacking emphasis on class and how gender constructions and work practices can be seen through that lens. At least one of the empirical examples, where the female worker felt ashamed of her way of dressing for work once she moved outside the work context, could be interpreted as an issue of belonging to a working class. Class and hierarchical structures are important aspects in the construction and reproduction of manual working class occupations, but this has not been included in the analysis of the apparel within these occupations. One of the articles from the project *Uni-Form* that has inspired many of the perspectives in this thesis (Neumann et al. 2012) addresses class as part of the analytical perspective. However, this should be a main theoretical concern of an empirical study of these occupations, and preferably studied in connection to material conditions. Bringing class into the analysis could contribute to nuance the emphasis on gender and view the female workers' gendered and classed identities as connected.

In order to embark on more materially-enriched studies it might also be possible to study other aspects of these occupations and how these aspects effect the work environment. One obvious possibility is to look at how male workers in the studied manual occupations perceive and use work uniforms, and to investigate if there is any potential there for change. It would also be interesting to switch occupational categories and see how clothes work when excluding and including men in female-dominated occupations, such as in nursing. Other types of male-dominated occupations with more formal attire (for example, in the financial sector), could also

make for an interesting comparative study to this one, where clothing for women (and men) could likewise be studied in order to reveal tacit and embodied aspects of work. This means moving into the office sphere where men dress in a suit and tie, and women dress in formal pants, blouse and jacket. There is no doubt that this occupational dress is also challenging for some women.

Workplace studies can be used to understand more than work itself, as this thesis shows. Studies of social integration and everyday life in the workplace could be used as supplementary to my study to understand other aspects, such as safety issues. I briefly touch on this in my dissertation, but this could also be done more systematically. The way work life has been studied in this dissertation, by focusing on material aspects, could also be used in relation to the studies of kindergartens grade schools, colleges or trade schools. Other disciplines could also make use of more materially-oriented studies. A contribution to a framework for materially oriented studies has been offered in Article C, which is concerned with wardrobe studies. Finally, in this article, there are concrete suggestions of research areas where material surroundings and objects could be studied as part of a study of the micro-dynamics of everyday life such as in consumer studies, design studies, marketing studies, user-centred innovation and cultural studies.

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Attachment: Article A translated

A Velcro that upsets. Women and work in the Navy

The first thing I thought when we got the tightening function, was like, ‘What’s the point? So, we are not mannequins, we are here to work.’ [...] But there is nothing better than to feel good at work in your uniform, right? So I try to sort of tighten it a bit. Then, I think, ‘No, ugh, then you must hold in your stomach all the time (laughs a bit)’. But, it's really fine for those who want to use it, who have that opportunity. And I understand of course, if they feel like it, but then I think, like ‘What's the point? We are here to do a job, not to look good.’ (Female lieutenant)

In 2010, the Norwegian Defence Logistics Organization (NDLO) provided a new work uniform (M/04) for testing to a selection of its Navy personnel at a mine sweeper vessel in Norway. This uniform had been adjusted in relation to its predecessor (M/2000) to create a better fit. It came with a new and improved fabric that was meant to be more comfortable and durable and with new details such as Velcro straps on the pockets, shoulders, chest and waist. It is the Velcro straps placed in the waist at each side of the uniform jacket that the female lieutenant talks about in the quote above. The new version of the jacket provided the possibility for a more feminine shape in the work uniform with a shorter shoulder width and a narrower waistline enabled by the Velcro. However, this tightening function was the subject of debate among the women on the vessels, as shown in the above quote; how could they show their feminine forms *and* do a good job? How could they be appropriately female?

This chapter is based on *one* specific material object, the Velcro straps in the waist of the jacket in work uniform M/04 and the empirical data gathered through fieldwork on two Norwegian Navy vessels. The debate over the Velcro straps reveals many important discourses about being a woman in a workplace dominated by men. Above all, it points to how women and men act out their gender through certain clothing practices within a predetermined uniform regulation. The Velcro strap is used as an example of how uniformity can function as a negotiating arena for women in the encounter with masculine traditions.

How the body is led and felt through the workday in clothes that are too long, too wide or press adversely on parts of the body, are important conditions for workers everyday life. Work clothing is an essential part of employees' physical and social / symbolic preconditions, but is rarely articulated. This chapter takes work clothing as a starting point and asks: How are negotiations about femininity made through the work uniform and how can this be traced through the Velcro strap in work jacket M / 04? The chapter will show the importance of taking the material side of consumption seriously, in addition to (and not instead of) analysing the uniforms' symbolic aspects. By taking both sides into the analysis, it will be possible to produce a thick description of everyday consumption, as it appears of uniforms in use.

1. Women and uniforms

The research on uniforms distinguishes between uniforms, quasi-uniforms and informal uniforms (Craik 2005). Work clothing in the Navy, with their injunction and protocol-directed clothing, would qualify as “uniforms”. As Jennifer Craik describes it, standardized workwear qualifies as quasi-uniforms while clothing like sportswear can be categorized as a kind of informal uniform. Thus, the term uniform not only refers to work clothes and military uniforms but also extends to sportswear. Uniforms have numerous functions. Visually, they provide wearers with a common aesthetic and with an ability to be quickly identified. In the case of the Navy, blue uniforms make it is easy for outsiders to recognize the wearer’s connection to the Armed Forces, while badges adorning the uniform indicate the wearer’s participation in a hierarchical structure.

The uniform contributes to form the individual wearing it. This is a phenomenon discussed by Marcel Mauss (1979) in his work on body techniques as well as by Daniel Miller in his writing on “lived garments” (2005). The uniform constitutes one’s profession, and reshapes the civilian into the professional (Andrews 2005). Janet Andrews claims that clothing has an ability to reshape the body, while John Harvey (2007) shows how clothes, by covering or revealing, can function as a way of embodying values. Through the connection between the body and the material, people get access to ideas that are related to the clothes’ form.

The uniform’s function is to give the wearer authority and identity, and to assign him/her affiliation with a particular group. The uniform visualizes hierarchies and push aside individual

differences. The relation between uniforms and femininity is problematic because femininity is closely related to the individual body, which is incompatible to an abstract hierarchical community. The uniform's low fashion sensibility is also a bigger problem for women than for men, because fashionability is a more important factor in women's clothing. For men, uniformity is a standard part of their civilian dress, as with the business suit, for instance (Pettersen 2004). When it comes to the design of uniforms for women, difference is problematic – especially in occupations where authority, danger and physical labour are involved (Ewing 1975; Craik 2005).

Female versions of (male) uniforms show us how changing views on women's professionalism have taken material form. Uniforms for important social institutions like the police force (Finstad 2000; Young 1997; Steele 1989), the military (Garber 1992; Kidwell 1989), the postal service (Larsson 2005), the fire brigade, and others are effectively made for men. At the same time, uniforms made specifically for women amplify the tendency to see women as different, and to see men as normal (de Beauvoir 2000; Moi 2001; Butler 1999). Women in male-dominated occupations must therefore display an asexual femininity in both conduct and dress (Garber 1992), which deviates from femininity as it is normally performed. Uniforms with skirts have therefore been unpopular both in social and practical terms. This is expertly documented in Liv Finstad's (2000) study of the police force. An important dilemma in the study of female clothing practices is if women want to stand out as different, or through their clothes show affiliation to an occupation where gender is downplayed.

2. Data material

The material upon which this study is based was gathered in 2010¹⁸. The author engaged in participatory observations, interviews, practice studies and wardrobe studies on two Navy

¹⁸ The material for this article has been gathered in connection to the author's PhD work, which is a part of a larger project supported by the Norwegian Research Council's program for User Driven Innovation (BIA) made in collaboration between The National Institute for Consumer Research (SIFO), a Norwegian workwear company, the Norwegian Defense Logistics Organization (NDLO) and the Norwegian Work Research Institute (AFI). In this project, the author and two other researchers from SIFO completed fieldwork and/or interviews in the period between 2009-2011 at fourteen work sites in Norway and additional fieldwork at six of these work sites. These work sites are placed within six occupational categories: the Navy, industrial fishing, on- and offshore oil and gas production, skilled manual work, construction and industry production. This article is mainly based on fieldwork and interviews done at two of the Norwegian Navy's vessels, in which women's practices and experiences with uniforms are of central focus.

vessels: one mine trawler and one minesweeper. These methods were deployed in the course of the ethnographical fieldwork, but the selection of the methodological techniques is different. Interviews and participatory observations are well known methods, while practice studies and wardrobe studies are less well known (Klepp & Bjerck 2012).

Practice studies were conducted as observations of women and their male colleagues. The aim was to find out which clothes were used, but also to investigate *how* these clothes were used by female personnel. While the main focus was on how women used their clothes, the men's clothing was also registered. Here, the everyday dress of the personnel was important, as was how the clothing was used in relations between co-workers. It was important to capture how gender was communicated or under-communicated through the use of civilian and uniform clothing, accessories, hairstyle, makeup and jewellery. The wardrobe studies (Klepp & Bjerck 2012) registered whole wardrobes or parts of wardrobes. Through the wardrobe studies, all uniform and other clothing on board the mining vessels were registered. In addition, we also talked about every single piece of clothing during the registration. We discussed different options for the personnel's required uniforms, how clothing choices were made and how the Navy's uniform regulations were obeyed or disobeyed.

The Navy vessel's personnel also tested newly designed uniforms. This was done in two rounds, first during the course of routine fieldwork in which the methods mentioned above were used. After giving the Navy personnel several months to wear the new uniforms, a new fieldwork was conducted with greater emphasis on the newly-tested garments. This gave us, among other things, valuable information about old and new uniforms so that the dress practices related to both uniforms could be compared. On the Navy vessels, two different uniforms were tested. One was a special piece of clothing made for deck sailors; the other was work uniform M/04 designed to replace work uniform M/2000. The M/04 uniform is described in this chapter. The data material was gathered through field dairies, with long entries of daily events, conversations and activities, and recorded interviews which were later transcribed, together with pictures and short films in which the clothing and personnel in everyday situations were shown. Five women and four men were interviewed on the Navy vessels, but in the fieldwork all personnel on board was included.

3. The Navy's uniforms

In the Navy, there is clear regulation determining what kind of clothing ought to be worn at any given time. The Navy's uniform regulation states that it is an officer's duty to wear his/her uniform in daily service, at formal occasions and at gatherings of an official and social nature where common practice dictates that a uniform is appropriate attire¹⁹. A general rule is that everyone with the same or similar working conditions at a branch or on a vessel ought to be wearing the same uniform clothing, and at formal arrangements there should be the same uniform for the same category of personnel (Vestvik & Bjerck 2012: 13). This regulation, and the uniforms that are handed out to the Navy personnel, however, do not place functionality and individuality for each user in focus.

The personnel at the Navy vessels mainly used two types of uniforms on board. One was a service outfit for everyday indoor office use. The other was a dark blue work uniform, which resembled the types of uniforms that most people associate with the Navy. The service outfit existed in separate female models, but these were not particularly well regarded among the female personnel:

And then they had [girl pant], but they are impossible [to use], because they have like a very small waistline and the size of a donkey in the thighs, and then they are shaped like spaghetti in the legs. They are very strange. So then you choose the male trousers, so that you can have a low waistline and... They are better. And you get a skirt for one of the uniforms, and that is for girls in particular. But they are also rather small and have a high waistline. (Female officer)

This female officer said that she decided to use the male trouser model because the model referred to as a "girl pant" had a very different form that was less suited to her body and her use. This is by no means a unique situation. Working clothes and uniforms for women who works in typical male occupations today are either clothes designed for men, or copies of men's clothes where shape and aesthetics have been adapted to the female body and female dress customs. Experiences done by workwear producers, like the workwear company, show that this is seldom successful, something also international research confirms. Many people experience that this

¹⁹ Uniformsreglementet for Sjøforsvaret SAP-7 (F), 2007, p.19.

traditional uniform is adjusted to an “impersonal” hierarchical community, while the feminine is related to the individual, the individual body, and this is difficult to reconcile in a conformal outfit (Vestvik & Bjerck 2012).

The work uniform M/2000 was similar for both women and men with fixed sizes and without the possibility for customization. The jacket and the trousers were made in flame retardant cotton, and were only available in a few sizes. In general, there was a need for a greater variation when it came to the sizes of the uniforms. There was also a need for greater variations in both width and length so that the personnel could customize their clothing to fit better. The quality of the textiles also seemed in need of improvement given the level of strain they were exposed to. The women had their own needs when it came to the clothing and how it fit and functioned – though, they did not want a separate female model that differed from that of the men. The clothing ought to be similar for all personnel so that the women don’t stand out in any way. Some women made some adjustments to their clothes, changing the shape slightly to achieve a better fit. All said, we observed cases of customization for both sexes.

The work uniform was used by everyone on board of the mining vessels, from machinists to captains. Due to the diversity of the work (from the engine room to the commanding bridge), the common uniform was less functional when applied to the various working tasks, regardless of gender, body shape or size. The Navy personnel’s clothing remained equal, and poorly adapted, especially to the female body. The new work uniform M/04 was meant to improve the uniform for a variety of personnel by addressing the feedback received about the poor quality of the clothing. The Navy’s uniform M/04 was therefore an improved version of the former work uniform, the M/2000. Its incision was adjusted to create a better fit, and the jacket had an added tightening function by way of a Velcro strap in the waist. The M/04 was also manufactured using a new and improved textile for better comfort and durability, and it had several added details. It was available in sizes 42”-60”. Both the male and the female Navy personnel expressed joy over finally getting a work uniform with a more functional fit. The women felt better and more feminine in this uniform compared to the former one (Vestvik & Bjerck 2012: 41), and Velcro straps in the waist of the jackets were one of the reasons why. Nevertheless, the introductory quote in this chapter shows that showing femininity through the uniform was not unproblematic in relation to personal preferences, the gaze of others, and employer regulations.

4. The Velcro's function

Regulations not only instruct uniform wearers on how to dress on any given occasion, but also give guidance on personal attitude and behaviour when using a uniform. In general, combining civil and uniform garments is not allowed, and there are restrictions on the use of jewellery, watches, hairstyles and cosmetics. (Vestvik & Bjerck 2012). These strict regulations do not provide much room to mark and communicate gender, but as we shall see there was still room for negotiation when it came to women's clothing practices. As the quote above suggests, there is great complexity surrounding the material in women's uniforms. The Velcro on the uniforms serves as a material base for a larger discourse on how women can show femininity through their work uniform. The Velcro is also a good example of a symbolic and practical function for both sexes' adaptation of the uniform.

The uniforms came in a few different sizes based on standard masculine body types. Actual physical differences between (most) men and women essentially come down to the fact that women have breasts, a slightly narrower waist and a curvier lower back than men. In addition, women often have narrower shoulders and shorter arms and legs than men (Neumann et al. 2012: 244). These differences are not reflected in the Navy's uniforms or in work clothes in general. The standard is the male body, and the aesthetics in the uniform are related to masculinity. As the women interviewed agreed, the fit of the uniforms was generally poor. The Velcro strap in the jacket of the tested work uniform M/04 was therefore a response to the challenge of adapting uniforms to gender and size. Depending on how the Velcro was strapped, the waistline could be regulated.

One specific feedback was that the previous model's jacket was too wide over the stomach, and several of the female staff went down a full size so that it would fit. This, in turn, led to the jacket being too short in the sleeves. The idea that the jacket would fit a wide variety of bodies of both genders was incorrect. One of the women who participated in the first fieldwork said that she wanted to bring the old uniform home with her so that she could make adjustments in the waistline, even though she did not know if this violated the Navy's uniform regulations. By doing this, she could adjust the uniforms incision to fit her specifications, without standing out from the other uniforms. Had she had this new work uniform, however, she could have used the

Velcro's tightening function, and there would have been no reason for her to personally sew in her adjustments.

Another result from the adjustable Velcro strap in the jacket was that it followed the movements of the body better. This was especially important among the male and female deck sailors who often pulled the wind- and waterproof outerwear over their work uniforms. It was nevertheless clear that the Velcro's function primarily was directed towards the Navy vessel's female soldiers. The male testers in the study explained that they thought the Velcro was an advantage for women, and that the women could use it to feel more feminine. The women confirmed that they felt more feminine when they used the Velcro's tightening function.

The women were nonetheless mixed in their response to the Velcro strap, and they used the tightening function to varying degrees. "We are not mannequins, we are here to work," the female lieutenant in the initial quote says, and points to the importance of workwear as a symbol for work motivation. First and foremost they wanted to be included. One way to be included in the workplace was to look visually similar to their colleagues. The Velcro's function was therefore questioned: Was it really *necessary*? The female lieutenant felt more feminine, but this was not necessarily a desired effect of the uniform in the work context.

One of the women said that the new M/04 work uniform made her feel better looking at work. Whereas the work uniform M/2000 had been referred to as a "sack", the tightening function in the new uniform could be used to achieve a better shape. The fact that the women who had tested the uniform liked the tightening function, was not, according to them, based on a desire to show their feminine curves. Rather, the Velcro made the uniforms fit better, and gave the women better mobility. The men, on the other hand, did not quite see what function the Velcro could have for them (though they did claim that the Velcro was not in the way). They concurred, however, that it could be nice for their female colleagues to be able to tighten their uniform jackets to achieve a better fit.

One of the men in the study who tested the new work uniform had a narrow body and was very pleased with the tightening function in the jacket. He used it so that it would fit better around his waist and his stomach. By doing so, he did not have to choose between a jacket that was either too wide around his waist, or too short on his sleeves. The new uniform jacket was therefore a (potential) better fit for both women *and* men. Still, the Velcro strap was considered to be a

function intended for women. It is worth noting that this man was not considered more feminine by using the Velcro. Used by women however, and especially in combination with other female markers, it became a visual sign of femininity which was questionable in this work context.

The feedback on the uniform jacket's Velcro points to a larger debate about women and workwear. How can you be just enough of a woman in a workplace? How can a woman dress accordingly? The female lieutenant who said that she did not want to be a mannequin on the job captures this debate precisely. For her, the work context was a place where she did her job, not a place where she should look good. Her work and equality with her male colleagues were overemphasized, while her looks (clothes and other female markers) were underemphasized. The quote can be interpreted in three ways: 1. she is not there for others to look at, 2. she wants to be taken seriously as part of a working community without placing too much emphasis on the differentness that being a women represents in this context, and 3. femininity, the way it is portrayed here, is seen as an obstacle for being included in the community, for being "one of the guys." The quote also says something about what it means to feel good ("there is nothing better than to feel good at work in your uniform"), which is not only due to the technical quality of the uniform, and the quote is also setting guidelines for body ideals in society as a whole ("hold in your stomach"). In this way, the work uniform was used as a principle for inclusion in the work community, and a way of balancing femininity in a context dominated by masculine conditions. As such, the uniform is an important adjustment factor in this occupation.

5. Uniform as adaptment factor

Wearing a uniform at work was regarded as practical for several important reasons. Among other things, having a standard set of clothes to use for work made things easier. This was pointed out by several of the personnel on board the two Navy vessels. Putting on a required work uniform shortened preparation time, as the workers knew exactly what to wear. Several of the female personnel appreciated not having to spend time in front of the closet picking out a work outfit. They saved on the expense of purchasing new clothes and saved their civilian clothing from wear and tear. More importantly, everybody on board wore the same apparel, thereby establishing a material framework for the work community, no matter the gender. At the

same time there were problems with gaining access to clothes that fitted due to the limited size range.

The female officer who in the quote above explained that she found the female work outfit odd and poorly fitting also implied that the female shape disappeared completely in the male uniform. The male uniform did not give her the opportunity to show that she was a woman. In a study conducted by Gro Beate Drege and Beatrix Nytingnes about women in the police force, one of the female police officers said: "Put your vest on and you become very gender neutral. With a tie, protective boots and belt, you are not very feminine in a uniform. A uniform is masculine" (1999: 43, my translation). The uniforms thus dress men to be professional, while women dress to be professional through the wrong gender. The quote from the female officer above confirms that the Navy uniforms have the effect of making women dress as the wrong gender. Thus, with uniforms, it is not just about fit and functionality; social and symbolic aspects also play major roles.

A consistent trait among the women on the Navy vessels was their ability to adapt to their work contexts. Being able to make important physical, social and professional adaptations to the male-dominated arenas was important in order to be accepted as an equal employee. Regarding social adaptation, each of the women told their version of a demanding workday. Women told stories about how they felt that they had to work extra hard to prove that they could do their job as well as men. They had to "endure" a harder work environment with dirty talk, sexist stories about "typical women", and at times offensive commentary directed at them. At the same time, they had to wear the same uniforms as men in spite of the fact that it did not fit their bodies. The adjustment therefore had both a physical and a social character.

The men, however, claimed that they tried to restrict their language and that they took on the heaviest work tasks in order to provide their female colleagues a helping hand. In this, a process of change is expressed in the descriptions of, and from, the female personnel. Difficult periods at the start of their working careers and/or education, where women were in the minority, shaped these women and their views of themselves. One of the women on board described it like this:

...I think I have become tougher. I have thicker skin. So I think I want to describe myself as a bit more...tough-talking than many of the men on board. And while that might be

weighed for or against me, you just don't want to be trampled on so easily. When you are a civilian, you notice a difference in your friends back home that are the same age as you. I don't feel anymore that we are completely {... I feel much older than them. Yes, I think that it is as a woman as well and with... everything I have experienced – all the adversity and prosperity and so on – that have shaped me as a person. (Female lieutenant)

The women also stated that they felt that they had to work much harder than their male colleagues to show that they could do a good job. The men on board the vessel confirmed this. When a woman came on board she was often judged more strictly based on whether she was fit for the work, and if she could endure an extra heavy workload. A male sailor noted that if a female sailor came on board, he paid extra attention to her. He didn't expect the same of her as a male sailor, but the demands of her were higher. A female sailor who failed to fulfil the requirements was judged based on the fact that she was a woman (“well yeah, she's a girl”), while a male sailor who failed to carry out the tasks required of him was judged based on his personal character (“he's a slacker”).

The fact that a gender quota was introduced for women in the Navy, made it especially challenging for women. They had to prove their expertise and defend their rank to a larger extent than in other male-dominated occupations. This was why some of the women were opposed to the quota. Again, we see a strong desire from them to blend in.

I am against quotas and against the separate recruiting of females, because I think it puts us in a special position, one that we don't need when working in this occupation on a daily basis. Then, you want to be equal. And the more that things like this are done, the more it is confirmed, ‘No, you are different’, and the worse I really think it is. I think it does us a disservice. (Female officer)

The women were in a distinct minority on board the vessels, from three to five women for every fifty to sixty men, and no special adaptations or adjustments were made to them being on board the vessels. For instance, there were no women's cabins and they shared a cabin with up to five male colleagues. This was both due to the fact that the women themselves wanted it to be like this, and because it was difficult to do it any another way in a vessel cramped with cabins that

were divided by rank. Fitting in was therefore an important factor. With this background, it was understandable that women themselves did not petition to enhance their position as women in a male-dominated context, but rather worked to gain acceptance in the physical and social work environment that they came into. At least in the beginning. Sharing a cabin and using the same workwear as their male colleagues was seen as an important part of working life on board of the vessels, and described as “part of the deal”. Women who applied to the Navy should “know what they are getting themselves into”. In this, the interaction between the material and the non-material seems to have great significance.

The emphasis on community, and the work to establish community between female and male personnel through their work on board, reflects much of what Anne Iversen (2006) found in her study of female employees in the workshop industry. She identifies two active discourses in this context: worker equality and gender inequality. Worker equality refers to the community that is established between workers that results in security, unity, loyalty and protection (Neumann et al. 2012: 244). The experience of a shared destiny through work gives a sense of equality and a basis for a “we” that is not gender-neutral, but which has a masculine bias (Iversen 2006:28). The fact that women must prove their competence to a greater extent than men, talk tough in the workplace, and withstand more to be included in the community, shows this masculine bias.

On the Navy vessels, there were also a widespread understanding of gender as a fundamental difference, which is what is referred to as gender inequality, the second active discourse Iversen found in his study. This resulted in “an understanding that women and men do different things, are suited to do different things, think differently and not least act differently” (2006: 29). On board the vessels, this was expressed through a basic understanding that the work carried out was of a masculine character and that women were therefore less suited to do this work than men. This is also reflected in an understanding of women's nature that made them distinctly orderly people, less tolerant of aggressive talk, vain and concerned with makeup and interior, amongst other things. According to this view, men by nature, on the other hand, were coarse both verbally and physically, and liked to talk about women and cars. In its purest form, femininity seems to be a hindrance to being included in the work community. Women's struggle to fit in as “one of the guys” in the workplace thereby underscores the importance of the discourses on worker equality and gender inequality (Neumann et al. 2012: 245).

The adaptations to masculine systems that women must make throughout their education and careers thus form an important context for the development of women's workwear. In this, the physical adaptation to the work context by using uniforms was crucial. Dressing in workwear intended for men and masculine conditions was expected of women in this study. It was also something the women imposed on themselves in order to be taken seriously as professional workers and part of the community. The responsibility to fit in fell entirely on the women themselves, while it was up to the male colleagues to determine whether the women fit in or not. Only when the women had shown that they were "one of the guys," would they receive their male colleagues' recognition and approval (Neumann m. fl. 2012: 248).

6. The uniform as a silent adaptation

Material objects work as a setting, Miller writes (2010: 50), as they make us aware of what is appropriate and inappropriate. Like much other silent knowledge, it works best when it is unarticulated and unchallenged. As a result of their adaptation to the occupational and social contexts, the women workers rarely reflected on the garments that were given to them. Silent knowledge, theorized by Michael Polanyi (1966), is a form of knowledge that is not easily articulated, but which exists as a precondition for human action, being and knowledge. Gram-Hanssen's concept of "embodied habits" and "institutionalized knowledge" (2011: 65) within practice theory also embraces this non-reflexive "embodied" interaction with the material. The uniforms are a part of this silent setting in that they are taken for granted and form the frame for everyday work in occupations that do not tend to articulate their clothing practices.

Andrewes (2005: 32) claims that it is not just the body's appearance that changes through the clothes, but that something changes inside the body as well. This makes clothing even more powerful. The uniforms decide much of the work that is done, but are not given much attention in the discussions about what constitutes working life, except when it comes to health and safety. Women's use of uniforms not only provides a visual appearance that resembles that of male workers, but bodily and socially dresses them to fit into a community at work. In this way, the material has an important function, both in a socio-symbolic and in a practical sense, which cannot be separated.

Female and male personnel reflected only slightly on the uniforms as good or bad. It was therefore sometimes difficult to talk about the uniforms they wore every day, because their knowledge was silent and only slightly articulated or reflected upon. We solved this by using methods from the wardrobe studies, by relating stories about the uniforms closer to the specific work situations that they took part in. The fact that very few, if any, asked for other, more appropriate clothing, no matter how dissatisfied they were, shows a widespread perception that they settled for what they were provided and were able to order. Another factor was that the female workers preferred not to stand out by requesting customized clothing because they were women. This adds to the adaptation discourse – having chosen this occupation, they had to accept the conditions that came with it.

One of the main symbolic features of the uniform was that it worked as a way to dress into a work community physically, socially and professionally. Jennifer Craik (2005) refers to this as the uniform's "open" meaning. It gave them an easy way to dress visually as "one of the guys" and thus provided them a chance to distinguish themselves as little as possible. This was an equally important trait of the uniform as its fit, comfort and optimal functionality of the uniform. Wanting to fit in often led to women understating their own appearance at the workplace. A widespread attitude among both men and women was that "vain girls don't fit in [and] you have to be able to get your hands dirty", and that if the female workers appeared to be preoccupied with how they looked they did not fit in.

"I don't think you should involve that much personal stuff – at least not as a girl. There are those who make a big deal of it – big earrings and a lot of makeup, putting their hair up, etc. – but I don't want a uniform that is very different from what everyone else is wearing. I think I would have felt more left out if I had that. I think that it's quite alright to have certain things that say that you are a woman – it is not a bad thing to stand out in that way – but not too much either. (Female officer)

Being inside and outside at the same time is well illustrated in this quotation from the female officer. How *not to be* is here described and justified as a show of moderation and a sign of mastering the balance of femininity. The use of the uniform was a way to signal the desire to fit in and be independent, while at the same time dissociating from the gender stereotype of "vain women."

Several of the women who pointed to the importance of fitting in among their male colleagues nonetheless had long hair, used jewellery and wore makeup. This can be seen as a way to make the uniform and their appearance more feminine. The Velcro strap provided an opportunity for the women to tighten the waist of their uniforms and highlight feminine bodily features or keep the waist un-cinched and achieve a similar silhouette as their male colleagues. In this way, they could regulate their uniforms according to what felt right.

7. Well dressed and well seen

The female lieutenant that is quoted in the chapter's introduction presents her thoughts about dressing as a woman on board the Navy vessel. This is reflected through the Velcro strap, a fairly modest function in a uniform garment that nonetheless reveals two important thoughts about wearing a uniform as a woman in a male-dominated work sphere. Firstly, it points to the motivation for the work itself. There should not be too much emphasis on appearance and looking good in workwear. Rather, the focus should be on getting the job done in line with the other employees in the same work place. Secondly, it links comfort to the performance of work. The clothes that are worn should be functional and lead to the workers feeling well in their uniforms. This can be both divisive and unifying.

Having clothing that is not too tight or in other ways obstructive to movement is all about well-being, but well-being is not only a question of comfort as Ingun Grimstad Klepp (2008, 2009) has shown in her study of what it means to feel well-dressed. What we perceive as well-being is related to several factors. Physically unpleasant clothing can provide a sense of well-being depending on (among other things) context and occasion as well as what kind of expression the body and the clothes are supposed to form together. Uniforms based on a masculine tradition and standardized sizes, which lack the possibility for adaptation, might not necessarily feel comfortable but can still feel right due to the safety that uniformed dress provides its wearer. Dressing similar to everyone else at work means that you (as a woman) can participate in the work community – both in form and attire. This is what constitutes the feeling of well-being in this context.

The feeling of well-being and comfort emphasizes the relationship between the body and the body's immediate surroundings (Crowley 2000: 89). Thus, the feeling of well-being includes

relations that contribute to the achievement of this condition (Klepp 2009: 77). The uniform is a material condition that contributes to well-being, seen in relation to the inclusion in a work community. “But there is nothing better than to feel good at work in your uniform, right? So I try to sort of tighten it a bit. Then, I think, ‘No, ugh, then you must hold in your stomach all the time (laughs a bit).” The female lieutenant in the introductory quote highlighted the importance of feeling good in one’s work uniform, but at the same time did not link well-being to the use of the Velcro strap – something that was NDLO’s primary objective for including this tightening function on the jacket. Why is this so?

The Velcro provided the wearer the opportunity to adapt the uniform to his/her body and its movements. But by having the potential to make the uniformed body different from the rest of the work community, the uniform also created a contradictory understanding of well-being. The female lieutenant confined to clothing norms that said she should not exaggerate her looks, and that showing the forms of her female body on board the vessel would not aid the inclusion process. “I shouldn’t have the feeling of being at a ball in a comfortable dress. It is supposed to be a uniform that is comfortable to wear,” the same female lieutenant stated. The feeling of well-being seems to be two-fold: other people’s gaze on you in your uniform, and the feeling of having the uniform on your body. There is not a clear distinction between the importance of being well-dressed and feeling good. The body has learned to feel discomfort when norms are broken, while at the same time the norms themselves have become invisible. According to Klepp (2009: 90-91), the clothes in this respect are not only carriers of specific meanings, but also instruct the wearer. These subjects learn about what it means to be women and to be part of the personnel on board the Navy vessels by wearing their uniforms.

8. Suitably feminine

Just as women in the personnel on board the vessels had to show that they were worthy of their jobs, they also had to demonstrate that they had mastered the art of being well-dressed and “appropriately women”. The tendency to under-communicate gender inequality (Iversen 2006: 27-29) was a necessity for being included as “one of the guys”. Making oneself attractive for the male personnel was apparently not important – just as the female lieutenant in the introductory quote pointed out. More important than broadcasting her gender, this lieutenant had to first and

foremost prove that she was equal in her ability to do the same work as her male colleagues. It might seem that the Navy vessels were a gender-neutral workplace, but taking into consideration both what was said *and* what was acted out through clothing, it turned out that the workplace was permeated by gender inequality and heteronormative expectations (Neumann et.al. 2012: 248).

On board the Navy vessels, “proper dress” was a well-known phrase. First and foremost, this was about being properly dressed according to uniform regulations. Being properly dressed meant wearing the right uniform for the right occasion, and here, the distinction between formal and informal occasions was important. Among other things, this meant wearing neat and clean clothes, placing distinction marks both correctly and visibly, and ensuring that hair did not fall below one’s cap or barrette. Thus, the personnel was obligated to wear appropriate clothing for appropriate occasions. Dressing for the occasion is an important premise in civilian life as well (Klepp & Bjerck 2010), but, with the exception of etiquette books of the 1960s (Døving & Klepp 2009), it is not as strictly regulated and recorded as it is in the Navy.

Women can neither have a ponytail nor loose braids on board Navy vessels. According to uniform regulations, the hair should be arranged so that it does not fall below the upper edge of one’s jacket or shirt collar. *Discreet* use of jewellery and cosmetics is permitted. In practice, markers like makeup, jewellery and hairstyles were toned down when the female personnel were on missions with the Navy vessel. Although it was not common to use a lot of makeup and jewellery, such markers were not dropped entirely. Two of the informants used brightly coloured and white pearl earrings. One of the female informants who wore earrings and a ring stated that occasionally she would put on extra makeup:

It is mostly because I use it on a regular basis then it is just like there. [...] I’m used to using it. [...] Sometimes I have a French manicure, right? I do it myself. [...] But when I sail I’m not that thorough. I can’t be bothered. It’s too much. And I don’t even have time to do my makeup or remove it and it takes longer to do when you have long shifts and are busy. And the hair, it, well, it’s just there. I just try to keep it out of the way. (Female radio operator)

The above female radio operator was usually concerned with her appearance and often spent time on it, but emphasized it less when she was on duty. This informant was representative for the female personnel when it came to the use of jewellery and makeup. The women had long hair that they usually tied up, often in a loose bun. One of the female informants braided her hair on one occasion, but let it otherwise hang in a ponytail, which, according to the regulations, was not allowed. The uniform regulations for discretion regarding makeup and jewellery were generally followed, even though what is understood by discretion is relative. For instance, the rule that hair should be tied up and never fall below the uniform collar was not always followed.

When during fieldwork we talked about how women *should* act to fit in, the female lieutenant in the introductory quote insisted that neither she nor other women could come to work with too much makeup or styled hair. It was difficult for her to tell us why, but she told on another occasion that she was concerned with what others thought of her, and was afraid to send the wrong signals about her motivations for working with many men. By this, she meant that she was protecting her reputation at her workplace in the Navy, and that by toning down her sexuality at work she wanted to show that she was there to do her job on equal terms with her male colleagues.

It was apparent that the material basis for symbolically showing (or hiding) her femininity lay in her practical use of the uniform and the details of her own appearance. In this way, proper dress also points to a way of dressing in uniform that did not match uniform regulations. This was particularly tied to women's workwear. The women had to demonstrate that they were dressed properly when working on board the Navy vessels. There was no room for the use of civilian clothes, low necklines, lipstick, long flowing hair, nail polish and other typical feminine markers. In general, on the vessels, women had to balance between not being too feminine or too masculine. Several of the women personnel stated that it did not make sense to take time to care for their hair and to apply makeup or nail polish when such things did not stay put after a long day's work. It was not considered proper clothing practice on board and was something women preferred to do in their civilian lives or at events such as the annual Christmas party for Navy vessel personnel.

When it came to dressing up and showing femininity, the female personnel not only distinguished between work and leisure, but also to distinguish between everyday work (with

uniform and limited performance of personal characteristics and dress), leisure with work colleagues (where they paid attention to what they wore) and leisure with civilians (where they could “be themselves” or an extreme version of themselves, like dressing up to go on a night out).

What I notice is that usually when we are out, there is always a *vorspiel* [pre-party] on board with us officers sitting there and the privates sitting downstairs. And then of course, the uniform is off, and the makeup is on and the hair is fixed. And then you have a completely different type of shoes on, and you have a completely different type of clothing. And *then* I think that I am a totally different type of person. [...] And they look at me in a completely different way. It's more like they are a little scared ... not alarmed, but just ‘Wow, she is a girl. Okay.’ (Female lieutenant)

The annual Christmas party was virtually the only occasion where the boundaries of clothing and behaviour between job and civilian life was exceeded. This was the only day in the work context where femininity was freely expressed. I participated in the final week of preparation for the yearly Christmas party in the last fieldwork. It had already been planned and was being talked about for a long time, but things escalated during the final week of preparation. The girls talked mostly about outfits and accessories, while the boys talked about food and drinks, and sometimes even clothes. The girls bought dresses, jewellery, makeup, tights and shoes. In addition, they applied spray-tan and fixed their nails as part of the planning phase. One of the women who talked about dress choices used expressions like “we're going to be so hot tonight,” a phrase that had never before been uttered in front of either female or male colleagues.

It is a paradox that women can put so much emphasis on their appearance at the Christmas party, but still hold relatively rigid views on appearance and the place of femininity and womanhood at work. How can we understand this? I will not analyse the discourse around the Christmas event further, but use it here to illustrate a contrast that is actually taking place in women's work. While it was not important to show that they were women on board, the female personnel insisted on maintaining their femininity and argued that they “hadn't stop shaving their legs just because they'd joined the Navy.” This concerned another type of femininity in the work sphere, namely being *suitably feminine*.

9. The uniform as an arena for negotiation

The women were concerned with the fact that they were women, and thus different from their male colleagues. These were differences that went far beyond physical work. None of the women wanted to be mistaken for men, and believed that by virtue of their feminine bodies, appearance and voice it was clear that they were women. The differences were not only in physical attributes, but also existed in small, subtle markers of femininity. Several of the female workers used earrings and necklaces as well as light makeup. Mascara was very prevalent, which was explained by the mascara's ability to disguise being tired. With one exception, all the female employees had long hair. The long hair was often loosely tied up in a ponytail or otherwise put up in a bun higher on the head for more formal occasions. Thus, the female members of the personnel negotiated between being "one of the guys" and signifying that they were women. One of the women was quite clear on the relationship between gender and appearance and stated the following:

Even though I work here, I am a girl and I like [clothes]. It is just the way we are – most of us anyway. You want to look good. So of course, I guess this does something to your well-being, [...] the self-esteem. (Female radio operator)

This quote sets a clear link between work, gender, dress and self-esteem. Not the least, it confirms an understanding about inequality between women and men by referring to specific gender stereotypes about women and men's natures.

According to Craik's (2005) theory of the uniform's open meaning and hidden life, the uniform has the ability to facilitate women's social integration into the workplace, and at the same time, it involves downplaying the female gender. This points to an essential ambivalence in the desire to be included as "one of the guys." The female personnel maintained that they were not at work to show themselves as women, and that they wanted to be taken seriously as part of the work community. Yet, it was evident that this femininity, which seems to be an obstacle to full inclusion, was important to the female workers. The women were clear that they could be hindered by their own femininity to be included as full members of the masculine-dominated work community, yet they wanted to be seen as women and not men. Such ambivalence was expressed by most of the women on board the Navy vessels.

Being a “suitable woman” was more open to interpretation than first assumed, and it was something that varied from woman to woman. Some were more concerned with typical feminine markers and employed them to a greater extent. However, everyone was clear that it was important to feel well in the work uniform and that this had a significant impact on well-being and self-esteem. This applied to them as both women and as part of the Navy vessel personnel. To be included, it was therefore important to be just enough of a woman and feminine at work. Proper clothing could thus be understood as clothing that adhered to uniform regulations and that which would be seen as clothing appropriate for women in the work context. In this way, there were others who decided whether the women succeeded at adapting, while they themselves were fully responsible for making this adaptation. By challenging proper dress codes, as was done at the Christmas party, or by confirming them, as was done daily when the women put on their uniforms, these personnel put different contexts to the test.

Storm-Mathisen and Klepp (2006) argue in their article that the correct dress norm for women is wearable clothing and this means clothing that highlights features of the body that are most in line with current beauty ideals. In that, well-being is used as a guideline. For the women on board the Navy vessels, the argument of well-being is also used, but in terms of their interpretation of being a suitable woman in the work context, rather than in relation to current beauty ideals. Here, narratives about other women's dress in the occupation played a major role and served as a guideline for dressing in uniform. Stories were told by both women and men about female workers with excessive focus on appearance; makeup, hairstyles and manicured nails they were afraid would break, expressed the type of femininity that should not be shown at work.

The experience of discomfort was tied to the balance between dressing how they wanted and dressing according to what the context required, was something most of the women in Klepp's study (2009: 88) often talked about in relation to work life. The effort in finding clothes they felt comfortable in applied less to the women on board the vessels, because they had to relate to a fixed uniform regulation. Nonetheless, it was evident in how the women dressed in their uniforms that there was an ongoing negotiation about dress on board the Navy vessels. This had the uniform as negotiation arena, but the use of feminine markers was an important part of it. The Velcro strap in the new uniform jacket can thereby be said to be a *result* of a negotiated

femininity in the uniform, seen from the NDLO. But this also became a part of the ongoing negotiation about femininity on board.

In her study of the clothes of Finnish horse stable girls, Karoliina Ojanen (2009) wrote about how the limits of the stable girls' community is governed symbolically through appearance and clothing. In the stable, it was not socially acceptable to dress up, despite the absence of men. Femininity or womanhood was not insignificant it just had to be exercised properly, and at the right time. This required a separate discretionary judgment and competence that the women gained through experience. The interesting thing when using gender as a basis for these analyses is that both the absence and presence of men gave similar expressions. The work context in the Navy's vessels and in the Finnish stables is interpreted as a controlling room where gender is constantly challenged through clothing. In line with what Ojanen (2009) found in her studies, women on board the Navy vessels dressed according to current norms in their workplaces and by that maintained the internal material conditions of the work community. Thus others' controlling gaze became determined for how the uniform felt on the body, regardless of whether it was a male or female gaze.

The Velcro strap seems to be a solution to the dilemma of looking good, feeling well and being included at the workplace. For those who did not think the Velcro strap overstepped the line for what's proper and appropriate, it became a subtle material function that exceeded any symbolic value. Through the power of its tightening function and its aesthetic similarity to the rest of the work colleagues it became possible to look good and at the same time participate in the work community through the uniform. The Velcro strap made it possible to vary tightening of the jacket from time to time. It also facilitated a space in the uniform that was otherwise bound by strict and predetermined regulations. In this way, the Velcro strap functioned as a negotiating arena for femininity.

The Velcro strap, which could be used by both women and men, was interpreted and used more strategically by women as a display of femininity. It was this that also made the Velcro strap so challenging. If firmly tightened by a woman who had already incorporated several feminine markers, it could tip the balance from the proper to the inappropriate. This became clear by what the female lieutenant expressed in the introduction: the Velcro strap had the power to turn women into mannequins, and this was not the reason why these women worked in the Navy. If

the women failed to be appropriately feminine, it came at the cost of their inclusion in the working community. In this way, they could not be “one of the guys.” The story of the Velcro straps thus seems to be a story of ambivalence. Being on the inside while at the same time existing on the outside. Being too much and too little. Always an issue of being *just right*. An ambivalence that is expressed in a small, but certainly not insignificant material detail.

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