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Does Gender Matter? Responsiveness to Authority Positions in the Norwegian Armed Forces

Behavioral Intentions Towards Female Officers

Hanna Solvang Myrvoll and Ingebjørg Bjørnenak Nilsen
Master's thesis in Cand. Psychol, PSY-2901, December 2021



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Supervisor: Frank Siebler

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Preface

This thesis is written for the last year of the clinical psychology program at UiT The Arctic University of Norway. It is part of an unpublished time series, and the material used was developed by Frank Siebler and Camilla Eikaas in 2010. We first contacted Siebler in May 2021 and together agreed on the theme gender inequality at the workplace, with emphasis on gender gap in authority. As we had personal contacts in the Norwegian Armed Forces, we aimed to conduct our study in the Armed Forces and received the final approval in August 2021. Personally, we chose this topic as there has been much attention aimed towards increasing the female share in the Armed Forces over the past decade. The last study in the unpublished timeseries investigating gender discrimination was conducted in 2012, and we were interested in following up the development.

We have contributed equally to this thesis, through project description, approval to conduct the study, recruiting, data collection, analyzing and dissemination. We have authored this thesis under the supervision of Associate Professor Frank Siebler, who we would like to thank for supporting and guiding us through this project. We would also like to thank all participants, both military personnel and civilians, for participating in the study. Furthermore, we would like to express our gratitude to the Chief of the Artillery Battalion, Chief of Signal Battalion, Chief of Public Affairs Norwegian Army and The Norwegian Defense University College for approval and cooperation, making it possible for us to conduct the study in The Norwegian Armed Forces. We would also like to thank lieutenant colonel Tommy Myrvoll who initiated contact with the Norwegian Armed Forces and assisted us in getting all required approvals. Lastly, we would like to thank all other military personnel, especially staff sergeant Jason Alason, for assisting in the recruitment process.

Abstract

Based on the underrepresentation of women in the Norwegian Armed Forces, this thesis investigated whether there is a gender authority gap where female officers receive less authority compared to male officers. This was done by measuring behavioral intentions towards female officers. The study consisted of 198 participants from the Artillery Battalion and the Signal Battalion in the Norwegian Army. As a comparison sample, civilian was used ($n = 141$). By using an online questionnaire containing scenarios with a military context, the study measured participants' willingness to comply or discuss an order given from either a female or male officer. It was hypothesized that orders from female officers would receive more discussion compared to male officers, pointing to decreased authority for female officers. A within-subject design were used, and results show that the gender of the officer in the scenarios had no significant effect on participants behavioral intentions in the military sample ($p > .20$). Results from the civilian sample show a significant effect where participants are more inclined to discuss orders from male officers compared to female officers, which is opposite to the hypothesis ($p < .04$). Explanations for this are offered. In conclusion, this study did not find evidence of a gender authority gap. Measures implemented in the Armed Forces, increased female exposure and changes in desired leader-characteristics are discussed to understand the results. Other explanations for the underrepresentation of women in the Armed Forces are considered, including family policies and organizational culture. Limitations and recommendations for future research are outlined.

Key words: Gender gap, authority, gender discrimination, Norwegian Armed Forces, women in the military, workplace, labor market

Does Gender Matter? Responsiveness to Authority Positions in the Norwegian Armed Forces

Behavioral Intentions Towards Female Officers

The percentage of females with leadership positions in Norway has increased during the past decade, as 37% of leadership positions in 2019 were held by women (Gram, 2021). Compared to previous statistics, this shows that the development towards reducing the gender gap in management and leadership in Norway is present. This is also a trend worldwide, where the female share of women in senior management positions was 30% in the European Union (EU) and 29% in the United States (US) as of 2020. Globally, the female proportion in senior management roles has increased almost 10% over the last decade (Grant Thornton, 2020).

The reduction of gender imbalance is not only present within management and leadership positions, one can also see an increase of female participation in traditional, male-dominated occupations. The latter can be defined as organizations and industries that was designed, preserved, and administered by men since its inception, for example the police and the military. Such organizations are often “characterized by stereotypical masculine traits, such as aggressiveness, decisiveness, risk-taking and competitiveness.” (Barreto et al., 2009, pp. 3-4; Campuzano, 2019).

Notwithstanding the development over the past decade, the gender employment gap is still existent as women in the EU are underrepresented in the labor market compared to men. Arguably making the gender imbalance more evident is the gender pay gap, where women earn 14,1 % less per hour on average compared to men (Eurostat, 2021). The gender pay gap is not limited to pay discrimination but also includes other inequalities women face when it comes to work access, progression and rewards. These inequalities include sectoral segregation, work-life balance, the glass ceiling, and discrimination (Eurostat, 2021). For this

thesis, the issue of discrimination is of most interest, but the other factors will also be addressed.

Short Introduction to the Present Study

Based on the statistics presented demonstrating the unequal gender distribution in the labor market, this thesis aimed to investigate factors that may contribute to the gender imbalance. More specifically this study was focused in the Norwegian Armed Forces, as this is a highly-male dominated organization, and additionally there is an imbalance in leadership positions where most are held by men (Forsvaret, 2021b). This study was interested in whether a gender authority gap is present and contribute to the gender imbalance. In this thesis, “gender gap in authority” and “gender authority gap” are used interchangeably and refers to an imbalance in the level of authority males and females in the same position receive. The present study looked at the responsiveness male officers and female officers receive. This was measured through behavioral intentions towards female officers and male officers in the Norwegian Army, which is one of the branches in the Norwegian Armed Forces. Underneath follows an overview of women's history in the Norwegian Armed Forces and previous research on the area. In this thesis “the Norwegian Armed Forces” and “Armed Forces” will be used interchangeably for the Armed Forces of Norway, whereas “the military” will be used when addressing the military in a more general manner including international research. Further in the introduction, relevant theoretical constructs will be presented, followed by the hypothesis and specific variables investigated in the present study.

Historic Perspective on Women in the Norwegian Armed Forces

Female participation in the Norwegian Armed Forces started during the second World War, as the need for labor was crucial. This created political fuss, and the female participation decreased in tact with the reduction in need for labor after the end of the war. During the 70s and 80s some milestones where met where females were granted access to

selected positions in the military and was later on allowed to serve initial service (Orsten, 1999).

In 2000, resolution 1325 from the United Nation Security Council, put international pressure on increasing the female share in the Armed forces. The resolution underlined the importance of equal terms of male and female participation at all levels and in different roles, in the work towards freedom and security (FNs sikkerhetsråd, 2000). The Norwegian government laid out a plan for implementation of the resolution in 2006 (Utenriksdepartementet, 2006), and all females were summoned for initial service on a voluntary basis later that year (Forsvarsdepartementet, 2006-2007). The Ministry of Defense in Norway also published a white paper (Forsvarsdepartementet, 2006-2007) lining out several overall objectives concerning how to increase the female proportion in the Norwegian Armed Forces. It was stated as a realistic goal to reach a female share of 20% by 2020. In 2006, the percentage of females working in the Armed Forces was 7 % and among those serving the initial service, the female share was 5%. In the white paper, different initiatives and measures were lifted, covering a number of areas. Female quotas for education through the Norwegian Defense University College was purposed, along with revision of admission requirements and focus on leadership- and personal development for women. Additionally, the establishment of a function in the Army to strengthen the work towards increasing the female share. A great amount of the measures underlined the need for research, that being research focusing on monitoring different cohorts from initial service and onwards and research aiming to increase the knowledge about attitudes and culture within the Norwegian Armed Forces (Forsvarsdepartementet, 2006-2007). However, the real equality-milestone was in 2014, when the Norwegian Parliament introduced that the initial compulsory military service from now on would apply for both women and men, as the first European country to do so (Dahl et al., 2021; Forsvarsdepartementet, 2014).

The current situation in the Norwegian Armed Forces show a great increase of the female share, compared to statistics from 2006. The annual report from 2020 revealed that the percentage of females being permanent employees was 14%. For conscripts serving initial service, the female share was 33%. The female shares of the officers (OF1-OF2 rank) was 11% and specialists (OR rank) was 16%. For women of higher leadership positions ranked colonel/commodore (OF5 rank and higher) it was 13% in 2020 (Forsvaret, 2021b).

Summarized National Research on Women in the Armed Forces

In the wake of the overall objectives in the white paper published in 2006 by the Ministry of Defense in Norway, a research group was established called Norwegian Defense Research Establishment. As a result of this, extensive research was focused on how to increase the female proportion and mapping out attitudes and culture within the Norwegian Armed Forces. A research report published by the Norwegian Defense Research Establishment in 2017, sums up most of the research done in the timeframe 2008-2016 (Forsvarets forskningsinstitutt, 2017). The report highlights one study done by Hanson, Steder & Kvalvik (2016) showing that, during initial service, male participants became increasingly convinced that males are most suitable for leading troops. When starting initial service, 37% of males had such beliefs and after nine months this number had increased to 54%. Females tended to answer that both genders are equally good leaders, much more frequent than men (Forsvarets forskningsinstitutt, 2017).

These statistics lead to a somewhat uncomfortable, but important question, concerning why time spent serving the Norwegian Armed Forces seemed to increase the belief that men are better leaders. The report highlighted possible explanations for this trend. Firstly, the importance of- and focus on physical strength and stamina during the compulsory initial service, that stereotypically aligns with masculine traits. Secondly, the possible lack of female role models in leadership-positions such as instructors and troop leaders. Thirdly,

little contact and interaction with such females and female soldiers in general, that could possibly change the belief that men are better suited for leadership-positions (Forsvarets forskningsinstitutt, 2017).

Different studies have been conducted with participants who served their initial service in mixed-rooms, where female and male recruits shared accommodation. Finseraas and colleagues (2016) did a behavioral vignette experiment where a candidate for a leadership position in the military (squad leader) had to be evaluated. The characteristics and qualifications of the candidate remained unchanged, but the name differed from a stereotypical female or male name. Results showed that female candidates were rated lower compared to male candidates and that discrimination of women by male respondents was present. When positive information (physical strength, leadership experience) about the candidate was added in the vignette, both male and female candidates were given a higher rating, yet it did not reduce discrimination. Nonetheless, results from male participants that had lived in a mixed-room condition during initial service, showed significantly less discrimination towards females.

A similar study done by Dahl and colleagues (2021) show somewhat related results. Recruits were asked to view different gender-related statements, regarding mixed-gender teams in the army and traditional gender roles, on different timepoints. Participants in a treatment group were assigned to mixed-rooms and squads with women for an eight-week boot camp. The control group were all-male squads. Results showed that male participants in the treatment group had a significant positive attitude change on the statements, compared to the baseline results before female exposure. For the control group, positive attitudes concerning mix-gender productivity decreased during the boot camp. However, a six months follow-up study showed that the positive attitude changes from the treatment group had decreased and were similar to those in the control group.

These studies can arguably confirm the possible explanations lifted in the report by the Norwegian Defense Research Establishment (2017), showing that exposure to female soldiers seem to have a positive effect on gender attitudes and can change stereotypes of a squad leader being male. Furthermore, the studies underlined that even in highly gender-skewed workplaces, attitude- and stereotype change is achievable. Yet, such changes seem to be dependent on continued comprehensive exposure (Dahl et al., 2021).

In sum, extensive research has been conducted in the Norwegian Armed Forces, including several field-studies, qualitative and quantitative studies, and with time also systematic literature reviews. Results reveal negative attitudes and stereotypes held by men concerning women in the Armed Forces, especially with regards to women in leadership positions (Dahl et al., 2021; Hanson et al., 2016; Hovde, 2010; Kristiansen et al., 2008). Women's experiences working in the Armed Forces has also been documented, and results implied that women felt the need to prove themselves, become more masculine, and experience bullying and sexual harassment during their service (Ellingsen et al., 2016; Fasting et al., 2021; Fasting & Sand, 2011; Hanson et al., 2016; Hellum, 2010; Kristiansen et al., 2010). However, results from an annual self-report survey done by the Norwegian Armed Forces in the timeframe 2016-2020 showed that women reported a higher satisfaction rate during their initial service compared to men (Forsvaret, 2021a).

International Research on Women in the Military

As a result of the UN resolution 1325, North Atlantic Treaty Organization's (NATO) Science and Technology Organization has conducted research regarding women in the allied Armed Forces over the last 20 years. A report published in May 2021 sums up main findings in connection to the twentieth anniversary of the resolution. In brief, results showed the value of long-term leadership commitment for culture change to be achievable and lasting. Leadership seems to be the key when it comes to the inclusion of every member in a

battlegroup, that having zero tolerance for discrimination and harassment (NATO Science & Technology Organization, 2021). Several studies included in the report showed a presence of negative attitudes towards women working in the military of different NATO countries. The report underlined that masculinity has been linked to several unwanted behaviors in the military, such as bullying, harassment and devaluation of other groups, resistance to gender equity, and sex-based discriminatory language. Such a strong hyper-masculine culture may make women feel the need to adapt to the majority culture. However, a number of studies show that even though the military culture is primarily male-dominant in NATO countries, there has been a change in the understanding of military professionalism. This has been focused on masculinity and legitimized violence, but as the international war picture and priorities change, military professionalism has become more inclusive with regards to service members and culture (NATO Science & Technology Organization, 2021).

International Studies Comparing Military Personnel and Students' Attitudes Toward Women in the Military

Previous research show that military affiliated students and -personnel in general was less approving of female participation in the military, compared to civilian samples, consisting of college students (Kurpius & Lucart, 2000; Laurence et al., 2016; Matthews et al., 2009). This difference in approval was intensified when female participation concerned areas of combat or command positions. Females, regardless of their work status, were more approving than men towards women in the military. On the contrary, men working in the military tended to give the lowest approval towards women in the military, compared to all women and civilian men.

Common Definitions Discussed

So far, this paper has presented statistics on gender inequality in the labor market, especially on upper management levels. Additionally, an overview of women's history and

today's situation in the Norwegian Armed Forces has been outlined. In the following we present concepts and theories from feminism and social psychology that have been used to explain gender inequality in general.

Authority

“The essence of authority is a relationship between two or more actors in which the commands of certain actors are treated as binding by the others” (Weber, 1954, p. 328 as cited in Spencer, 1970, p. 124). A highly relevant example in line with this definition is the relationship between military personnel with different ranks, as orders given from military personnel with a higher rank are binding for military personnel with a lower rank (Forsvarssjefen, [FSJ], 2020, p. 9). Authority is a relevant concept within gender inequality at work as it brings jurisdiction, status and increased responsibility. As authority positions lead to power, women's underrepresentation in authority positions at the workplace therefore may be one of the contributors to gender inequality in the labor market (Wright et al., 1995). A cross-national study compared gender gap in workplace authority in several developed capitalist countries, showing an inequality where women had decreased authority compared to men (Wright et al., 1995). Based on this it is of interest to investigate whether decreased authority for female officers can be a factor contributing to the gender imbalance in the Norwegian Armed Forces. Throughout this thesis “having authority” and “being in a leadership position” will be used as interchangeable expressions, given their close relationship.

Definitions of Gender and Level of Implementations

Conventional understandings of gender underlines how it is biologically given and seen as a stable personality trait, where being male is defined by masculinity and being female is defined by femininity (Berdahl et al., 2018). However, more recent theories see gender as socially constructed and formed within culture through social processes. What is

seen as gender-specific characteristics is therefore continuous. Gender can further be analyzed on three levels, namely individually, structurally, and symbolic. Individually, gender concerns which tasks are seen as appropriate for men and women. Structurally, it reflects how society structures social activities around the segregation of men and women. Lastly, the symbolic level regards symbols and associations affecting the division of labor. This separation is important for implementation of measures, as measures on the individual level will have limited effect unless there is movement on other levels (Lauritzen & Leirvik, 2008).

An example from the Norwegian Armed Forces demonstrates the importance of this. A measure aimed to prevent female recruits from receiving an unfortunate label was implemented on the individual level. The measure focused on guiding females on how to act in response to males and what to wear and not wear. On a structural level, this measure made the challenges of being a female minority in a male-dominated organization, into an individual and unique female problem. In this way, it is the female's gender that is visible and problematic, and the responsibility to avoid an unfortunate label is placed on women. On a symbolic level, measures like this are in danger of reinforcing and reproducing stereotypes about females and males in the military (Lauritzen & Leirvik, 2008).

Model Consisting of Stereotypes, Prejudice, and Discrimination

Throughout literature, concepts such as stereotypes, prejudice, and discrimination have been used interchangeably, and often with different definitions. A classic model separates stereotypes, prejudice, and discrimination into three different components of an attitude. Attitudes concern an evaluation of people, ideas, or objects and constitute a cognitive, an affective and a behavioral component. Stereotypes are the cognitive component and refer to assumptions about the traits members of a social group are thought to share. The affective component concerns prejudice, where an affective reaction is elicited toward a

person based on group membership. Lastly, discrimination concerns the behavioral component and relates to how a person acts towards others based on group membership (Steffens & Viladot, 2015, p. 14). To demonstrate this, an example of gender stereotypes will be used. The cognitive component (stereotype) could be “male officers are better leaders than female officers”. The affective component (prejudice) would be the emotion one feels, for example a male soldier might feel uncomfortable when given a command by a female officer, but not when given the same command by a male officer. Furthermore, the behavioral component (discrimination) concerns how one acts to this stereotype, for example being less cooperative with female officers. This is an extreme example, but it highlights the distinction between the three components that together constitute an attitude.

Gender Stereotypes

Over the decades different definitions of stereotypes have been proposed and the accuracy of stereotypes has been extensively discussed (Nelson, 2006, p. 4; Schneider, 2005, p. 17). In 1954, Allport underlined that stereotyping is part of our basic cognitive nature and that this type of categorization helps us navigate in a complex world (Schneider, 2005, p. 11). Schneider (2005, p. 24) provided a general definition of stereotypes as “qualities perceived to be associated with particular groups or categories of people”, and this is also in line with most social-cognition researchers (Nelson, 2006, p. 6). Furthermore, research has shown that stereotypes can be automatic and triggered without conscious awareness so that one unintentionally acts in a stereotypically manner. Therefore, people might act in ways that is unequal of women without being aware of it themselves (Swim & Cohen, 1997). For this thesis, gender stereotypes are of most interest and regards characteristic features of men and women that are socially shared (Steffens & Viladot, 2015, p. 20).

Descriptive and Prescriptive Gender Stereotypes

Gender stereotypes affect women and men's positions at the workplace and in relation to this, two categories of stereotypes, namely descriptive and prescriptive, have been thought to contribute to inequalities in the labor market. Descriptive stereotypes constitute beliefs of what women and men typically are like (Heilman & Caleo, 2018). The most fundamental dimensions of descriptive stereotypes are communality and agency which is ascribed to women and men, respectively. Communality is characterized by being caring and nurturing where relations to other people are especially valued. On the other hand, agency is characterized by competition and task-orientation. The dimensions of agency and communality are associated with high and low status roles in society, respectively. In this way descriptive stereotypes can contribute to inequalities at the workplace as men is seen as more competent than women (Steffens & Viladot, 2015, p. 20). Furthermore, gendered behavior is reinforced within society and therefore maintains and contributes to gender inequalities. This can in turn affect power distribution within the labor market as different gendered behaviors lead to unequal positions of power (Berdahl et al, 2018).

The prescriptive stereotypes regard expectations about what women and men should and should not be like. It consists of norms dictating which behaviors are appropriate for women and men. The descriptive stereotypes of agency and communality overlap and affect the prescriptive stereotypes. Hence, women should act in communal ways and should not act in agentic ways as this violates the norms. Violation of prescriptive stereotypes can lead to socially negative consequences in many forms, and research has shown that such violations can lead to lower performance at the workplace (Heilman, 2012). Consequently, women who wants to become leaders or work in male-dominated areas face a dilemma. Either, they follow stereotypes about women and act in coherence with these, but then are assumed to be weak. Or, they act in agentic ways, consistent with male stereotypes, but then often are seen

as too aggressive and face negative consequences at the workplace (Caleo & Halim, 2021; Steffens & Viladot, 2015, p. 181).

Research has shown that successful women in a typically male-dominant position, face greater challenges than men, who on the contrary are rewarded for their success. Women in these positions tend to be disliked and seen as lacking communal traits they “should have” (Heilman, 2012). The same tendency is also visible for men as these negative consequences also affect successful men in typically women gendered-type jobs. This is therefore not unique for women, and the main effect is that being successful at gender-inconsistent workplaces brings negative consequences, as it violates the prescriptive stereotype (Heilman & Wallen, 2010).

Traditional and Modern Sexism

Sexism regards prejudice towards women and has together with racism been of most interest within research on prejudice and discrimination (Schneider, 2005, p. 283). In the literature sexism has been separated into traditional and modern sexism, whereas the latter is more present in society today. Traditional sexism is blatant and overt, where unfavorable treatment of women is more visible and intentional. Modern sexism is more hidden and has further been separated into two different forms, namely covert and subtle sexism. Both regards unfavorable treatment of women, but respectively refers to whether the sexism happens in a hidden way or if it goes unnoticed because it is perceived as normal behavior within the cultural and social norms. For example, with covert sexism someone say that they are supportive of gender equality, but intentionally acts in ways that is unfavorable of women. With subtle sexism one’s behavior might be unequal towards women, but it is perceived as normal within the culture so oneself and others simply do not notice that it contributes to unequal treatment based on gender (Swim & Cohen, 1997).

Discrimination

As presented, discrimination serves as the behavioral component of an attitude. While prejudice is unseen, discrimination on the contrary is observable. Discrimination can however come in many forms and does not need to be a direct result of prejudice. It can stem from simply preferring one group over another, so it does not need to be hatred. It can further stem from implicit prejudice, unconscious bias or social pressure, so that it is more subtle (Schneider, 2005, p. 292). Stereotype biases has shown to result in discrimination towards women in leadership, but it is often subtle and difficult to detect. Women are seen less favorable and have more difficulty being seen as an effective leader compared to men (Hoyt, 2010). For example, a meta-analysis from Davison & Burke in 2000 referred to in Hoyt (2010) found a bias where participants selected men for masculine positions which included leadership, and selected women to feminine jobs such as secretary.

Social Norms

What influences behaviors and decisions of an individual in a group can be said to stem from the social norms within the group, that being what is habitually approved and the unwritten rules of how to act (Kallgren et al., 2000). Conformity happens when an individual stick to the social norms of a particular group, which again leads to common expectations and coordination of the members in the group (DeLamater et al., 2018, pp. 446-448). Social norms often foster the main goals of the group and can facilitate behaviors aiming to attain these goals. For individuals, social norms usually work as a cognitive guideline, where one judges and interpret surroundings, learning to distinguish what is right and wrong. For group members, social norms further stimulate the feeling of common identity. This feeling often gets heightened if the norms facilitate behavior that is somewhat distinct from other groups and requires a particular dress code or speech pattern (DeLamater et al., 2018, pp. 446-448).

Of relevance for this thesis are peer group norms within the Norwegian Armed Forces. This regards how the impression of other military personnel's beliefs and

expectations, for example would affect how one reacts toward a command given from a female officer. Prior research has shown that males in the Armed Forces acted in favor of other males rather than females, and this tendency might be a result of such unofficial norms (Dahl et al., 2021; Finseraas et al., 2016; Hanson et al., 2016).

Contact Between Groups

Prejudice can be reduced as a result of contact between groups. Continuous contact with a female leader at the workplace can change attitudes towards her, and further has the potential of being generalized toward female leaders in general. Nevertheless, this is only possible under certain conditions as contact also has shown to result in the opposite, namely that one feels threatened by female leaders (Steffens & Viladot, 2015, p. 217). Another model has suggested subtyping as a result of contact, where inconsistent stereotype behavior leads to the removal of these individuals from the stereotyped group, so that they are seen as a unique subgroup with distinctive features (Lyness & Judiesch, 1999; Schneider, 2005, p. 404). A study from Lyness & Judiesch (1999) found that compared to men, women were more likely to attain management positions through promotion, than being hired straight into the position. This was explained by subtyping, as women already working in the organization was placed in a unique group. In this way gender stereotypes have less influence on the decision maker when job-relevant information about the individual is present.

Social-Role Model

Eagly's social-role model suggests that gender stereotypes in fact are stereotypes regarding the distinct roles women and men possess in society, and not about gender (Schneider, 2005, p. 447). The differing behaviors between genders in society is a product of the roles one naturally ends up in. Women are more nurturing than men because they are more inclined to be placed in jobs and roles where these behaviors are anticipated. On the contrary, men are more likely to end up in jobs were characteristics like competitiveness and

task-orientation is valued and therefore, men stereotypically are perceived this way. With leadership positions comes more power and influence, and when most of these positions are held by men, they are naturally seen as more powerful. The results of this are opposite for women; they are perceived less powerful as they are less likely to hold these positions (Schneider, 2005, pp. 447-448).

Lack of Fit Model

The “lack of fit model” underlines how stereotypes not only are applicable to social groups, but also to different professions and jobs. Stereotypes of various professions can fit well with certain social groups and individuals, but may not fit others in the same way. Consequently, in society there will be jobs that stereotypically fit the characteristics of men, but not with women. However, what is seen necessary for various jobs is not fixed and can change with time (Steffens & Viladot, 2015, p. 36). For example, there has been a change within the Norwegian Armed Forces, where traditionally typical-male features like instrumentality, strength, and an authoritarian style were deemed necessary for higher positions. The last decade typical-female features like social skills and relational abilities have become increasingly valued and necessary. The importance of women in prevention work and conflict resolutions are underlined to maintain and promote peace. This change has made women more fit to these jobs and the Armed Forces also has a higher request for women (FNs sikkerhetsråd, 2000; Forsvarsdepartementet, 2006-2007).

Think Manager-Think Male Phenomenon

The “think manager-think male” phenomenon postulate that managers are more associated with men than with women. When people think of a manager they tend to think of a man, but research has shown that this traditional association is changing. In the U.S, female managers and business students did not show an association between managers and men, although their male colleagues still did. The less traditional image of a manager is visible in

many countries, and in Sweden, characteristics associated with a typical leader has become more similar to the female- rather than the male stereotype (Steffens & Viladot, 2015, p. 37). Adding to this, Heilman (2012) pointed out signs of a shift in characteristics defining a good leader, namely that communal traits and behaviors are becoming more desirable. Contributors to this might be because of a change in perception of what defines a good leader or a result of an increased number of women in leadership positions. Either or, there has been changes where more women are achieving management positions and moving into traditionally male-dominated fields (Barreto et al., 2009, pp. 3-4).

The Queen-Bee Syndrome

Research shows a tendency where females, who work in male-dominated organizations, tend to replace their behavior with more stereotypical masculine behaviors and leadership-styles, to cope with the lack of gender balance. This tendency has been referred to as the “queen-bee syndrome”, as some women tend to separate themselves from other females and ignores the gender discrimination in the process (Berdahl et al., 2018; Carli, 2018). This tendency was also summed up in an analysis of different studies conducted in the Norwegian Armed Forces, which painted a picture of a masculine culture that almost demanded an adaptation to the masculine values, in order to be accepted and tolerated (Fasting & Sand, 2011). In one of the studies, Lauritzen et al. (2009) reported that female informants valued not being a so-called “girly-girl,” in order to get acceptance and become “one of the guys”. In another study done by Hellum (2010), results showed that women in the Norwegian Royal Navy reported the need to be thick-skinned (in Norwegian, “å ha bein i nesa”), and work harder than men to prove their right to be in the Navy, rather than simply a part of a quota. Such attitudes might work as a barrier on the road towards equality and diversity within an organization.

Glass Ceiling

One theory that has opted to explain the underrepresentation of women in higher leadership positions is the glass ceiling, and regards a phenomenon limiting women's advancement into management. It concerns artificial barriers derived from attitudinal bias in organizations preventing qualified individuals from progressing to upper management positions (Nelson, 2006, p. 235). In the glass ceiling, glass represent how subtle and transparent the barriers are, whereas ceiling refers to the upper limit in the organization that women can reach (Barreto et al., 2009, p. 5). Furthermore, the glass ceiling includes progressively increasing barriers as women climbs the hierarchy. In this way, it is not a term describing labor market discrimination, but implies a more specific type of gender discrimination that is present in the higher end of the hierarchy (Baxter & Wright, 2000; Cotter et al., 2001). Baxter & Wright (2000) underlined how numerous studies have found a gender gap in authority, but that they failed to account for intensified barriers when women move up the hierarchy. However, articles accounting for this have found evidence of a glass ceiling (Cotter et al., 2001; Lyness & Judiesch, 1999). There has been limited research on men in traditionally female-gendered occupations, but Williams (1992) found structural advantages enhancing their careers and termed this phenomenon the glass escalator, but later underlined it did not apply to all men (Williams, 2013).

Sectoral Segregation and Domestic Responsibilities

The sectoral segregation refers to a gender gap in the labor market where women are over-represented in low-paying sectors, whereas men are over-represented in higher-paid sectors. Literature reveals a tendency where women want to work with people and value equality at the workplace whereas status and wages are less important. Women are more inclined to enter low-paying sectors that facilitate their interests due to domestic responsibilities. On the contrary, men tend to enter higher-paid sectors as they prefer hierarchy-enhancing jobs and value status and income more than women (Steffens & Viladot,

2015, p. 114). Gender stereotypes also contributes to the segregation as the perception of certain “male fields” may lead women to steer away. In this way stereotypes about academic fields can affect who chooses to participate in the fields, and women may self-stereotype, behaving in ways that are considered appropriate for their group (Cheryan et al., 2013; Steffens & Viladot, 2015, p. 133).

Domestic responsibilities also contribute to the underrepresentation of women in leadership positions, as women continue to carry out most of the duties related to family life and childcare (Carli, 2018; Hoyt, 2010). Women also spend more time with their children today, than they reportedly did back in the 60s. This is especially a trend for highly educated women, who again could possibly be distinct candidates for leadership positions (Carli, 2018; Guryan et al., 2008; Sayer et al., 2004). Domestic responsibilities may cause women to take employment leaves, working reduced hours or tradeoff leadership positions to more mother-friendly careers (Carli, 2018; Hoyt, 2010; Sani, 2015).

In the Norwegian Armed Forces, research shows that family policies are indeed a crucial factor when deciding whether to stay employed. A report sums up common reasons for leaving the Armed Forces from 2019-2020 based on a questionnaire, where family-related reasons are listed (Fauske & Strand, 2021). Christophersen (2017) investigated causal relationships between an officer’s number of children and whether the officer was still employed in the Royal Norwegian Navy. Results showed that for each child an officer had, there was a 52% probability they had quit their job in the navy. In sum, several reports connected to the Norwegian Defense Research Establishment highlights the importance of having family policies that can make military service more compatible with family life, especially for women (Fauske & Strand, 2021; Forsvarets forskningsinstitutt, 2017; Kristiansen et al., 2008; Steder & Fauske, 2012).

The Present Study

This study is a part of an unpublished timeseries, where three previous studies using the same material has been conducted in Norway prior to this, however using different samples. Eikaas (2010) developed the materials in collaboration with Frank Siebler in 2010 and used soldiers as participants. Aspvik (2010) used a student sample where some of the participants had completed the initial compulsory military service. Kjøllesdal (2012) used a sample consisting of soldiers. Both Aspvik (2010) and Eikaas (2010) found answer patterns implying a presence of gender discrimination favoring male officers. However, Kjøllesdal (2012) did not find evidence for such an effect.

Prior research both in the Armed Forces and in regular businesses has shown that women are underrepresented in upper management positions and in traditional male-dominated workplaces. Gender gaps are further visible both in regards of pay, authority and employment. Factors contributing to this has been identified, namely women's domestic responsibilities, sectoral segregation, discrimination, and glass ceiling. Gender inequality in the labor market is in other words visible on many levels, and numerous theories seek to explain reasons for this, such as Eagly's social role model, the lack of fit model and the think-manager think-male hypothesis. These are also intricately connected to how subtle discrimination and sexism affect women at the workplace.

This thesis focused on gender gap in authority in the Norwegian Armed Forces and measured behavior intentions toward female officers in the Norwegian Army. A questionnaire describing eight different scenarios regarding decision making in a military context was used. As the present study was part of an unpublished timeseries, the material could not be changed. Therefore the analysis allowed a greater number of variables than will be presented in the analysis. Below follows an overview of all variables in the questionnaire, emphasizing the variables used in the analysis for this thesis.

The scenarios in the questionnaire described a situation and thereafter an officer gave an order to the soldier in the scenario. In the scenarios and throughout this thesis the word “soldier” refers to an individual with a lower rank than the officer, that being any military personnel with a lower rank than the officer giving the order. The word “officer” applies to any given authority position within the Armed Forces, for example the troop leader in the scenarios. As described earlier, this implies a relationship of authority where orders from the officer are binding for the soldier, given the soldier's lower rank in the scenario. The scenarios varied in regards of the officer's gender, whether it was peacetime or wartime and whether the order from the officer was a clear command or a polite request. The participants had to decide whether they would carry out the order immediately or whether they would try to discuss it first. Participants were asked to answer on behalf of themselves and in terms of what they think others would do in the situation. Of most interest for this thesis is the variation of the officer's gender. If negative attitudes towards female officers are present one would see a tendency where participants are more inclined to discuss orders from a female officer than a male officer. If this is the case, it further implies that female officers have decreased authority. Based on the literature presented regarding gender inequality in the labor market, this leads to the hypothesis that:

H1 “Female officers will receive more discussion when giving orders compared to male officers.”

HO “The difference described by H1 will not appear”

Method

Participants

The study consisted of two samples. The first sample included participants from two battalions in the Norwegian Army referred to as the military sample. The second sample consisted of civilians, referred to as the civilian sample. The civilian sample was used as a

comparison group to the military sample and was initially a fallback option in case not enough data was collected in the Armed Forces. The intended sample size was a minimum of 60 participants, as we planned for a correlational analysis and comparison of means. All participants received a formal invitation to participate in the study, either personally or via email and flyers. In exchange for participating, it was offered a chance to win one of several universal gift cards worth 1000NOK.

Both samples were asked the same demographic questions, considering age, gender, if they were currently a student, if they were currently a soldier in active service and how much time they have spent serving in the military. These demographics were requested to make a clear distinction between the military sample and the civilian sample. Lastly, a question concerning consent to use participants' data in the analyses was asked as the final question. In total, this study had 339 participants, consisting of 155 females and the average age was 22.39 years ($SD = 4.61$, range 18-56 years).

The military sample. Participants in this sample included conscripts and military personnel with different ranks from two battalions in the Norwegian Army, namely the Artillery Battalion in Setermoen and the Signal Battalion at Heggelia, both based in Northern Norway. There were 107 participants from the Artillery Battalion and 102 participants from the Signal Battalion, leaving a completion rate of 90% and 65% in each battalion, respectively. In total, eleven participants were excluded from the analyses as they did not give consent to use their data. Based on this, the military sample consisted of 198 participants. The average age was 20.54 years ($SD = 2.77$, range 18-33 years) and the sample consisted of 56 females (28.3%) and 142 males (71.7%). The average time in the military measured in months was 14.85 ($n = 196$, $SD = 29.49$, range 1-162 months).

The civilian sample. There were 141 participants in this sample, whereas one was excluded from the analyses for not giving consent to use their data. The completion rate was

40% in this sample. The average age was 24.99 years ($SD = 5.38$, range 18-56 years) and the sample consisted of 99 females (70.2%) and 42 males (29.8%). In the civilian sample, the average time in the military measured in months was 18.67 ($SD = 21.43$, range 2-112 months) for the few participants who had military experience ($n = 27$).

The Participants' Self-Categorization

In the military sample, 194 participants (98%) stated they were a soldier in active service, whereas seven participants (3.5%) stated they were a current student. In the civilian sample, 130 participants (92.2%) stated they were a current student. Two participants (1.4%) stated they were a soldier in active service. No participants were excluded based on these demographics and this decision was justified by the method of recruitment. Participants in the military sample was based in the respective military camps during the recruitment period, making it a high probability that the four participants stating to not be a soldier in active service may have answered so, as a result of a misunderstanding or by mistake. For the civilian sample, the main goal was to recruit participants who were not at a military workplace while answering the survey. The majority of the sample consisted of students as this was of convenience and accessibility. Even though two participants in this sample happened to have a military background, they were recruited digitally in their spare time, making them fitting for the civilian sample.

Procedure

Preparations for this thesis started in May 2021 when we reached out to a personal contact in the Norwegian Armed Forces who assisted in the process of gaining approval to conduct the study. The next two months were spent preparing a formal application and reaching out to the battalions for approval to administer the survey in the two battalions. Approval was received from Chief of Artillery Battalion and Chief of Signal Battalion to administer the survey in the respective battalions. The application was then forwarded to

Chief of Public Affairs Norwegian Army who gave approval for the study prerequisite a final approval by the research committee at The Norwegian Defense University College. This was admitted, and the final approval was given in August 2021 (see Appendix A). The data collection started 27th of September and the data was downloaded 25th of October, for both samples.

The procedure of the data collection in the military sample was different for the two battalions due to practical reasons. Therefore, the procedure will be described individually for these two although they are treated as one sample in the analyses. Corresponding information was given to both battalions but was presented verbally and/or in writing.

Artillery Battalion. The participants from the Artillery Battalion were recruited physically as we were invited to Setermoen military camp. We met three different troops in one day, at various, agreed times. One of the troops was gathered inside an auditorium, and the remaining two were gathered outside in an open space on the military campsite. Troop leaders informed the participants that they needed their smartphone for the online survey. We then gave a brief introduction of the survey, including a short personal presentation. The survey was presented as an online questionnaire concerning decision making in a military context, consisting of eight scenarios where a decision must be made. Voluntary, anonymous participation was emphasized, in addition to the study being approved by the Norwegian Defense University College and the Staff of the Norwegian Army. The participants in each troop were told that by participating, they would join the draw for a universal gift card worth 1000NOK. Due to a tight schedule in the battalion, the introduction was kept short and effective, knowing that the questionnaire contained a front page with all necessary information about the study and instructions. The participants were invited to ask questions regarding the survey before and after the completion of the questionnaire.

The actual data collection took place as we handed out flyers with a QR-code and a link to the online questionnaire. Participants were told to either scan the QR-code or enter the link on their smartphones. The troop that was gathered inside an auditorium were already seated in different rows and the environment had few distractions. For the two troops gathered outside, we handed out flyers in a random order and asked participants to pass these around as they entered the questionnaire. Participants were standing in a cluster to be able to hear the introduction of the study. The surroundings were partly shielded, thus with a few distractions of heavy wind and other military personnel walking by. Some participants sat on the ground during the data collection, and some were standing throughout the whole session. In all three troops the introduction and completion of the questionnaire took approximately 15 minutes. In the end, we thanked the participants for their attention and participation in the study. Thereafter, a gift card was handed out to a predetermined placed participant in each troop (e.g., “participant number nine from the top-left corner”).

Signal Battalion. The data collection procedure in the Signal Battalion was mainly digital and carried out by an agreed confederate in the battalion. We sent the necessary information concerning the study via email to the confederate, which then distributed the survey further. The data collection within the battalion took place through email and flyers, with a written and occasionally verbal invitation to participate in the study, all administered by the confederate. We had regularly contact with the confederate during the data collection period by phone and email, to follow up the engagement and to answer possible questions. The confederate also handled the distribution of the gift cards to two random participants in the battalion.

Civilians. The participants in the civilian sample were recruited in several digital ways. Employees at the University of Tromsø sent out an email on behalf of us to all psychology students and additionally put up a post on their website. Both contained an

invitation to participate in the study and information about the lottery draw of the gift cards. In addition to this we shared an invitation to the study on social media, sent direct messages to students and placed flyers around the university campus. We handled the distribution of the gift cards and these were sent to two random e-mail addresses that the participants could fill in on the last page after answering the survey. The participants did not need to write their own e-mail address for anonymity reasons, and therefore had the option to use an address not connected to themselves.

Material

As mentioned earlier, the material for this study was already existent and has been used several times from 2010 to date (see Appendix B). The material consisted of a questionnaire containing eight scenarios where a decision had to be made. The scenarios described various situations in a military context. The military context was regarded especially relevant for decision making as this is thought to reduce ambiguity, for example when a superior officer asks a soldier to do something, the soldier is expected to follow the order.

Each scenario was described from a soldier's subjective perspective, using 5-8 sentences. Thereafter, a superior officer gives an order or a request, that was made to seem unfair, inappropriate or even wrongful, relative to the description of the situation in the scenario. The participants were then asked, "What would you do?", with an answer scale graded from 1: "carry out the command from the troop leader immediately" to 7: "try to discuss the command with the troop leader". Using the same Likert-scale ranging from 1-7, the participants were also asked "What would others have done?", in attempt to map out possible social norms in the sample. Figure 1 contains a screenshot of one scenario in the questionnaire, together with the two Likert scales, as an example.

Figure 1.

Screenshot of the Questionnaire, Showing one Scenario and the Answer Likert-Scales for Oneself and Others.

Tenk deg følgende scenario:

[KRIG] Troppssjef Jon Mehus har mange års erfaring i felt. Han har rykte på seg å være skikket både fysisk og mentalt. Laget ditt kommer til en høyde som må tas. Du melder at det er et farlig oppdrag som innebærer stor risiko, men han gir ordre til deg som lagfører om å ta høyden.

Hva ville DU ha gjort?

utføre ordre fra troppssjef umiddelbart prøve å diskutere ordren med troppssjef

Hva ville ANDRE SOLDATER ha gjort?

utføre ordre fra troppssjef umiddelbart prøve å diskutere ordren med troppssjef

Here follows an English translation of the scenario. *“Imagine yourself the following scenario: [WAR] Troop leader Jon Mehus has many years of experience in the field. He has a reputation of being fit both physically and mentally. Your team arrives at a high point that needs to be taken. You report that it is a dangerous mission that involves great risk, but he gives an order to you as the team leader to take the high point.”*. The two questions following the scenario translates to *“what would you do?”* and *“what would other soldiers do?”* with the answer Likert scale ranging from left *“carry out the command from the troop leader immediately”* to right *“try to discuss the command with the troop leader”*.

The scenarios varied due to three different variables, namely gender of the officer, context and tone of voice. The gender variable was implied by the officer’s name. Half of the scenarios included a male officer whereas the remaining four had a female officer. For the context variable, four of the scenarios were described as peacetime and the other half as

wartime. The last variable was tone of voice and regarded whether the superior officer gave a clear command or simply asked the soldier politely to do something. This led to three variables, gender (male vs. female officer), context (wartime vs. peacetime) and tone of voice (clear command vs. polite request). These variations were made to allow further analyses of the participants responses to the different variables.

Between-subject counterbalancing was used for the gender variable. All participants saw the same eight scenarios, four of them with a male officer, and the other four with a female officer. Any given scenario was presented with a male officer for half of the participants whereas a female officer was presented in the same scenario for the other half. This was preferable so that the effects of officer gender that may had come out, could clearly be attributed to the officer gender, and cannot be explained by other characteristics of the scenarios. Distractions was placed in the scenarios in attempt to take the focus away from the officer's gender. This was to avoid that participants suspected that the study was looking at gender attitudes. One distractor consisted of a sentence with personal characteristics, attempting to make the scenarios more realistic and the officers more humane (e.g., “She has a reputation of having good technical insight and logical knowledge”). Another distraction placed in the scenarios regarded the soldier's own perception of the outcome in the situation. Additionally, this distractor highlighted the unfairness of the officer's command and made the scenarios more realistic.

For the context variable, both wartime and peacetime contained ethical dilemmas for the soldier as the officer's decision was made to seem unfair and inappropriate. In addition, it was also implied that not following an order was unacceptable and might have consequences. This made situations more complex, aiming to evoke feelings of unfairness in the participants. The wartime scenarios highlighted ethical dilemmas further as decisions would have bigger consequences than in peacetime scenarios. In the wartime scenarios the different

officers were balanced across the situations, with one hazardous male officer, one hazardous female officer, one careful male officer and one careful female officer. For example, in one of the scenarios a man has been wounded, and the male officer puts the troop at risk, whereas the female officer is absurdly careful. For the peacetime scenarios, one example of the dilemmas and the inappropriateness of the officer's command, is the description of the soldier's poor physical state. The example from Figure 1 shows a scenario with a war context and a hazardous, male officer.

Questionnaire Tool

We ran the study using an online survey tool called Questback, as this has been used for the same material prior to this study. Questback offers various design and layout features, including the option to download all the raw data in SPSS format.

Variables, Design, Statistical Analysis

Overall, the study had four independent variables that varied within-subjects, gender (male vs. female officer), context (wartime vs. peacetime), tone of voice (clear command vs. polite request) and, for whom the answer was given (for oneself vs. for others). In addition, the assignment of a male vs. female name to the officer in a specific scenario was counterbalanced between subjects. From all the independent variables, only the gender of the officer was relevant to test our hypothesis. Therefore, whereas the study as a whole had a mixed design that included both within-subjects and between-subjects variables, for the purpose of the hypothesis test it had a repeated-measures or within subject design. The dependent variables were the participants' 16 answers for what they or other soldiers would do in the given situation. The results were analyzed with a mixed-model ANOVA (analysis of variance), using IBM SPSS Statistics version 25.

Results

All results are based on cases that gave explicit permission to use their data. Within each of the two samples the counterbalancing of officer gender over the scenarios resulted in an even-handed distribution such that any given scenario was presented with a male officer for approximately half the sample, but with a female officer for the other half.

Analyzes

A Pearson correlation test showed that the two responses each participant gave for oneself and others in the scenarios were all positively correlated, of considerable magnitude and statistically significant (range $r = .59$ to $r = .83$, $p < .001$). Therefore, the responses could be collapsed, and no separate analyses for them were conducted.

Two new dependent variables were created, namely “Male Officer” and “Female Officer”, which was the average of the eight single answers to the four scenarios containing a male officer and the average of the eight single answers to the four scenarios with a female officer. These two variables had the same range as the original, raw variables and corresponded with the Likert Scale used in the scenarios, ranging from 1-7 where 1 = “carry out the command from the troop leader immediately” and 7 = “try to discuss the command with the troop leader”. Table 1 shows descriptive statistics of the two dependent variables for the whole sample in total, for the two samples separately and for subsamples divided by the participants own gender.

Table 1.*Descriptive Statistics of the Dependent Variables Male Officer and Female Officer.*

Variable	Military_Civilians	Participant gender	<i>M</i>	<i>SD</i>	<i>N/n</i>
Male Officer	1	Female	2.89	1.11	56
		Male	2.44	.84	142
		Total	2.57	.94	198
	2	Female	3.11	1.18	99
		Male	2.93	1.21	42
		Total	3.05	1.19	141
	Total	Female	3.03	1.16	155
		Male	2.55	.96	184
		Total	2.77	1.08	339
Female Officer	1	Female	3.04	1.14	56
		Male	2.48	.83	142
		Total	2.64	.96	198
	2	Female	2.96	1.12	99
		Male	2.72	1.18	42
		Total	2.89	1.14	141
	Total	Female	2.99	1.13	155
		Male	2.53	.92	184
		Total	2.74	1.05	339

Note. Military_Civilian: 1 = military sample, 2 = civilian sample; Answer scale from 1 = “carry out the command from the troop leader immediately”, 7 = “try to discuss the command with the troop leader”.

To test the hypothesis, we ran a mixed model ANOVA with the two averaged answer variables “Female Officer” and “Male Officer” as the dependent variables. This gave within-subject factor concerning whether there was a difference between answers to male-officer scenarios versus female-officer scenarios for the whole sample. In addition, we used the between-subject factors, namely, whether the participants belonged to the military sample or

the civilian sample, and whether the participant her-/himself was female or male. This produced a total of four significance tests related to our hypothesis. Sphericity was not violated.

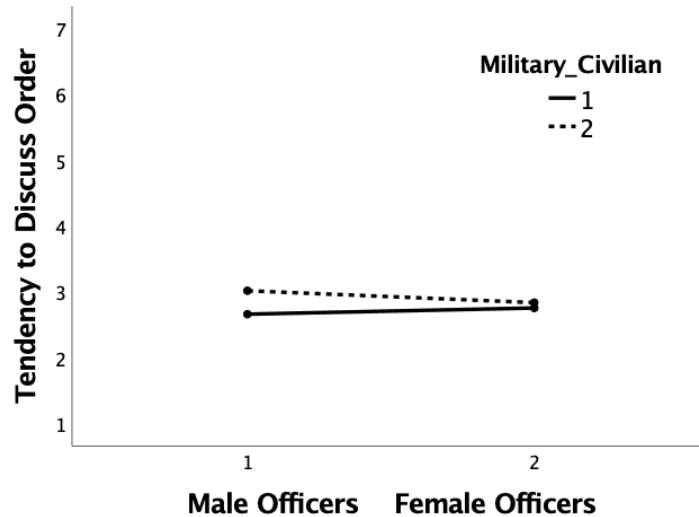
Firstly, there was no difference between answers to male-officer scenarios versus female-officer scenarios in the sample as a whole, $F < 1, p > .45$. Secondly, a two-way interaction tested if there is a difference between answers to male-officer scenarios versus female-officer scenarios when looking at the two samples, military and civilian, separately. This result was significant, $F(1, 335) = 5.84, p < .02$, which means that there was a difference between the two samples in the way they respond to male officers versus female officers. This finding was also related to our hypothesis. Thirdly, a two-way interaction testing whether there is a difference between answers to male-officer scenarios versus female-officer scenarios, when looking separately at male versus female participants was not significant, $F < 1, p > .45$. This means that male and female participants answered in the same way when the officer was male as when the officer is female. Fourthly, a three-way interaction tested whether there is a difference between answers to male-officer scenarios versus female-officer scenarios when looking separately at male versus female participants within each sample (military and civilian sample). Results showed that there was no significant difference for this interaction, $F < 1, p = .80$. This means that females from the military, males from the military, female civilians, and male civilians all answered in the same way independent of male-officer scenarios versus female-officer scenarios.

The significant result from the mixed model ANOVA showed a difference between the military and the civilian sample in regards of their responses to male-officer scenarios and female-officer scenarios. To correctly interpret this, it is necessary to take a closer look at the means (see Figure 2). This showed that the military sample seemed a bit more willing to execute a command without discussion when it comes from a male officer ($M = 2.66, SE =$

.08) rather than from a female officer ($M = 2.76$, $SE = .08$). However, pairwise comparison showed that this difference was not statistically significant, $p > .20$. Further, it showed that civilians seemed a bit less willing to execute a command without discussion when it comes from a male officer ($M = 3.02$, $SE = .10$) rather than from a female officer ($M = 2.84$, $SE = .09$). Pairwise comparison showed that this difference was statistically significant, $p < .04$. In sum, this showed that for the military sample it made no statistically significant difference whether the officer in the scenario was male or female. They responded in the same way in either case. For civilians, in contrast, it made a significant difference which showed that they were more inclined to discuss with a male officer and execute more readily without discussion when the officer was female. In sum, this did not support the hypothesis that participants would discuss more with a female officer than a male officer. Instead, it went toward the null hypothesis that there was no difference between answers towards female-officer scenarios and male-officer scenarios within the military sample. For the civilian sample it went in the complete opposite direction of the hypothesis, namely that participants were more willing to discuss with a male officer than a female officer.

Figure 2.

Tendency to discuss an order as a Function of Officer Gender and Participant Sample.



Note. Answer scale (y-axis): 1 = Carry out the command from the troop leader immediately, 7 = Try to discuss the command with the troop leader. Military_Civilian: 1 = military sample, 2 = civilian sample.

Other Results

For completeness, the between-subject effects will be covered briefly in this section even though not related to the hypothesis test. These effects were also of interest due to the gender imbalance within the two samples, whereas the majority of participants in the military sample was male and the majority in the civilian sample was female. The between-subject effects regarded the difference between answers given from the military and the civilian sample, and the difference between answers given from male versus female participants, regardless of scenarios involving a male or female officer.

There was a marginally significant difference between answers given from the military sample compared to the civilian sample, $F(1, 335) = 3.83, p = .051$. Further, the results showed a significant difference between the answers from female participants and

male participants, $F(1, 335) = 10.03, p = .002$. Lastly, a two-way interaction between the two samples and the participants' own gender tested whether the participant gender difference that was shown to be significant, differed in the military sample and the civilian sample. Results showed that this interaction-effect was not significant, $F(1, 335) = 1.79, p > .18$. This meaning, that the difference in answers from male and female participants were consistent in both samples.

To understand the significant differences in answers between the two samples and between the respondents' gender, one must look at the means. Means from the main effect between the military and civilian sample, showed that the military sample has a lower tendency to discuss orders before executing them ($M = 2.71, SE = .07$) than the civilian sample has ($M = 2.93, SE = .08$). However, this difference was only marginally significant as mentioned ($p = .051$). Means from the significant main effect regarding participants own gender revealed that male participants had a lower tendency to discuss orders before executing them ($M = 2.64, SE = .08$), than the female participants had ($M = 3.00, SE = .08$).

Reduced Sample

We decided to keep participants in the samples that answered unexpectedly to the questions regarding whether the participants were a current student and/or a soldier in active service. The following section will briefly explain the same results using a reduced, total sample. This sample consisted of military respondents that stated to be a soldier in active service and not a current student, and civilian respondents that stated that they were a current student and also not a soldier in active service ($N = 316$).

For the Pearson correlations between answers for oneself and answers for other soldiers, the pattern stayed generally the same as in the total sample. Results from the mixed-model ANOVA showed that the previously significant two-way interaction from the test of within-subjects effect between male and female officer in the scenario and the military and

civilian sample became only marginally significant with the reduced sample $F(1, 312) = 3.64$, $p = .057$. In the pairwise comparison, the difference became nonsignificant in both samples (military, $p = .257$; civilian, $p = .124$). From the test of between-subject effects, results showed that the two main effects were significant, whereas the interaction stayed non-significant.

Discussion

The present study investigated whether there is a gender gap in authority in the Norwegian Armed Forces. Females are underrepresented in higher leadership positions and in male-dominated areas, such as the military (Barretto et al., 2009, pp. 3-4; Gram, 2021; Grant Thornton, 2020). Additionally, there is evidence for the existence of a gender gap in authority in multiple countries (Wright et al., 1995). Research has shown a tendency to view men as better leaders than women, both in general and within the Armed Forces (Fasting & Sand, 2011; Hanson et al., 2016; Hoyt, 2010; Steffens & Viladot, 2015, p. 37). To investigate this research question, behavioral intentions toward female officers in the Norwegian Army was measured. Participants reported their likely behavior in response to scenarios that, unknown to the participants, systematically varied in regards of the officer's gender, so that half of them contained a male officer whereas the other half involved a female officer. The data were collected in parallel from two samples, namely soldiers (including military personnel) at the workplace, and civilians via the Internet.

The results do not support the hypothesis that female officers would receive more discussion than male officers. In other words, we did not find a presence of gender authority gap in the Norwegian Armed Forces as female officers did not receive more discussion compared to male officers. As a comparison sample, civilians were used. The civilians did not show a greater tendency to discuss orders from female officers either. In fact, in some analyses, they showed a somewhat greater tendency to discuss orders from male officers.

Furthermore, the correlation coefficients between the self-answers and the other-answers for each scenario were all positive, considerable and significant. Therefore, no further analyses on social norms were conducted. The discussion will concentrate on the military sample as this was the main focus of this thesis. The civilian comparison sample will only be addressed shortly, as it primarily was a fallback option in case limited data was collected in the Armed Forces.

Contrary to our results, previous research has shown a gender gap in authority where females have decreased authority (Wright et al., 1995). Additionally, research has shown a tendency to select men for leadership positions, and women to more feminine positions (Davison & Burke 2000 referred to in Hoyt, 2010), which implies a preference for male leaders. Our findings are also contrary to previous international research comparing military personnel and civilians' approval of women in the military. Former research show that military personnel are less approving of female participation in the military, especially within command positions, compared to civilian students (Kurpius & Lucart, 2000; Laurence et al., 2016; Matthews et al., 2009). The three previous studies conducted in Norway using the same scenarios as this study, further shows an interesting pattern. Both Aspvik (2010) and Eikaas (2010) found answer patterns implying a presence of gender discrimination favoring male officers. However, on the contrary Kjøllestad (2012) did not find a significant effect of the officer's gender affecting participants decision to follow order or discuss it, and our results are in line with this.

This pattern can suggest that gender discrimination is less present in the Norwegian Armed Forces today than it was at the time Aspvik (2010) and Eikass (2010) conducted their studies. The results point towards an attitude change within the organization, as Kjøllestad (2012) also suggests. As previously presented, multiple measures have been implemented in the Armed Forces over the past decade for the purpose of increasing the female share.

Already outlined, several white papers from the Norwegian Government concerning the gender imbalance led to initial compulsory military service for both women and men as of 2014, increasing the female share substantially (Forsvarsdepartementet, 2006-2007, 2014; Utenriksdepartementet, 2006). For example, results from mixed-room studies showed attitude- and stereotype change in favor of females (Dahl et al., 2021; Finseraas et al., 2016; Forsvarets forskningsinstitutt, 2017). As research has shown, exposure can reduce prejudice (Steffens & Vildaot, 2015, p. 217). Therefore, one can argue that the results from this study could be an outcome of positive attitude change due to increased female exposure overall in the Norwegian Armed Forces. As these changes have been visible overall, the results from this study using participants from the Norwegian Army may perhaps be generalized to other branches in the Armed Forces.

Research shows that the “think manager- think male” phenomenon is present both within the Armed Forces and in general, but only holds true for males, as females in general does not show the same association (Forsvarets forskningsinstitutt, 2017; Finseraas et al., 2016; Steffens & Viladot, 2015, p. 37; Schein, 2001). Our findings might be a result of the ongoing shift in characteristics defining a good leader, where communal traits and behaviors are more desirable (Heilman, 2010; Steffens & Viladot, 2015, p. 37). In line with this, the lack of fit model underlines how the stereotypes of which professions that fit well with certain groups, are not fixed and change with time. This is also visible within the Norwegian Armed Forces where the perception of women has become more fit to leadership positions and desired in conflict resolutions to promote peace (Forsvarsdepartementet, 2006-2007; FN's sikkerhetsråd, 2000). Considering Eagly's social role model (Schneider, 2005, p. 447), one would think that this shift eventually will affect the stereotypes regarding the distinct roles men and women possess in society. In other words, as the female share in leadership

positions increases, the more likely they should be to hold these positions as the stereotypes of different roles women possess in society changes.

Civilian Sample

The significant result from the civilian sample showing that participants discussed more with male officers than female officers is a bit surprising as it goes in the opposite direction of H1. Explanations for this can be that the military context led to alienation of the scenarios as most civilian participants did not have any experience from the military. This can further have made civilians more inclined to discuss orders, as they are not familiar with the consequences of not obeying. Furthermore, scenarios might not be as realistic to civilians as they were to soldiers and therefore fail to provoke feelings of unfairness. This significant difference became non-significant in the reduced sample.

Other Potential Factors Contributing to the Underrepresentation of Women

So far, explanations for our results have been presented and decreased authority for females does not seem to be a contributing factor to the gender inequality in the Norwegian Armed Forces. In the following, we present other potential explanations for the underrepresentation of women in the Armed Forces and leadership positions in general.

The glass ceiling might be a factor producing intensified barriers as women move up the hierarchy, as research has shown (Lyness & Judiesch, 1999). Based on this, the way to the top might be more challenging for women, but our results suggests that females may have the same authority as males when they first reach the positions.

In male-dominated organizations such as the Armed Forces, the literature shows a masculine culture that almost demands adaption to the masculine values to be accepted and tolerated, known as the “queen-bee syndrome” (Berdahl et al., 2018; Carli, 2018; Fasting & Sand, 2011). This is unique for male-dominated organizations and can be a contributing factor to the gender imbalance in the Armed Forces. The adaptation might not be as easy for

all women, as research has shown (Hellum, 2010). Such organizational culture can be a barrier toward equality as women who fail to adapt might not get accepted and seen as equal.

As mentioned, our results might be a consequence of increased contact and therefore reduced prejudice toward females in the Armed Forces. However, increased contact can also result in subtyping where women in the Armed Forces are removed from the stereotyped group and seen as a unique subgroup with distinctive features (Lyness & Judiesch, 1999; Schneider, 2005, p. 404). This can potentially lead to advantaging of females already in the Armed Forces whereas females that have not entered yet, or newly entered are disadvantaged as they are not part of the favorized group yet.

Domestic responsibilities can contribute to the underrepresentation of women in leadership position and in the Armed Forces. There are disadvantages in wages, work experience and employment continuity for working mothers in general (Carli, 2018; Hoyt, 2010; Sani, 2015). Research has shown that family policies are influential when deciding whether to stay in the Armed Forces (Fauske & Strand, 2021). Family policies therefore seem to be of importance to promote gender equality within organizations. This also touch on sectoral segregation as a contributing factor as women often steer away from jobs that conflict with domestic responsibilities. On the other hand, women often value cooperation and nurturing jobs and therefore enter jobs that facilitate this, so it cannot only be attributed to family policies (Steffens & Viladot, 2015, p. 114).

Strengths, Limitations and Recommendations for Future Research

This study has both areas with strengths and limitations that should be addressed and moreover lifted for the purpose of future research. Firstly, considering the materials used for this study. Each participant was presented with four almost identical scenarios two times, only differing between a female or male officer. This may have led participants to understand the gender aspect of the study. Multiple measures were implemented to avoid this, namely

distractions of describing personal characteristics of the given officer in the scenario and the soldier's own perception of the outcome in the scenarios. To further improve the material, one could add more distractions to scenarios. One could also split participants into two groups where each group only get one of the two scenarios presented containing either a male or female officer. Moreover, the officer's decisions in each scenario were also made to seem unfair and even wrongful. This raises the question whether the outcome of our findings would be different if the officer's decisions were made to seem fair and appropriate. The latter question could be interesting for future research.

Secondly, other possible limitations of importance concern the samples and the data collection procedure in this study. The average age of the participants in the military sample was relatively low and the same goes for the average time spent serving in the military. Previous research has shown tendencies where time spent serving the Norwegian Armed Forces seem to increase conscripts' beliefs that men are better leaders (Hanson et al., 2016). Therefore, a sample consisting of more experienced military personnel would be more ideal for the purpose of this study.

Further, the procedure of data collection used for the military sample also has potential for betterment. Given the digital data collection in the Signal battalion, there is limited information concerning the environment. In the Artillery battalion, one limitation regards the two troops standing outside in a distracting environment during the completion of the survey. Ideally, the data collection procedure would have been the same for both battalions as they were treated as one sample, preferably sitting inside with few distractions in the environment.

By measuring behavioral intentions, rather than asking for explicit self-reported attitudes, one decreases the probability of social desirability bias and is left with better predictions of real behavior (Ajzen, 1991). However, the usage of self-reported data can be

seen as a limitation itself as it only reduces but does not completely remove the possibility of social desirability bias. One cannot rule out participants suspecting that the officer's gender was of interest, and thereby giving socially desired answers. If so, covert sexism could be present, but this study was not able to find it using the present materials.

The sample sizes used in this study are substantially larger than samples used with the same materials in prior research and cover both civilians and participants from two battalions in the Norwegian Army. This can enhance the ability to generalize our findings and perhaps makes it more representative for the Norwegian Armed Forces. Furthermore, our result suggest that perhaps other authority relations may have become more egalitarian in recent years.

For future research, it would be interesting to investigate other variables in the materials. For example, the independent variable tone of voice regarding whether the officer simply asks or commands the soldier to execute. With this variation, the officer sometimes allows feedback and other times does not. All the scenarios are constructed so that the officer's decision is wrong or unfair. In this way, it would be beneficial to give feedback, namely discuss order, when the officer allows it to avoid any negative or dangerous outcomes in the situation. On the other hand, giving feedback when the officer gives a clear command might produce a higher threshold given the hierarchical structure within the Armed Forces ([FSJ], 2020, p. 9). It would therefore be of interest to investigate how tone of voice affects the results. Given the wrongfulness of the officer's decision, not discussing an order in scenarios where female officers allows feedback, but doing so if the officer is male, could indicate decreased authority for female officers.

Furthermore, it would be of interest to see how the independent variable of context affected this. The variation of peace and war scenarios can be thought to influence the decision to discuss or not when officers allow feedback. Naturally, one can assume that

participants would be more inclined to discuss orders in war situations compared to peace situations, due to consequences of an unwise decision being more fatal in war. Investigating how the gender of the officer affects these decisions could further enlighten if gender discrimination is present.

Conclusion

In conclusion, this thesis strived to shed light on elements contributing to the underrepresentation of women in the Norwegian Armed Forces. Specifically, whether gender discrimination is present and contributes to decreased authority for female officers. Results show that female officers did not have decreased authority compared to male officers. Considering earlier research using the same scenarios as this study, it points to a trend of decreased gender discrimination in the Armed Forces. This might be a result of extensive research on the area and measures implemented to promote gender equality. Furthermore, there seem to be a shift in traditional gender stereotypes where men previously have been seen as better leaders than women. Communal traits are increasingly desired for leadership positions, and women have become of importance for higher positions in the Norwegian Armed Forces, especially within peace work. The question remains why women are underrepresented in the Armed Forces, but it does not seem to be a consequence of a gender gap in authority. Factors that might influence this are discussed, such as the glass ceiling, masculine organizational culture and domestic responsibilities.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/https://doi.org/10.1016/0749-5978(91)90020-T)
- Aspvik, M. (2010). *Revealing authority gender-biases among Norwegians* [Bachelor thesis, University of Tromsø]. Unpublished.
- Barreto, M., Ryan, M. K., & Schmitt, M. T. (2009). Introduction: Is the glass ceiling still relevant in the 21st century? In M. Barreto, M. K. Ryan, & M. T. Schmitt (Eds.), *The glass ceiling in the 21st century: Understanding barriers to gender equality* (pp. 3-18). American Psychological Association. <https://doi.org/10.1037/11863-001>
- Baxter, J., & Wright, E. O. (2000). The glass ceiling hypothesis: A comparative study of the United States, Sweden, and Australia. *Gender & Society*, 14(2), 275-294. <https://doi.org/10.1177/089124300014002004>
- Berdahl, J. L., Cooper, M., Glick, P., Livingston, R. W., & Williams, J. C. (2018). Work as a masculinity contest. *Journal of Social Issues*, 74(3), 422-448. <https://doi.org/10.1111/josi.12289>
- Caleo, S., & Halim, M. L. D. (2021). Gender and the development of leadership stereotypes. *Routledge Taylor & Francis Group*, 32(2), 72-76. <https://doi.org/10.1080/1047840X.2021.1930745>
- Campuzano, M. V. (2019). Force and inertia: A systematic review of women's leadership in male-dominated organizational cultures in the United States. *Sage Publications*, 18(4), 437-469. <https://doi.org/10.1177/1534484319861169>
- Carli, L. L. (2018). Women, power, and the career labyrinth. In C. B. Travis, J. W. White, A. Rutherford, W. S. Williams, S. L. Cook, & K. F. Wyche (Eds.), *APA Handbook of the*

- Psychology of women: Perspectives on women's Private and Public Lives* (pp. 349-365). <https://doi.org/10.1037/0000060-019>
- Cheryan, S., Plaut, V. C., Handron, C., & Hudson, L. (2013). The stereotypical computer scientist: Gendered media representations as a barrier to inclusion for women. *Sex Roles, 69*(1), 58-71. <https://doi.org/10.1007/s11199-013-0296-x>
- Christophersen, S. H. (2017). *Kvinnelige yrkesoffiserer – hvorfor lykkes ikke Sjøforsvaret? En kvantitativ studie av gjennomtrekk blant yrkesoffiserer i Sjøforsvaret med fokus på kjønnsmessige forskjeller* [Master, Forsvarets høgskole]. Forsvarets høgskole. <https://fhs.brage.unit.no/fhs-xmlui/handle/11250/2478012>
- Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces, 80*(2), 655-681. <https://doi.org/10.1353/sof.2001.0091>
- Dahl, G. B., Kotsadam, A., & Rooth, D.-O. (2021). Does integration change gender attitudes? The effect of randomly assigning women to traditionally male teams. *The Quarterly Journal of Economics, 136*(2), 987-1030. <https://doi.org/10.1093/qje/qjaa047>
- DeLamater, J. D., Myers, D. J., & Collett, J. L. (2018). *Social psychology* (8th ed.). Routledge Taylor & Francis Group. <https://doi.org/https://doi.org/10.4324/9780429493096>
- Eikaas, C. (2010). *Attitudes among Norwegian soldiers towards male and female officers* [Bachelor thesis, University of Tromsø]. Unpublished.
- Ellingsen, D., Lilleaas, U.-B., & Kimmel, M. (2016). Something is working-But why? Mixed rooms in the Norwegian army. *NORA: Nordic Journal of Women's Studies, 24*(3), 151-164. <https://doi.org/10.1080/08038740.2016.1236037>
- Eurostat. (2021, November 15th). *European Commission: EU27 international trade*. https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/equal-pay/gender-pay-gap-situation-eu_en

- Fasting, K., Kjøber, P. K., & Strand, K. R. (2021). *Mobbing og seksuell trakassering i Forsvaret -Resultater fra MOST-undersøkelsen 2020*. (21/00414). Forsvarets forskningsinstitutt. <https://publications.ffi.no/nb/item/asset/dspace:6975/21-00414.pdf>
- Fasting, K., & Sand, T. S. (2011). *Flere kvinner i Forsvaret? En analyse av studier om rekruttering av kvinner og kvinners erfaringer i og med Forsvaret: Delrapport 1*. (04/2011). Forsvarets høgskole. <http://hdl.handle.net/11250/99345>
- Fauske, M. F., & Strand, K. R. (2021). *Sluttårsaker i Forsvaret i 2019 og 2020*. (21/00746). Forsvarets forskningsinstitutt. <https://publications.ffi.no/nb/item/asset/dspace:7066/21-00746.pdf>
- Finseraas, H., Johnsen, Å. A., Kotsadam, A., & Torsvik, G. (2016). Exposure to female colleagues breaks the glass ceiling: Evidence from a combined vignette and field experiment. *European Economic Review*, 90, 363-374. <https://doi.org/10.1016/j.eurocorev.2015.11.010>
- FNs sikkerhetsråd. (2000). *FNs sikkerhetsråds resolusjon 1325 om kvinner, fred og sikkerhet* (1325). https://www.regjeringen.no/no/tema/utenrikssaker/utviklingssamarbeid/innsiktsmappe/kvinner_likestilling/1325/id560774/
- Forsvaret. (2021a). *Vernepliktsundersøkelsen kontingent 2020*. Forsvaret. <https://www.forsvaret.no/aktuelt-og-presse/publikasjoner/vernepliktsundersokelsen>
- Forsvaret. (2021b). *Årsrapport 2020*. Forsvaret. <https://www.forsvaret.no/aktuelt-og-presse/publikasjoner/forsvarets-arsrapport>
- Forsvarets forskningsinstitutt. (2017). *VITEN: Slik får Forsvaret flere kvinner*. (17/00889). Forsvarets forskningsinstitutt. <https://www.ffi.no/publikasjoner/arkiv/slik-far-forsvaret-flere-kvinner>

Forsvarsdepartementet. (2006-2007). *Økt rekruttering av kvinner til Forsvaret* (Meld. St. 36 (2006-2007)). <https://www.regjeringen.no/no/dokumenter/stmeld-nr-36-2006-2007-/id475314/>

Forsvarsdepartementet. (2014). *Endringer i vernepliktsloven og heimevernloven (allmenn verneplikt – Verneplikt for kvinner)* (Prop. 122 L (2013–2014)).
<https://www.regjeringen.no/no/dokumenter/Prop-122-L-20132014/id762771/>

Forsvarssjefen. (2020). *Forsvarets grunnsyn på ledelse*. Forsvaret.
<https://regelverk.forsvaret.no/view/doccard/document:1672443>

Gram, K. H. (2021, September 15th). *Stadig flere kvinner blant ledere*. Statistisk Sentralbyrå.
<https://www.ssb.no/befolkning/artikler-og-publikasjoner/stadig-flere-kvinner-blant-ledere>

Grant Thornton. (2020). *Women in business 2020: Putting the blueprint into action*.
https://www.grantthornton.global/globalassets/1.-member-firms/global/insights/women-in-business/2020/women-in-business-2020_report.pdf

Guryan, J., Hurst, E., & Kearney, M. (2008). Parental education and parental time with children. *Journal of Economic Perspectives*, 22(3), 23-46.
<https://doi.org/10.1257/jep.22.3.23>

Hanson, T., Steder, F. B., & Kvalvik, S. N. (2016). *Hva motiverer til tjeneste i Forsvaret? En innledende kvantitativ analyse av holdninger og adferd i Brigade Nord* (16/01012). Forsvarets forskningsinstitutt.
<https://publications.ffi.no/nb/item/asset/dspace:2608/16-01012.pdf>

Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior*, 32, 113-135. <https://doi.org/10.1016/j.riob.2012.11.003>

- Heilman, M. E., & Caleo, S. (2018). Combatting gender discrimination: A lack of fit framework. *Group Processes & Intergroup Relations*, 21(5), 725-744.
<https://doi.org/10.1177/1368430218761587>
- Heilman, M. E., & Wallen, A. S. (2010). Wimpy and undeserving of respect: Penalties for men's gender-inconsistent success. *Journal of Experimental Social Psychology*, 46(4), 664-667. <https://doi.org/10.1016/j.jesp.2010.01.008>
- Hellum, N. (2010). "Bein i Nesa" - En antropologisk studie av kjønnsproblematikk på minesveiperen KNM Otra (2010/00030).
<https://publications.ffi.no/nb/item/asset/dspace:3624/10-00030.pdf>
- Hovde, J. (2010). "Kvinner i forsvaret - dårlig for krigsmorale - bra for arbeidsmiljøet".
Hvilken forståelse og motivasjon har mannlige ledere for kvinner i Forsvaret
[Masteroppgave, Forsvarets stabsskole]. Forsvarets høgskole.
<http://hdl.handle.net/11250/99886>
- Hoyt, C. L. (2010). Women, men, and leadership: Exploring the gender gap at the top. *Social and Personality Psychology Compass*, 4(7), 484-498. <https://doi.org/10.1111/j.1751-9004.2010.00274.x>
- Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus theory of normative conduct: When norms do and do not affect behavior. *Personality & Social Psychology Bulletin*, 26(8), 1002-1012. <https://doi.org/10.1177/01461672002610009>
- Kjøllestadal, T. (2012). *Holdninger til kvinnelige ledere: Predikerer implisitte og eksplisitte holdninger atferdsintensjon mot kvinnelig befal i Forsvaret?* [Master thesis, University of Tromsø]. Munin. Unpublished.
<https://munin.uit.no/bitstream/handle/10037/4542/thesis.pdf?sequence=2&isAllowed=y>

- Kristiansen, S.-T., Boe, O., & Skjæret, S. W. (2010). *Ikke en av gutta! Et mangfoldsperspektiv på inkludering av kvinner i Forsvaret* (KS Fagrappport nr. 1). <http://hdl.handle.net/11250/160875>
- Kristiansen, S.-T., Boe, O. C., Bakken, B. T., Skjæret, S. W., & Granlund, L.-M. (2008). *Kunsten å rekruttere og beholde jenter i Forsvaret: Skisse til en ny strategi for økt kvinneandel i Forsvaret* (KS Fagrappport nr. 2). <https://fhs.brage.unit.no/fhs-xmlui/handle/11250/160871>
- Kurpius, S. E. R., & Lucart, A. L. (2000). Military and civilian undergraduates: Attitudes toward women, masculinity, and authoritarianism. *Sex Roles, 43*(3), 255-265. <https://doi.org/10.1023/A:1007085015637>
- Laurence, J. H., Milavec, B. L., Rohall, D. E., Ender, M. G., & Matthews, M. D. (2016). Predictors of support for women in military roles: Military status, gender, and political ideology. *Military Psychology, 28*(6), 488-497. <https://doi.org/10.1037/mil0000142>
- Lauritzen, T., & Leirvik, B. (2008). *Med et kjønnsperspektiv på Forsvaret som arbeidsorganisasjon - et teorinotat* (ØF-notat nr. 08/2008). Østlandsforskning. <https://www.ostforsk.no/wp-content/uploads/2015/01/082008.pdf>
- Lauritzen, T., Leirvik, B., Schanke, T., & Ellingsen, A. (2009). "Vi er ikke sånne jente-jenter". *Første underveisnotat i prosjektet "Forskning på årskull" med resultater fra intervju med vernepliktige, befal og vervede* (ØF-notat nr. 09/2009). Østlandsforskning. <http://www.ostforsk.no/old/images/notater/092009.pdf>
- Lyness, K. S., & Judiesch, M. K. (1999). Are women more likely to be hired or promoted into management positions? *Journal of Vocational Behavior, 54*(1), 158-173. <https://doi.org/10.1006/jvbe.1998.1646>

- Matthews, M. D., Ender, M. G., Laurence, J. H., & Rohall, D. E. (2009). Role of group affiliation and gender on attitudes toward women in the military. *Military Psychology, 21*(2), 241-251. <https://doi.org/10.1080/08995600902768750>
- NATO Science & Technology Organization. (2021). *Women in the Armed Forces: NATO Science and Technology Organization (STO) research on women in the Armed Forces (2000-Present)*. <https://www.sto.nato.int/public/2021-NATO-STO-WIAF-Report-v3.1-2021-04-14.pdf>
- Nelson, T. D. (2006). *The psychology of prejudice* (2. ed.). Pearson Education.
- Orsten, L. (1999). *Forsvarssak eller kvinnesak? Utviklingen av yrkesmessig likestilling for kvinner i Forsvaret* (0333-3981). Forsvarets høgskole. <http://hdl.handle.net/11250/99705>
- Sani, G. M. D. (2015). Within-couple inequality in earnings and the relative motherhood penalty. A cross-national study of European countries. *European Sociological Review, 31*(6), 667-682. <https://doi.org/10.1093/esr/jcv066>
- Sayer, L. C., Gauthier, A. H., & Furstenberg, F. F. (2004). Educational differences in parents' time with children: Cross-national variations. *Journal of Marriage and Family, 66*(5), 1152-1169. <https://doi.org/https://doi.org/10.1111/j.0022-2445.2004.00084.x>
- Schneider, D. J. (2005). *The Psychology of Stereotyping*. The Guilford Press.
- Spencer, M. E. (1970). Weber on legitimate norms and authority. *The British Journal of Sociology, 21*(2), 123-134. <https://doi.org/10.2307/588403>
- Steder, F. B., & Fauske, M. F. (2012). *Tiltak for å øke kvinneandelen i Forsvaret* (2012/00903). Forsvarets forskningsinstitutt. <https://www.ffi.no/publikasjoner/arkiv/tiltak-for-a-o-ke-kvinneandelen-i-forsvaret>
- Steffens, M. C., & Viladot, M. À. (2015). *Gender at work: A social psychological perspective*. Peter Lang Publishing.

- Swim, J. K., & Cohen, L. L. (1997). Overt, covert, and subtle sexism: A comparison between the attitudes toward women and modern sexism scales. *Psychology of Women Quarterly*, 21(1), 103-118. <https://doi.org/10.1111/j.1471-6402.1997.tb00103.x>
- Utenriksdepartementet. (2006). *Regjeringens handlingsplan for gjennomføring av FNs Sikkerhetsråds resolusjon 1325 (2000) om kvinner, fred og sikkerhet*. <https://www.regjeringen.no/globalassets/upload/kilde/ud/pla/2006/0002/ddd/pdfv/275810-fn1325.pdf>
- Williams, C. L. (1992). The glass escalator: Hidden advantages for men in the 'Female' professions. *Social Problems*, 39(92), 253-267. <https://doi.org/10.1525/sp.1992.39.3.03x0034h>
- Williams, C. L. (2013). The glass escalator, revisited: Gender inequality in neoliberal times. *Gender & Society*, 27(5), 609-629. <https://doi.org/10.1177/0891243213490232>
- Wright, E. O., Baxter, J., & Birkelund, G. E. (1995). The gender gap in workplace authority: A cross-national study. *American Sociological Review*, 60(3), 407-435. <https://doi.org/10.2307/2096422>

Appendix A

Approval from The Norwegian Defense University College



1 av 2

Vår saksbehandler
Borghild Boye, bboye@mil.no
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FHS/FAGSTAB/SEK STUD STØ

Vår dato 2021-08-25
Vår referanse 2021/025768-003/FORSVARET/ 002

Tidligere dato **Tidligere referanse**

Til
Hanna Solvang Myrvoll
.
..

Kopi til
HÆR/HST

Tillatelse til å innhente opplysninger i og om Forsvaret til forskningsformål

1 Bakgrunn

Forsvarets høyskole (FHS) har mottatt din oppdaterte søknad av 23. august 2021 om tillatelse til å innhente opplysninger i og om Forsvaret til forskningsformål. Prosjektet det skal innhentes data til er en hovedoppgave i psykologi som omhandler kjønn og autoritet. Det skal gjennomføres en spørreundersøkelse blant militært personell inkludert vernepliktige, og tillatelse er innhentet fra Hæren ved kommunikasjonssjef Erling Nervik.

2 Drøfting

Vurdering av søknader om tillatelse til å innhente opplysninger i og om Forsvaret til forskningsformål er regulert av *Bestemmelse om utlevering av personopplysninger til forskning og gjennomføring av spørreundersøkelser*, fastsatt av sjef HR-avdelingen i Forsvarsstaben 1. mai 2018.

I henhold til punkt 2.3 og 2.4 i denne bestemmelsen er det en forskningsnemnd oppnevnt av sjef FHS som har myndighet til å behandle søknader om tillatelse til datainnsamling i Forsvaret. Kriterier og rettsgrunnlag som skal legges til grunn for vurderingen er omtalt i punkt 4.1 og 4.2.

Forskningsnemnda har vurdert din søknad som tilfredsstillende i henhold til gjeldende krav.

3 Vedtak

Søknad om tillatelse til å innhente opplysninger i og om Forsvaret til forskningsformål innvilges. Tillatelsen gjelder til prosjektslutt 14. desember 2021.

4 Vilkår for tillatelsen

Det er kun gitt tillatelse til innhenting av det datamaterialet som fremgår av søknaden. Data hentet fra Forsvaret skal ikke benyttes til andre formål enn den aktuelle hovedoppgaven. Ved prosjektslutt skal alle data hentet fra Forsvaret slettes. Det skal sendes sluttmelding til FHS vedlagt oppgaven. Sluttmelding sendes til følgende e-postadresse: fhs.datautlevering@mil.no

Sven G. Holtmark
professor
leder av forskningsnemnda

Dokumentet er elektronisk godkjent, og har derfor ikke håndskreven signatur.

Appendix B

Scenarios Measuring Behavioral Intentions

The following scenarios are retrieved from Eikaas (2010).

[KRIG] Laget ditt skader en mann i et angrep. Det krever tre mann til å behandle ham. Du observerer at det ikke er lenge til dere kan komme i ”kontakt” igjen, og med tre mann til å behandle den sårede soldaten er laget i umiddelbar fare. Troppssjef Kristian Lang kommer mot deg, han ber deg om å ta vare på mannen, istedenfor å sikre laget ditt.

[KRIG] Troppssjef Jon Mehus har mange års erfaring i felt. Han har rykte på seg å ha god teknisk innsikt og logisk kunnskap. Laget ditt kommer til en brakke som må tas. Du melder at det er et enkelt oppdrag som innebærer liten risiko, men han gir ordre til deg som lagfører om å unngå brakken.

[KRIG] Laget ditt skader en mann i et angrep. Det krever tre mann til å behandle ham. Du ser at det ikke er lenge til dere kan komme i ”kontakt” igjen, men selv med tre mann til å behandle den sårede mannen er laget ikke i umiddelbar fare. Troppssjef Anne Rosenvinge kommer mot deg, hun ber deg om å sikre laget ditt, istedenfor å ta vare på den sårede.

[KRIG] Troppssjef Benedikte Sand har mange års erfaring i felt. Hun har rykte på seg å være skikket både fysisk og mentalt. Laget ditt kommer til en høyde som må tas. Du melder at det er et farlig oppdrag som innebærer stor risiko, men hun gir ordre til deg som lagfører om å ta høyden.

[FRED] Du og din tropp har nettopp kommet hjem fra øvelse. Dere har vært ute i hele 6 døgn, og er svært utmattet fysisk og mentalt. Til din overraskelse blir du bedt av Troppssjef Einar Solberg om å lede troppen i vask av kasserna.

[FRED] På rommet dere bor i på kasserna har hver soldat et primær skap hvor dere kan oppbevare militært utstyr og noe sivilt. På grunn av bedre utstyrskontroll får dere

følgende ordre fra troppssjef Erik Finn; alle skap på rom skal tømmes for sivilt utstyr og vaskes, og ved neste inspeksjon skal disse bli låst.

[FRED] Etter mange døgn ute på øvelse kommer du og din tropp tilbake til leir. Du ser fram til å endelig få slappet av, dusje og sove i en varm seng. Troppssjef Helene Kristiansen kommer til deg og ber deg om å lede troppen i vask av hele kasserna.

[FRED] Hele formiddagen gikk med til atskillelse og sammensetning av våpen. Da du kommer frem venter en lang og grundig puss av våpen og lagutstyr. Troppssjef Kristin Mehren er nøye når det gjelder pussens detaljer. Når hele utstyret er så blankt at du kunne ha speilet deg i det, gir hun deg ordre om å pusse våpen én gang til.

