Differences in Perception of Male and Female Leaders in Two Work Domains

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Abstract

Both the International Maritime Organization (IMO) and the International Labour Organizations are making a concerted effort promoting women into the maritime industry (Stevenson, 2015). However, although the female participation rate has increased over the last decades, women only make up 1-2% of the 1.25 million seafarers worldwide (Belcher, Sampson, Thomas, Veiga & Zhao, 2003). The industry that carries over 90% of the world’s goods needs to access the entire talent pool, regardless of gender (Kitada, 2015). Yet, barriers, many of which are perceptual, hinder female employment, particularly in leadership positions. The present thesis aims to investigate if the implicit beliefs about leadership are the same for female leaders as they are for male leaders, and if this differs as a function of a masculine versus neutral work domain. A questionnaire based on Project GLOBE’s 21 primary leadership dimensions measured perceptions of leadership attributes with either female leaders or male leaders in two work sectors (a CEO of a marketing firm and a Captain of a passenger ship). Gender was used as independent between-group variables, work domain was independent within-group variables and ratings on the 21 leadership attributes were dependent variables. The statistical analysis was done in IBM Statistical Package for Social Sciences Version 22, with a 2 x 21 x 2 x 2 repeated measures General Linear Model (2 work domains x 21 leadership attributes x 2 leader gender x 2 rater gender). The sample consisted of 578 participants from educational institutions in eastern Norway and 21 participants from the Norwegian maritime industry. The results showed no observable difference between the perception of male and female leaders. A small and significant difference could be observed between work domain and leader gender ($\eta_p^2 = .014$). The male CEO of marketing needed a higher average of leadership attributes to be considered outstanding, than the female CEO of marketing. The participants from the maritime sample rated male leaders as needing a generally higher average of the leadership attributes, than female leaders, to be considered outstanding leaders.

Keywords: Implicit leadership, gender differences, maritime industry, marketing, female leaders, male leaders

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Introduction

The amount of women in the maritime industry is increasing (McGarry, 2015). Still, women tend to be seen as the weaker of the genders, especially at sea (Grant & Grant, 2015; Kitada, 2015). Generally speaking, if only males are eligible as leaders, the overall potential for selecting the best leader is reduced (Delgado, Øvergård & Henden, 2015). It would therefore be interesting to study if female leaders are perceived different than male leaders in a maritime context as compared to a more normal land based work environment. The importance of having more women in the maritime industry was expressed in the 2010 STCW Convention in Manila, through resolution 14 “Promotion of the participation of women in the maritime industry” (Mejia, 2010, p. 233). In 2008 the World Maritime University (WMU) hosted a conference addressing the empowerment of women in the maritime industry. Similarly, in March 2014, WMU and IMO hosted a second conference on “Maritime Women: Global Leadership” (Kitada, Williams & Froholdt, 2015). This conference and IMO´s resolution 14 as well as several other initiatives taken to increase the presence of women in the maritime industry, indicate that this matter is not only highly important but also a prominent topic in the maritime and academic world.

According to the implicit leadership theory (Eden & Leviatan, 1975), the idea of leadership is forged by the beliefs of the individual and is therefore idiosyncratic. Some leadership attributes are universally positive, some universally negative, and some will vary from society to society. For instance, leaders that are charismatic/transformational, team oriented, and/or participative are prototypical of outstanding leadership in all cultures (Hartog, House, Hanges & Ruiz-Quintanilla, 1999). Other leadership attributes might not be as universally endorsed (ibid; Fjærløve, Øvergård & Westerberg, 2015; Javidan & House, 2001). The relation between leadership and context might sometimes be somewhat unclear.
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(Wren, 1995). In order for a leader to be effective in a context of diversity, they need to both have an understanding for their own leadership style and that this might deviate from what others might prefer (Ayman & Korabik, 2010). Specific leadership qualities might be contingently suited to the context in which the leader operates (Antonakis, Avolio & Sivasubramaniam, 2003; Bass, 1985; Pawar & Eastman, 1997; Pettigrew & Martin, 1987).

The maritime industry has long traditions in Norway, and is considered to have extensive importance to the Norwegian economy and society (Benito, Berger, Forest & Shum, 2003). Shipping, trade and the economic development go hand in hand (Stopford, 2009). An industry that carries the very most of the world’s goods needs the best of workers, specialists and leaders irrespective of gender (Kitada, Williams & Froholdt, 2015). Unfortunately, the maritime industry is traditionally and presently still male dominated (Thomas, 2004). Hence, the maritime industry is not accessing available talent pool. Historically, life at sea has required a great deal of physical strength making men better suited than women to work on a ship. Today, the international trade has changed and due to technological advances, state of the art training is required rather than brute physical strength.

Theoretical Framework

Conceptualizing leadership. The evaluation of individual leaders was the early focus of leadership research. In more recent decades the scope of leadership research has expanded into including other variables such as followers (Hollander, 1992), supervisors (Kacmar, Zivkuska & White, 2007), contexts (Walumba, Lawler & Avolio, 2007) and culture (Graen, 2006; Triandis, 1980). One of the interesting omissions much leadership research has is the inattention towards the impact followership might have on leadership. According to the social constructionist theory (Meindl, Ehrlich & Dukerich, 1985), leadership is affected by the manner in which followers perceive a leader’s personality, behavior and effectiveness. It is
even claimed that the effectiveness of leaders is equally a result of great followers as it is a result of great leadership (Shamir, 2007). Furthermore, it is argued that leadership is in the eye of the beholder, meaning that leadership as a concept can change, and that understanding the perception of leadership is essential to understanding leadership (Graen, 2006; Javidan, Dorfman, Sully de Luque & House, 2006; House, Hanges, Ruiz-Quintanilla, Dorfman, Dickson & Gupta, 1999).

There is no unanimous definition on the term *leadership* (House, Dorfman, Javidan, Hanges, & Sully de Luque, 2014), and even defining leadership within a single cultural context may be difficult (Javidan, Stahl, Brodbeck & Wilderom, 2005; Dickson, Castaño, Magomaeva, Hartog, 2012). One effort to define leadership cross culturally was done by the Project GLOBE (House, Javidan, Hanges & Dorfman, 2002; House, Javidan & Dorfman, 2001) and sounds as follows: “the ability of an individual to influence, motivate, and enable others to contribute towards the effectiveness and success of the organizations of which they are members” (House *et al.*, 2014, p. 17). According to the Implicit Leadership Theory (ILT; Lord & Maher, 1991) leaders are recognized by the extent they match the implicit beliefs about leadership, which the perceiver has regarding traits, abilities and overall qualities of the ideal leaders (Epitropaki & Martin, 2004). Cognitive schemas and personal assumptions about traits and abilities in the ideal leader are activated when interacting with a leader (Kenney, Schwartz-Kenney & Blascovich, 1996). The preexisting assumptions are based on assimilations on previous experiences. When the follower encounters a leader, either a controlled or automatic memory search for leader prototypes including the leader behavior is executed (*ibid*). If the actual leader behavior is matched with many of the perceiver’s leader prototypes, the person can be labeled a “leader”. Once this stimulus is related to a person, it can be reactivated among with other schema-consistent information, even in those cases.
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where the stimulus no longer exists (Phillips & Lord, 1982). This type of mental categorization is a simplifying heuristics that serves as leader recognition. Whereas ILT is analyzed at an individual level, the Culturally Endorsed Leadership Theory (CLT; House, Hanges, Javidan, Dorfman, & Gupta, 2004) is analyzed at a societal level (House et al., 2014) so that society defines positive and negative leadership attributes. Subsequently ILT is likely to be shaped by the societal culture (Javidan, Dorfman, Howell & Hanges, 2010). As ILT explains, the implicit conceptualization of leadership is something that arises in personal perceptions, CLT appreciates leadership as something that is common for those who share cultural values.

Gender and leadership. In order to stay as competitive as possible, organizations must capitalize on the strengths of all members of the organization (Pfeffer, 2005), this is particularly true for those in leader positions. The presence of women in top leader positions is shown to have a positive correlation with firm value (Carter, Simkins & Simpson, 2003). Further, a study from Campell and Mínguez-Vera (2008) indicates that having the representations of both genders on the top management positions in a balanced ratio is a key factor for a firm’s value. Nevertheless, interpret this relation cautiously as there is no certainty about the causation.

In 2008, women occupied 47% of the jobs in Norway, only 36% of leader positions in general, and as little as 20% of top leader positions (Statistics Norway, 2010). This statistic shows that although Norway is a country that emphasizes gender equality, the division of leadership position still indicates inequality.

Women and men do not tend to have the same opportunities to contribute as leaders (Hogue & Lord, 2007). A nation can have greater or lesser gender equality overall (Hofstede, 1983), likely affecting the assessment of leaders of different gender on a society level.
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According to the role congruity theory (Eagly & Karau, 2002), female leaders can fall victim of the perceived incongruity between the female gender role and the leadership role. This can lead to females being perceived less positively in terms of getting leadership positions, and that the evaluation of leader behaviors are less favorable when the leader is a woman (ibid). An idea of a “glass ceiling” (Morrison, White & Van Velsor, 1987) is often used to describe how prejudice and discrimination prevents women from reaching top leadership positions.

There are many arguments explaining the reasons why there are less female than male leaders. Early research indicated that women suffered prejudice in both “feminine” and “masculine” fields of work (by both men and women) and that there was a general belief of woman being inferior to man in almost all fields of work (Goldberg, 1968). Other research (e.g. Barnett & Hyde, 2001) emphasizes how time and culture generate multiple roles connected to gender, work, and family. For instance, in some cultural contexts, a woman’s family responsibilities can come in the way for getting a leadership position (Cevallos, 2015). Other accounts argue that gender differences in personality might predispose the genders to different occupational behaviors (Browne, 2006). Regardless, the actual leader behaviors of both female and male leaders in organizations seem to be less stereotypical (Eagly, 1990). Several arguments suggest that actual leadership practices do not differ across genders. First, it is plausible that leadership roles in organizations are clearly defined with established degrees of freedom and procedures. Second, leaders get socialized into the organization and thus need to conform into the established functioning of the organizational culture (Terborg, 1977). Third, the variables making a person choose to become a leader or the criteria for why an organization selects a leader are the same independent of gender. However, the basis for interpretation on which behaviors of female and male leaders are perceived might still be different. Furthermore, the female and male basis for interpretation might also differ
(Delgado et al., 2015). Attitudes about suitable roles for women and men have multiple influences, among several: the interpreter’s culture, mother’s gender ideology and parent household division of labor (Kroska & Elman, 2009). Moreover, the standard for evaluating an individual seems to be relative to the stereotypical within-group expectation (Miron, Branscombe & Biernat, 2010). Because the female stereotype is insinuated to be less suitable for leadership – a “good” female leader may be objectively worse than a “good” male leader, because the standard for evaluating female leadership references a lower standard (Biernat & Danaher, 2012).

**Relevance to the Maritime Industry.** Shipping is a necessity for economic development in a global world (Smith, 1994) and without the maritime industry the modern world would not exist the way it does today (Stopford, 2009). The Maritime Industry is a multi-trillion dollar industry that transports over 90% of the world’s goods (Kitada et al., 2015). In spite of this, women only represent 1-2% of the 1.25 million seafarers worldwide (Belcher, Sampson, Thomas, Veiga & Zhao, 2003). The topic of understanding how women leaders are perceived in comparison to male leaders is of importance, both socially in respect to equality and in making the maritime industry exceed with competent individuals from both genders.

**Aim of this Thesis**

The aim of this thesis is to explore the extent to which the implicit beliefs pertaining to female and male perceivers, affects their perception on female and male leaders in a maritime context.

**Hypothesis 1.** In present times, males and females are becoming increasingly similar in their choice of education and work (Delgado, Øvergård & Henden, 2015). In spite of this, males and females competence is evaluated differently (*ibid*). In some cases, female leaders
can experience prejudice because of an incongruity between the female gender role and the leadership role (Eagly & Karau, 2002). It is worth considering whether and how the gender of a leader may influence the expectations towards what attributes that make up a good leader. Hypothesis 1 is stated as: *Participants will rate male leaders to need a higher average of leadership attributes than female leaders to be considered outstanding leaders.*

**Hypothesis 2.** Women face gender related challenges when working in male-dominated environments (Kitada, 2013). They might feel that they need to compromise a family life or “become one of the boys” in order to succeed (Mackenzie, 2015). Some regions of the maritime industry can even be seen as male preserves, were men can behave in ways that would not be regarded acceptable in mix-gender settings (*ibid*). The belief that seafaring is man’s job reduces women’s possibilities for entry to the maritime industry (Belcher *et al*., 2003). It is therefore of interest to understand how raters see maritime leaders as compared to a leader in a “normal” mainland job. Hypothesis 2 is stated as: *Participants will rate a CEO in marketing to need a higher average of leadership attributes than a Captain to be considered an outstanding leader.*

**Hypothesis 3.** The maritime industry is often interpreted as having a masculine culture (Randsley, 2006). The maritime industry is and has been dominated by men, which habituate for masculine norms and values (Kitada *et al*., 2015). Hence, it is possible that the maritime industry evaluates female and male leaders differently than groups of more balanced gender composition. Hypothesis 3 is stated as follows: *Participants who themselves belong to the maritime industry will rate male leaders as needing a higher average of leadership attributes than female leaders – an effect that is not expected to be seen from a sample of students.*
Method

About the Project

Two master students conducted the current research project under the supervision of a professor at Buskerud and Vestfold University College (HBV). Over the course of a year, the current research project has gone through several unpredicted transformations. The initial idea was to map out cultural values and leadership profiles in Norway, Spain and Portugal by the previously validated framework used in the GLOBE Project. The students created an in-depth and extensive web-based questionnaire with strong influence of the GLOBE Phase 2 Questionnaire (The GLOBE Foundation, 2006). Professor Dorfman, President of the GLOBE Project, permitted our use of the GLOBE Phase 2 Questionnaire (The GLOBE Foundation, 2006). The questionnaire measured the perception of leadership attributes, actual leadership and cultural values (see Table 1 in the following page for an overview of GLOBE's 6 global leadership dimensions, 21 primary leadership dimensions and leadership attributes). With the assistance of Dr. Olga Delgado at Politecnico de Cataluña, a total of 2904 survey invitations was sent to possible participants who had announced interest in the research project in Dr. Delgado’s presentations at conferences in Spain and Portugal. A total of 96 persons opened the questionnaire and only 26 completed the questionnaire. Due to a low response rate and unanticipated inaccessibility to desired maritime samples in Norway, several adjustments had to be made.

In spite of the bitterness of declaring forfeit on the old research project, two thirds of the original questionnaire, measuring the perception on leadership and culture was used to gather a sample from 55 maritime management students. An academic article was written and published in the peer-reviewed academic journal *TransNav* on this sample (Fjærli *et al.*, 2015).
### Table 1
Global and Primary Leadership Dimension with Attributes

<table>
<thead>
<tr>
<th>CHARISMATIC/VISIONARY-BASED LEADERSHIP</th>
<th>TEAM ORIENTED LEADERSHIP</th>
<th>SELF-PROTECTIVE LEADERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visionary</strong></td>
<td><strong>Collaborative Team Orientation</strong></td>
<td><strong>Self-Centered</strong></td>
</tr>
<tr>
<td>Foresight</td>
<td>Group Oriented</td>
<td></td>
</tr>
<tr>
<td>Prepared</td>
<td>Collaborative</td>
<td>Self-Centered</td>
</tr>
<tr>
<td>Anticipatory</td>
<td>Loyal</td>
<td>Non-participative</td>
</tr>
<tr>
<td>Plans Ahead</td>
<td>Consultative</td>
<td>Loner</td>
</tr>
<tr>
<td><strong>Inspirational</strong></td>
<td><strong>Team Integrator</strong></td>
<td><strong>Status Conscious</strong></td>
</tr>
<tr>
<td>Enthusiastic</td>
<td>Communicative</td>
<td>Status Conscious</td>
</tr>
<tr>
<td>Positive</td>
<td>Team Builder</td>
<td>Class Conscious</td>
</tr>
<tr>
<td>Moral booster</td>
<td>Informed</td>
<td>Internally Competitive/</td>
</tr>
<tr>
<td>Motive arouser</td>
<td>Integrator</td>
<td>Conflict Inducer</td>
</tr>
<tr>
<td><strong>Self-Sacrificial</strong></td>
<td><strong>Diplomatic</strong></td>
<td>Face-Saver</td>
</tr>
<tr>
<td>Risk taker</td>
<td>Effective Bargainer</td>
<td>Indirect</td>
</tr>
<tr>
<td>Self-Sacrificial</td>
<td>Win-win Problem Solver</td>
<td>Avoids Negatives</td>
</tr>
<tr>
<td>Convincing</td>
<td></td>
<td>Evasive</td>
</tr>
<tr>
<td><strong>Integrity</strong></td>
<td><strong>Malevolent (reverse scored)</strong></td>
<td><strong>Bureaucratic/Procedural</strong></td>
</tr>
<tr>
<td>Honest</td>
<td>Hostile</td>
<td>Habitual</td>
</tr>
<tr>
<td>Sincere</td>
<td>Dishonest</td>
<td>Procedural</td>
</tr>
<tr>
<td>Just</td>
<td>Vindictive</td>
<td>Ritualistic</td>
</tr>
<tr>
<td>Trustworthy</td>
<td>Irritable</td>
<td>Formal</td>
</tr>
<tr>
<td><strong>Decisive</strong></td>
<td><strong>Administratively Competent</strong></td>
<td></td>
</tr>
<tr>
<td>Willful</td>
<td>Orderly</td>
<td></td>
</tr>
<tr>
<td>Decisive</td>
<td>Administratively Skilled</td>
<td></td>
</tr>
<tr>
<td>Logical</td>
<td>Organized</td>
<td></td>
</tr>
<tr>
<td>Intuitive</td>
<td>Good Administrator</td>
<td></td>
</tr>
<tr>
<td><strong>Performance Oriented</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvement-Oriented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellence-Oriented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance-Oriented</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARTICIPATIVE LEADERSHIP</th>
<th>HUMANE ORIENTED LEADERSHIP</th>
<th>AUTONOMOUS LEADERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-participative (reverse scored)</td>
<td><strong>Modesty</strong></td>
<td><strong>Autonomous</strong></td>
</tr>
<tr>
<td>Autocratic</td>
<td>Modest</td>
<td>Individualistic</td>
</tr>
<tr>
<td>Dictatorial</td>
<td>Self-effacing</td>
<td>Independent</td>
</tr>
<tr>
<td>Bossy</td>
<td>Patient</td>
<td>Autonomous</td>
</tr>
<tr>
<td>Elitist</td>
<td></td>
<td>Unique</td>
</tr>
<tr>
<td><strong>Humane Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autocratic (reverse scored)</td>
<td><strong>Generous</strong></td>
<td></td>
</tr>
<tr>
<td>Individually Oriented</td>
<td>Compassionate</td>
<td></td>
</tr>
<tr>
<td>Non-delegator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micromanager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-egalitarian</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Global leadership dimensions in uppercase and bold letters. Primary leadership dimensions in italics and Bold letters. Leadership attributes in italics
A much less ambitious but necessary change to the objectives was conducted as the previous plan had taken seven months of work and the submission deadline was approaching. Using GLOBE’s 21 primary leadership dimensions a considerably shorter questionnaire was made (please see Table 1, primary leadership dimensions are written in italics and bold letters). The new questionnaire measured the perception of how leadership attributes contributed to leadership in two sectors of work, a CEO of a marketing firm and a Captain of a passenger ship. Two versions of the questionnaire were made: one with the description of a female CEO and female Captain, and another with the description of a male CEO and male Captain.

**Research Design**

An experiment with a split plot design was devised with stories of male and female leaders as independent between group variables, work domain as independent within group variables and answers to the questions as dependent variables (Please see table 2).

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Overview of the Split Plot Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male participants</td>
<td>Male leader</td>
</tr>
<tr>
<td>Female leader</td>
<td>Female participants</td>
</tr>
</tbody>
</table>

**Procedures for Data Collection**

Participants at educational institutions volunteered upon encouragement. The data collection happened in a direct and active but also polite manner. It took part in cafeterias, halls, at student’s weight room, student’s squares, at choir practices, at reading rooms, at lecture halls, inside many different faculties, etc. Participants were briefed on beforehand that the involvement were entirely voluntary and that they could terminate the process at any time.
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if they so desired. The two versions of the questionnaire (male and female leaders) were handed out in an alternate sequence ensuring that an approximately equal amount of surveys were distributed.

Participants from the maritime industry received a web-based version of the same questionnaire. The questionnaire started with an introduction page, followed by a consent form. The third page contained a randomization technique by using the last digit of their phone number to assign the participants to either the male or the female version of the questionnaire. The participant were linked to the male survey if their phone number ended with 0, 1, 4, 7, or 8. The participants were linked to the female survey if their phone number ended with 2, 3, 5, 6, or 9. These numbers were randomly selected by using a randomization function in Microsoft Excel.

**Ethical Considerations**

Informed consent and sensitive storage of data were considered unnecessary as all responses where completely anonymous and no sensitive data was collected. The personal information gathered (age and gender) was not enough to identify a person and the questionnaire was therefore deemed anonymous. No harm or discontent in any form was reported to have been experienced as an effect of contributing to this research project. All participants were informed about the involvement being voluntary and that they could withdraw from the study at any time, if they so preferred. If desired, participants could get informed about the research project after the completion of the survey.

**Creation of the Questionnaire**

The questionnaires made, followed the GLOBE projects framework of leadership (see Table 1). Project GLOBE created a new cross-culturally designed instrument for measuring both leadership attributes and behaviors. The GLOBE project studies both the superior and
inferior sides of leadership and organizational behavior in a global perspective (Dorfman, Howell, Hinio, Lee, Tate & Bautista, 1997; Dorfman, Javidan, Hanges, Dastmalchian, & House, 2012), thus making this framework especially well-suited for investigating leadership in situations where different implicit beliefs about leadership, gender roles and qualities can be present.

The leadership framework is built up by 112 leadership attributes, which are combined into 21 primary leadership dimensions. The 21 primary leadership dimensions form six culturally endorsed leadership dimensions (charismatic/value-based, team-oriented, self-protective, participative, humane-oriented and autonomous leadership).

The questionnaire used in the current research project had two descriptions of two leaders who could both be either male or female (see Table 3 or 4 for illustration).

The CEO in marketing had the following description: Jane/John Edwards is the CEO of a marketing firm that operates in large parts of Europe. Jane/John and the corporate team lead 60 employees with varying responsibilities and tasks within the firm. As CEO, She/He is enriched with authority and is involved in high-level decision-making. Her/His responsibility is to ensure corporate growth and the well-being of the firm and its employees, as well as creating strategies toward increasing both short- and long-term value.

The Captain had the following description: Michelle/Michael Turner is captain of a passenger vessel traveling between Oslo and Kiel. Michelle/Michael leads a highly trained team with varying responsibilities within the ship. All onboard, including crew and passengers, are under her/his authority, ultimately rendering her/him responsible for the safety and efficiency of all operations during voyage. Among others, such operations include navigation, crew management, passenger well-being and so forth.
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Each leader was to be rated on the 21 primary leadership attributes on a scale from 1 to 7, were 1 = “greatly inhibits outstanding leadership”, 2 = “somewhat inhibits outstanding leadership”, 3 = “slightly inhibits outstanding leadership”, 4 = “has no impact on outstanding leadership”, 5 = “contributes slightly to outstanding leadership”, 6 = “contributes somewhat to outstanding leadership”, 7 = contributes greatly to outstanding leadership”. See table 3 for an example of how the paper version of the questionnaire looked like. See figure 4 for an example of how the web based questionnaire looked like.

Table 3

<table>
<thead>
<tr>
<th>Leadership Attributes</th>
<th>Associated Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Visionary</td>
<td>He has foresight, exhibits preparedness, is anticipatory and plans ahead</td>
</tr>
<tr>
<td>2 Inspirational</td>
<td>He is enthusiastic, positive, a morale booster and motive arouser</td>
</tr>
<tr>
<td>3 Self-Sacrificial</td>
<td>He is a risk taker, self-sacrificial and convincing</td>
</tr>
<tr>
<td>4 Integrity</td>
<td>He is honest, sincere, just and trustworthy</td>
</tr>
<tr>
<td>5 Decisive</td>
<td>He is willful, decisive, logical and intuitive</td>
</tr>
</tbody>
</table>

Table 4

<table>
<thead>
<tr>
<th>Excerpt of the Male Version of the Web-based Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = This attribute greatly inhibits a CEO from being an outstanding leader.</td>
</tr>
<tr>
<td>2 = This attribute somewhat inhibits a CEO from being an outstanding leader.</td>
</tr>
<tr>
<td>3 = This attribute slightly inhibits a CEO from being an outstanding leader.</td>
</tr>
<tr>
<td>4 = This attribute has no impact on whether a CEO is an outstanding leader.</td>
</tr>
<tr>
<td>5 = This attribute contributes slightly to a CEO being an outstanding leader.</td>
</tr>
<tr>
<td>6 = This attribute contributes somewhat to a CEO being an outstanding leader.</td>
</tr>
<tr>
<td>7 = This attribute contributes greatly to a CEO being an outstanding leader.</td>
</tr>
</tbody>
</table>

The survey had two leaders – one CEO of marketing and one Captain of a passenger ship. In one survey both leaders were female and in the other both male. Participants evaluated either male or female Captains and CEOs on the 21 primary leadership attributes.
DIFFERENCES IN PERCEPTION OF MALE AND FEMALE LEADERS

Data Analysis

The IBM Statistical Package for Social Sciences (SPSS) Version 22 was used for statistical analysis and the creation of various figures. Since a split-plot design with repeated measures was used, the corresponding form of analysis in SPSS – The General Linear Model (GLM) Repeated Measures was used. Other uses of SPSS included Descriptive statistics, t-tests, and Scale reliability analysis (Cronbach’s α).

Results

All results were analyzed using a repeated measure general linear model (GLM) analysis. As Mauchly’s test of sphericity was found to be significant in all evaluations. Naming of effect sizes as small (.01), medium (.06) and large (.14) follow Cohen’s (1988) classification of effect sizes for partial eta square ($\eta^2_p$).

Participants

This study got the participation from 579 students (268 males, 311 females) at major educational institutions in Eastern Norway and 21 professionals from the maritime industry (18 males, 3 females).

Student Sample. The student’s age ranged from 19 to 54 ($\bar{x} = 24.27$, $SD = 5.02$). The total sample consisted of 579 participants (see Table 5 for the cross tabulations of participant gender and the gender of the described leader). The student participants came from 29 different nationalities although 86 % of them were Norwegians. The second represented nationality were Brazil with 2.2 % and the third Russia with 1 %.

Table 5

<table>
<thead>
<tr>
<th>Leader Gender</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>128</td>
<td>156</td>
<td>284</td>
</tr>
<tr>
<td>Female</td>
<td>140</td>
<td>155</td>
<td>295</td>
</tr>
<tr>
<td>Total</td>
<td>268</td>
<td>311</td>
<td>579</td>
</tr>
</tbody>
</table>
Maritime Industry Sample. The maritime samples age ranged from 26 years to 59 ($\bar{x} = 42.67$, $SD = 10.25$). The total sample consisted of 21 participants (see Table 6 for the cross tabulations of participant gender and the gender of the described leader). The sample consisted of 18 Norwegians and three persons from Northern Europe.

<table>
<thead>
<tr>
<th>Leader Gender</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18</td>
<td>3</td>
<td>21</td>
</tr>
</tbody>
</table>

As shown in table 6, only three female raters were among the maritime sample. This meant that the conventional analysis of the effect of rater’s gender was not possible for the maritime sample.

The internal reliability of the GLOBE structure

The internal reliability of the current research project did not yield the same structure as in the GLOBE questionnaire (please see table 7). None of the leadership scales had a Cronbach’s $\alpha$ of .70 which is seen as a minimum level (Cortina, 1993; Kline, 2000). The lack of internal reliability indicates that the original GLOBE structure is not suitable for making sum scores of the five GLOBE scales. Likewise, reliability scores are not consistent across work domains.

<table>
<thead>
<tr>
<th>Leadership Scales</th>
<th>CEO $\alpha$</th>
<th>Captain $\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charismatic</td>
<td>.601</td>
<td>.433</td>
</tr>
<tr>
<td>Participative</td>
<td>.519</td>
<td>.415</td>
</tr>
<tr>
<td>Humane Oriented</td>
<td>.626</td>
<td>.667</td>
</tr>
<tr>
<td>Team Oriented</td>
<td>.688</td>
<td>.613</td>
</tr>
<tr>
<td>Self-Protective</td>
<td>.650</td>
<td>.521</td>
</tr>
</tbody>
</table>

*Note. $\alpha$ = Cronbach’s Alpha*
Differences in Rater Gender, Leader Gender, Leader Conditions and Samples

A 2 x 21 x 2 x 2 repeated measure GLM (2 types of leaders x 21 primary leadership dimensions x 2 leader gender x 2 rater gender) with leader gender and rater gender as between subject factors was conducted to analyze the effects of leader type, leader gender and participant gender. If the Mauchly’s test for sphericity was found significant, Greenhouse-Geisser was used to correct the degrees of freedom in the analysis (Field, 2013).

Hypothesis 1

No effect was found between the gender of the leader (F1, 554 = 1.551, p = .214, \( \eta_p^2 = .003 \)). The interaction effect between rater gender and leader gender showed no statistical or practical significance (see Figure 1). The effect size was extremely small (F1, 554 = .880, p = .349, \( \eta_p^2 = .002 \)). Hypothesis 1 was thereby rejected. There were no identifiable differences between the perception of male and female leaders.

![Figure 1. Leader gender x Rater Gender](image)
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Hypothesis 2

A large and significant difference between the two work domains (CEO and Captain) could be seen ($F_{1, 554} = 95.387, p < .001, \eta^2_p = .147$). Further, a small and significant two-way interaction effect between the work domain and the leader gender could be observed ($F_{1, 554} = 7.865, p = .005, \eta^2_p = .014$; see also Figure 3). Hypothesis 2 is supported by the data. The CEO of marketing needed a higher average of leadership attributes to be considered an outstanding leader. Furthermore, the male CEO in marketing needed a higher average of leadership attributes, than the female CEO in marketing, to be considered an outstanding leader. These differences show that although we cannot prove hypothesis 1 with the aggregated scores of both work domains, it is possible to observe a differences as a function of leader gender when the leader is a CEO in a marketing firm (see Figure 3).

Figure 3. Mean differences concerning leader gender and work domain
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The results also indicated that it was no significant two-way interaction between work domain and the gender of the rater ($F_{1, 554} = .867, p = .352, \eta_{p}^{2} = .002$). There was almost a significant three-way interaction between the work domain, the gender of the rater, and the gender of the leader ($F_{1, 554} = 3.729, p = .054, \eta_{p}^{2} = .007$; please see Figure 4). However, this difference would have been very small.

Figure 4. Comparison between the two work domains, the rater gender and the leader gender

Hypothesis 3

An analysis of rater gender was not possible in the comparison between the two samples due to the low number of female participant in the maritime sample. Hence, a 2 x 2 GLM-repeated measures with work domain and primary leadership dimensions as within-subject variables, and rater gender as between-subject variables for the whole sample (student sample and maritime sample) was made. The residuals of this analysis were then saved and used in a new 2 x 2 GLM-analysis, with leader gender and the two samples (students and maritime) as between subject variables. No statistical interaction could be indicated between the two samples and the work domain ($F_{1, 554} = .008, p = .929, \eta_{p}^{2} < .000$). Nonetheless, there was a statistical three-way interaction between work domain, leader gender, and the two samples ($F_{2, 554} = 4.776, p = .009, \eta_{p}^{2} = .017$; see also Figure 6).
Furthermore, there was significant interaction between the leader gender and the two samples ($F_{1,554} = 5.204, p = .023, \eta^2_p = .009$) in the test of between-subjects effects (please see Figure 5). The sample consisting of students had a close to equal overall rating of male and female leaders. The sample from the maritime industry, however, rated the female leaders as needing less leadership attributes, than their male counterparts, to be considered outstanding leaders. Hypothesis 3 was supported by the data. The participants from the maritime industry rate male leaders as needing a higher average of leadership attributes than the female leaders. This is not observed in the student sample.

The maritime sample were more polarized on the leader gender differences when the leader was a Captain, as compared to a CEO in marketing (please see Figure 6). Students rated female and male Captains to have close to equal averages of leadership attributes.
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Discussion

The present thesis sets out to investigate the perception of male and female leaders in two types of work domains, by participants of both genders.

Results of the statistical analyses give basis for rejecting Hypothesis 1, as there was no statistical difference between the gender of the leaders and no significant interaction between rater gender and leader gender. Note that there was a small but observable interaction between the leader genders in one of the work domain ($\eta_p^2 = .014$). Hence, leadership attributes are rated differently as a function of the leader gender when the leader is a CEO in a marketing firm but not when the leader is a Captain of a passenger vessel.

Concerning Hypothesis 2, a large effect sized ($\eta_p^2 = .147$) significant difference could be observed between the two work domains. Furthermore, a small but significant interaction could also be observed between work domain and leader gender ($\eta_p^2 = .014$). Female CEOs in marketing firms need a lower average of leadership attributes than male CEOs in marketing firms to be considered outstanding leaders. CEOs need a higher average of leadership attributes than Captains, thus providing support for Hypothesis 2.
Regarding *Hypothesis 3*, the two samples varied as a function of leader gender, thus accepting hypothesis 3. Yet, the effect size for work domain, leader gender and the two samples were small ($\eta^2_p = .017$). The effect size of the interaction between leader gender and the two samples were minuscule ($\eta^2_p = .003$). The student sample gave male and female leaders almost equal ratings, while the maritime sample rated females as needing a far lower average of leadership attributes to be considered outstanding compared to the male leaders. Both the student samples and maritime samples rated male CEOs, as needing an equally high average of leadership attributes. The samples rated female CEOs differently, since the maritime sample perceived female leaders as needing far less leadership attributes than male leaders to be considered outstanding. The maritime sample rated female captains as needing far less leadership attributes than what the students rated and more than the student sample when the Captain was male.

It is also worth mentioning that the male and female raters have a different idea on what averages of leadership attributes that is needed for outstanding leadership in general. This is however, unrelated to the leader gender or work domain.

**Gender and Leadership**

Some research indicates that male and female leaders have no overall differences in performance (Eagly, 1995). However, the way male and female leaders are perceived and evaluated can differ as a function of gender. For instance, Lewis (2000) found that while a male leader’s anger might be perceived as assertiveness, a female leader’s anger might be perceives as instability or aggression.

The results in the current research indicate that the differences in the overall perception of the leader gender will only vary when the leader is a CEO of a marketing firm and not a Captain. This is a contrast of Eagly and Karau’s findings (2002) that indicated that
there is a negative perception of female leaders is based on the incongruity between the leader role and the female gender role. If this were true for this research, an even bigger difference in the leader gender ratings would be expected in the Captain condition than in the CEO condition due to the masculine nature of the maritime work domain. According to the role congruity theory (Eagly & Karau, 2002), males would be perceived as better-suited leaders in male dominant positions, due to the masculine nature of the work domain. Similar studies (e.g. Eagly, Makhijani & Klonsky, 1992; Heilman, Wallen, Fuch & Tamkins, 2004) have shown that a female leader that performs equally as well as a male leader could be evaluated worse if the job was of a masculine nature. This has been explained by gender stereotypes that dictate that the genders should act differently from another (Eagly & Wood, 2012). If a woman acts in a “manly” manner she could be discriminated for breaking with the female gender role. This effect was not observed in this research project.

The Shifting Standards Model (SSM) suggests that stereotypes lead evaluations of individuals to occur relative to their within-category standard (Biernat, Manis & Nelson, 1991). Although, females and males can be labeled proportionately “competent”, a male might be assumed to score higher on tests of competency (Biernat & Thompson, 2002). Since the male stereotype indicates that males are better leaders than women (Biernat & Danaher, 2012) – women leaders are likely to be evaluated on a lower standard of leadership competence (Biernat & Manis, 1994). Similarly, the results of the data gathered in this thesis, all show that female leaders need lower averages of leadership attributes to be considered outstanding leaders. This can conceivably be explained by shifts in judgment standards. If a particular gender-standard affects the judgments of the rater, it indicates that the evaluation of an outstanding female and male leader is based on a specific group means and not the “male-female juxtaposition” as other research (e.g. Eagly & Johnson, 1990) could infer. What is
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considered “good” for women leaders is objectively worse than the “good” for male leaders, simply because the standard for evaluating women leaders are held lower than the standard for evaluating male leaders (Biernat & Melvin, 1994; Biernat & Danaher, 2012).

In the maritime work domain (Captain), male and female participants did not rate differently as a function of leader gender. However, in both work domains - male participants rate that leaders need to have a generally higher average of leadership attributes than what the female participants rate.

Differences Between the Students Sample and the Maritime Sample

The difference in rating as a function of leader gender is bigger in the maritime sample than in the student’s sample. The maritime sample rated male leaders as needing higher levels and female leaders as needing lower levels of leadership attributes than the student sample (see Figure 5). It is probable that the maritime sample has more specific knowledge about what it implies to be a captain. The maritime sample is more likely to have acquaintances that are captains or perhaps own experience at sea. Correspondingly, if the maritime sample has specific memories about real life captains, these captains are most likely male. Besides, the student’s mental representation of a captain and the captain’s responsibility can possibly be affected by the images of captains exposed to them from unknown fictional sources.

In the occupational culture of seafarers, there seems to be standard ways of behavior that are deemed appropriate only when at sea (Kitada, 2010). Seafarers have a type of “micro” culture with accepted jargon, laws, traditions, and working conditions. This way of behavior reflects masculine norms and values. For instance, although physical strength is no longer needed at sea, the use of muscle power demonstrated the traditional image of a strong man at sea (ibid). As the maritime industry is male dominated and the mental representation
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If a seafarer often is male, it is likely that the most people automatically think of a Captain as male, and that a female Captain is a distinction or exception from the norm. This could perhaps have stronger impact on the maritime sample, as they are more likely to be familiar with the occupational culture of seafarers.

Perhaps, the lack of difference in ratings between the leaders gender in the students sample can be attributed to the out-group homogeneity principle (Quattrone & Jones, 1980; Brauer, 2001) – that the individuals in an out-group are more similar to each other than members of the in-group. In this context it could signify that students regard male Captains and female Captains as more similar since they belong in the same out-group, than they are distinctive because of gender. The student participant would then demonstrate a tendency to generalize their idea of the group as a whole (all seafarers or all Captains) to the behavior of a specific group member (the Captain independent of gender). The out-group homogeneity bias is especially likely to happen with unfamiliar groups that have never met before (Ostrom & Sedikides, 1992), which is likely the case for most of the student sample.

Limitations

The questionnaire used primary leadership dimensions as items. Although the questionnaire is based on the GLOBE questionnaire (The GLOBE Foundation, 2006), the underlying factor structure is not the same and the construct validity is therefore at risk. The construct validity is the degree to which the questionnaire measures what it claims to measure (Cronbach & Meehl, 1955). Nonetheless, construct validity is not proven or disproven with a single study but rather with continuous evaluations and improvements (Peter, 1981).

The maritime sample was small with few female participants. However, although this proposes some limitation to the participant gender ratio it is still over what is considered
normal gender ratio in the maritime industry with only 1-2% female representation (Belcher et al., 2003).

Another potential limitation is the self-selection bias. This bias may arise because the participants choose entirely by themselves to participate in the research project. Consequently, the principles of probability sampling are not followed and the estimates may somewhat reduce the ability to generalize to the population.

**Future Research**

Future research could outline on the exact leadership attributes that makes the difference in the perception of female and male leaders. For instance, it would be interesting to see if the specific leadership attributes are associated with gender stereotypes would be rated as more or less contributing to outstanding leadership to the opposite gender. Perhaps this could give some indication to not only what leadership attributes that differ or are similar, but to understand why these differences might exist.

Further research on gender and leadership in a maritime context should also evaluate other parts of the maritime industry if the goal is to understand the width and complexity of the industry and increasing the gender ratio.

This study explores how female and male leaders are perceived in both a masculine and a neutral context. Additional research on gender and leadership in general should also investigate more on how female and male leaders are perceived in a feminine context. By understanding the reasons why the genders sometimes differ or have similarities we could perhaps start to explain why the body of research on gender and leadership have both patterns and contradictions in their findings.
Conclusion

This thesis has shown that male and female leaders differ when they are rated as a CEO of marketing but not when rated as a Captain. Female CEOs need a lower average of leadership attributes than male CEOs to be considered outstanding leaders. The sample from the maritime industry rated female leaders as needing less and the male leaders as needing more leadership attributes than the student sample to be considered outstanding leaders.
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References


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