

Gender differences in the self-assessment of leadership skills in the maritime industry

- Are female maritime officers more negative to their own leadership skills, relative to their male peers?

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MASTER THESIS

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Acknowledgement

This master thesis is written by Veronica Henden as a part of the Master of Science in Maritime

Management at Buskerud and Vestfold University College. The thesis is written in the fourth

semester, spring 2014. The overall aim with this thesis is to determine whether female- and male

leaders in the maritime industry is evaluated differently and how the leaders evaluate themselves,

relative to positive- and negative leadership skills.

I have chosen this subject for my thesis because I feel that the subject is highly interesting, and an

important subject in the maritime industry. My motivation for this thesis has been to increase the

awareness of the subject, as well as come up with possible solutions to the challenges regarding the

gender differences.

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Abstract

It is highly desirable that women and men have the same access to maritime training and work aboard ships. Gender stereotypes affect judgment of competence in men and women differently. This master thesis investigated female and male maritime officers' ability to evaluate their own leadership skills. A 360° leader evaluation survey obtained both self-assessments and co-worker assessments of maritime officers' leadership (both positive and negative) skills using the MLQ 5X leadership questionnaire. The results from 17 female and 30 male maritime officers' show an interaction between gender and errors in self-evaluation (tendency to over-estimate or under-estimate) of leadership skills. Female leaders tended to underrate their actual leadership skills, while male maritime officers tended to overrate their leadership skills relative to the evaluations of their co-workers. These results points to a gender difference in the evaluation of leadership skills in the maritime domain. A second experiment was conducted to investigate whether co-workers in the first experiment was influenced by existing stereotypes in the maritime industry. Results showed that the co-workers in the first experiment were fairly realistic in their assessment, and the origin of the difference is situated in the leaders' perceptions of themselves. An overtly critical attitude towards own leadership skills might be a factor in explaining why many women choose to abstain from high-status positions in the maritime industry. Maritime leadership training can be made more inclusive by focusing on gender differences in the (self)-evaluation of leadership skills.

 $\textbf{Keywords:} \ \ \text{Women seafarers} \cdot \text{Gender differences} \cdot \text{Self-assessment} \cdot \text{Leadership} \cdot \text{Stereotypes} \cdot \\ \text{Maritime officers}$

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1 Introduction

The vast majority of leaders in the maritime industry are men. According to the oil- and energy website Offshore, under 10 % of the employees working offshore are women, and the number has virtually been the same over the past 25 years. If we only look at the oil- and gas sector alone, only 20 % are women. However, most of these women work onshore. In the proportion of the women who works offshore the majority of them are employed as chefs, cleaning personnel or nurses (Stangeland, 2011). Occupations that could be categorized as feminine typed jobs; this will be further explained in a section below. However, the proportion of women seafarers is slowly increasing. Hence, in the modernized work environment of today, it is preferable if women and man are given the same opportunities to access training- and work in the maritime sector. There is general agreement in recognizing that women face more barriers and difficulties than men to occupy positions of responsibility. The challenge of attracting women leaders to the maritime industry have already been addressed by resolution number 14 "Promotion of the participation of women in the maritime industry" where the International Maritime Organization expresses their support to facilitate more women to participate in the maritime sector by developing long- and medium term plans to integrate the women in the field (IMO, 2011, p. 58). To allow for an increased participation of women in the maritime professions we need to identify possible barriers that can hinder women in applying for a maritime education and -profession. My goal is to identify whether there exist gender differences in the self-evaluation (sic. self-esteem) of leadership skills, and also identify if there are stereotypes that influence the co-workers when evaluating leaders in masculine- and feminine typed work. Selfevaluation or self-esteem is important for any person that would like to hold a job that requires skill, competence and responsibility. Individuals with little belief in themselves would according to common sense be less likely to apply for a job for which they felt they were not competent. Hence, understanding how female officers rate themselves as leaders relative to their male peers would be of interest to understand the possible psychosocial barriers that keep women from seeking a profession in the maritime industry. It is also interesting to find out if women face more barriers when entering into a masculine typed than a feminine typed job, in terms of possible stereotypes in the working culture.

1.1 Gender differences in leadership.

Early studies indicated that there might be differences in leadership between men and women (Bowman, Worthy & Greyser, 1965). Some authors claim that women lack the necessary managerial skills and traits (Henning & Jardin, 1977, ref. in Eagly & Johannesen-Schmidt, 2001). Furthering the assumption of women as less competent leaders, Mansfield (2006) writes that women are inherently less competitive, don't like taking unnecessary risks and are more likely to let their emotions affect them in their decision making. Henceforth, following from Mansfield's premises, women are less suited to become leaders in a competitive world.

On the other hand, some argue that women's leadership is actually more effective in a contemporary society (Helgesen, 1990). Women tend to be more participative and democratic and less autocratic and directive than men (Eagly and Johnson, 1990). Further, women scores higher than men in the Multidimensional Leadership Questionnaire (MLQ) leadership subscales 'Idealized Influence' (charisma), 'Inspirational Motivation' and 'Individual Consideration', and 'Contingent Reward', while men scores higher on both categories of 'Management-by-Exception' and 'Laissez-Faire' (Eagly & Johannesen-Schmidt, 2001). However, other studies have not shown such clear differences (Komives, 1991; Maher, 1997; Kent, Blair, Rudd & Schuele, 2010). And, furthering the disagreement, several researchers argue that there is little or no association between gender and leadership styles (van Engen, Leeden & Willemsen, 2001; Kent et al., 2010). The ambiguity in the results may be due to the importance of the social context in which leadership is exercised (Rosener, 1990; Druskat, 1994). In "traditional" bureaucratic, rigid and historically male-dominated organizations, such as the maritime sector, gender differences are masked, because if women want to be accepted as leaders they must adapt to the norms and dominant male expectations in this type of organizations. By contrast, in "nontraditional" organizations women would feel more willing to display their true leadership style – given that such differences do exists. These findings show that there is no general agreement between researchers on whether men and women adopt and practices different leadership styles (Eagly & Johannesen-Schmidt, 2001).

1.2 Gender and Leadership effectiveness.

When it comes to the effectiveness of female and male leaders, there are not a clear differences between men and women. However women and men were slightly more effective in their leadership roles that were congruent with their gender (Eagly, Karau & Makhijani, 1995). The differences between men and women leaders – to the magnitude that there are any –is nicely summed up by the sentence (Northouse, 2013, p. 310) "women are no less effective at leadership, committed to their jobs, or motivated for leadership roles than men. However, women are less likely to self-promote and negotiate than men". In essence, women are just as effective as men at their jobs, but they will seek to improve their own position to a somewhat lesser extent than men.

1.3 Gender Differences in Evaluation of competence and leadership skills.

Today women and men are becoming more equal, respectively when it comes to choice of education and occupation. Nonetheless, there still exists a tendency to evaluate women and men's competence differently. Many researchers believe that discrimination and biased evaluation is the main reasons why women are looked at as less competent and less likely to be prominent leaders (Beyer, 1990; Eagly & Karau, 2002; Eagly, Makhijani & Klonsky, 1992; Heilman, Wallen, Fuchs & Tamkins, 2004). Gender stereotypes determine the way people process information about men and women

(Hoyt, 2005). It is said that in some situations, for example under stress and limited time, people tend to depend more on stereotypical beliefs than their own reasoning (Kruglanski & Freund, 1983, ref. in Eagly an Karau, 2002). Stereotypes are believed to be a major cause to why men and women are judged unequally. Stereotypes have also shown to influence the self-esteem of individuals and also how the different genders are expected to behave in in male typed- and female typed jobs (Minter, Gruppen, Napolitano & Gauger, 2005).

The personality traits (Eagly & Johnson., 1990) of a leader or a manager are characterized by a person with high self-esteem, assertiveness and have an authoritarian behavior. The latter description fits the "think-leader-think-male" (Hoyt, 2005) version of the typical stereotype existing in many business domains, even still today. This and other existing stereotypes forms obstacles and hinders for women who want to enter into leadership positions. The most frequent reason which is discussed for why not more women obtain leadership roles is discrimination, as mentioned earlier (Eagly et al., 1992). The discrimination deals with the fact that most women do not have the same characteristics as a man, hence the characteristics that seem to be required to be ratified as good leader in accordance with the stereotype. Another reason for why a smaller fraction of women than for men choose to go for leadership roles is women's low self-efficacy perceptions (Zeldin & Pajares, 2000). It is not the circumstance that women lack the skills or the capability required, however the women have less confidence that they could execute the tasks as good as her male counterpart. Meanwhile, female leaders are in many cases associated with the negative characteristics of power that comes with a leadership role, while the positive characteristics is translated to a male leader (Newsom &Newsom, 2011)

As a leadership role is associated with the characteristics of a man, women face a conflict between their gender role and leadership role (Eagly & Johnson., 1990). So for example, if a woman leads her co-workers in a masculine style, the assessment would not be equally as good as if it was a man, because the role she has taken doesn't match with her gender. However, ultimately the gender role should not overrule the leadership role (Kanter, 1977, ref. in Eagly & Johnson, 1990). An example from another domain is Hillary Clinton, a woman who leads in a masculine method. Sarah Palin is an example of a politician who carries herself in a feminine way. As a result of their manner of leading, Clinton was not liked as much as Palin, for the reason that her leadership role got in a conflict with her gender role, as explained above. Hence, she didn't behave as she was expected to behave (Newsom &Newsom, 2011). The existing difference when evaluating women and men originates from either actual differences in their behavior or it could be caused by gender bias (Eagly et al., 1992). Gender role congruency theory deliberates whether men or women act in accordance with the expectations consistent with their gender (Eagly et al., 1992). Women are expected to behave friendly, be sensitive and caring towards their co-workers, and as mentioned earlier this description does not match the

expectations for a leadership role. According to research by Eagly et al. (1992), men relative to women have more freedom to lead in the way they see fit and appropriate for the situation and themselves.

A leadership role can be divided in two different attributes; communal and agentic. The communal attributes are warm and nurturing, characteristics associated with women. The agentic attributes are consistent with the characteristics of a person with decisiveness, autonomous and task oriented, characteristics normally associated with a man. The role congruity theory by Eagly and Karau (2002) and Eagly et al. (1992) believes that for a leader to be successful it is necessary to have agentic attributes, and not the communal attributes associated with women. Henceforth, a woman should act similar to a man, but then again the woman is incongruent with her gender. Nevertheless, a research by Eagly & Johnson (1990) discovered in an experiment that female leaders succeeded at interpersonally traits, as well as task oriented traits to a higher degree than male leaders. There are some consequences when a female leader or a manager conducts herself incongruent with her gender. The female leader could be rejected, or not get social approval from her co-workers, even if she is successful. The female leader is expected to behave within a certain standard. However when she violates this standard, she breaks out of the "normal" conduct for a female leader (Heilman et al., 2004).

A meta-analysis based upon 136 participants investigated gender differences in leadership and stereotypical perception of leadership in a laboratory setting. In this research women were perceived as more interpersonally oriented and men more task-oriented. However, these differences seem to disappear in organizational contexts (Eagly & Johnson, 1990). Studies evaluating the assessment or evaluation of leadership behaviors have found that women who led, in what was perceived to be a masculine manner tended to be devaluated relative to male leaders (Eagly et al., 1992). If a woman is performing equally well as a man would do in a masculine typed job, the woman can still be given a biased judgment, based upon the cultural- and gender stereotypes that assume women are not supposed to act and behave the same way as men.

Interestingly, women do not only face discrimination from men, but also from women. For example, women who are assessed by other women in a hiring process are less likely to be hired. This effect is not present when the assessors are men (Biernat & Fuegen, 2001). It is easy to think that since women know about the existing cultural prejudice, they would be able to correct the bias. However, women tend to set higher standards for other women. They set higher standards for the reason that they know that the women will be evaluated to a high standard, so the assessors want to assure that they will be able to cope with the resistance they will most probably meet. Also, a further bias is that both men and women were more willing to hire women if the decision were associated with low risk and small

consequences, but quickly changed towards favoring men if the consequences where more serious (Biernat & Fuegen., 2001).

1.4 Self-evaluation of leadership skills

The perception of tasks as masculine or feminine seems to affect self-evaluation of task performance. Self-consistency theory (Beyer, 1990) anticipates that men, as a result of high esteem in masculine tasks will overestimate their actual competence. However when it comes to feminine tasks, men are more accurate in their self-evaluation (Beyer, 1990). For women the situation is somewhat different. Women tend to underestimate themselves in masculine tasks and have more accurate expectations about the feminine and neutral tasks (Beyer, 1990; Eagly et al., 1992). Hence the accuracy of the selfevaluation of men and women will depend on whether the task is seen as representing a masculine- or a feminine trait. Self-perception and expectancies are in addition important measures in the selfconsistency theory. The expectancies a person hold for himself/herself will have an effect on their selfevaluation (Beyer, 1990). It is shown in the research performed by Beyer (1990) that men tend to have higher expectancies for themselves at masculine types jobs than women. Due to the differences in expectations at masculine characterized tasks, women are facing a bigger threshold for taking recognition for their achievements at the same level as men. Women could miss out on career developing opportunities, with respect to the situation where women fear that their work does not meet the high standard as set for male. As a result many women in this situation fail to benefit from getting valuable feedback on their work and the possible chance for success. Women are also known to have lower expectations of their ability at masculine tasks than men; which may cause the women to continuously place less effort in the execution on these kinds of tasks. Albeit, it shows that women in this circumstance execute the tasks with less effort to match the low expectations, however it does not tell us about their actual ability (Beyer, 1990).

1.5 Shifting Standard.

Imagine a child crying after a fall during play in the kindergarten. An adult who works at the kindergarten picks up the child to comfort it. Comforting children is a stereotypically feminine task, and the evaluation of the task would depend on whether there was a man or a woman who performed the task. A man doing this task would be evaluated as more empathic than a woman doing the same task. This is an example of *Shifting standards*, and occurs when individuals have different beliefs about opposing groups (Biernat & Manis, 1994). The consequence is that different groups can be evaluated using different standards. In many occupations women and men are evaluated using different standards (Biernat & Vescio, 2002; Wennerås & Wold, 1997). Thus, feedback involving "good work" to a woman may not be "good work" for a man (Biernat & Fuegen, 2001).

Women tend to be held to lower standard than men, however at the same time women are held to a higher confirmatory standard (Biernat & Fuegen, 2001). Higher confirmatory standard means that women must perform better than men to achieve the same level of evaluation, hence, to be evaluated with the same level of competence women must work harder (Biernat, Fuegen & Kobrynowicz, 2010). Gender stereotypes have shown to influence individuals to different extents (Biernat & Vescio, 2002). And occasionally individuals will try to hide the fact that they are acting in accordance with stereotype. Hence, gender bias is present, however in some cases in indirect forms (Biernat, Tocci & Williams, 2011). This is because individuals have a tendency to also indirectly accept a stereotype, even if it is not correct or an accurate description (Biernat & Kobrynowicz, 1991). Attitudes and ideas may seem positive at first, nevertheless the actions speak otherwise. Their action follows a more traditional path influenced by the existing stereotypes (Gupta, Jenkins & Beehr, 1983, ref. in Biernat & Vescio, 2002). This phenomenon was investigated by Gupta et al. (1983), where they discovered that women in a workplace were subjectively assessed as more positive, however the behavior of the co-workers were more congruent with the stereotypical thinking that men are better than women. Men initially got more percentage of the company's promotions as well as pay raises.

An example of a typical stereotype is that men are looked at as more competent than women. With regards to the shifting standard model, the women are evaluated at as less competent. Women are hold to a lower standard and therefore find it easier to be acknowledged as competent. However, men will find it harder to reach the level where he is acknowledge as competent since they are hold to a higher standard. Men, will also have a lower threshold to be called incompetent, because he is expected to perform at a certain level (Biernat & Kobrynowicz, 1991).

1.6 Relevance to maritime industry.

There are reasons to believe that there are different standards for evaluating the competence of men and women in the maritime sector. This is particularly so because working as a seafarer has – and still is – been portrayed as a masculine work arena. Existing gender beliefs will influence both male and females' expectations for themselves, and both groups will compare their own performance relative to the opposite gender (Correll, 2004). Females and males will also apply different standards to evaluate their own task competence, because of existing gender status beliefs (Correll, 2001). Consequently, since male are viewed as the more competent gender in masculine-typed work tasks, males are more likely to seek greater challenges in education and work, and also seek a career in the maritime domain. Meanwhile women may also seek greater challenges, just to be evaluated to the low standard of her gender and have to work more for the same achievement as her male peer. A woman who steps into a leadership career in the maritime domain is a woman who is not afraid to step outside the conventional

framework and meet the resistance, consisting of stereotypes and standards of how they should and are expected to behave.

IMO has through their resolution 14 indicated an interest in increasing the participation of women in the maritime sector, "... to endeavor considering ways to identify and overcome, at an international level, the existing constraints ... so that women can participate fully and without hindrance in seafaring activities..." (IMO, 2011, 58). My involvement to IMOs' ambition is to investigate how males and female leaders evaluate their own level of leadership skills. The general aim is to identify to what extent female officers under- or overestimates their own leadership skills relative to male officers. The aim is also to figure out what type of barriers women face when entering into roles of responsibility, and if there are different barriers in a feminine- and masculine typed occupation.

2 Experiment 1

2.1 Hypotheses

The master thesis will first investigate the following hypotheses.

Hypothesis 1: Women will underestimate their overall leadership skills level, while men will overestimate their overall leadership skills level relative to the ratings given by their co-workers.

Since maritime leadership is associated with a masculine trait, I hypothesize following the self-consistency theory (Beyer, 1990) that women will be more critical towards their own skills. Further, I expect that this effect will be dependent upon whether the leadership skills in question are positive (i.e. supportive, rewarding, and so on) or negative (i.e. punitive, after-the-fact or of a non-leadership type). These effects are further operationalized in hypothesis 2a and 2b below:

Hypothesis 2a: Women will show a tendency to overestimate their own level of negative leadership skills while male officers will underestimate their own level of negative skills relative to the ratings given by their co-workers.

Hypothesis 2b: Women officers will tend to underestimate their own level of positive leadership skills while male officers will tend to overestimate their own level of positive leadership skills relative to the ratings given by their co-workers.

3 Method

3.1 Research Design.

Parts of the data set (30 male and 3 female maritime officers) are based on a recent doctoral research project (Delgado, 2012). Additional data from 14 female officers was sampled for this study using a similar data collection method as in the initial doctoral project. Data collection took the form of a 360-degree evaluation of leadership using the MLQ-5X questionnaire. A total of 47 leaders assessed their own leadership scores and they were also rated on the same questionnaire by their co-workers (between 2 and 6 co-workers). Because of effective leadership is based on the effect the leader has on their co-workers, the colleagues' evaluation has been used as an indicator of the leader's actual skills.

3.2 Participants.

A total of 47 maritime officers, consisting of 30 men and 17 women, participated. The male officers ranged from 29 to 58 years of age (Mean = 40.6, SD = 7.3) and the women ranged from 28 to 48 years of age (Mean = 35.5 years, SD = 3.9). The officers where mainly of Spanish (n = 26) or Portuguese (n = 16) nationality. The remainder of the participants was Norwegian, Argentinian and Dutch.

3.3 Sampling Strategy.

Participants were recruited using social nets and professional contacts. Participants were asked by email or by phone calls to answer voluntarily the Multifactor Leadership Questionnaire on-line.

3.4 The Multifactor Leadership Questionnaire.

The Multifactor Leadership Questionnaire (MLQ—also known as MLQ 5X short or the standard MLQ) measures a broad range of leadership types (Bass & Riggio, 2006). MLQ has been extensively researched and validated, and it has been found to be valid across cultures and types of organizations, and is used in much leadership research. The MLQ have evolved over the last 25 years with numerous investigations of leaders in public and private organizations, from CEOs of major corporations to non-supervisory project leaders. The MLQ 5X is a 45-item 360-degree multi-rater leadership measure. Respondents rate the regularity of an occurrence on a Likert-scale (0 = never, 4 = always). MLQ categorizes leaders as having either transformational, transactional or laissez-faire leadership styles. While transactional leadership, in the best case, makes followers reach the expected, transformational leadership is to work in a way that inspires followers to reach beyond the expected (Bass & Riggio, 2006). Transformational leadership is also known to be associated with wellbeing and the increased positive mental health of the follower (Arnold, Turner, Barling, Kelloway & McKee, 2007). It may also help to satisfy the needs of Maslow's hierarchy of needs (Burns, 1978). The transactional leader leads by giving something that the follower wants in exchange for the desired work task (Bass, 1996).

As already discussed, this first research sought to distinguish "positive" from "negative" leaders. Thus, choosing certain positive and negative facets from MLQ to create aggregated measures of positive and negative leadership, disregarding whether they belonged to different styles or not.

3.4.1. Positive leadership skills.

The facets that described positive leadership skills (e.g. where showing more of these skills is associated with being a better leader) were the following six characteristics:

- *Idealized Attention* (IA). The attention and recognition a leader give to the follower for the appropriately fulfilled task.
- *Idealized Behavior* (IB). To what degree the leader illustrates a good example by own behavior.
- *Individualized Consideration* (IC). The leader treats the employees as individuals, recognizing that they have their own abilities, needs and aspirations (Bass, 1997). Using the followers' own goals the leader tries to create growth by the choosing the projects best suited as well as mentoring/coaching along the way.
- Intellectual Stimulation (IS). Old assumptions, traditions and believes are questioned in order to stimulate new perspectives and procedures (Bass, 1997) Open-mindedness and reasoning is encouraged of followers before decision-making is taken place. The leader will also reinforce the followers' potential for innovation and creative thinking by reframing problems and questioning assumptions. In this process it is important that no answers are seen as stupid or mistakes of the individual follower is made fun of.
- Inspirational Motivation (IM). The leader presents and optimistic, attractive and attainable vision for the future that helps the followers to raise the anticipation of themselves (Bass, 1997). By the best means the vision can ultimately be envisioned for the followers themselves and in that manner a healthy attitude emerges.
- *Contingent reward* (CR). The leader ensures that work objectives are defined and clarified and contingently rewards behaviors that are in accordance with fulfilling these goals.

3.4.2 Negative Leadership Skills.

The dimensions of leadership considered as negative leadership skills are the three characteristics presented below:

- *Management by Exception, Active*, (MbEA), involves that the leader monitors the work situation, looking for potential problems and thereby is able to anticipate oncoming mistakes and can take corrective actions. The leader's focus is on errors and avoiding these, rather than improving existing processes.

- Management by Exception, Passive (MbEP) is a leadership characteristic where the leader does not intervene in organizational processes before problems become apparent and serious (Bass, 1997).
- Laissez-Faire (LF) is a type of non-leadership where the leader avoids responsibilities and does not make decisions. The leader is basically passive avoidant.

3.5 Calculation of Total Leadership Score.

Total Leadership Scores (TLS) were calculated by reversing the scale of the negative scores and then summing up all leadership scores (both positive and negative). The Total Leaderships Score (TLS) was calculated according to the following formula:

$$TLS = (IA + IB + IC + IS + IM + CR) + (4-MbEA) + (4-MbEP) + (4-LF)$$

Based on the formula above the total leadership score is an un-weighted average of the positive leadership skills (IA, IB, IC, IS, IM and CR) and the reversed negative leadership skills (MbEA, MbEp and LF). This ensures that high scores on positive leadership skills and low scores on negative scores contribute positively to the overall leadership score.

4 Results

Categorization of effect sizes in this master thesis follows Cohen's classification of effect sizes for mean differences between groups (Cohen, 1988). The categories are $small\ (d < .30)$, $medium\ (.30 < d < .80)$ and $large\ (.80 < d)$. Due to the fact that this master thesis has $a\ priori$ direction-specific hypotheses I have used planned comparisons involving one-sided null-hypothesis tests (see e.g. Ryan, 1959 for a discussion).

4.1 Overall leadership score.

Women officers ($\bar{x} = 2.818$, $\sigma = .363$) tended overall to be rated slightly higher by their co-workers than their male counterparts ($\bar{x} = 2.61$, $\sigma = 0.506$). This effect was of a medium size (($t_{(45)}$ =-1.493, \bar{x}_{diff} = -0.209, 95% CI of \bar{x}_{diff} [-0.438, 0.021], d = .474, one-tailed p = .072) but the effect was not statistically significant (i.e. the type I error level was higher than the commonly accepted .05 level).

When it came to the officers' self-evaluation relative to their co-worker's evaluation (calculated as Self-rating – Co-worker's rating) women officers ($\bar{x} = -1.33$, $\sigma = 2.55$) tended to underestimate their own overall leadership skills compared to their male counterparts ($\bar{x} = .371$, $\sigma = 2.96$). The difference between the women and men officers was of medium size in the predicted directions ($\bar{x}_{\text{diff}} = -1.705$,

95%CI of \bar{x}_{diff} [-3.11, -0.298], $t_{(45)}$ = 1.993, d = .595, one-tailed p = .026). Women officers scored themselves on average lower than their co-workers, while male officers marginally scored themselves higher than the rating by their co-workers. These findings are in accordance with predictions of hypothesis 1.

4.2. Negative Leadership Skills.

The co-workers rated female ($\bar{x}=3.75$, $\sigma=1.03$) and male ($\bar{x}=3.89$, $\sigma=1.67$) officers with a statistically non-differentiable level of negative leadership skills. The effect size was small to the extent of being negligible ($t_{(45)}=0.30$, $\bar{x}_{\text{diff}}=0.134$, 95% CI of \bar{x}_{diff} [-0.602, 0.870], d=.097, one-tailed p=.383). Thus, on the whole male and female officers was on average rated by their co-workers to have the same level of negative leadership skills.

However, when it came to the officers' self-evaluation relative to their co-worker's evaluation (calculated as Self-rating – Co-worker's rating) women officers ($\bar{x}=0.808$, $\sigma=1.195$) tended to greatly overestimate their own level of negative leadership skills compared to their male counterparts ($\bar{x}=-0.119$, $\sigma=0.930$). The difference between the women and men officers was of medium size in the predicted directions ($\bar{x}_{\text{diff}}=-0.926$, 95%CI of \bar{x}_{diff} [-1.44, -0.41], $t_{(45)}=-2.957$, d=.595, one-tailed p<.003). Women officers scored themselves on average higher on negative leadership skills than their co-workers, while male officers marginally scored themselves lower than the rating by their co-workers. These findings are in accordance with predictions of hypothesis 2a.

4.3 Positive Leadership Skills.

There was a statistically significant difference on positive leadership skills between female ($\bar{x} = 2.853$, $\sigma = 0.475$) and male ($\bar{x} = 2.562$, $\sigma = 0.504$) officers. The effect size was ($t_{(45)}$ =-1.937, \bar{x}_{diff} = -0.29, 95% CI of \bar{x}_{diff} [-0.537, -0.044], d = .593, one-sided p < .03). Female officers where on average rated higher by their co-workers on positive leadership skills than the male officers.

When it came to the officers' self-evaluation relative to their co-worker's evaluation (calculated as Self-rating – Co-worker's rating) women officers (\bar{x} = -0.527, σ = 2.253) tended to underestimate their own level of positive leadership skills compared to their male counterparts (\bar{x} = 0.252, σ = 2.36). The difference between the women and men officers was small but in the predicted direction ($t_{(45)}$ =1.104, \bar{x}_{diff} = 0.779, one-sided 95% CI of \bar{x}_{diff} [-0.382, 1.940], d = .33, one-sided p =.138). These findings are in the same direction as the predictions of hypothesis 2b but the observed effect is too small for us to reject the null hypothesis.

4.4 Interaction effect of Gender and Valence of Leadership Skill.

After observing that the differences between the leader's self-rating and the co-workers rating is dependent upon gender and the valence of the leadership skills in questions we evaluated the

possibility of an interaction effect (as would be expected based upon hypothesis 1 to 2a and 2b). A repeated measures ANOVA with gender as a within-group factor was calculated. The results showed that even in the small sample there is indications of an interaction effect ($F_{(1,45)} = 3.973$, p = .052, $\eta_p^2 = .081$). The interaction effect is shown in Figure 1.

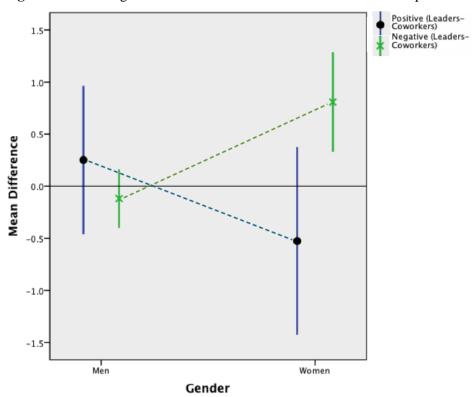


Figure 1: Effect of gender and valence on self-evaluation of leadership skills

Figure 1. Means for male and female officers on positive leadership skills (circle) and negative leadership skills (cross). Error bars are +/-1.645 standard errors (90% CI) of the mean. The dashed lines indicate the change between two conditions. The whole horizontal line at 0 shows the position where there would be no difference between the co-workers and the leader's evaluation of leadership skills.

As can be seen in Figure 1 the crossing of the lines indicates an interaction effect between gender and valence of leadership skill that is also supported by the statistical results. Note that the means of female officers are further away from the horizontal line and in the opposite direction of the means of the male officers.

4.5 Limitations - Experiment 1.

The present study is limited by the fact that I cannot clearly identify causes of the observed effects as gender stereotypes and shifting standards can affect the leaders as well as the co-workers or both. I

acknowledge this limitation, as only experimental research allows for generalized causal inference (Shadish, Cook & Campbell, 2001). I would claim that it is necessary to identify the extent of a phenomenon before one proceeds to an investigation of the causes of the phenomenon. To that extent I have found results that are in accordance with other research as well as finding some results that are in need of further research to be fully understood.

Another limitation resulting from the limited number of women seafarers in maritime industry is the limited number of informants. As inferences made from statistics is based upon assumptions that the samples are representative for the respective populations (of female and male officers), I can say that the inferences and conclusions are probably more correct for female officers, as the sampled quantity is much large proportion of female officers than we did for male officers. Since also the most interesting effects involve women, I would argue that the number of informants in the first study would not reduce the validity of our conclusions regarding female officer's self-assessment of leadership.

A third possible limitation that can affect the reliability of answers is the respondents' ability and fluency in English as most of the respondents' mother tongue is not English. However, English is a working language in the maritime industry and the respondents should therefore be able to respond adequately to a questionnaire in English. Furthermore, it is not expected that the reliability of the difference between men and women seafarers would be affected by a potential lack of English proficiency, as each group would be expected to have an equal proficiency.

5 Experiment 2

5.1 Hypotheses.

Hypothesis 1: There is no difference between the maritime- and the nursing students, when it comes to preferences in leaders' gender in the different leadership skills.

Hypothesis 2: There is a difference between the maritime- and the nursing students. The maritime students will have a vision of a leader which fits with his/hers masculine professions, whereas the nursing students will have a vision in accordance with his/hers feminine professions.

Experiment 2 is conducted to see if there is a difference of opinion about a leader's gender in a masculine- and a feminine occupation. It was also conducted to see if the raters (and the leaders) in the first experiment are affected by the typical stereotypes in the maritime industry.

6 Method

6.1 Research Design.

Data for this experiment were collected from students at Buskerud and Vestfold University College. Respectively, from two different programs the school is offering; maritime and nursing. These two programs were used to demonstrate a masculine- and a feminine typed education. The data collection took the form of a series of statement, which was altered from the questions in the MLQ 5X questionnaire, used in the first experiment. A total of 45 students rated to which degree the statements was most suitable for a man or a woman.

6.2 Participants.

A total of 45 students at Buskerud and Vestfold University College participated (21 from a maritime education and 24 from a nursing education). The maritime students ranged from 21 to 51 years (Mean = 28.8, SD = 7.4), and 14 where men and 7 were women. The age of the nursing students ranged from 19 to 44 (Mean = 26.04, SD = 7.8), and 2 where men and 22 where women.

6.3 Sampling Strategy.

Participants for experiment two were recruited at school. Participants were asked face to face, during lecture to partake in a voluntary leadership questionnaire.

6.4 The Questionnaire.

The questionnaire developed for experiment two, was created from the MLQ 5X leadership questionnaire, and altered the questions into a series of statements. The answers was in form a 9-point Likert-scale (1 = male, 9 = female). The middle point was 5, which represented a description equally male and female. The idea behind the experiment was to see to which degree a description of different leaders fits a man, women or both equally as much. This experiment was also to investigate whether if it exist a difference between individuals in a masculine- and a feminine study or occupation, which was in this experiment represented by maritime- and nursing students.

As already discussed in section 3.4, the MLQ 5X measures a broad range of leadership types (Bass & Riggio, 2006). All of the statements could be categorized as either a positive- or a negative leadership skill. However, the participants did not get the information about which statement belonged to which category, so the participants were free to have their own opinion about what they felt was a good leadership skill or not. The purpose of this experiment was also to figure out if individuals in a maritime and nursing occupation have different views of what a good leader is, respectively when it comes to positive- and negative leadership skills.

7 Results

7.1 Overall leadership score.

The maritime students ($\bar{x}=44.431$, $\sigma=3.950$) tended to marginally rate the overall leadership skills more towards the characteristics of a man than the nursing students ($\bar{x}=45.093$, $\sigma=2.235$). The effect size was of a small size ($(t_{(44)}=-0.279, \bar{x}_{\text{diff}}=-0.262, 95\% \text{ CI of } \bar{x}_{\text{diff}}$ [-2.16, 1.63], d=-.0817, one-tailed p=.39), and there was not statistically significant (i.e., sig. >.05).

7.2 Positive leadership skills.

The maritime students ($\bar{x} = 4.989$, $\sigma = 0.559$) tended also to rate the positive leadership skills slightly more towards a man, than the nursing students ($\bar{x} = 5.077$, $\sigma = 0.452$). The effect size was of a small size in accordance with Cohen's categorisation (($t_{(44)}$ =-0.583, \bar{x}_{diff} = -0.88, 95% CI of \bar{x}_{diff} [-0.392, 0.216], d = -.173, one-tailed p = .28), and there was not statistically significant (i.e., sig. >.05).

7.3 Negative leadership skills.

The difference between the maritime students ($\bar{x}=4.964, \sigma=0.558$) and the nursing students ($\bar{x}=4.878, \sigma=0.536$) was not substantial. The effect size was also categorised as a small size (($t_{(44)}=0.526, \bar{x}_{\text{diff}}=0.086, 95\%$ CI of \bar{x}_{diff} [-0.243, 0.41], d=0.157, one-tailed p=0.301), there was no statistically significance between the two groups.

7.4 A closer look at the means.

When I gather the questions from each of the nine categories into positive- and negative leadership skills, I do not get a clear indication if one of the groups prefers one gender over the other, i.e. I can reject hypothesis 2. However, if I look at the mean for each question, I can see which of the questions lean more towards a male or a female leader for both the maritime- and the nursing students.

		Education		
	Ma	Maritime Nursing		sing
		Standard Stand		Standard
	Mean	Deviation	Mean	Deviation
Idealized Attributes	4.27	.87	4.69	.75
Idealized Behavior	5.40	.96	5.81	.80
Inspirational Motivation	4.56	1.27	4.52	.73
Intellectual Stimulation	5.26	1.09	5.02	.91
Individual Consideration	5.60	1.14	5.65	1.02
Contingent Reward	4.83	1.00	4.69	.64
Management by exception - active	4.92	1.23	5.06	.83
Management by exception - passive	4.68	.98	4.60	.72
Laissez-faire	5.30	.89	4.97	.79

Table 1. The computed means and standard deviations for the nine categories of leadership behaviors.

The calculated mean for both the maritime- and nursing students give us an indication and suggestion for which characteristics is more suited for a man or a woman according to the respondents. The result of the survey displays the fact that the differences between the groups are not considerable. The respondents from the maritime group meant that idealized behavior, intellectual stimulation and individual consideration were the positive characteristics best suited for a female leader, as was also the case for the nursing students. The characteristic that distinguish the groups apart, were the negative characteristic of a female leader. The maritime students answered that laissez-faire were a more accurate description for a female leader, while the nursing students answered more towards management by exception – active. So, as I mentioned before laissez-faire is described as a leader who avoid responsibilities and do not make decisions, equally as non-leadership. Management by exception – active is a more active leader. However, a leader behaving within this category is likely to only look for problems, and solutions to them. This kind of leader does not look for improvements in the current processes; on the other hand he/she is focused on finding errors and figure out how to avoid them. Therefore, the reason for why the maritime- and nursing students have difference opinions about negative leadership characteristics could be because the maritime industry is masculine typed work, so the negative characteristics of a female leader may be magnified in light of the gender differences and the expectancies for how a leader should behave while working in the maritime sector. In the nursing sector the expectancies for how a female leader is more equivalent to the female gender role, and could consequently be the reason for why the negative characteristics of a female leader in this sector is "less" negative.

The same situation occurred in the description of a male leader. Both the maritime- and the nursing students describe a male leader to fit with the positive leadership characteristics; *idealized attributes*, *inspirational motivation* and *contingent reward*. When it comes to the negative leadership characteristics, the maritime students described a male leader to fit to the *management by exception* – *active* and *management by exception* – *passive*. Whereas the nursing students believed that *management by exception* – *passive* and *laissez-faire* were more appropriate for male leaders. The depiction of *laissez-faire* and *management by exception* – *active* was described above in the latter section. Acting in accordance with management by exception – passive, is a leader who don't get involved in the process before an error progresses into a serious problem. As mentioned before the nursing occupation is a feminine typed job, and the male working in this sector can experience a conflict with their "normal" or "natural" behavior, and therefore they are perceived as more negative than woman working in the same industry.

7.5 Applying the results.

Both groups have described to which degree the different characteristics of leadership suit the two genders, and both groups have answered that female leaders hold three positives- and one negative characteristic. Male leaders hold three positive- and two negative characteristics. Since the nursing-

and the maritime students have replied fairly similar and also similar to the results from the coworkers in the first experiment, leads me to believe that the co-workers in the first experiment were not strongly affected by the existing stereotypes associated with a maritime profession, and provided true and realistic statements about their leaders.

In the second experiment, female leaders are considered as more positive, than their male counterparts. In addition female leader are rated slightly higher on overall leadership skills, given that women were associated with three positive leadership skills and only one negative, whereas male leader were associated with three positive- and two negative leadership characteristics. The result from the first experiment, and was also confirmed in the second experiment, displays that female leaders underestimate their own positive leadership skills, and overestimate their negative leadership skills, and this phenomenon could be elucidated by the self-consistency theory by Beyer (1990). In this theory a male leader will feel confident about his abilities in masculine tasks, and female leader in a masculine domain will underestimate her own leadership abilities. As the maritime domain is a very masculine career, it would seem realistic that these female- ad male leaders are influenced by this manner of thinking. Thus, the leaders responded to the questionnaire in accordance with this view in mind. However, in this research the male leaders did not overestimate their own leadership skills to a great extent. On the other hand, female leaders will according to the theory by Beyer (1990) underestimate their own leadership skills in this domain, and it proved to be correct in this experiment.

However, we can look at it from the other point of view. The raters could hold different standards towards male- and female leaders, and the leaders themselves could hold different standards when they are evaluating own performance. As explained in an earlier section, the shifting standard theory is described as if a person measures people from opposite groups against different standards (Biernat & Manis, 1994; Biernat & Vescio, 2002; Wennerås & Wold, 1997). The raters could have set low standards for female leader. Therefore, when the female leader performs greater than the standard she has been evaluated to, she appears to score higher. Hence, this might be the reason why female leaders seem to get higher assessment by the raters than their male counterparts, who could have been evaluated to a higher standard, compared with the standard set for female leaders. Still, I cannot say with certainty that this is occurring in the minds of the respondents in these experiments. The biased self-assessment can originate from male- and female leaders are using different standards to evaluate their own competence (Correll, 2001). A maritime profession is, and as I have described before a masculine typed job. And with a masculine typed job there are certain expectations for how a leader should behave. The female maritime officers may feel inadequate to fill these expectations and standards, because she holds different leadership attributes as a women. The result is a biased selfassessment for female officers, since she is holding herself to a different standard.

7.6 Limitations – Experiment 2.

With experiment two, I tried to identify the causes of the phenomenon discovered in experiment one. Henceforth, the results from the second experiment give me an indication of the existing differences between the two groups, but the results were not statistically significant. With a bigger sample size the results could have been significant, and elucidate the phenomenon to a greater extent. Even dough, the reliability of experiment two is not affected by the small sample size, and illustrates a small difference between the maritime- and the nursing students. Further research should be conducted to clarify and to be able to draw firm conclusions for why there exists a difference in how male and female leaders are evaluated in a masculine- and a feminine typed job.

Another limitation that could affect the reliability of this experiment is participants' lack of experience. Since most of the participants are students still, they don't have much experience with different leaders and could feel inadequate to respond correctly. Nevertheless, most people can make up an opinion about which gender that best suits the variety of leadership qualities. So, it is not expected that the reliability is affected by the lack of experience, since the probability that the respondents have an opinion about the subject is high.

The reliability can also be reduced by the fact that not all participants talk fluently English. For example, English is not the standard language in the nursing studies. So, to reduce the confusion associated with language, and also to increase the reliability in this study I translated the questionnaire to Norwegian.

8 Discussion

The goal of this master thesis was to examine how maritime officers' assess and are assessed by coworkers relative to positive- and negative leadership skills, and if the leaders themselves and the coworkers are affected by existing stereotypes in the industry. The predictions was that since working as a maritime officers is culturally and historically looked at as a masculine-typed job, women would underestimate their own positive leadership skills, overestimate their negative leadership skills when compared to their male peers. The findings from the experiments was that women were rated marginally higher than men on overall leadership skills and got significantly better scores on positive leadership skills than men by their co-workers (no difference on negative leadership scores). These results are in opposition to researches, which have found that men tend to be favored over women as leaders, especially in careers characterized by masculine traits (Beyer, 1990; Eagly et al., 1992), and that individuals tend to assess women leaders more negatively than the comparable male leaders (Eagly et al., 1992). Also, other research has found that women who performs just as well as men in a masculine-typed job, would elicit more negative evaluations (Heilman, et al., 2004). The observed inconsistency with other researches in the study may be caused by an authentic difference between the

female and male participants in the study - It might be that the women that have chosen a maritime career at the sea are extraordinarily well suited for this type of job – meaning that the selection of female officers may even stricter than for men due to a tendency for women to have a higher confirmatory bias for proving competence (Biernat & Fuegen, 2001). Still, the observed variances between male- and female officers where small, except for positive leadership skills that had a moderate effect size. To draw firm and generalized conclusions from this study is a little too premature; however I can conclude that female leaders in this experiment tended to underestimate their own leadership skills, when compared to the evaluation performed by their co-workers. This result was also consistent with other research finding.

For an individual to want to pursue a career path in the maritime domain, the individual would want to feel that he/she is competent enough to perform the required tasks. However, individuals are affected differently by gender stereotypes when assessing their own behavior (Minter et al., 2005). As previously mentioned positive feedback should increase the level of self-assessment (Correll, 2004). Research performed by Correll (2001) suggests that when women are assessing their own performance, they depend more on feedback given on their competence than their male colleagues, and will continue to set low standards for themselves if they do not receive confirmations on their competence. However, Biernat and Vescio (2002) states that because women and men are assessed to different standards, women are more likely to receive positive nonverbal feedback if they perform well, but even if the performance was good, the women are less likely to get career enhancing opportunities such as men. If women do not receive the positive feedback they need to feel confident in their performance, they will continue to feel less adequate. This lack of self-esteem will have a negative effect on their self-evaluation, thus leading to an underestimation of their positive leadership skills and overestimation of their negative leadership skills, as shown in this thesis. Thus, allowing for improved feedback and mentoring during tailored-made leadership training, as well as a benchmarking of leadership behavior could be a factor in improving women officers 'self-assessment and thereby their desire to pursue a maritime career. It is also important to increase the awareness that there exist a difference between the male- and female leaders, in both the industry and in the education system to improve the routines and programs. Another measure to improve the current situation could be to develop and implement new expectations and requirements for both woman and men. This would help the existing maritime employees, but in particular new employees in the future to evolve more correct and -modernized views suited for today's and the future work environment.

9 Conclusions

The overall aim of this master thesis was to identify if there exist a difference in the evaluation and self-evaluation between female- and male maritime officers, and the reasons for why this discrepancy exists, to improve and increase the participation of women in the maritime industry and -education. Theory and research completed previously give me a reason to believe that gender stereotypes and shifting standard when evaluating own leadership skills are applicable theories to describe the observed discrepancy. Through the two experiments I have found that female maritime officers tended to underestimate their own leadership skills, whereas male maritime officers showed the opposite effect. The gender differences can be one barrier for why not more women enter into a maritime profession, and possible countermeasures should be implemented to prevent this problem. The fact of the matter is when the industry excludes women from working offshore; they exclude 50 % of the possible work force.

With respect to measures that could be implemented to improve the understanding of actual leadership skills, and also to improve how leaders evaluate themselves I suggest that the education system introduces and improves feedback during tailored leadership training, as well as benchmarking of leadership behavior between male and female. This could influence and strengthen the females' self-assessment, and thus make a career in the maritime industry more attractive. Another measure is to make sure that women are men are equals when applying for jobs; standard procedures for hiring and evaluation should be implemented to prevent favoring one gender over the other.

We already know that the maritime industry is historically known to be best suited for men, and the industry is affected by this stereotype still today. However, from these experiments I found out that the co-workers appeared to favor female leaders over male leaders as the co-workers scored the female leaders higher on overall- and positive leadership skills. The low self-esteem in the females own leadership skills leads them to think less of themselves, when comparing themselves to their male counterparts; consequently, measures must be instigated to improve the self-esteem and build confidence in the current and future female maritime leaders. If we can overcome the existing constraints in the maritime sector, as well as implement new methods of training, mentoring, hiring and evaluation of male- and female leaders, the industry can become an equally balanced place to work.

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Appendix 1 – Questionnaire

Leadership Questionnaire					
Gender: Male Female					
Age:					
Area of education:					

On the following pages you will find a series of statements. State to which degree you think the statements describe a male or a female leader.

1.	A leader that provide others with assistance in exchange for their efforts.			
	Male	Equally male and female	Female	
2.	A leader that re-ex	amines critical assur	mptions to question whether they are appropriate.	
	Male	Equally male and female	Female	
3.	A leader that fails	to interfere until pro	blems becomes serious.	
	Male	Equally male and female	Female	
4.	A leader that focus standards.	· ·	arities, mistakes, exceptions, and deviations from	
	Male	Equally male and female	Female	
5.	A leader that avoid	-	when important issues arise.	
	Male	Equally male and female	Female	
6.	A leader that talk a	about the most impor	rtant values and beliefs.	
	Male	Equally male and female	Female	
7.	A leader that is abs	sent when needed.		
	Male	Equally male and female	Female	
8.	A leader that seek	differing perspective	es when solving problems.	
	Male	Equally male and female	Female	
9.	A leader that talk of	optimistically about t	the future.	
		Equally male		
	Male	and female	Female	

10. A leader that insti	ill pride for being associat	ed with others.	
Male	Equally male and female	Female	
11. A leader that disc	-	is responsible for achieving performance target	s.
Male	Equally male and female	Female	
12. A leader that wait	t for things to of wrong be	efore taking action.	
Male	Equally male and female	Female	
13. A leader that talk	enthusiastically about wh	at needs to be accomplished.	
Male	Equally male and female	Female	
14. A leader that spec	rify the importance of hav	ing a strong sense of purpose.	
Male	Equally male and female	Female	
15. A leader that sper	nd time teaching and coac	hing.	
Male	Equally male and female	Female	
16. A leader that mak achieved.	tes clear what one can exp	pect to receive when performance goals are	
Male	Equally male	Female	
	and female		
17. A leader that is a	firm believer in "if it ain't	broke, don't fix it".	
Male	Equally male	Female	
	and female		
18. A leader that goes	s beyond self-interest for t	the good of the group.	
Male	Equally male and female	Female	
19. A leader that trea	t others as individuals rath	ner than just as members of the group.	
Male	Equally male and female	Female	27

20. A leader that demonstrate that problems must become chronic before taking action.				
Male	Equally male and female	Female		
21. A leader that act in v	ways that build others' res	pect.		
Male	Equally male and female	Female		
22. A leader that concer	ntrate with full attention o	n dealing with mistakes, complaints and failures.		
Male	Equally male and female	Female		
23. A leader that consid	er the moral and ethical co	onsequences of decisions.		
Male	Equally male and female	Female		
24. A leader that keeps t	track of all mistakes.			
Male	Equally male and female	Female		
Male	Equally male and female	Female		
	and female y a sense of power and con Equally male			
25. A leader that display Male	and female and semale and semale	nfidence.		
25. A leader that display Male	and female and semale y a sense of power and continuous Equally male and female	nfidence. Female		
25. A leader that display Male	and female y a sense of power and con Equally male and female ate a compelling vision of Equally male	nfidence. Female		
25. A leader that display Male 26. A leader that articular	and female y a sense of power and core Equally male and female ate a compelling vision of	nfidence. Female the future.		
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25. A leader that display Male 26. A leader that articula Male	and female y a sense of power and core Equally male and female ate a compelling vision of Equally male and female and female attention toward failures to Equally male	refidence. Female the future. Female		
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29. A leader that consider others.	er each individual as	having different needs, abilities and aspira	tions from	
Male	Equally male and female	Female		
30. A leader that get oth	ers to look at problen	ns from many different angles.		
Male	Equally male and female	Female		
31. A leader that help of	hers to develop their	strengths.		
Male	Equally male and female	Female		
32. A leader that sugges	t new ways of lookin	g at how to complete assignments.		
Male	Equally male and female	Female		
33. A leader that delay r	esponding to urgent of	questions.		
Male	Equally male and female	Female		
34. A leader that empha	size the importance o	of having a collective sense of mission.		
Male	Equally male and female	Female		
35. A leader that express satisfaction when others meet expectations.				
Male	Equally male and female	Female		
36. A leader that express confidence that goals will be achieved.				
Male	Equally male	Female		
	and female			

- Thank you!