

Leading employees of different genders

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Abstract

Motivating employees is important, which is why much research has focused on which kind of leadership motivates employees. However, motivating leadership might not be the same for Susan as it is for Steve. Not much attention has gone to how employees' attributes might matter, which is why this paper examines whether the employee's gender and gender-based attributes moderates the association between employee motivation and transformational and transactional leadership components (verbal and pecuniary rewards). Based on gender differences in communal and agentic attributes, I argue that transformational leadership and verbal rewards motivate female employees more than male, whereas pecuniary rewards motivate male employees more than female. To examine this, I conduct a moderated mediation analysis on a cross-sectional study of 1,380 Danish high school teachers. It shows that female employees on average are more communal and less agentic than their male colleagues. More communal and female employees tend to be more motivated when they perceive more transformational leadership (but not significantly so) whereas more agentic and male employees tend to be less demotivated when they perceive more pecuniary rewards.

Key words: Gender, communal, agentic, transformational leadership, transactional leadership, motivation.

Introduction

Like any organization, public organizations depend on good and fitting leadership to help improve for example performance and motivation. Goal-oriented leadership (e.g. transformational and transactional leadership) have been found to have a positive influence on the employees' performance (Avolio et al. 2009; Jacobsen and Andersen 2015; B. E. Wright, Moynihan, and Pandey 2012). Both transformational and transactional leadership strategies seek to get the employee to work towards the organizational goals, but they do so through different mechanisms. Transformational leadership is about trying to align the employee's goals with that of the organization, whereas transactional leadership is about trying to make it in the employee's self-interest to work towards the goals. Both leadership strategies are thus meant to increase performance by influencing the employee and his or her behavior. Still, we know very little about how employee-characteristics might matter for the effectiveness of leadership strategies. Previous literature often focus on the manager's characteristics, for example the manager's gender, and not the employees. The research question of this paper is thus, whether the employee's gender moderates the correlation between goal-oriented leadership strategies and motivation and whether communal and agentic attributes mediate this moderation. Knowledge about how employee's characteristics matter for the effectiveness of leadership behavior is extremely relevant for managers who wish to increase motivation through leadership, since managers' leadership strategies otherwise could be less effective towards half their work force.

With this paper, I seek to contribute in at least three ways: First, by increasing the sparse knowledge of whether male and female employees are motivated by different leadership components. Second, by looking further into the attributes that are at the base of the argument for why some leadership strategies fit one gender better than the other – i.e. communal and agentic

attributes (Baron-Cohen 2004, 11; Eagly and Karau 2002, 574; V. L. Nielsen 2014). Third, to better management of employees of different genders.

Studies have found differences between women's and men's attributes (Baron-Cohen 2004; V. L. Nielsen 2014), which are also believed to affect performance (Gneezy, Niederle, and Rustichini 2003; Ors, Palomino, and Peyrache 2013) and possibly the effectiveness of leadership elements such as wage systems (V. L. Nielsen 2014). Focusing on the manager's gender and his or her leadership strategy, previous studies have connected transformational and transactional leadership strategies with female and male attributes respectively (Bass, Avolio, and Atwater 1996; Carless 1998; Eagly and Johannesen-Schmidt 2001; Eagly, Johannesen-Schmidt, and van Engen 2003). Nevertheless, the fit between goal-oriented leadership components and gender attributes might also matter for employees' motivation. It would be extremely useful for managers to know whether their employees are motivated by different leadership components. I hypothesize that fit between leadership components and employees' gender has a positive effect on work related outcomes such as work motivation.

Based on the analysis of 1,380 Danish high school teachers there is partial support for the hypotheses. Female employees are significantly less motivated than male employees when they perceive more pecuniary rewards. Even though the more agentic employees also tend to be more motivated when they perceive more pecuniary rewards, the gender-moderation does not seem to be mediated by the agentic attributes. However, when analyzing direct questions on the attitude towards pecuniary rewards, the agentic attributes does seem to mediate the correlation with gender. Even though not statistical significant, female employees tend to be more motivated than male employees when they perceive more transformational leadership. This moderation seems to be mediated by the employees communal attributes, as expected. Opposite the expectation the same does not hold true for verbal rewards. The importance of these gender-based attributes which lay at

the base of many theoretically argued gender differences in leadership thus need more empirical examination.

Leadership strategies

Different leadership strategies have been argued to appeal differently to men and women. Women have for example been argued to be more aligned with democratic leadership than men, who are more tolerant of autocratic leadership (Eagly and Johnson 1990; Eagly and Johannesen-Schmidt 2001). In the last decades, the focus has primarily been on transformational and transactional leadership. These goal-oriented leadership strategies seek to increase employees' goal attainment through motivation and direction (Oberfield 2014; Jacobsen and Andersen 2015). Therefore, I will focus on these leadership strategies, as it is important to know, if they motivate employees differently dependent on their gender.

Transformational leadership is about trying to align employee's goals with the organization's in order to get employees to work towards the organization's goals (Bass 1999, 11; Jung and Avolio 2000, 950). Resulting from criticism of the traditional multi-dimensional transformational leadership concept (Knippenberg and Sitkin 2013; Yukl 1999), I follow the recent trends in the literature (Jacobsen and Andersen 2015, 832; Jensen et al. 2016) and define transformational leadership by its visionary element and by the leader's behavior instead of the effects of his or her behavior. In line with Jensen et al. (2016) among others, I conceptualize transformational leadership by three aspects. First, developing a clear vision with the main goals of the organization. The leader seeks to translate the organizations general goals into clear and specified goals that are more tangible for the employee. Second, the leader seeks to communicate the vision, to share it amongst the employees so they understand the vision as well as how their work can contribute to achieving it. The transformational leader thus seeks to both set the direction for the organization and clarify

how the employees though their work can contribute to achieving the goals. Thirdly, sustaining the vision in the short and long run. The leader seeks to create sustained accept, cooperation and excitement about the vision and organizational goals. Transformational leadership contains all three aspects and is defined as “behaviors that seek to develop, share, and sustain a vision intended to encourage employees to transcend their own self-interest and achieve organizational goals” (Jacobsen and Andersen 2015, 832).

Transactional leadership, on the other hand, builds on a quid pro quo logic, where the leader uses an exchange to make it the employee’s self-interest to work to achieve the organizational goals (Bass 1999, 9–10). Thus, instead of trying to move the employee’s self-interest in order to align it with the organizational goals, as the transformational leader, the transactional leader seeks to appeal to the employee’s self-interest by rewarding or sanctioning the employee contingent on his or her behavior and achievement of organizational goals. The exchange needs to be contingent on the employee’s behavior, and the connection needs to be clear to the employee. Only then can the employee’s aspiration to receive rewards or avoid sanctions get the employee to conduct the desired behavior and thereby contribute to achieving the organizational goals. Jensen et al. (2016) define transactional leadership as “the use of contingent rewards and sanctions with the intent to facilitate that employees have self-interest in achieving organization goals.”

In line with recent literature (Jensen et al. 2016; Jacobsen, Bøllingtoft, and Andersen 2016), I divide transactional leadership into three components: verbal rewards, pecuniary rewards, and sanctions. Verbal rewards contains the use of non-pecuniary benefits to reward the employee, contingent on his or her behavior. Verbal rewards mostly consist of verbal acknowledgements and compliments, whereas pecuniary rewards are of monetary value, such as salary supplements, training and perks. Both types of rewards are given to employees when they do as the leader wanted; this thus gives the employee an incentive to achieve the organizational goals. Oppositely,

sanctions are given to employees that do not meet the agreed expectations. This will also give the employee an incentive to achieve the organizational goals or at least to not be counter-productive. Sanctions can be in the form of informal and formal reprimands and ultimately dismissal. Verbal rewards, pecuniary rewards and sanctions are three different ways to conduct transactional leadership, which do not necessarily co-vary (Jensen et al. 2016). Preliminary interviews with managers and teachers at Danish high schools have shown that managers generally do not use sanctions. Therefore, it is less relevant to study in this context and I have left it out of the remainder of the paper. I will therefore discuss three different leadership components: transformational leadership, verbal rewards and pecuniary rewards.

Multiple studies have found all three components important in relation to for example employees' motivation (Wright, Moynihan, and Pandey 2012; P. A. Nielsen et al. Forthcoming), commitment (Oberfield 2014), and performance (Bellé 2014, 2015). This is particularly true for employee-perceived leadership, compared to the manager's self-reported leadership strategy (Jacobsen and Andersen 2015; Favero et al. 2016). I will focus on the employee's perception of the manager's leadership strategy, as the employee has to perceive the leadership strategy in order to react on it and for the reaction to depend on the employee's attributes. Even though the literature suggests that each of the leadership components has a positive effect on employee-outcomes, the effect might be larger or smaller for different groups of employees.

I expect the leadership components to have a larger positive effect, if it fits with the employee's gender. Person-environment fit, defined as "the compatibility between an individual and a work environment that occurs when their characteristics are well matched" (Kristof-Brown, Zimmerman, and Johnson 2005, 281), is argued to influence and shown to correlate with for example higher motivation, satisfaction and performance (Kristof-Brown, Zimmerman, and Johnson 2005). If the manager meets the employee's psychological needs, or the employee's values are similar to the

values reflected in the leadership component, there is a fit (Cable and Edwards 2004, 823). Therefore, I argue that when the leadership component fits the employee's gender-based attributes it will have a larger positive effect on employee's motivation. That is: The employee's gender moderates the average effect of leadership, because the leadership components fit one gender better than the other, and this moderation is mediated by the employee's attributes. Before arguing which leadership components fits which gender, I will present literature on differences in work related values and needs in regards to gender.

Gender differences

Men and women are often described differently, e.g. masculin-feminin, instrumental-expressive and agentic-communal. However, many of these distinctions cover similar sets of attributes and multiple studies using different distinctions have measured them with the same scales (Ward et al. 2006, 206–7). I will concentrate on the potential differences in agentic and communal attributes (Bakan 1966) as they have often been used in the leadership context (Eagly, Johannesen-Schmidt, and van Engen 2003). *Agentic* attributes cover a tendency to be assertive, controlling, and confident for example by being ambitious, independent and competitive. *Communal* attributes on the other hand cover a tendency to be concerned with other people, including being interpersonal sensitive, helpful and sympathetic (Eagly and Johannesen-Schmidt 2001). Communal people are thus more attentive and better at understanding other peoples' points of view and emotions. Agentic attributes are more strongly ascribed to men unlike communal attributes that are more strongly ascribed to women (Eagly and Johannesen-Schmidt 2001).

On the other hand, it is still under debate whether men and women differ in such attributes (Eagly and Wood 2011; Nielsen 2014). There is thus also reason to believe that these gender differences are not present, at least when examining a specific profession in Denmark. If at least

part of the gender differences are caused by differences in socialization, they could be expected to differ between societies, as boys and girls might be socialized differently. Denmark is one of the countries with the lowest degree of gender inequality (Human Development Report, 2015). This might cause the social expectations towards girls and boys to be more similar than in countries where women and men are for example (to a higher extent) expected to hold different types of jobs. Therefore, the gender differences in Denmark might be smaller than gender differences in countries with more gender inequality, which would make Denmark a least likely case. Still, Nielsen (2014) has found gender differences in Denmark.

However, the above-mentioned gender differences are tendencies on average. Some women will be more agentic and some men more communal than the average. In female-dominated organizations such as child-care, where communal attributes like being helpful and sympathetic are beneficial, male employees are likely to be more communal than the average male, due to selection and self-selection mechanisms. So, even if the gender differences are present on average in Denmark, this does not mean the differences are also present within a given organization or profession. The organization's selection of employees and the individuals' self-selection into the profession mean that the individuals within the same organization are probably more alike than individuals in general (Nielsen 2014, 167). Based on the Person-Environment Fit Theory people will likely be attracted to jobs and organizations that fits their own attributes (Kristof-Brown, Zimmerman, and Johnson 2005). Likewise, organizations will often select and choose the candidates that fit with the given organization and job tasks. Two mechanisms are thus at play which both cause the employees in a given profession and organization to be more alike than people in different organizations: People choose jobs that fits their attributes and organizations choose employees that have the preferred attributes. These effects are even more present when the women and men in the organization hold the same type of job which is the case for high school teachers.

Thus, the gender differences within high schools might be neutralized due to the selection and self-selection mechanisms, which leads to the competing expectation that female and male high school teachers do not differ in communal and agentic attributes. This will be tested later in the paper, but in the following section, I will assume that women tend to be more communal and men more agentic, on average.

Fit between leadership strategies and employees' gender

Based on the fit-literature (e.g. Kristof-Brown, Zimmerman, and Johnson 2005), I argue that the leadership components fit different gender attributes, and that this will cause the employee's gender to moderate the average effect of the leadership components. Previous studies have found, that there are gender differences in job attribute preferences (Konrad et al. 2000; Bigoness 1988; Gooderham et al. 2004). Women prefer feedback, working with people, and opportunity to help others, whereas men prefer earnings and solitude, compared to the other gender on average. It thus seems that gender differences in attributes also expresses itself in employees' job related preferences. I argue, that each of the three leadership components can be categorized in regards to how well it fits the communal and the agentic attributes, and hence in what degree it fits female and male employees on average.

Transformational and transactional leadership have previously been related to the female and male *managers* respectively (Eagly and Johannesen-Schmidt 2001). However, these studies focus on the managers, not the employees, and they do not argue the link for each distinct leadership component or even each strategy, but instead focus on transformational leadership, where they use the original criticized transformational concept. Therefore, I will argue for the fit between each leadership component and gender attributes in the following.

In line with the existing literature, I argue transformational leadership has communal aspects (Eagly and Johannesen-Schmidt 2001). The existing arguments primarily build on elements that are not included in the new definition of the concept. However, transformational leadership still fits the communal attributes. Transformational leadership is about communicating and convincing employees about a shared vision. This demands interaction between the manager and the employees, and can help increase a sense of togetherness in the organization (Jensen and Bro 2018), which fit well with the communal attributes, e.g. being communicative and interpersonal. Furthermore, communal employees are helpful, sympathetic, accepting of others direction and supporting of others (Eagly and Johannesen-Schmidt 2001, 783), which fits very well with transformational leadership. The desire of transformational leadership to make the employee believe in the vision and convince them to work toward the vision fits very well with the communal employees' tendency to accept others direction and to be supporting of others. Oppositely, it does not fit well with the agentic tendency to be controlling and competitive. I therefore argue that transformational leadership fits the communal attributes very well and not the agentic.

Verbal rewards is typically seen as a transactional component, still, some researchers argue that it can be seen as a mix of transactional and transformational leadership (Yukl 1999). Empirically, Jacobsen et al. (2016) finds, that employees' perceptions of verbal rewards are stronger correlated with their perceptions of transformational leadership than of pecuniary rewards. Thus, even though verbal rewards conceptually are a transactional component, it is closely related to transformational leadership. Therefore, it is too simplistic to conclude that verbal rewards are closer related to male than female attributes, only because it is a transactional leadership component.

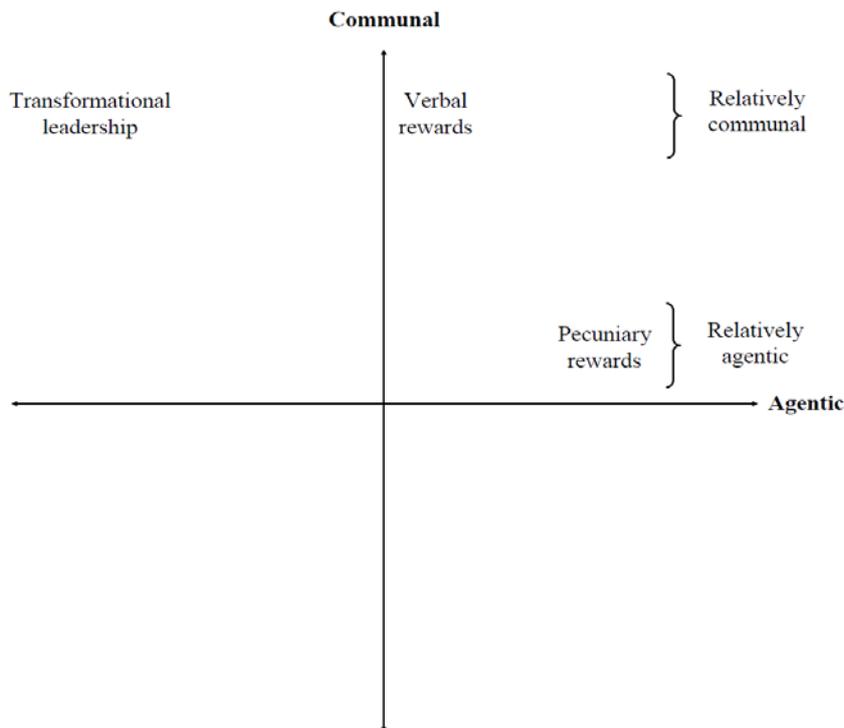
Verbal rewards and pecuniary rewards build very much on the same transactional logic, but are still quite different in regards to communal and agentic attributes. Verbal rewards are very communicative, because the manager has to communicate the rewards to the employees, unlike

pecuniary rewards which can be put in an automatic system without much contact or effort from the manager. Verbal rewards can also be more gentle and kind opposite pecuniary rewards which are less personal and can be more competitive, as they are more tangible and easy to compare. Thus, the agentic tendency to be ambitious, competitive and self-confident fits better with pecuniary rewards, as bonuses and other pecuniary rewards makes it easy to argue how well you are doing, and hence compete with your coworkers. The agentic employee probably has less need for verbal rewards, because he is already confident in his own skills. Thus, the communal tendency to be kind, sympathetic, and sensitive fits well with verbal rewards, whereas the agentic tendency to be competitive, ambitious, and self-confident fits better with pecuniary rewards. However, there is some overlap between the two leadership components, and they thus both have elements that fit the other gender-based attribute as well. Verbal rewards can for example also be somewhat competitive whereas pecuniary rewards also can fit well with an interpersonal sensitive person.

Based on these arguments, I place the three leadership components on a two-dimensional scale showing their fit with communal and agentic attributes respectively. As shown in figure 1, I consider transformational leadership and verbal rewards relatively communal and pecuniary rewards relatively agentic.

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Figure 1. Communal and agentic leadership components



The relative communal leadership components, transformational leadership and verbal rewards, are thus expected to fit the communal employees better than the agentic employees. The communal employees are expected to prefer a manager that is communicative, social and nurturing, and be more likely to follow the managers' (often) social vision and appreciate receiving gentle verbal appreciation, i.e. prefer transformational leadership and verbal rewards. Oppositely, the relative agentic leadership component, pecuniary rewards, is expected to fit better with the agentic tendencies such as being ambitious, competitive, and self-confident. As women have a tendency to have more communal attributes and men agentic attributes, I arrive at the following hypotheses:

Hypothesis 1a: The association between transformational leadership and employee motivation is more positive for female employees than for male employees.

Hypothesis 1b: The association between verbal rewards and employee motivation is more positive for female employees than for male employees.

Hypothesis 1c: The association between pecuniary rewards and employee motivation is more positive for male employees than for female employees.

As these relationships are expected because female employees are expected to be more communal and less agentic than male employees, I arrive at the following mediating hypotheses:

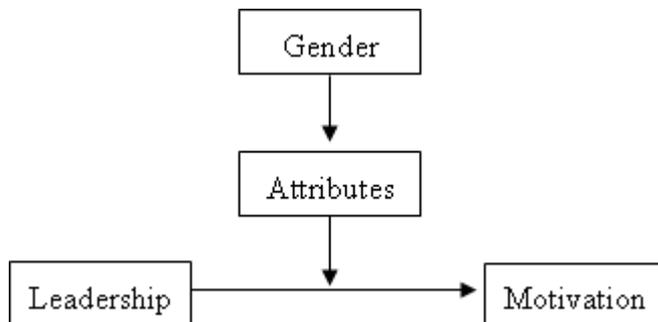
Hypothesis 2a: The gender moderation on the association between transformational leadership and employee motivation is mediated by the employee's communal and agentic attributes.

Hypothesis 2b: The gender moderation on the association between verbal rewards and employee motivation is mediated by the employee's communal and agentic attributes.

Hypothesis 2c: The gender moderation on the association between pecuniary rewards and employee motivation is mediated by the employee's communal and agentic attributes.

I will therefore test the following model:

Figure 2. Model



Research design and data

This paper uses a cross-sectional survey from Danish high school teachers. Danish high schools have a near equal distribution of female and male teachers (Danske Gymnasier, 2014: 26) and variation in leadership strategy (Jacobsen & Andersen, 2015; Jensen et al., 2016). It is thus a good case to study the importance of employees' gender and leadership. The study was distributed to approx. 9,250 teachers in 2018 with a response rate of 17.5 percent.

Measurement

All the variables are measured with employee-answered questionnaires, however, the risk of common source bias is expected to be severely reduced, because I focus on the moderating effects. Common source bias can cause or increase a correlation between the dependent and the independent variables, however, if this common source correlation is not different for each gender or gender-based attribute, it would decrease the moderating effect and thus make it a harder test of the interaction hypotheses (Jakobsen and Jensen 2015).

The dependent variable, motivation, is measured with seven seven-point likert-scaled questions that reflects work motivation. 0 represents the lowest motivation and 100 the highest. Confirmative factor analysis shows that all items load with mean lambdas between .34 and 0.67. The low-scoring items are the questions that were originally reverse-worded. The fit indicators suggest that the fit is a bit poor (RMSEA = 0.105, CFI = 0.876, SRMR = 0.057). However, SRMR is acceptable and also the most useful estimator when the sample is large, as in this case. I therefore choose to use the scale as it was constructed, to be consistent with previous research and because it is preferable to have a broad scale for motivation in this study of gender differences. The exact wording of questions and the analysis is shown in the appendix (Table A1).

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The independent variables, the employee-perceived leadership components, were measured with seven-point likert-scaled survey questions. The wordings and factor loadings can be seen in Table A2. The measures have been validated and further described by (Jensen et al. 2016). In accordance with the definitions transformational leadership was measured with questions regarding developing, sharing and sustaining a vision in the organizations, verbal rewards with measures regarding the managers use of non-pecuniary rewards contingent on the employee's behavior, and pecuniary rewards with questions on the managers use of rewards with monetary worth contingent on the employee's behavior. Confirmative factor analysis shows that all items load fine on their respective factors, with mean lambdas between 0.65 and 0.89. The fit indicators also suggest a fine fit (RMSEA = 0.080, CFI = 0.965, SRMR = 0.041). Each leadership component is based on a minimum of three questions, scaled from 0 to 100 and standardized.

The respondents attitude towards pecuniary rewards were also measured more directly by asking how much they agree/disagree with two seven-point scaled questions. The first being: “Individual wage supplements could motivate me to put in an extra effort” and the second: “Individual wage supplements would create a bad culture in the workplace”.

The employees’ gender were measured with survey answers and coded so 0 represents a man and 1 a woman. The few respondents answering “other” are not included.

The gender attributes were measured with a shorter version (Helmreich, Spence, and Wilhelm 1981) of the Personal Attributes Questionnaire (Spence, Helmreich, and Stapp 1975) with eight seven-point likert-scaled questions for each measure (see Table A3). Each question contained conflicting attributes, such as “Not at all competitive” versus “Very competitive”. Asking respondents to choose between two opposite statements can reduce social desirability bias (Paulhus 1991). The confirmatory factor analysis show that some items load poorly on the factor, with the

lowest mean lambda at 0.295. However, this is acceptable as it makes theoretical sense that there will be some differences in which of the items the respondents score high on, i.e. you can be able to make decisions very easily but also give up very easily. The fit indicators suggest an acceptable fit (RMSEA = 0.079, CFI = 0.826, SRMR = 0.078). Both measures are first scaled from 0 to 1, 1 being most agentic/communal, and then standardized.

Control variables, that could cause bias if omitted, i.e. variables that affect both the interaction terms and motivation, are also included in the analyses. When testing the effect of each of the leadership components, the remaining leadership components are included as control variables. Furthermore, a measure of the number of years the respondent has been a teacher was included. It was measured as 2018 minus the year the respondent graduated from university. As the respondent's age is highly correlated with this variable, age is not included in the analyses. The number of years the employee has worked under the immediate managers is also included. This was measured by a direct question and standardized. Lastly, the manager's leadership position, is included, where 1 represent a principal, and 0 represents other leadership positions. Descriptive statistics and correlations of all variables (before standardization) are shown in Table A4.

Estimation strategy

The cross-sectional data is examined with OLS-regression. I use cluster robust SE, at the organizational level, to account for the clustered structure of multiple employees in the same organization. I do not use a fixed effects model, as this will control for variation in leadership behavior between organizations, which is essential for the analyses. There is thus a risk of biased estimates, to the extent that unobserved factors at the organizational level explains the effectiveness of leadership and the gender of the employee. As mentioned, all continuous variables are standardized to decrease the multicollinearity with the interaction terms.

Results

I expect gender to matter for the association between leadership components and motivation, because men are expected to be more agentic on average while women are expected to be more communal. The first step is thus to examine whether female and male employees differ in these attributes. I find that even within the same profession and within the same high school in Denmark, female teachers are on average 2.703 percentage points less agentic (model 1.1) and 7.249 percentage points more communal (model 1.2) than male teachers. The communal gender difference is thus more pronounced than the agentic, but both are highly significant. The results also show that male and female teachers on average have both agentic and communal attributes.

Table 1. Gender differences in attributes

	Fixed effects		OLS - standardized	
	Agentic (model 1.1)	Communal (model 1.2)	Agentic (model 1.3)	Communal (model 1.4)
Female employee	-2.703*** (0.717)	7.249*** (0.619)	-0.208*** (0.0542)	0.599*** (0.0518)
Controls	No	No	Yes	Yes
Constant	69.38*** (0.491)	71.28*** (0.429)	0.0766+ (0.0437)	-0.297*** (0.0417)
Observations	1380	1380	1351	1351
R^2	0.011	0.099	0.025	0.095
Adjusted R^2	-0.089	0.007	0.022	0.093

*Note: Standard errors in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Fixed effects at high school level. Control variables include tenure, years being the manager's employee, and the manager's leadership position.*

The second step is to examine whether gender moderates the association between leadership and motivation as can be expected following the theoretical arguments and the empirical support for gender differences in agentic and communal attributes. Looking first at model 2.1. it is seen, that the high school teachers in general and the female employees in particular are quite motivated, scoring around 80 on a scale from 0 to 100. Nevertheless, the employees perceiving more transformational leadership or verbal rewards are even more motivated. Pecuniary rewards, however, decreases the motivation on average.

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Table 2: Regression of motivation on leadership with split sample on employee gender

Motivation	Split sample			
	Model 2.1	Model 2.2	Female Model 2.3	Male Model 2.4
Transformational leadership (TFL)	1.498 ^{**} (0.530)	1.353 ⁺ (0.772)	1.631 [*] (0.708)	1.219 (0.782)
Verbal rewards (VR)	1.948 ^{***} (0.481)	2.134 ^{**} (0.696)	1.689 [*] (0.668)	2.261 ^{**} (0.714)
Pecuniary rewards (PR)	-1.006 [*] (0.489)	-0.0687 (0.689)	-1.750 ^{**} (0.610)	-0.159 (0.704)
Female employee	4.297 ^{***} (0.701)	4.309 ^{***} (0.707)		
Female employee x TFL		0.203 (1.015)		
Female employee x VR		-0.374 (0.963)		
Female employee x PR		-1.758 [*] (0.853)		
Controls	Yes	Yes	Yes	Yes
Constant	78.01 ^{***} (0.643)	77.99 ^{***} (0.646)	82.55 ^{***} (0.542)	77.69 ^{***} (0.688)
Observations	1351	1351	706	645
R^2	0.072	0.077	0.043	0.071
Adjusted R^2	0.067	0.070	0.034	0.062

Note: Standard errors in parentheses, cluster robust. ⁺ $p < 0.10$, ^{} $p < 0.05$, ^{**} $p < 0.01$, ^{***} $p < 0.001$. Leadership components and continuous control variables are standardized. Control variables include tenure, years being the manager's employee, and the manager's leadership position.*

Starting with the only significant gender-moderation, model 2.2 shows that the negative association with pecuniary rewards is even more negative for female employees, as expected. In accordance with hypothesis 1c, female employees are significantly less motivated than male employees when they perceive more pecuniary rewards. However, gender does not significantly moderate the associations between motivation and transformational leadership or verbal rewards. The association between transformational leadership and motivation is, however, smaller and insignificant for male employees (model 2.4), which is in accordance with hypothesis 1a. Oppositely, the association between verbal rewards and motivation is smaller for female employees compared to male, which is opposite the expectation in hypothesis 1b. As argued, verbal rewards

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has both communal and agentic elements, which can explain the fact that verbal rewards has a significant positive association with motivation for both female and male employees. The agentic elements might thus be more pronounced than expected.

To sum up, gender seems to matter most in regards to pecuniary rewards and not significantly for transformational leadership nor verbal rewards. However, in a causal interpretation of the results, there is a small tendency for female employees to be more motivated by transformational leadership than male employees. Oppositely, female employees tend to be a bit less motivated by verbal rewards than male employees, which was not expected. Lastly, neither female nor male employees are motivated by pecuniary rewards, but as expected, male employees are most motivated thereby (or less demotivated).

The third step is to see if the gender moderation is mediated by gender-based attributes, and thus whether the gender differences described above weakens when the gender-based attributes are introduced in the analysis. As the gender-based attributes must moderate the association between the leadership components and motivation, to mediate a gender-moderation, I include a regression with the gender-based attributes without gender (Model 3.1). It is in particular interesting to see whether the gender-based attributes significantly moderates the association, because there were only limited support for the gender-moderation hypotheses.

Neither the communal nor agentic attributes significantly moderate the association between motivation and any of the leadership components (Model 3.1). However, starting with transformational leadership, it is worth noticing that the association with motivation tend to be stronger the more communal the employee is. Furthermore, the (insignificant) moderation of gender in model 2.2 of 0.203 points decreases to -0.138 points when the gender based-attributes are introduced as moderators in model 3.4. This gives some indication that a potential moderation of

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gender on the effect of transformational leadership is mediated by these attributes, in accordance with hypothesis 2a. The decrease in the gender moderation in model 3.2 indicate that it is primarily mediated by the communal attributes.

Table 3: Regression of motivation on leadership with gender and attributes as moderators

Motivation	Gender att. Moderation Model 3.1	Communal mediation Model 3.2	Agentic mediation Model 3.3	Gender att. mediation Model 3.4
Transformational leadership (TFL)	1.166* (0.520)	1.244+ (0.746)	1.272+ (0.735)	1.174 (0.715)
Verbal rewards (VR)	1.728*** (0.458)	1.878** (0.660)	2.365*** (0.667)	2.169*** (0.627)
Pecuniary rewards (PR)	-1.058* (0.470)	0.0694 (0.656)	-0.275 (0.685)	-0.123 (0.640)
Female employee		2.581*** (0.717)	5.103*** (0.652)	3.548*** (0.654)
Communal	3.131*** (0.394)	2.921*** (0.415)		2.569*** (0.404)
Agentic	3.235*** (0.400)		3.680*** (0.389)	3.483*** (0.395)
Female employee x TFL		-0.111 (0.973)	0.130 (0.984)	-0.138 (0.959)
Female employee x VR		-0.193 (0.941)	-0.595 (0.893)	-0.537 (0.870)
Female employee x PR		-1.967* (0.861)	-1.639+ (0.842)	-1.849* (0.833)
Communal x TFL	0.664 (0.479)	0.671 (0.491)		0.612 (0.452)
Communal x VR	0.000708 (0.538)	-0.132 (0.538)		0.112 (0.541)
Communal x PR	-0.0170 (0.596)	0.315 (0.528)		0.261 (0.585)
Agentic x TFL	-0.268 (0.502)		-0.235 (0.495)	-0.291 (0.489)
Agentic x VR	-0.341 (0.523)		-0.658 (0.517)	-0.491 (0.516)
Agentic x PR	0.825 (0.540)		0.838 (0.513)	0.777 (0.527)
Controls	Yes	Yes	Yes	Yes
Constant	80.21*** (0.395)	78.75*** (0.603)	77.65*** (0.595)	78.31*** (0.553)
Observations	1351	1351	1351	1351
R ²	0.169	0.122	0.157	0.192
Adjusted R ²	0.161	0.112	0.148	0.181

*Note: Standard errors in parentheses, cluster robust. + p < 0.10, * p < 0.05, ** p < 0.01, *** p <*

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0.001. Leadership components, gender-based attributes, and continuous control variables are standardized. Control variables include tenure, years being the manager's employee, and the manager's leadership position.

For verbal rewards both the communal and agentic attributes are further from significantly and substantially moderating the association, which is a necessary precondition for it to mediate the moderating effect (Model 3.1). Furthermore, the (insignificant) gender moderation in model 2.2 is not decreased in model 3.4. Therefore, there is no support for hypothesis 2b.

Turning to pecuniary rewards where an increased perception on average were associated with a 1.758 point larger decrease in motivation for female employees compared to male (Model 2.2). The question is, whether this difference is because female employees on average are less agentic and more communal. Model 3.1 shows us, that the association between pecuniary rewards and motivation as expected tend to be more positive, the more agentic the employee is. However, the gender-moderation does not weaken when including the gender-based attributes in model 3.4. When including the attributes an increase in perceived pecuniary rewards is associated with a 1.849 point larger decrease in motivation for female employees compared to male. This is thus approximately 0.1 point more than in model 2.2. This indicate that the gender-based attributes do not mediate this moderation.

Based on interviews with three female and three male employees and their managers, there especially seemed to be a gender difference in their opinion on the use of pecuniary rewards. Furthermore, several did not think pecuniary rewards could be used to a very high extent in high school. Therefore, I included questions about the respondents thoughts on the use of individual wage supplements as a tangible example of pecuniary rewards. Respondents were asked to what extent individual wage supplements could motivate them to put in an extra effort and whether they would create a bad culture in the workplace. The quantitative results are presented in table 4.

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Table 4. Attitudes towards pecuniary rewards

	PR motivates		PR creates bad culture	
	Model 4.1	Model 4.2	Model 4.3	Model 4.4
Female employee	-2.157 (1.441)	-0.952 (1.513)	3.837** (1.351)	1.869 (1.465)
Communal		0.719 (0.972)		1.407 (0.888)
Agentic		6.035*** (0.912)		-4.618*** (0.733)
Constant	41.73*** (1.249)	41.13*** (1.236)	71.89*** (1.387)	72.89*** (1.384)
Observations	1405	1389	1405	1389
R^2	0.001	0.033	0.005	0.034
Adjusted R^2	0.000	0.031	0.004	0.032

*Note: Standard errors in parentheses, cluster robust. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Communal and agentic attributes are standardized. The dependent variable are coded from 0 to 100.*

The results supports the expectations and hypotheses 1c and 2c. However, the first interesting finding is, that high school teachers on average don't think pecuniary rewards can motivate them to put in extra work but thinks that it will create a bad culture in the workplace. However, there is also some differences in the respondents attitudes. Though not significant, female employees tend to be less likely to claim that pecuniary rewards can motivate them and they are significantly more likely to think that it will create a bad culture. These associations seems to be mediated by the gender-based attributes, as the gender differences decreases when the gender-based attributes are included. As expected agentic employees are more likely to think they can be motivated by pecuniary rewards and less likely to think it will create a bad culture.

To sum up, there is some support for hypotheses 2a and 2c. Even though not significant, there is some indication that especially communal attributes might mediate a potential gender moderation on the association between transformational leadership and motivation. Regarding pecuniary rewards, the agentic attributes and gender tend to moderate the association with motivation, however, the gender-based attributes do not mediate the gender-moderation. However, asking the

employees more directly about their attitudes towards pecuniary rewards, at least the agentic attributes seem to mediate the gender difference.

Conclusion and discussion

The empirical support for gender and gender-based attributes moderating the association between leadership and motivation is not as pronounced as expected. None of the moderations for transformational leadership and verbal rewards are statistical significant. However, as expected male and agentic employees are significantly more motivated when perceiving more pecuniary rewards compared to female and less agentic employees respectively. However, the mediated moderation analysis does not support that the gender-moderation is mediated by gender-based attributes. However, the direct questions about pecuniary rewards gives more support to the gender-based attributes mediating the gender difference. However, it still raises the question of whether these gender-based attributes should be at the base of the theoretical arguments for gender differences in leadership. Further research is thus needed to get a better understanding of gender-based attributes.

Regarding pecuniary rewards, it is also worth noticing that even though there is a gender difference in the association between pecuniary rewards and motivation, this does not seem to make it beneficial to use pecuniary rewards towards male employees, as they also experience a negative association on average. It seems that at least for Danish high school teachers pecuniary rewards are at best motivating the most agentic male employees. It thus seem more beneficial to use transformational leadership and/or verbal rewards towards the Danish high school teachers, regardless the gender.

Even though all moderations regarding transformational leadership are statistically insignificant, the empirical tendencies provide partial support for the theoretical arguments. The

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association between transformational leadership and motivation tend to be more positive for female employees than for male, and this moderation also seem to be mediated by the employee's communal attributes, as expected. In causal terms there thus seems to be a small tendency for female employees to be more motivated by transformational leadership than male employees, because they tend to be more communal. A next step for further research on gender differences in the effectiveness of transformational leadership would be to look into the content of the vision, as this might be important for which gender or gender-based attributes it speaks to (Krogsgaard, Thomsen, and Andersen 2014). I would expect that a vision focused on being the best organization or increasing the students grade average would fit better with the agentic attributes of being competitive and ambitious while a vision focused on the students well-being would fit better with the communal tendency to be sympathetic and concerned with others.

The moderations regarding verbal rewards are not statistically significant either. However, the association with motivation tend to be more positive for male employees compared to female, which goes against the expectation. As described verbal rewards does contain elements that are both communal and agentic, and the agentic elements might just exceed the communal. However, if the verbal rewards are more agentic than communal, the agentic employees would be expected to have a more positive association between verbal rewards and motivation, which does not seem to be the case. More agentic employees experience a less positive association between verbal rewards and motivation than less agentic employees on average (Model 3.3). The degree to which verbal rewards can be seen as communal or agentic might depend on how they are communicated to the employee. There might for example be a difference between whether appreciation and acknowledgement is given to an individual or a group and whether it is given in person or in public. Public and individual appreciation might relate more to the agentic attributes of ambition, competition and confidence, while at personal or group acknowledgement might fit better with the

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communal tendency to be interpersonal and concerned with other people. This would be an interesting distinction in the research on verbal rewards and gender differences.

This paper only consider the gender of the employee, but the gender combination between the employee and manager might also matter for how the leadership is being received and how motivated the employee is (Grissom, Nicholson-Crotty, and Keiser 2012). I therefore urge future research to look further into this always present but understudied phenomenon.

As a conclusion there is some indication that pecuniary rewards are most effective towards male and agentic employees while transformational leadership is most effective towards female and communal employees. However, it seems that pecuniary rewards often decreases instead of increases the teachers' motivation. Verbal rewards, on the other hand, seems effective towards most employees, and perhaps even male employees more than female.

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Appendix

Table A1: Confirmatory Factor Analysis of Motivation

Work Motivation	
I do my best to complete my job regardless of the challenges	0.622
I am willing to start work early or stay until late to finish a job	0.674
It has been difficult for me to become truly involved in my present job (reversed)	0.395
I probably do not work as hard as others with a similar kind of job (reversed)	0.463
I carry out extra work in my job, which is actually not expected from me	0.501
It seems as if time is dragging by slowly when I am at my job (reversed)	0.342
n	1,370
χ^2	143.78
RMSEA	0.105
CFI	0.876
SRMR	0.057

Note: CFA with standardized factor loadings. RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square residual.

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Table A2: Confirmatory Factor Analysis of perceived leadership

<i>My manager...</i>	
Transformational leadership	
“Concretizes a clear vision for the high school’s future”	0.790
“Seeks to make employees accept common goals for the high school”	0.853
“Strives to get the high school’s employees to work together in the direction of the vision”	0.739
“Strives to clarify for the employees how they can contribute to achieving the high school’s goals”	0.792
Verbal rewards	
“Gives individual employees positive feedback when they perform well”	0.826
“Actively shows his or her appreciation of employees who do their jobs better than expected”	0.887
“Personally compliments employees when they do outstanding work”	0.880
Pecuniary rewards	
“Rewards the employees’ performance when they live up to his or her requirements”	0.663
“Rewards the employees’ dependent on how well they perform their jobs”	0.864
“Points out what employees will receive if they do what is required”	0.645
n	1,374
χ^2	312.65
RMSEA	0.080
CFI	0.965
SRMR	0.041

Note: CFA with standardized factor loadings. RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square residual.

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Table A3: Confirmatory Factor Analysis of communal and agentic attributes

The questions below inquire about how you are as a person, i.e. not only at work, but also privately. Each question consists of a pair of contradictory characteristics and a scale from 1-7. The numbers form a scale between the two contradictory characteristics. Please choose the number you think best describes where you fall on the scale.

Communal attributes	
Not at all emotional vs. very emotional	0.405
Not at all able to devote self completely to others vs. Able to devote self completely to others	0.511
Very rough vs. very gentle	0.346
Not at all helpful to others vs. very helpful to others	0.592
Not at all kind vs. very kind	0.604
Not at all aware of feelings of others vs. very aware of feelings of others	0.718
Not at all understanding of others vs. very understanding of others	0.756
Very cold in relations with others vs. very warm in relations with others	0.714
Agentic attributes	
Not at all independent vs. very independent	0.458
Very passive vs. very active	0.553
Not at all competitive vs. very competitive	0.294
Can make decisions easily vs. has difficulty making decisions	0.456
Gives up very easily vs. never gives up easily	0.489
Not at all self-confident vs. very self-confident	0.721
Feels very inferior vs. feels superior	0.546
Goes to pieces under pressure vs. stands up well under pressure	0.494
n	1,372
χ^2	993.03
RMSEA	0.079
CFI	0.826
SRMR	0.078

Note: CFA with standardized factor loadings. RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square residual.

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Table A4: Descriptive statistics and correlations

	n	Mean	S.D.	Min	Max	1	2	3	4	5	6	7
1 TFL	1380	56.54	22.77	0	100	1.000						
2 VR	1380	55.39	25.08	0	100	0.593*	1.000					
3 PR	1380	36.46	20.89	0	100	0.554*	0.606*	1.000				
4 Motivation	1380	80.13	13.20	16.67	100	0.160*	0.164*	0.083*	1.000			
5 Gender	1380	0.52	0.50	0	1	0.011	-0.041	-0.006	0.151*	1.000		
6 Agentic	1380	0.68	0.13	0.04	1	0.050	0.028	0.056*	0.265*	-0.115*	1.000	
7 Communal	1380	0.75	0.12	0.06	1	0.108*	0.082*	0.051	0.251*	0.309*	0.049	1.000
8 Years as teacher	1370	17.80	10.54	0	50	0.035	0.054*	0.065*	0.099*	-0.073*	0.097*	-0.064*
9 Years under manager	1359	5.15	4.61	0	35	0.087*	0.031	0.078*	0.008	0.002	0.026	-0.011
10 Principal	1376	0.31	0.46	0	1	0.209*	0.035	0.191*	0.015	-0.041	0.085*	-0.050

Note: * $p < 0.05$