Reducing Women's Lack of Fit with Leadership? Effects of the Wording of Job Advertisements

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Abstract

Linguistic forms which refer to persons impact mental representations of these persons: When masculine generics are used, women tend to be cognitively underrepresented, whereas feminine-masculine word pairs are associated with a higher cognitive inclusion of women. The present research investigates whether linguistic forms affect women's perceived lack of fit with leadership positions, which is particularly pronounced for high-status leadership positions. In a hiring-simulation experiment (N = 363), we tested the effects of different linguistic forms used in German-language job advertisements: (1) masculine forms (e.g., *Geschäftsführer*, CEO, masc.'), (2) masculine forms with (m/f) (e.g., *Geschäftsführer (m/w)*, 'CEO, masc. (m/f)'), and word pairs (e.g., *Geschäftsführerin/Geschäftsführer*, 'CEO, fem./CEO, masc.'). The job ads announced either a high-status or a low-status leadership position. Results showed that female applicants were perceived to fit less well with the high-status position than male applicants when the masculine form or the masculine form with (m/f) was used—even though they were perceived to be equally competent. However, female and male applicants were perceived as fitting the high-status leadership position similarly well when word pairs were used.

Keywords: leadership, lack of fit, hiring, gender-fair language

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Job Advertisements

Although women have increasingly gained access to leadership positions, they are still underrepresented in top management (European Commission, 2011). This may be due to a male bias in hiring leaders which is caused by a persisting 'lack of fit' between women's stereotypical attributes and attributes required for leadership positions (Heilman, 1983, 2012). Another line of research documents that linguistic forms used to refer to women and men can shape mental representations: When masculine forms are used as generics for both genders, readers or hearers think predominantly of men (i.e., male bias). Gender-fair forms (e.g., feminine-masculine word pairs), on the other hand, are associated with a greater cognitive inclusion of women and weaken the male bias in mental representations (for a review, see Stahlberg, Braun, Irmen, & Sczesny, 2007). This finding raises the question whether gender-fair linguistic forms, which help to overcome male biases in mental representations, may also help to overcome the perceived lack of fit for women with leadership, which is reflected in male biases in personnel selection procedures for leadership positions.

Women's Lack of Fit with Leadership Positions

Women's underrepresentation in leadership positions is a widespread phenomenon: In the European Union, for instance, women overall hold 32 % of leadership positions across countries. However, the higher the hierarchical level and the higher the status of a position, the lower the proportion of women: Only 12% of board members and just over 3% of board chairs are women (European Commission, 2011). The 'lack of fit' model (Heilman 1983, 2012) provides a theoretical basis for this phenomenon by explaining why

and how gender stereotypes can compromise women's career progress: Women are typically described with communal traits (e.g., helpful, kind, likeable), whereas men are typically ascribed agentic attributes (e.g., assertive, ambitious, dominant). These stereotypes about women and men are not only different, "but they tend to be oppositional, with women seen as lacking what is thought to be most prevalent in men" (Heilman, 2012, p. 115). Attributes required of a successful manager still correlate more strongly with the agentic traits ascribed to men than with the communal traits typically ascribed to women. This is also referred to as the "think manager – think male" phenomenon (TMTM, Schein, 1973, 2001).

In the leadership context, women seem to fit the common image of a successful manager or leader less well than men do. The perceived lack of fit (Heilman, 1983, 2012) or incongruity (Eagly & Karau, 2002) between women's assumed capabilities and the demands of leadership positions evokes the impression that women are not equipped to handle such male-typed tasks. This fact has various negative consequences for women aspiring to these positions (see Eagly & Karau, 2002, Heilman, 2012, for overviews): it fosters a male bias in hiring decisions (Schein, 2001), wage decisions (Eagly & Karau, 2002; Stanley & Jarrell, 1998) and employment-related recommendations (Heilman & Okimoto, 2008; Heilman, Wallen, Fuchs, & Tamkins, 2004).

Nowadays approval of women in middle management and lower-status leadership positions is increasing (Eagly & Carli, 2007), but lack of fit perceptions for women seem to persist when it comes to high-status leadership positions that are characterized by authority and prestige (Heilman & Parks-Stamm, 2007). In contrast to top management positions, middle management positions are described as requiring more interpersonal skills, which is

congruent with the feminine stereotype (Eagly & Karau, 2002). Women's persisting lack of fit with high-status leadership positions (Eagly & Karau, 2002; Heilman, 2012; Koenig, Eagly, Mitchell, & Ristikari, 2011) is not equally reflected in all dimensions or stages in personnel selection procedures for high-status leadership positions: Research has revealed that in hiring-simulation paradigms where female and male applicants are described as well qualified for the job and therefore perceived as similarly competent, female applicants are evaluated less favorably for the positions than their male counterparts. For instance, studies by Glick, Zion, & Nelson (1988) as well as by Rudman & Glick (1999, 2001) showed that female applicants were perceived as less hirable for typically male positions than male applicants, *even though* evaluations of female and male applicants' competence were similar. Biernat and Fuegen (2001) asked participants to evaluate applicants and draw up a shortlist (i.e., to preselect a number of applicants for the final hiring decision) as well as to make a hiring decision. They found differences between these two dimensions: Female applicants were more likely to be shortlisted, but less likely to be hired than male applicants. Thus, women's lack of fit with leadership—respectively a male bias—appears to prevail in later stages of personnel selection procedures, where males are preferred over females even though they were judged or treated equally in earlier stages of the selection procedure. The male bias seems to affect the preference for a candidate, but not judgments of candidates' competence, just as there is a male bias in selection and hiring decisions, but not in shortlisting.

In general, the lack of fit model (Heilman, 1983, 2012) posits that, based on the perceived job requirements, a person's fit with a job is assessed by taking his/her perceived

attributes into account. Hence, the more male-typed a job is deemed to be—be it because of work responsibilities (Gaucher, Friesen, & Kay, 2011), the wording of the job description (Bem & Bem, 1973), the proportion of men in the occupation (Cejka & Eagly, 1999), or the level and function of the position within an organization—the greater women's perceived lack of fit (Heilman, 2012). This raises the question whether linguistic forms used in advertisements of leadership positions can impact the perceived fit of women with the respective position.

Linguistic Forms Referring to Women and Men

Languages differ in the linguistic forms they provide to refer to women and men. In languages with grammatical gender—many European languages such as Italian, French, Spanish or German, or Polish—most human nouns and pronouns are gender-marked and are differentiated for feminine and masculine. In English, on the other hand, which is a natural gender language, most human nouns are gender-neutral, and gender marking is largely restricted to pronouns (*he/she*) (see Stahlberg et al., 2007, for an overview). In both types of languages, however, masculine-male forms (nouns and pronouns) are used as generics, which means that they are used as forms referring to *both* women and men (e.g., German *Lehrer* 'teachers, masc.', English *a politician … he*), a practice, which is not regarded as gender-fair. A gender-fair alternative would be to use word pairs which combine a feminine and a masculine noun (German *Lehrerin/Lehrer* 'teacher, fem./teacher, masc.') or a feminine and a masculine pronoun (*he/she*) (see Braun, Sczesny, & Stahlberg, 2005, for an overview of gender-fair forms in German; see UNESCO, 1999, for an overview of recommendations for English).

While masculine generics have the advantage of being shorter, they are ambiguous because masculine forms serve a double function: They can refer specifically to male persons, but also (generically) to mixed groups and to persons whose gender is unknown or irrelevant (Stahlberg et al., 2007). Past research on the interpretation of masculine generics in comparison to gender-fair forms has consistently demonstrated that masculine forms are associated with a male bias in mental representations. Gender-fair forms, on the other hand, are associated with a higher mental inclusion of women. This was shown for many languages including English (e.g., Crawford & English, 1984; Gastil, 1990; Gabriel, Gygax, Sarrasin, Garnham & Oakhill, 2008; Hamilton, 1988; Ng, 1990), French (e.g., Chatard, Guimond, & Martinot, 2005; Gabriel et al., 2008), Italian (e.g., Merkel, Horvath, Maass,& Sczesny, 2014), and German (e.g., Braun et al., 2005; Gabriel et al., 2008; Irmen & Rossberg, 2004; Heise, 2000).

A series of experimental studies on German conducted by Braun and colleagues (2005) revealed that masculine forms are associated with lesser cognitive inclusion and slower identification of women as members of certain groups (such as athletes, actors or other occupational groups); also, more women were mentioned when gender-fair forms (e.g., word pairs) were used instead of masculine forms. This effect was particularly pronounced in male-dominated fields, where women constituted the minority. Recent research confirmed these results, but revealed that the ascribed competence of job holders was independent of the linguistic label (Merkel et al., 2012), probably because competence ascriptions are rather stable (Fiske, Cuddy, Glick, & Xu, 2002). Moreover, schoolchildren perceived women as more successful in typically male professions (e.g., physicist, pilot, firefighter) when the professions were presented with word pairs rather than masculine

forms (Vervecken, Hannover & Wolter, 2013). Taken together, these findings indicate that linguistic forms play a crucial role for perceptions of the gender-typicality of professions (i.e., gender ratio), for ascriptions of success in professions, but not for competence ascriptions.

To our knowledge, only one study has investigated the impact of linguistic forms on perceived fit with leadership positions: Asked to name politicians who might run for chancellorship in Germany, participants suggested more female candidates when word pairs (*Politikerin oder Politiker* 'politician, fem. or politician, masc.'; *Bundeskanzlerin oder Bundeskanzler* 'chancellor, fem. or chancellor, masc.') were used than when masculine forms were used. In this study suggesting politicians as leaders was male-biased with masculine forms, but not with gender-fair forms such as word pairs (Experiment 3, Braun, Sczesny, & Stahlberg, 2002). In line with this finding, the present research aims at examining whether the use of linguistic forms in job advertisements for leadership positions affects the selection of applicants in an employment context.

Linguistic Forms in Job Advertisements

Analyses of job advertisements have shown that vacant positions are still often announced with masculine forms (e.g., for Italian: Mucchi-Faina, 2005; for German: Bundesministerium für Frauen und Öffentlichen Dienst, 2009; Hellinger, 2004, Lujanksy-Lammer, 2006), although this is prohibited by law (e.g., in Austria, Gleichbehandlungsgesetz, 2004). This is particularly true for the leadership context. A recent study conducted in Austria documented a 27:1-ratio of masculine to gender-fair forms in job advertisements for leadership positions. In other work domains or types of

positions there was no such extreme predominance of masculine (over gender-fair) forms (Bundesministerium für Frauen und Öffentlichen Dienst, 2009).

In addition to masculine forms and word pairs, another form occurs in many job advertisements which has not yet received any attention in research: the masculine form followed by (m/f), to indicate 'male/female' in the respective language (e.g., German *Geschäftsführer (m/w)*, 'CEO (m/f)'). This form has been documented in job advertisements in various languages, including Dutch (Pauwels, 1998), Spanish (European Parliament, 2008), and German (Bundesministerium für Frauen und Öffentlichen Dienst, 2009; Hellinger, 2004; Lujanksy-Lammer, 2006). The addition of (m/f) is supposed to make the generic use of the masculine 'more gender-fair' by pointing to the inclusion of both genders. But it is doubtful whether this form is equally efficient as word pairs, given that the reader initially encounters and processes the masculine form and only subsequently receives a minimal linguistic cue to the inclusion of women.

The overwhelming prevalence of masculine forms in advertisements for leadership positions—whether followed by (m/f) or not—strongly suggests that linguistic forms may play a critical role in sustaining women's perceived lack of fit with leadership. Experimental research on English-language job advertisements has shown that the forms used in job ads impacted women's self perceived fit: Women were more interested in typically male jobs when women were explicitly mentioned (e.g., *linewoman*, *frontwoman*) compared to job advertisements in gender-neutral (e.g., *lineworker*, *frameworker*) or male-only formulations (e.g., *lineman*, *frontman*) (Bem & Bem, 1973). Moreover women felt more ostracized (i.e., ignored), were less motivated to pursue the job, and identified less with the job when masculine forms (e.g., *he* and *his*) were used in job descriptions and in

mock job interviews rather than gender-fair forms (e.g., *he/she* and *his/her*). Women also

reported lower expectations regarding their future feeling of belonging to the workplace

(Stout & Dasgupta, 2011).

To sum up, the use of different linguistic forms in job advertisements has been

shown to impact the self-perceived fit of applicants; but so far nothing is known about the

effects it may have on recruiters' evaluations and their perception of the applicants' fit with

a position. This question is of practical importance because job advertisements can easily

be formulated in a gender-fair way without causing major controversies (compared to

quotas, for example) or expenses for the organization.

Aims and Overview of Research

The present research addresses the question whether the forms used to describe

leadership positions in job advertisements impact the perceived fit of female and male

applicants with these positions. We conducted a hiring-simulation study to investigate

whether the wording in German-language job advertisements affect evaluations of

applicants in a personnel selection procedure. We compared three linguistic versions of

advertisements for a leadership position — masculine forms, word pairs, and masculine

forms with (m/f). As women's perceived lack of fit with leadership positions is particularly

pronounced for positions high in status and authority (Heilman & Parks-Stamm, 2007), we

also varied the status of the position: a project leader position with lower status versus a

CEO position with higher status. We assumed the perceived suitability of female and male

applicants to be moderated by linguistic form and status of leadership position. While we

expected no differences for the low-status position, our *Hypothesis* for the high status position reads as follows:

Female applicants for high-status positions are perceived as less suitable than male applicants when masculine forms or masculine forms with (m/f) are used in the advertisement; this difference is absent when a word pair is used.

Past research documents that male applicants were preferred as leaders even though female and male applicants' competence was evaluated similarly (e.g., Rudman & Glick, 1999, 2001). Moreover, competence ratings were not affected by different forms of job titles in German (Merkel et al., 2012). Therefore, applicants' perceived competence should not be impacted by linguistic forms.

Although it would seem to be plausible to assume that women favor women in selection procedures more than men do, women and men do not differ in their evaluations of applicants and hiring decisions, since they share the same societal gender stereotypes (see Heilman, 2012). Numerous studies have revealed that women and men evaluate and hire female and male applicants in much the same way. A meta-analysis with 49 studies showed that—against its initial hypothesis—women and men did not differ in their hiring decisions for female and male applicants (Davison & Burke, 2000). Moreover, women and men have been found to react similarly to linguistic forms (Merkel et al., 2012). Hence, we did not investigate effects of participants' gender on the perceived lack of fit in the present studies.

In earlier research by Braun and colleagues (Experiment 3, 2002) participants were asked to name and suggest politicians as potential future leaders in order to capture mental representations. The present study, however, is the first to investigate effects of linguistic

forms in job advertisements in personnel selection procedures for leadership positions. It is also the first study to examine the impact of masculine forms with (m/f). The present study broadens the scope of the existing literature in that we attempt to show potentially far-reaching consequences of organizations' language use in job advertisements for women's career opportunities in the context of leadership.

Our study employed a between-subjects design, in order to make applicant gender less salient than it would be in within-subject designs (Davison and Burke, 2000): We asked participants to evaluate only one applicant, who was either female or male. Such paradigms are regarded as a reasonable and valid method and are common practice (see the meta-analyses of Davison & Burke, 2000; Olian, Schwab, Haberfeld, 1988; Swim, Borgida, Maruyama, & Myers, 1989). Meta-analyses in the context of gender discrimination in hypothetical hiring situations have revealed that effects of gender discrimination can be even larger in within-subjects than in between-subjects designs (Olian et al., 1988). The meta-analysis by Davison and Burke (2000), which included far more studies than the one by Olian and colleagues (1988), showed no differences between within- and between-subjects designs.

Hiring-simulation paradigms per se have more ecological validity today than in former times, as nowadays recruiting is often outsourced to so-called 'Head Hunters' or employment agencies. They are given job titles and job descriptions and professionally recruit profile-matching employees for these jobs. Moreover, evaluating only one applicant also served to disguise the aim of the study and to limit the time needed for filling out the questionnaire.

Method

Participants and Design

A sample of 363 students of business and economics from Austrian universities (226 women, 132 men, 5 without gender information; mean age: 24.50; $SD = 5.24$) completed the web-based questionnaire. We chose students of business and economics because they are more likely than others to be involved in personnel selection in their future careers. Students were recruited via email and were offered the opportunity to win one of five 20 Euro-vouchers in a lottery. We removed data of 6 participants, because it was their second participation in the study. Data of their first participation remained in the sample.

The study was based on a 2 (Status of Position: low vs. high) x 3 (Linguistic Form: masculine form vs. masculine form with (m/f) vs. word pair) x 2 (Applicant Gender: female vs. male) between-participants design.

Material and Manipulations

Job advertisements. We created German-language job advertisements based on material used by Bosak and Sczesny (2008). These fictitious job advertisements were standardized with respect to layout, company name (*Haber Incorporated*), and information on the organization and job description. We balanced communal and agentic traits in the description of job requirements to minimize chances of language-unrelated gender biases (see Gaucher et al., 2011). Only job titles varied in the job advertisements: (a) with respect to status of leadership position (low vs. high) and (b) with respect to linguistic form (masculine form vs. masculine with (m/f) vs. word pair). We used the order feminine-masculine in word pairs, since this is fairly common in German-speaking countries and is

recommended in German guidelines or regulations for gender-fair language (e.g., Land Hessen, 2005; Land Oberösterreich, 2003).

As leadership positions we chose a 'project leader' for the position of lower status, and a 'chief executive officer' (CEO) for the position of higher status relative to leadership positions in general. The job title for the high-status position in the word pair form, for example, was *Geschäftsführerin/Geschäftsführer* ('CEO, fem./CEO, masc.'). All German job titles used in the job advertisements and their English translations are presented in Table 1. The respective job title appeared as heading of the job advertisement and was repeated once in the job description. To ensure that the linguistic form and status manipulation remained salient throughout the study, the respective job title appeared in the header of each page of the questionnaire measuring the dependent variables.

Applications. We created applications which had allegedly been submitted via online-application forms and included the applicants' curriculum vitae (CV). We provided information on name, address, birth date, education, job experience, and further education as well foreign languages and management-relevant IT knowledge. In order to make applicants appear sufficiently suitable and experienced for the respective job, the alleged web applications for the low- and the high-status leadership position differed in applicant's age, leadership experience, further education and IT knowledge. Applicants for the high-status leadership position were older, reported two more prior job positions, more further education and greater IT knowledge. Pictures of applicants were not provided to prevent effects of attractiveness (e.g., Eagly, Ashmore, Makhijani, & Longo, 1991; Heilman & Stopeck, 1985). The program of the web-based questionnaire randomly assigned participants to experimental conditions.

Manipulation checks. In order to check if the high-status leadership position was indeed ascribed a higher status than the low-status position, participants were asked *"Does the position advertised in the job advertisement have more or less prestige and status compared to other leadership positions?"* Participants provided their answers on a 7-point Likert scale (1 = much less prestige/status; 7 = much more prestige/status). At the end of the questionnaire, participants were asked whether the applicant was female or male.

Measures. Participants rated the applicant's competence and suitability for the leadership position, indicated her or his hireability and the wages they found appropriate for the applicant.

Competence. We asked participants "To what extent do you ascribe the following traits to the applicant?" Participants were presented with five commonly used competence traits (competent, efficient, confident, skillful and capable, Cuddy, Fiske & Glick, 2004 and Cuddy et al., 2009, Cronbach α = .90) and indicated their answers on 7-point Likert scales (1 = very little; 7 = very much). To back up the cover story (collection of data about the applicant's personality profile) and to distract attention from competence items, the competence items were mixed with 10 filler traits which were related to person orientation or warmth (e.g., helpful, friendly; Cuddy et al., 2009) or other traits (e.g., punctual, curious).

Applicant's aptitude. Participants evaluated the applicant's aptitude with the advertised position with four items: (1) *"The person is very well qualified for the advertised leadership position"*, (2) *"It would be difficult for the person to fulfill the job requirements"* (reverse coding), (3) *"The person fits the profile of the advertised leadership position"*, and (4) *"The advertised leadership position fits the person's skills and abilities."*

We adopted these items from Bosak and Sczesny (2008). Participants indicated their agreement with these statements on 7-point Likert scales (1 = strongly disagree; 7 = strongly agree).

Hireability. We asked participants to indicate how likely they would hire the applicant for the advertised position on a 7-point Likert scale (1 = very unlikely; 7 = very likely).

Appropriate wage. Participants were asked what wage they considered appropriate for the applicant relative to the average wages paid for the job (which represented the scale midpoint). Participants gave their responses on an 11-point rating scale ranging from -50% to +50%, in 10% increments (derived from Becker, Glick, Ilic, & Bohner, 2011).

In order to explore the structure underlying the six items (i.e., the four items measuring applicant's aptitude, the hireability item and the appropriate wage item), and to uncover whether these items could be reduced to one or more powerful, coherent and reliable subsets, we conducted an exploratory factor analysis (principal component analysis). As the resulting factors could be correlated, we used oblique rotation (direct oblimin) (Tabachnick & Fidell, 2001). This analysis revealed one factor only. This factor had an eigenvalue of 4.01 and was labeled "suitability". All item loadings ranged between .59 and 89. This factor explained 66.79 % of variance.

Following this analysis, the six items measuring suitability were Z-standardized, because they involved different answer formats, and were averaged to form a suitability index (Cronbach's α = .90). Competence and suitability correlated significantly (r = .61, $p \leq$ .001).

As professional experience can influence evaluations and decisions in personnel selection procedures (Krings, Sczesny, & Kluge, 2011), we measured the participants' professional experience with the help of a yes/no-question and controlled for it in all analyses.

Procedure

Upon entering the web-based questionnaire, participants were informed that the study was about the effectiveness of web applications, as nowadays more and more organizations collect CVs via an online form as a first step in personnel selection procedures. They were asked to imagine that they were responsible for personnel selection. They were shown one job advertisement and then the CV of either a female or a male applicant. Subsequently they were asked to evaluate the applicant, to rate his or her competence and aptitude for the position, to indicate his or her hireability and the appropriate wage. In the framework of manipulation checks, participants were asked to recall some details of the applicant's curriculum vitae (e.g., age, foreign languages spoken) in order to support the cover story. Finally, they were asked for demographic information as well as information on their professional experience. It was impossible to return to earlier pages of the web-based questionnaire. After completing the questionnaire participants were debriefed and thanked for their participation.

<div align="center">

Results

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Throughout this article, *p*-values of .05 or less are considered significant, *p*-values between .05 and .10 are considered marginal (Salovey, 2000). All contrasts are one-tailed.

Manipulation checks

Forty-four participants (12 %) did not remember the applicant's gender correctly; these participants were removed from the sample. Thus, the final sample consisted of 319 participants (199 women, 117 men, mean age: 24.49, SD = 5.22). As intended, the low-status position was rated lower in status (M = 3.95) than the high-status position (M = 4.37), $t(317)$ = -2.94, p = .004.

The Impact of Linguistic Forms

Our sample of business students varied in professional experience; professional experience turned out to correlate positively with ascribed competence (r = .18, $p \leq$ .001) and suitability (r = .23, $p \leq$ .001). Therefore we controlled for professional experience and conducted analyses of covariance with competence and suitability as dependent variables.

Before testing our hypothesis we subjected competence and suitability to a 2 (Status of Position: low vs. high) x 3 (Linguistic Form: masculine form vs. masculine form with (m/f) vs. word pair) x 2 (Applicant Gender: female vs. male) multivariate analysis of covariance (MANCOVA). This analysis showed that the covariate professional experience was associated with the two dependent variables competence and suitability, F (2, 305) = 9.73, $p \leq$ .001, η^2_p = .06. The results revealed a multivariate significant main effect of Status, F (2, 305) = 13.92, $p \leq$ .001, η^2_p = .08, and a marginal two-way interaction of Status x Applicant Gender, F (2, 305) = 2.92, p = .056, η^2_p = .02.

Competence. The ANCOVA for competence revealed that the covariate professional experience correlated with competence ratings, F (1, 306) = 10.04, p = .002, η^2_p = .03. Furthermore, a main effect of status, F (1, 306) = 12.56, $p \leq$ .001, η^2_p = .04, indicated that applicants for the low-status position were perceived as less competent (M =

4.77) than applicants for the high-status position ($M = 5.20$). No other effect reached significance (all ps > .148). All means and standard deviations are presented in Table 2. In addition, all means and standard deviations are presented in Appendix A, differentiated for participant gender.

Suitability. The ANCOVA for suitability showed that the covariate professional experience was associated with suitability, $F (1, 306) = 19.03, p \leq .001, \eta^2_p = .06$. A significant main effect was found for status of position, $F (1, 306) = 27.68, p \leq .001, \eta^2_p = .08$. Applicants for the low-status position were perceived as less suitable ($M = -.25$) than applicants for the high-status position ($M = .22$). The interaction status of position by applicant gender was marginally significant, $F (1, 306) = 3.41, p = .066, \eta^2_p = .01$. Most importantly, the hypothesized three-way interaction status of position by linguistic form by applicant gender, $F (2, 306) = 3.77, p = .024, \eta^2_p = .02$, reached significance. In order to decompose this interaction, we will present analyses for each position separately.

The ANCOVA for the *low-status position* revealed no significant effects, except for the covariate professional experience, $F (1, 145) = 11.15, p \leq .001, \eta^2_p = .07$. This indicates that female and male applicants for the lower-status position of project leader were perceived as similarly suitable.

The ANCOVA for the *high-status position* revealed that the covariate professional experience was associated with suitability, $F (1, 160) = 7.87, p = .006, \eta^2_p = .05$. A significant main effect for applicant gender, $F (1, 160) = 4.51, p = .035, \eta^2_p = .03$, indicated that female applicants were perceived as less suitable ($M = .05$) than male applicants ($M = .35$). In addition, the two-way interaction linguistic form by applicant gender was marginal, $F (2, 160) = 2.47, p = .087, \eta^2_p = .03$.

In order to test our hypothesis concerning differences between female and male applicants for the high-status position in the three linguistic conditions, we calculated one-tailed *a priori contrasts*. In the case of two independent variables and their combined effect on one dependent variable, planned contrasts of this kind are considered more appropriate for testing *a priori* hypotheses than *F-* tests of a univariate ANOVA (Hager, 2000; 2002), as they have more power to test predicted mean differences (Hager, 2002). Professional experience was included as a covariate in all analyses, but since calculations of contrasts cannot include covariates, we used residuals of suitability. These residuals were calculated by partializing professional experience from suitability ratings (using the option of saving residuals in regression analyses). Additionally, we calculated $r_{contrast}$ as recommended effect size for the present contrasts (Sedlmeier & Renkewitz, 2013; Rosenthal, Rosnow, & Rubin, 2000). Results of the contrasts revealed the following: Female applicants were perceived as significantly less suitable for the high-status position than male applicants when the masculine form was used ($p = .002$, $r_{contrast} = .22$); this difference was marginal for the masculine form with (m/f) ($p = .069$, $r_{contrast} = .12$). In the word pair condition female and male applicants were rated as similarly suitable ($p = .489$, $r_{contrast} = .02$).[i] All means and standard deviations are given in Table 2. Means are also displayed in Figure 1. Appendix B presents all means and standard deviations differentiated for participant gender.

Discussion

The present study was designed to gain insights into the effects of linguistic forms in job advertisements on personnel selection procedures. Employing a hiring-simulation paradigm, we investigated whether the use of masculine forms in advertisements for a

leadership position was associated with a perceived lack of fit for women and whether word pairs could reduce this lack of fit. The results confirmed our hypothesis: Linguistic forms affected suitability ratings for the high-status leadership position, but not for the low-status position. More specifically, female applicants were perceived as fitting the high-status position less well than male applicants when it was advertised in the masculine form. This effect was marginal for the masculine with (m/f). When a word pair was used, however, female applicants were perceived as fitting the position similarly well as their male counterparts. Thus, women's lack of fit with top management disappeared when explicit and symmetrical reference was made to a (potential) female and a male leader with a word pair. This finding confirms earlier results which showed that female professionals were suggested for a political leadership position more frequently (Braun et al., 2005) or were ascribed more success (Vervecken et al., 2013) when word pairs were used to designate the positions in comparison to masculine forms. The finding that linguistic forms impacted suitability ratings only for the high-status, but not for the low-status position is in line with other research findings which document that top management is perceived as more 'masculine' and that women's perceived lack of fit is more pronounced for positions of higher than lower levels (Eagly & Karau, 2002; Eagly & Carli, 2007; Heilman & Parks-Stamm, 2007; Koenig et al., 2011).

According to the lack of fit model (Heilman, 1983, 2012), a linguistic form may function as a signal of job requirements when women's fit with a leadership position is assessed by comparing their (stereotypical) attributes and job requirements. In our study, women's perceived fit with top management apparently increased when the position was advertised with a word pair in a gender-balanced or symmetrical way, compared to the

masculine form (whether combined with (m/f) or not). This is in line with the statement that the extent of the perceived lack of fit between a woman's attributes and the nature of the respective position "regulates the amount of bias exhibited" (Heilman, 2012, p. 117). Taking into account that occupations are perceived as more male-typed when presented with masculine forms and more gender-balanced when word pairs are used (Braun, et al., 2005; Merkel et al., 2012) and considering that women's perceived lack of fit with a position is more pronounced the more male-typed the position is deemed to be (Bem & Bem, 1973; Gaucher et al., 2011; Heilman, 2012), we conclude that word pairs counteracted the "maleness" of the high-status position. The present research provides further evidence for the lack of fit model by showing that the proportional representation of women and men in a certain job—even a linguistic representation in a job advertisement— can be related to "bias-curtailing effects" (Heilman, 2012, p. 121).

As expected, linguistic forms did not affect competence ratings, which confirms findings of recent research (Merkel et al., 2012). Irrespective of linguistic condition, applicants for the low-status position were perceived as less competent and were less likely to be employed than applicants for the high-status position. This is not surprising and can be explained as follows: In order to make applicants appear suitable for the respective positions, applicants for the low-status position (project leader) were presented as possessing less work experience and less IT knowledge than applicants for the high-status position (CEO).

The present research broadens the scope of past findings on the effects of gender-fair language. Earlier research has largely demonstrated that different linguistic forms influence mental representations and social perception (see Stahlberg, et al., 2007 for an

overview). But masculine forms—compared to gender-fair language—also have tangible implications in the work context, such as excluding women from particularly male-dominated fields (Bem & Bem, 1973; Merkel, et al., 2012; Stout & Dasgupta, 2011). The present results provide first empirical evidence that gender-fair forms in job advertisements can reduce the perception of women's lack of fit with leadership positions and may thus have a positive effect on the evaluation of female applicants in personnel selection procedures.

Furthermore, this is the first study which experimentally investigated ramifications of the masculine form combined with (m/f). This variant was developed specifically for job advertisements and is recommended by the European Parliament (2008) as a gender-fair form replacing the masculine only. In contrast to this view, our results show that this form is associated with a perceived lack of fit for women with top management, just like the masculine form is. Hence, just adding the letter 'f' for 'female' (in German: *w* for *weiblich*) to mark the inclusion of women does not suffice to level ascriptions of fit for female and male applicants for the high-status position. Moreover, it is not clear whether the order of 'm' first and 'f' second in (m/f) plays a role. We do not assume that changing the recommended order from (m/f) to (f/m) (e.g., European Parliament, 2008) would make a big difference, as the masculine job title would still dominate in the caption of the job advertisement (*Geschäftsführer (m/f)* or *Geschäftsführer (f/m)*), but this would have to be tested empirically. According to our findings, the outcome of the selection procedure for the high-status position was more gender-fair only when the entire feminine job title appeared as part of a feminine-masculine word pair in the advertisement. This seems to suggest that gender equality and symmetry are achieved to the extent that the linguistic

forms used are equal and symmetrical.

Limitations and Future Directions

One limitation of our study is that the findings are based on a hiring-simulation paradigm with a between-subjects design, whereas the world is a '*within-subjects world*' (Heilman & Chen, 2005, pp. 440). In particular, applicants are usually compared with other applicants in real-life personnel selection procedures. Evaluating one applicant only therefore does not reflect reality. Nevertheless, such paradigms are regarded as a reasonable and valid method and are commonly used (see Davison & Burke, 2000). We also argue that hiring-simulation paradigms have more ecological validity today than in former times, as was argued above.

As for the question of sampling, a meta-analysis comparing how managers and recruiters vs. university students evaluated job applicants revealed that the magnitude of bias did not differ between these two groups (Olian et al., 1988). However, a more ecologically valid sample, for instance, human resources managers, would be desirable to confirm that experts' evaluations as well are affected by linguistic forms.

Another limitation of our study is that the manipulation of applicant gender apparently was not salient enough, given that 12% of the participants failed to recall it correctly. Removing these participants lowered the power of our study: Post-hoc power analysis with G*Power (Faul, Erdfelder, Lang & Buchner, 2007) revealed that—given our final sample size of 319 participants, design and effect size of the hypothesized three-way interaction—our analysis had a power of 62% and thus did not reach the critical conventional power of 80% (Cohen, 1992). Reduced power in studies may be associated with a higher likelihood of false negative effects, a higher probability that an effect does not

reach statistical significance and effect inflation (i.e., an overestimation of the respective

effect size; Button, Ioannidis, Mokrysz, Nosek, Flint, Robinson, & Munafo, 2013). But

despite the reduced power of the present study, we found the hypothesized impact of

linguistic forms on suitability ratings.

  To further extend knowledge on the impact of different linguistic forms used in job

advertisements, future studies should take a closer look at the use of masculine forms with

the addition of (m/f). This form has received very little attention in research, although it is

frequent in job advertisements. Also, more research is needed to determine which other

alternative forms can reduce gender biases to which degree, for instance, gender-neutral

expressions such as *Geschäftsführung,* 'corporate management', or the capital I- form

which combines the masculine and the feminine in one word by capitalizing the first letter

of the feminine ending (e.g., *GeschäftsführerInnen*, Braun et al., 2005). Although the law

for equal treatment in Austria (Gleichbehandlungsgesetz, 2004), for instance, prohibits the

use of feminine-only forms, it would be of theoretical and practical interest to test the

effects of exclusively feminine forms in advertisements. Would readers interpret this form

as a signal that only women are wanted and perceive female applicants as more fitting than

male applicants?

  A further question is whether and how effects of linguistic forms interact with the

'think crisis – think female' stereotype. This phenomenon indicates that in times of crisis

women are preferred over men for leadership positions (Ellemers, Rink, Derks & Ryan,

2012; Gartzia, Ryan, Balluerka, & Aritzeta, 2012; Ryan, Haslam, Hersby, & Bongiorno,

2011). Considering that executives of an organization are aware of whether their

organization is in a crisis or not when they are making a hiring decision, this question is an important one.

Practical Implications

The results reported here are highly relevant to organizational language use and to women's career perspectives, because women (and organizations) are still faced with the *glass ceiling* (Hymowitz & Schellhart, 1986, Kaufmann, Isaksen, & Lauer, 1996) or with the *labyrinth* (Eagly & Carli, 2007), which women have to overcome to reach higher management levels. Our results suggest that there is a simple and efficient way for organizations to reduce women's disadvantages in the leadership context: making women linguistically visible. Laws, policies and guidelines in European countries demand the use of gender-fair language in job advertisements as a measure of gender equality anyway (e.g., Chancellerie fédérale, 2000; Europäisches Parlament, 2009; UNESCO, 1999). Using gender-fair language in job advertisements is a measure which is easily applicable and does not create extra expenses for the organizations concerned.

Conclusions

The present research has shown that linguistic forms which refer to women and men in an explicit and symmetric manner (i.e., word pairs) have the potential of reducing the perception of women's lack of fit with high-status leadership positions. In a broader perspective, the present study underlines the fact that linguistic forms can affirm and reinforce inequalities by impacting "decision making in such ways that serve to preserve group inequality and the prevailing status quo" (Gaucher et al., 2011, p. 122). Our research provides first empirical evidence that a gender-fair wording of job advertisements may

counteract the ascribed lack of fit for women with leadership positions.

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Table 1

German Job Titles for Low- and High-Status Positions

Status of Position	Linguistic Form		
	Masculine Form	Masculine Form with (m/f)	Word pair
Low Status	*Projektleiter*	*Projektleiter (m/w)*	*Projektleiterin/Projektleiter*
	'project leader, masc.'	'project leader, masc., (m/f)'	'project leader, fem./project leader, masc.'
High Status	*Geschäftsführer*	*Geschäftsführer(m/w)*	*Geschäftsführerin/Geschäftsführer*
	'CEO, masc.'	'CEO, masc., (m/f)'	'CEO, fem./CEO, masc.'

Table 2

Means (Standard Deviations) for Competence and Suitability by Status of Position,

Linguistic Form and Applicant Gender.

	Status of Position	Linguistic Form	Applicant Gender			
			Female		Male	
			M	*SD*	*M*	*SD*
Competence	Low Status	Masculine Form	4.69	1.27	4.41	1.10
		Masculine Form with (m/f)	4.69	1.16	4.84	.78
		Word Pair	4.77	.87	5.31	1.24
	High Status	Masculine Form	5.01	.85	5.29	1.23
		Masculine Form with (m/f)	5.23	.97	5.19	.95
		Word Pair	5.14	.88	5.29	.84
Suitability	Low Status	Masculine Form	-.14	.79	-.48	.78
		Masculine Form with (m/f)	-.47	.66	-.25	.79
		Word Pair	-.09	.72	-.13	1.13
	High Status	Masculine Form	-0.13	.88	0.49	.74
		Masculine Form with (m/f)	0.07	.78	0.32	.72
		Word Pair	0.22	.65	0.21	.74

Figure caption

Figure 1: Suitability (z-standardized averaged suitability for position, hireability and

   appropriate wage) for Female and Male Applicants for a High-Status Position. Higher

   numbers reflect higher manifestations of the variable.

Appendix A

Means (Standard Deviations) for Competence by Status of Position, Linguistic Form, and

Applicant Gender, differentiated for Participant Gender.

Status	Linguistic Form	Participant Gender	Applicant Gender			
			Female		Male	
			M	*SD*	*M*	*SD*
Low Status	Masculine Form	Women	5.05	1.11	4.89	1.05
		Men	4.05	1.40	3.91	1.00
	Masculine Form (m/f)	Women	4.65	1.38	5.17	.59
		Men	4.77	.23	4.29	.79
	Word Pair	Women	4.71	.99	5.65	.90
		Men	4.86	.65	4.45	1.63
High Status	Masculine Form	Women	5.22	.54	5.09	1.44
		Men	4.74	1.12	5.60	.73
	Masculine Form (m/f)	Women	5.37	1.12	5.09	.91
		Men	4.97	1.22	5.27	1.02
	Word Pair	Women	5.16	.99	5.24	.92
		Men	5.07	.52	5.46	.61

Appendix B

Means (Standard Deviations) for Suitability by Status of Position, Linguistic Form, and

Applicant Gender, differentiated for Participant Gender.

Status	Linguistic Form	Participant Gender	Applicant Gender			
			Female		Male	
			M	*SD*	*M*	*SD*
Low Status	Masculine Form	Women	.03	.78	-.17	.65
		Men	-.44	.79	-.79	.83
	Masculine Form (m/f)	Women	-.55	.74	-.12	.69
		Men	-.25	.36	-.48	.96
	Word Pair	Women	-.10	.81	-.06	1.03
		Men	-.01	.54	-.31	1.44
High Status	Masculine Form	Women	.15	.43	.41	.70
		Men	-.50	1.18	.63	.80
	Masculine Form (m/f)	Women	.13	.88	.17	.82
		Men	-.04	.54	.47	.63
	Word Pair	Women	.08	.67	.27	.71
		Men	.57	.49	.05	.86

[i] Analyses with all 363 participants—including those participants who failed the manipulation check for applicant gender— overall yielded the same results.