

**Gendered Wording in Managerial
Recruitment Materials: *How
Organizations Lose Potential Female
Applicants***

Master's Thesis

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PREFACE

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EXECUTIVE SUMMARY

Over the course of the past three decades, several researchers started to show interest in gender segregation, especially with regards to women, in top-level occupations. Vast bodies of evidence show that women are not only necessary in top-level occupations but are also interested in these positions. Prior research is primarily based on individual-level differences between men and women. The current research contributes to the top-level gender-segregation literature in that it looks at an institutional-level factor that withholds women from applying for top-level occupations. More specifically, this research focuses on the use of gendered wording in recruitment materials and how this influences the inclination to apply for dissimilar sexes. Next to gender differences, this research also takes into account how the stereotyping of occupational areas and managerial experience influences the application inclination of candidates. Moreover, we are interested in whether the Dutch labor market makes use of gendered wording in the recruitment materials that are exposed to potential candidates. In other words, we test if the effects are existent and therefore have profound managerial relevance.

To test our interests, we conducted two studies. The first study we conducted, a natural field experiment, was designed to test whether gendered wording has an effect on a candidate's inclination to apply. In our natural field experiment ($N = 277$), we experimented with different types of recruitment messages (i.e., agentic, communal or aggregated) to candidates. Results indicate women have a different inclination to apply, depending on what type of message they receive. Yet, no significant difference was found between communal and aggregated messages on a women's inclination to apply. For men, no effects were found at all. In addition, we found that both the stereotype of the occupational area and the managerial experience have a significant influence on the inclination to apply.

In the light of the results found, we were interested in how relevant these results are on the Dutch labor market. For this reason, we designed a second study that allowed us to test whether managerial recruitment materials are perceived as more masculine or feminine themed, and what the associated inclination to apply of raters was for dissimilar sexes. The rating (N = 10) of thirty recruitment materials allowed us to draw some inferences, yet these must be carefully considered as the sample size is relatively small. Nevertheless, we found that women rate managerial recruitment materials as more agentic, as opposed to men. Consequently, women are less inclined to apply than men.

Hence, results have profound implications for both theory and practice. Our research adds to the body of gender-segregation literature, the labyrinth in particular, and employee attraction and self-selection. The findings are especially relevant for practice, as recruitment specialists can use the insights provided to enlarge and diversify their applicant pool so that they can gain a competitive advantage.

Keywords: gender-segregation, gendered wording, managerial women, employee attraction, recruitment strategies, agentic, communal, labyrinth.

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This is it; my masters' thesis and at the same time the end of my track at the Erasmus university. I could have never imagined becoming so knowledgeable and resourceful throughout my time as a student.

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1. INTRODUCTION

Gender diversity within organizations is not nearly a new topic. Over the past three decades, the topic of women and their positions within businesses grew popularity in both public debate as well as in academic literature. Vast bodies of evidence show the importance of female representation in the company as a whole and especially in top-level positions (e.g. Appold, Siengthai & Kasarda, 1998; Nielsen & Huse, 2010). However, despite the abundant amount of evidence in favor of more women in higher positions, the percentage of females seizing top-level positions increases at a slow pace. Early research by Bem and Bem (1973) examined sex segregation in top-level occupations via recruitment materials in the early days of the discussion of gender-inequality in the workforce. Yet, in that time, the preference for a male or female candidate was overly specified by the use of gender specific pronouns (i.e. he, she; Bem & Bem, 1973). Not surprisingly, Bem and Bem (1973) found that the use of gender specific pronouns discouraged the opposite sex from applying for a job. Though, more interestingly, they found that women did have interest in the male dominated positions when the gender specific words were sex-reversed. This finding is important to the debate of women in male-dominated occupations, as it shows female interest exists and other mechanisms withhold women from applying for the positions traditionally held by men. Yet, it also stresses the importance of wording in recruitment materials for application decisions.

More recent literature on gender segregation in top-level positions shows us that an important consideration is the use of subtle gendered wording (i.e., level of agentic and communal themed words related to traits and characteristics) in recruitment materials (Gaucher, Friessen & Kay, 2011). This is considered to be important as both men and women value and process information differently when considering whether or not to apply for a job (Hentschel, Braun, Peus & Frey 2014). In addition to gendered wording as a stand-alone construct for gender

segregation, prior research provides evidence that agentic and communal traits, which form the basis of the argument for gendered wording, relate to both occupational area (Muchinsky & Harris, 1977) as well as managerial level (Chen, Chartrand, Lee-Chai & Bargh, 1998). However, with regards to gendered wording in recruitment materials, previous research has primarily focused on individual-level gender differences in wording and the appealing and belongingness of recruitment materials with respect to gender (e.g. Gaucher et al., 2011; Barbulescu & Bidwell, 2013). Little attention has been paid to the effects of gendered wording as an institutional-level factor that impacts the candidate's inclination to apply. Moreover, to our knowledge, no research provides us with evidence for other factors influencing the relationship – except gender. As a result, it is theoretically and practically unclear whether and how gendered wording has an influence on applicant behavior. More specifically, it is unclear under which conditions the impact does, does not or partially exists.

In this research, we will address the issue by relying on several theories to develop and test a more comprehensive approach to the relationship of gendered wording and a candidate's inclination to apply for a job. Specifically, we will look into the influence of gender, occupational area and managerial experience on the main relationship. Through the social dominance theory (SDT) and social role theory (SRT) we establish a theoretical foundation for the origins of gendered wording in recruitment materials (Sidanius & Pratto, 1999; Eagly, 2013). We expect this to have an impact on the candidate's inclination to apply, as candidates use perceived person-job fit as a self-selection mechanism (Edward, 1991) that accompanies the evaluation of recruitment materials. Due to males and females being respectively agentic and communally stereotyped (e.g. Eagly & Karau, 1991; Glick & Fiske, 1996; Rudman & Kilianski, 2000), and the use of sex-related information processing patterns (Darley & Smith, 1995), we expect gender to positively influence the relationship when the sex of the applicant

corresponds with the gender-theme in the recruitment materials. For the occupational area, we expect a positive influence on the main effect when the gender-stereotype of the occupational area (Shinar, 1975) corresponds with gender theme of the words used in recruitment materials. The last moderator we believe influences the main relationship, is the managerial level of a candidate. Due to the chameleon effect (Chartrand & Bargh, 1999), we believe the relationship of gendered wording and the inclination to apply is negatively influenced as managerial level of a candidate increases. With this research, we try to find evidence for factors that influence the composition of the applicant pool for top-level positions, by looking at the use of gender-themed words. Therefore, the research question of this study is as follows:

“How does gendered wording in recruitment materials influence a candidate’s inclination to apply for top-level occupations?”

The answer to this question has profound managerial relevance. First of all, there is the discussion for greater gender parity in high-level occupations. Job advertisements consisting of words directed to or acquainted with a particular sex might suffice as an institutional-level mechanism that out selects the opposite-sex. Therefore, the status quo continues to exist at the hands of organizations themselves. Another managerial relevant reason is the deeper understanding of how to approach candidates, to increase the diversity of the applicant pool. Extensive marketing research constitutes evidence for idiosyncratic treatments for different consumers, where a candidate can be perceived as the consumer of recruitment materials. A deeper understanding enables managers to target job advertisements to a specific set of potential hires with the same characteristics (e.g. sex, background, expertise etc.), enlarging the applicant pool. In addition to severe managerial relevance, this research contributes to the scientific literature as well. Specifically, this research will contribute to the literature of sex segregation

and discrimination in managerial positions by looking into institutional-level factors. Therefore, this research adds to the body of literature that tries to explain what withholds women from obtaining top-level functions such as the ‘glass ceiling’ (Morrison, White & Van Velsor, 1987), ‘glass cliff’ (Ryan & Haslam, 2007) and the ‘labyrinth’ (Eagly & Carli, 2007). In addition, it will contribute to the literature of employee attraction (e.g. Kickul, 2001; Coldwell, Billsberry, Van Meurs & Marsh, 2008) and candidate self-selection (e.g. Edwards, 1991; Barbelescu & Bidwell, 2013).

2. THEORETICAL OVERVIEW

The theoretical overview of this study is meant to lay a theoretical ground for the constructs and their mutual relationships that constitute our research model. In order to research our main question, we start our theoretical approach with the origins of gendered wording and how gendered wording comes about in recruitment materials. Secondly, we look into the theoretical foundation of the outcomes related to gendered wording. That is, we will elaborate on how candidates theoretically evaluate recruitment materials when they are exposed to gendered wording. This covers our main hypotheses. Yet, to understand when this relationship holds, we look into the influences of gender, occupational area, and managerial experience. We introduce these additional variables to the main effect, to have a deeper understanding of specific conditional influencers.

2.1 Origins of Gendered Wording

As mention in the introduction to our research, the use of specific gender related words such as ‘he’ and ‘she’ in recruitment materials as described by Bem and Bem (1973) implying an overly specific preference for one sex, is usually not found in recruitment materials today. However, despite the absence of explicit reference to men or women as superlative candidates, it is still possible that – unconsciously – the gender of the ideal candidate is subtly conveyed through the use of words that stereotypically are overly associated with a particular sex (Gaucher et al., 2011). To illustrate the use of gendered wording in recruitment materials we draw on the example of Gaucher and colleagues (2011). In their research, they state that, for example, male dominated areas might use references such as ‘*dominance* of the market place’ or ‘*determine* selling prices’, whereas less male-dominated occupational areas might use ‘*excellence* of the market place’ or ‘*establish* selling prices’. In either of the examples the intentional meaning of

the description is exactly the same, yet the identification is different for dissimilar sexes (Gaucher et al., 2011). That is, women that are exposed to phrases including words such as ‘dominance’ or ‘excellence’ feel less comfortable to identify with these words, whereas men have no problem identifying themselves with these words. Interestingly, Gaucher and colleagues (2011) found no such effect for men. In other words, men did not identify more when exposed to masculinity description, whereas women identified less.

Evidence suggests this is particularly true in a top-managerial context, as the communication of recruitment materials have a significantly higher amount of masculine-themed words (Gaucher et al., 2011; Horvath & Sczesny, 2016). In addition, there are certain characteristics (e.g., competence, objectivity and self-confidence; Junker & Dick, 2014) cultures and societies associate with leaders. These characteristics are typically attributed to men (Israeli & Adler, 1994; Schein, 2007). From this attributional point of view, the ‘think manager – think male’ saying occurred (Schein, 1973; Schein, 2007). Even more so, the argument holds true with research on characteristics (e.g., ambition, leadership and reliability; Junker & Dick, 2014) attributed to top-level managers, which are typically male rather than female (Sczesny, Bosak, Neff & Schyns, 2004).

Considering the above, we can conclude biased gender representation in recruitment materials for managerial occupations, even though subtle, still exists through the use themed words. In the next paragraphs, we will theoretically substantiate for how this subtle themed-wording comes about and maintains the status quo in group-based (i.e., male versus female) inequality. We will discuss two psychological theories that contribute to the processes through which wording difference might occur in the materials for managerial positions (Gaucher et al., 2011).

The first theory we will discuss is the social dominance theory (SDT; Sidanius & Pratto, 1999). Secondly, we will look into the influence of social role theory (SRT; Eagly, 2013).

2.1.1 Social Dominance Theory

The theory of social dominance (SDT) focuses on individual, institutional and structural factors that contribute to various forms of group-based oppression (Sidanius, Pratto, Van Laar & Levin, 2004; Deutsch, 2006). The theory states that “human societies tend to organize as group-based social hierarchies” (Pratto, Sidanius & Levin, 2006). According to the theory, these group-based social hierarchies produce group-based inequality through institutional-level discrimination. Institutional-level discrimination, as explained by Deutsch (2006), is a civilized oppression that is embedded within the social structure itself through unquestioned norms and habits that produce and maintain group-based inequality. Yet, because of the support by society and cultural stereotypes, it usually happens unconsciously and with the best intentions (Deutsch, 2006), meaning we are unaware of discrimination happening.

When the principles of the SDT are applied to recruitment materials, we could argue that companies discriminate the female group on an institutional-level through recruitment materials. That is, gendered language reinforces existing gender inequality by discouraging women to apply for jobs in male-dominated fields, as the recruitment materials are biased. Therefore, in organizations, SDT can be used to explain institutional level discrimination and unchallenged group-based hierarchies. Interestingly, the effect is not symmetric as continuation of male dominance is much more predicated on keeping women out of male dominated occupations, than on men being kept out of female dominated domains (Gaucher et al., 2011). Therefore, SDT predicts more masculine-themed linguistic in male-dominated areas, yet not more feminine-theme words in female-dominated areas. Gaucher and colleagues (2011) found

evidence for this effect in two of their studies. In this regard, gendered language in recruitment materials might suffice as an institutional discriminator. In line with this argument and the principles of SDT, recruitment materials currently used by institutions might have an unintended and unconscious discriminatory influence which contributes to the gender segregation in top-level occupations.

2.1.2 Social Role Theory

Another psychological theory that might explain gender segregation in managerial occupations is the social role theory (SRT; Eagly, 2013). The SRT takes a different approach in comparison with the SDT, as it proposes that observations in gender role-differences cause gendered wording (Eagly, 2013). The theory explains gendered wording through gender roles and stereotypes which arose from the traditional roles of breadwinner and homemaker for men and women respectively. Over the years, these traditional roles for men and women became associated with accompanying traits (agency for men, nurturance/communal for women), where men hold the higher hierarchical role (Eagly, Wood & Diekmann, 2000). Hence, SRT adds to the formation of implicit leadership theories. Implicit leadership theories are the images of what leaders are like in terms of behaviors and traits (Junker & Dick, 2014). Research suggests that current implicit leader images are described as predominantly male (Junker & Dick, 2014), hence the saying ‘think manager, think male’.

Consequently, in the light of SRT, gendered wording is the result of ‘original gender roles’, where the sex that predominantly holds the position defines the wording for the recruitment materials advertised in the job market. Consequently, stereotypically agentic or communal traits are stressed in the recruitment materials for a particular occupational area. The conceptualization of agentic and communal stereotypes is documented in abundant amounts of

researches (e.g. Glick & Fiske, 1996; Chodorow, 1999; Eagly et al., 2000). Chodorow (1999) describes stereotypically male agentic traits as autonomy, self-confidence, assertiveness and general self-concern, whereas women are described with words such as nurture, interdependence, affectionate and gentle. Gaucher et al. (2011) confirm this line of thought in their study when they examined the use of language in managerial recruitment materials, as they found managerial positions – traditionally held by men – produce job advertisement with primarily masculine linguistics (Gaucher et al., 2011).

Drawing on both SDT and SRT, we have reason to believe gendered wording in managerial recruitment materials is likely to exist. For the purpose of this research, we expand our theoretical framework by looking into the consequences of gendered wording in advertisement to get a firm understanding of how gendered linguistics influence application decision.

2.2 Impact of Gendered Wording

The first stage of most hiring processes is to make candidates aware of the available job (Rynes & Cable, 2003). Awareness is usually created by publishing vacancies that provide a brief job description and characteristics the ideal candidate must have, to have candidates engage in self-selection mechanisms. For example, a hairdresser is not likely to apply for the job of an accountant since the hairdresser does not match the portrayed characteristics. However, from the SDT and SRT we can conclude that job descriptions are likely to portray a particular gender theme, related to the sex-domination in a field. For this reason, the self-selection mechanism might not only work to out select individuals from different occupations, but also from within the same occupation. In this light, the impact of gendered wording on the application decision of candidates can be explained through the theory of person-job fit (O'Reiley, 1977), causing candidates to engage in a self-selection mechanism in the very first stage of the hiring process.

2.2.1 Perceived Person-Job fit

The person-job fit (PJ-fit) is defined as the match between a person's characteristics and the characteristics that form a job (Edwards, 1991; Kristof, 1996). Originally, the theory explains fit when an individual is already hired and practicing. For the purpose of this research, we approach the theory from a perception point of view, arguing a candidate will take the perceived fit into consideration prior to applying. Consequently, the PJ-fit fit suffices as an explanation for the self-selection mechanism that influence the application decision. Through this mechanism, specific gender-themed recruitment materials might dissuade opposite sex from applying (Gaucher et al. 2011), causing gender segregation in the applicant pool. This is particularly true for managerial positions, as these positions are predominantly held by men and produce masculine-themed recruitment materials. Consequently, even though women might have the right set of skills for the job, they out select themselves because they do not feel the job is appealing or they do not have a certain level of belongingness with the job (Barbulescu & Bidwell, 2013). In addition, Gaucher et al. (2011) provided evidence that job belongingness is more important to candidates than their identification with necessary skills. Therefore, the use of gendered wording cause candidates to engage in self-selection mechanisms leading to out select themselves, even though they are qualified for the job. Moreover, Gaucher and colleagues (2011) found that belongingness to a job is even more important for women than men. Consequently, the sex composition of the applicant pool is influenced, and gender segregation is maintained.

Drawing on both SDT, SRT and PJ-fit, we have reason to believe gendered wording in managerial recruitment materials is likely to exist and that a candidate's perceived fit as a self-selection mechanism that influences their application decision. To test our theoretical arguments, the following hypothesis is developed:

Hypothesis 1: There is a relationship between gendered wording and a candidate's inclination to apply.

Yet, we believe that the perceived fit is influenced by other factors than just the domination of gendered-wording. In the next chapter we will look into the factors we believe moderate the application decision. We will discuss the impact of gender, occupational area and managerial experience as self-selection mechanisms influencing perceived fit.

2.3 Possible Moderations

2.3.1 Gender

Reasonably, as gendered wording is about gender, we believe the gender of the applicant has an influence on the initial relationship. Stereotypes of both men and women have been widely documented (e.g., Eagly & Mladinic, 1989; Eagly et al., 2000; Duehr & Bono, 2006). In these documentations of gender stereotypes, men are ascribed to be more agentic, and women are described to communal. Characteristics belonging to the stereotypes of both men and women are in line with the traits as described by the SRT (Eagly, 2013). Logically, male find agentic-themed words more appealing, whereas women find communal-themed words more appealing (e.g. Chodorow, 1995; Gaucher et al., 2011). Following these arguments, we believe men and women feel a stronger fit with respectively masculine and feminine-themed words. Yet, we believe the fit impact is stronger for women for several reasons. First of all, as proposed by the SDT (Sidanius & Pratto, 1999), the effect is asymmetric. As explained before, top-level managerial positions are traditionally held by men, meaning the institutional mechanism of gendered wording dissuades women to apply (Gaucher et al., 2011), but not men as the produced materials are containing agentic aspects already. In addition, women preponderate

identification with sex-related words more than men, as they pay more attention to the context (Gaucher et al., 2011). The last reason we believe the impact is stronger for women is based on differences in information processing patterns of men and women. Women process information more comprehensively and thoroughly, picking up on subtle cues (Darley & Smith, 1995), whereas men take a more heuristic perspective missing out on subtle cues. This line of thought is supported by the research of Born and Tarris (2010), who researched student's inclination to apply when job requirements in gender-themed recruitment materials were presented as either traits or behaviors. In the study they found that women were indeed sensitive to presentation differences with regards to trait and behavior description. Women were more inclined to apply for masculine-themed materials when requirements were portrayed as behaviors rather than traits. For men no such effect was found. This study does not only explain the subtle cues women pick up on when processing information, it also explains the effects of how dissimilar genders respond (i.e., inclination to apply) to subtle wording differences. Hence, the following two hypotheses are developed with regards to gender as a moderating variable:

Hypothesis 2a: The relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that masculine-worded job advertisements, compared to feminine or aggregated, reduce a women's inclination to apply and have no impact on men's inclination to apply.

Hypothesis 2b: The relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that feminine-worded job advertisements, compared to aggregated or masculine, increase a women's inclination to apply and have no impact on a men's inclination to apply.

Yet, the masculine- and feminine-materials do not have to be mutually exclusive. Of course, the two can co-exist. In other words, this would mean that recruitment materials consist of both masculine and feminine stereotyped traits and behavior. This is relevant to our study, as a combination of both might increase how appealing the recruitment material is for women (Gaucher et al., 2011), as opposed to a sole masculine described material. Building on these arguments, the following hypotheses suggested:

Hypothesis 2c: The relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that masculine and feminine-worded, compared to masculine, job advertisements increase a women's inclination to apply and have no impact on a men's inclination to apply.

2.3.2 Occupational area

Occupational area can be described as the field of work an applicant is employed in (e.g., finance, marketing, sales etc.). The reason to believe working areas have an influence on the main relationship is because occupations have been stereotypically attributed to either men or women (e.g., Shinar, 1975; Gattys & Cann, 1981; White, Kruczek, Brown, & White, 1989). Stereotyping occupational areas finds its origin in SRT (Eagly 2013), where men are portrayed in occupations with agentic traits (e.g. military, accounting) and women are portrayed in occupations with communal traits (e.g. education, HR). In the study of Gattys and Cann (1981), the stereotyping of occupations was tested among young children between the age two and eight. Results showed that children in different age levels made significant distinctions between occupational groups (masculine vs. feminine). More interestingly, they showed that the extent of distinction significantly increased with the increase of age (Gattys & Cann, 1981). Hence,

drawing on the stereo typicality of occupations, the occupational area might be a relevant moderator to the main effect.

Possible reasons for these occupational gender distinctions are twofold. First of all, the proportion of men and women in the occupations psychologically influence perceptions of what is the ‘right’ or ‘wrong’ occupation for a sex (Shinar, 1975). Second, there is the prevalence of gender-based traits job occupants must have for a job (Shinar, 1975). If these traits of a particular sex are still portrayed in recruitment materials, the opposite sex is less likely to feel fit with the job at hand. Illustrating this effect, Barbelescu and Bidwell (2013) showed in their research that women are less likely than men to apply for finance and consulting jobs and are more likely to apply to general management positions because they feel less identification with firms and more with the latter. Moreover, less identification leads to lower expectation of job offer success, which dissuades candidates to apply. These arguments lead us to develop the following hypotheses:

Hypothesis 3a: The relationship between gendered wording in recruitment materials and a candidate’s inclination to apply is moderated by the occupational stereotype of the applicant, such that candidates in feminine stereotyped occupations have a stronger inclination to apply when the recruitment message feminine-themed.

Hypothesis 3b: The relationship between gendered wording in recruitment materials and a candidate’s inclination to apply is moderated by the occupational stereotype of the applicant, such that candidates in feminine stereotyped occupations have a weaker inclination to apply when the recruitment message masculine-themed.

We reckon that the latter proposition is much like the prior proposition. However, we believe this proposition adds value as it is not necessarily true that a stronger inclination to accept a communal message, reduces the chances that an agentic message is accepted when occupied in a feminine field.

2.3.3 Managerial experience

The level of managerial experience is believed to be a relevant factor due to the chameleon effect (Chartrand & Bargh, 1999). This effect is based on the theory of copying behavior (Chen, Chartrand, Lee-Chai & Bargh, 1998) and refers to unconscious imitation of social interactions, including postures, manners, expressions and speech. The result is that behavior of individuals one interacts with is unintentionally copied to match the social environment one is in (Chen et al., 1998; Chartrand & Bargh, 1999). In addition, imitative behaviors aid vicarious learning (Mattar & Gribble 2005) which occurs as a function of observing, processing and replicating the actions of other people. The chameleon effect is relevant to our study, as candidates engage in social interactions as they gain experience and the theory of gendered wording is built on traits and behaviors. Consequently, throughout their working life women engage in the process of the imitation of social interactions, which might allow them to move away from their initial core behaviors. For example, women working in top-level occupations – top-level occupations being currently male-dominated – adopt social patterns of their male colleagues, making them less susceptible to the influence of gendered wording as they feel more fit with masculine words, since they adopted these words to fit their environment. This argument can be invigorated by the study of Rudman and Glick (1999). In their research they show that women in top-level occupations present themselves as more agentic to be perceived as more hireable. Drawing on these arguments, the last hypothesis is developed:

Hypothesis 4: The relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the years of managerial experience of the applicant, such that managerial experience of a candidate weakens the association for masculine-themed recruitment messages, while no such association exists for aggregated or feminine themed recruitment messages.

Should we find significant evidence for the hypotheses as proposed above, there are several important implications. First of all, this would provide important theoretical implications for literature on institutional level influences of gender segregation in job advertisement. In addition, it would be an addition to the literature on job advertisement distribution, as it adds a perspective on how job advertisements should be marketed to whom. Other than theoretical contributions, there are several managerial contributions to this study. By knowing what to send to which type of candidate, managers can influence the distribution of the applicant pool. Specifically, in the light of the current female lack in higher occupations, managers can enhance the number of female applicants. The theoretical foundation of this research can be found in institutional level factors influencing gender inequality, stereotypical job types, and copying behavior as explained in theoretical substantiation for the hypotheses. In the next chapters we will further elaborate on the specific characteristics of our study and go into detail of how variables will be researched.

3. METHODOLOGY

Our research method consists of two separate studies. We will test the hypotheses as proposed above by conducting a natural field experiment. This is what we will refer to as our ‘main study’, as it allows us to test for the proposed associations. In addition, we will conduct a second study that allows us to explain if there is gendered wording observed in managerial recruitment materials in the Dutch labor market. The additional study is very relevant, as it allows us to draw solid conclusions on the potential findings in our first study.

4. MAIN STUDY

The main objective of our study is to find an association between gendered wording and the inclination to apply for a job. In addition, we will look into some moderators that might affect the relationship. By doing so, we try to find factors under which the condition will hold. That is, by substantiating for moderators we can predict universality of the relationship.

Testing the proposed relationships will be done through a natural field experiment. The choice for a natural field experiment is grounded in the fact that we would like to examine the relationship in a practical every-day setting, as this has not yet been done before. In our natural field experiment, we look into several variables to try to find support for our main hypothesis. The independent variable is gendered wording in job advertisement materials. Manipulations will be carried out based on a between-subject research design.

In total, four variables will be tested. The key variable, gendered wording in job advertisement materials, allows for three possible variations: masculine-worded messages, feminine-worded messages and aggregated messages (i.e., a combination of masculine and feminine words). Sex-

differences in wording already reveal our next variable, gender. The gender variable has two possible conditions: male and female. We are aware of the public debate about exclusive gender categories (Van Unen, 2018), nevertheless, we choose to stick to the traditional gender categories as the theory constituting this research is built on traditional male and female preferences and stereotypes. In addition to above mentioned variables, we add another two variables to our model. The first variable is occupational area, where we distinguish between masculine or feminine stereotyped occupations (Shinar, 1975). The second, and at the same time last variable is the managerial experience of the candidate, which is classified by years of managerial experience. The independent variable – and the accompanying moderators – lead to the dependent variable of interest: the candidate's inclination to apply for the job they are exposed to in the research setting. The outcome variable can be either positive, where the candidate is likely to apply for the job, or negative, where the candidate is not interested in the job offered.

In the remainder of this chapter we will discuss the sample we will be using, the method, dive into the material and manipulations we will be using and explain the specific variables in more detail. It is worth noticing that the data this research is built on, is collected in two different phases. That is, we extend the dataset that was collected by Geirnaerd (2018), who experimented with gendered wording in recruitment materials as well. However, her research was limited in sample size which limited significance of results. Moreover, her research did not include all variables necessary to test the hypotheses for this research. We will further discuss similarities and differences of our approach in the remainder of this chapter.

4.1 Sample

The sample we use to test our hypothesis is drawn from both middle and higher managerial workers population. This choice of sample might seem odd, as our main research question is to investigate the application behavior of solely top-level occupations. Yet, directly testing the relationship of gendered wording in recruitment materials on applicant behavior in top managerial positions requires to sample a group of candidates who are naturally exposed to such recruitment materials. Considering the fact that applicants are more likely to apply for jobs a level higher to their current job, the group we are interested in is the typical population of future applicants for higher managerial occupations. Therefore, a sample of both and middle and high-level managerial workers seems the right choice in order to make inferences about future top-level managers. In addition, this sample allows us to better test for the effects of the managerial experience moderator, as women in high-status positions often represent themselves as being more agentic due to copying behavior (Rudman & Glick, 1999). Thus, the population we are interested in are low- and middle level managers.

More specifically, we draw a sample from candidates that fit the experience criteria for the vacancies used in our experiment and have a LinkedIn profile. LinkedIn is a professional social media platform where people can share their professional profile and career track (Bonson & Bedranova, 2013). In other words, an individual's LinkedIn profile can be seen as a resume and can therefore be used to determine whether an individual is an applicable candidate to the vacancies in our research. Individuals that fit the profile of vacancies taking part in our experiment, are added to our sample. Suitability is determined by a professional headhunter and is dependent on the match between criteria advocated in the vacancy and the educational background, experience, skills and abilities portrayed on the LinkedIn profile of the candidate.

If a candidate is found eligible, he or she will be added to the pool of suitable candidates for the particular vacancy.

As discussed previously, data that is collected is used to extend the data that was collected by Geirnaerd (2018). In order to provide consistency of the variables used in our dataset, the definition of population and the sample approach for both researches are the same, which allows us to merge respondents. In this wave of data collection, 229 managerial workers were considered as eligible candidates to take part in our experiment. Out of the 229 subjects, we recorded a response from 102 candidates, resulting in a response rate of 49.5%. Geirnaerd (2018) recorded 121 participants. Hence, our total sample consists of 223 managerial workers, 87 men and 136 women.

Moreover, we use a control group to test whether the manipulations, as we will introduce later in this chapter, have an effect. The control group consists of 85 managerial workers, of which 32 are male and 53 are female. In the control group, we recorded a response rate of 63.5%. Hence, our control group consists of 54 people of which 20 are men, and 34 are female.

4.2 Method

To conduct our study and test our hypotheses, we sent out recruitment messages to candidates who are found to be suitable for the particular vacancy. As mentioned above, suitability is determined by a professional headhunter. When the candidate is found to be eligible, he or she will be added to the pool of suitable candidates. LinkedIn provides professional headhunters with the special option to use LinkedIn as a recruiting tool via a 'Recruiter Seat'. The recruiter seat includes powerful searching techniques (Purvis, 2015), which allows headhunters to search the platform for particular profiles – which form our eligible profile pool – and 'save' profiles

in a ‘project’ to get back to the profiles at a later time. Important to mention is that no (special) personal data from candidates is collected without their consent. Because profiles are ‘saved’ within the context of the LinkedIn platform, no privacy rules with regards to the collection and processing of data are violated. That is, candidates provide the data on the profile themselves where LinkedIn is the accountable processor (Tankard, 2016). No data that is able to lead back to an individual person in our subject pool is downloaded or processed, hence, rules and regulation towards GDPR are honored (Wachter, Mittelstadt & Russel, 2017).

When the pool of eligible candidates is completed (i.e. enough candidates to have a fair chance to proceed to the next steps of the recruitment process), the candidates will be randomly assigned to the control group, or to one of the three experimental conditions of the recruitment messages. The recruitment message will be sent out by the headhunter via the professional LinkedIn recruiter account. The message is a personal message from the headhunter to the candidate, conveying the interest in the person’s professional profile for the particular vacancy at hand. After an eligible candidate receives the recruitment message, he or she can decide to either accept or decline the message from the headhunter. When a message is accepted, the candidate has the ability to chat with the headhunter and, for example, ask for more specificities about the function (e.g., salary, benefits etc.). However, when the person declines the message, it shows their disinterest in the vacancy. LinkedIn even allows candidates to decline the message and give a reason. Thus, candidates do not accept messages to tell the headhunter they are uninterested and why. Consequently, responses to the recruitment messages are reported as either positive or negative. Despite the fact that usually candidates do not accept the message if not interested, we control for decline possibilities in acceptance reactions. Moreover, there is a possibility that receivers neither accept nor decline. Cases like this will be recorded as ‘non-

response' and will not take part in the research, as we cannot determine whether they are not interested, or just not seen or received the message.

4.3 Manipulation

In order to carry out our manipulation in the natural field experiment we used the list of masculine and feminine words created by Gaucher and colleagues (2011) to create recruitment messages. The list Gaucher and colleagues (2011) created is based on published lists of stereotyped agentic and communal words (e.g. Bartz & Lyon, 2004) and descriptive masculine and feminine trait words (e.g. Bem & Bem, 1973; Bem, 1974). Based on the list exhibited in appendix B (Gaucher et al., 2011), three experimental conditions were created: a masculine-worded recruitment message (agentic); a feminine-worded recruitment message (communal); and an aggregated recruitment message of masculine and feminine-themed words (both agentic and communal). To create these paragraphs, masculine and feminine words from the list (Gaucher et al., 2011) were selectively substituted into the paragraphs to highlight agentic, communal, or aggregated aspects of the job. The intervention consists of varying the created paragraphs after the managerial vacancy, which in total constitute the recruitment message send to the candidate (i.e., subject). Managerial vacates in recruitment messages used for interventions are positions in the occupational areas of Human Resource Management, General Management, Marketing, Sales, and Finance.

Care is taken that the standard message (i.e., information about particular vacancy portrait in message) contains no masculine nor feminine-themed words from the list, to ensure the gendered worded paragraph suffices as the source of variation in the experimental groups. The control group receives the standard message without the variation. To the message, a link to the

Table 1: Experimental paragraphs

	English	Dutch
Agentic	This position emphasizes professional achievement and an opportunity for personal advancement. You will enjoy the ability to demonstrate your competence and tackle work challenges with an efficient and agentic approach .	In deze rol kan je aanzienlijke professionele resultaten bereiken , enkele grote uitdagingen tackelen , persoonlijk groeien in de eigen carrière, en heb je de kans om te laten zien hoe je jouw vaardigheden efficiënt kan inzetten.
Communal	This position emphasizes social support and an opportunity to be benevolent toward others . You will enjoy the ability to demonstrate your generosity and tackle social challenges with a helpful and communal approach .	In deze rol kan je support bieden aan je stakeholders, en heb je de kans om anderen te helpen . Er wordt je de mogelijkheid geboden om te laten zien hoe sociaalvaardig jij bent, wat jij anderen te bieden hebt , en hoe jij de mensen om je heen verder kan helpen .
Aggregated	This position emphasizes professional achievement and an opportunity for personal advancement . You will enjoy the ability to demonstrate your competence and tackle work challenges with an efficient and agentic approach . This position also emphasizes social support and an opportunity to be benevolent toward others . You will enjoy the ability to demonstrate your generosity and tackle social challenges with a helpful and communal approach .	In deze rol kan je aanzienlijke professionele resultaten bereiken , enkele grote uitdagingen tackelen , persoonlijk groeien in de eigen carrière, en heb je de kans om te laten zien hoe je jouw vaardigheden efficiënt kan inzetten. In deze rol kan je support bieden aan je stakeholders, en heb je de kans om anderen te helpen . Er wordt je de mogelijkheid geboden om te laten zien hoe sociaalvaardig jij bent, wat jij anderen te bieden hebt , en hoe jij de mensen om je heen verder kan helpen .

Note: the **bold** words denote the masculine and feminine words. The colors indicate the split in the aggregated message

full original vacancy is attached. In total, three variations of messages for each of the managerial vacancy occurred, all emphasizing different aspects of the job by using masculine and feminine-themed words: agentic, communal and aggregated. As we conduct this research in the Netherlands, and the main language of most vacancies is Dutch, messages were translated into Dutch by means of a parallel translation method, where different translators discuss alternatives for translation until consensus is reached (Malhotra & Birks, 2007). Again, to be consistent in the merging of data, we use the same method of manipulation and corresponding messages as Geirnaerd (2018) used, despite our doubt on the translation of some of the words used in the messages. Resulting paragraphs can be found in table 1.

4.4 Measures

In order to provide evidence for our proposed hypothesis, we will be measuring several variables. Here, we distinguish from the research method used by Geirnaerd (2018). In the remainder of this chapter we will explain in depth how our variable will be measured.

4.4.1 Inclination to apply

The candidate's inclination to apply is the proposed outcome variable. The variable is dichotomous, meaning it has two possible variations. As already discussed in our method section, the inclination to apply is measured by either the acceptance or rejection of recruitment message sent to them. To determine whether the managerial worker is willing to apply or not for the job, we examine whether the response to the gendered worded recruitment message is positive (i.e., accepted) or negative (i.e., declined). A positive response to a recruitment message implies the managerial worker is interested in the position and thus is inclined to apply for the job. Subsequently, a negative response to the recruitment message implies that the

managerial worker is not interested in the position and would not likely be inclined to apply for the job at hand.

4.4.2 Gender of Applicant

The gender of the applicant is retrieved from the professional LinkedIn page of the candidate and is measured as either male or female, making the variable a non-metric dichotomous variable. As there is no natural order, the variable will be treated as nominal.

As previously mentioned, we are fully aware of the public debate arguing for non-defining gender categories. Yet, in order to test our hypotheses and contribute to the literature of sex segregation in top-level positions, we are obliged to make a distinction between genders as our theory is built on the distinction of two gender categories and their societal roles. Moreover, it is not the purpose of this research to obtain knowledge of non-defining gender categories with regards to their application decisions, despite the relevance in the present-day society.

4.4.3 Occupational Area

The occupational area of the candidate is the function someone is practicing within the context the candidate is employed in. Occupational areas are stereotyped as male or female, making the variable non-metric dichotomous. The variable will be measured on a nominal scale, as there is no logical natural order.

Occupations of subjects are classified into one of the groups on the basis of the stereotype occupation list by Shinar (1975). To determine the occupational area of a particular candidate, we will look at the occupational area of the managerial vacancy the candidate is found eligible for. The vacancies we classified as feminine are Human Resource Management, General

Management, and Marketing. Logically, the other two vacancies, Sales and Finance, are classified as masculine.

4.4.4 Managerial Experience

The managerial experience of the candidate is measured by the years of managerial experience of a candidate. This data is retrieved from the eligible candidate's personal LinkedIn page, where managerial experience is recorded. As managerial experience is measured in years, this is our only metric variable, which will be measured on a ratio-scale.

4. MAIN STUDY RESULTS

In our theoretical overview several hypotheses regarding gendered wording in recruitment materials were established. We based our hypotheses on the distinction between masculine, feminine, and the aggregation of both masculine and feminine recruitment materials to establish whether there is an effect (i.e., main effect). Moreover, we added moderating variables to check for universality among the conditions. Real-world data was collected to test the propositions made in our hypotheses. In this chapter we will present our findings, after our statistical strategy is discussed.

4.1 Statistical Strategy

Statistical procedures in SPSS allow us to test for the associations. Prior to processing our data for statistical procedures, we recorded for missing values and looked for the necessity to conduct an outlier analysis. Since we use primarily categorical variables and only one metric variable (i.e., managerial experience), the outlier analysis is limited to one variable. A boxplot analysis provides insight in three subjects that contain a potential outlier. However, boxplot analysis in SPSS uses an inter quartile range rule multiplier of 1.5, which Hoaglin, Iglewicz and Tukey (1987) proved to be ineffective in some cases. Indeed, a histogram of the cases shows no worrying cases. Appendix D provides visualization of our outlier analysis.

We chose to develop statistical measures by using cross-tabulation, which allows us to describe more variables simultaneously. From the cross-tabulation, the chi-square test (χ^2) is derived to test the significance of potential association. The same results can be accomplished by using the logistic regression method. Hence, we will conduct logistic regressions as well as the chi-

square test, to test our hypotheses. Another benefit of using logistic regression is that it allows us to graphically map the associations tested.

4.2 Main Effect

The central question to this research is whether there is a relation between the type of message (i.e., agentic, communal or aggregated) a candidate receives and the candidate's interest in the vacancy (i.e., accepted or declined). This is explained as hypothesis 1, which describes the main effect. To test whether there is a difference in the acceptance of different types of messages, including the control group, we used the chi-square method which proved the significance of the association ($\chi^2(3, N=277) = 16.894, p = .001$)¹. These results provide the evidence that there is a significant difference in acceptance of different messages. More specifically, we use a chi-square test see whether there is a significant difference between experimental groups, excluding the control group. Results show significance ($\chi^2(2, N=223) = 16.297, p = .001$). Thus, hypothesis 1 is supported.

4.3 Moderators

Now that we have established the fact that there is an effect between gendered wording and the inclination to apply (i.e., main effect), we will look at the proposed potential moderating variables: gender, stereotypical occupational area, and managerial experience.

4.3.1 Gender

Following our arguments in the introduction as well as in the discussed theory, gender might be one of the most important and interesting moderators. Introducing gender into the model

¹ Same results were found in binary logistic regression.

allows us to form a better understanding of types of messages that are accepted and by which sex. Table 1 provides a cross-tabulation of the message conditions that are either accepted or declined, separated by the variable ‘gender’ as a layer. A visualization of the same results is presented in the histogram in figure 1.

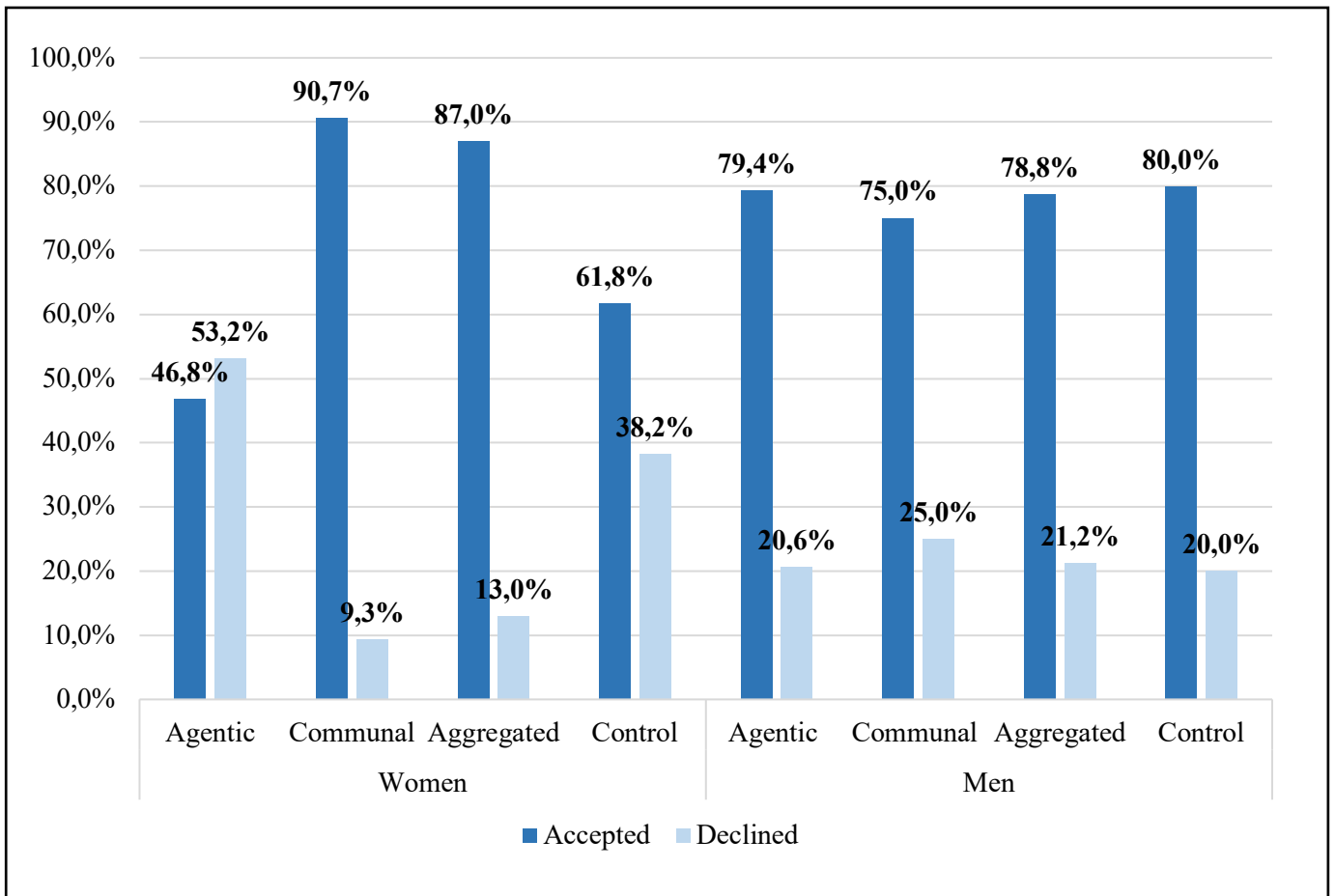


Figure 1: Female and male inclination to apply

Analyzing table and figure 1, we can see that the acceptance rate of men is relatively stable. Yet, we tested whether there is a significant difference between the control group, and the experimental messages. Not surprisingly, no significant effect was found ($\chi^2(1, N = 107) p =$

Table 1: Cross-tabulation of Type of Message * Inclination to apply * Gender

		Female			Male		
		Accepted	Declined	<i>Total</i>	Accepted	Declined	<i>Total</i>
<i>Agentic</i>	Count	22	25	47	27	7	34
	Expected count	34.9	12.1	45.0	26.6	7.4	34.0
	% within message	46.8%	53.2%	100.0%	79.4%	20.6%	100.0%
<i>Communal</i>	Count	39	4	43	15	5	20
	Expected count	31.9	11.1	43.0	15.6	4.4	20.0
	% within message	90.7%	9.3%	100.0%	75.0%	25.0%	100.0%
<i>Aggregated</i>	Count	40	6	46	26	7	33
	Expected count	34.3	11.8	46.0	25.8	7.2	33.0
	% within message	87.0%	13.0%	100.0%	78.8%	21.2%	100.0%
<i>Control</i>	Count	21	13	34	16	4	20
	Expected count	24.4	9.6	34.0	15.7	4.3	20.0
	% within message	61.8%	38.2%	100.0%	80.0%	20.0%	100.0%
<i>Total</i>	Count	101	35	136	68	19	87
	Expected count	101.0	35.0	136.0	68.0	19.0	84.0
	% within message	74.3%	25.7%	100.0%	78.2%	21.8%	100.0%

1.000). The same test was conducted for the female control group. Here, a significant effect was found ($\chi^2(1, N = 170) = 28.970, p < .001$). In other words, experimental and control groups significantly differed from each other in accepting and declining messages. Analyzing results of the experimental conditions compared to the control group, we can see there are significant differences for women, but not for men. Finding only significant differences for women is in line with our hypotheses. In the remaining of this paragraph, we will further test our proposed hypotheses.

Hypothesis 2a

Analyzing table 1 and figure 1, we clearly see that men and women respond differently to different types of recruitment messages. For example, 79.4% of the male candidates accept an agentic recruitment message, whereas only 46.8% of the female candidates do. In other words, women are less likely to accept an agentic message than men. The descriptive analysis is in line with the prediction we made in hypothesis 2a. To test for the significance of this prediction, we conduct a chi-square test for both men and women who receive an agentic message. That is, we use the sex of the candidate as a between-subject variable to make two different cases. For women a significant relationship was found ($\chi^2(1, N = 136) = 28.328, p < .001$). Meaning, a significantly larger proportion of women that received a masculine-themed recruitment message, was less inclined to accept the message (53.2%, see table 1) than women who received a feminine or combined-themed message (respectively 9.3% and 13.0%). For men, no significant relationship was found ($\chi^2(1, N = 87) = .051, p = .821$). Concluding, hypothesis 2a is supported: the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that masculine-worded job advertisements reduce a women's inclination to apply and have no impact on men's inclination to apply. Figure 2 provides a graphical representation of the gender

interaction ($\beta = -2.316$, $z = 11.042$ $p = .001$), computed by logistic regression. A summary of the stepwise logistic regression results is presented in appendix D, table D1. This figure, too, clearly shows that the inclination to apply decreases for women when the message is high in masculine content.

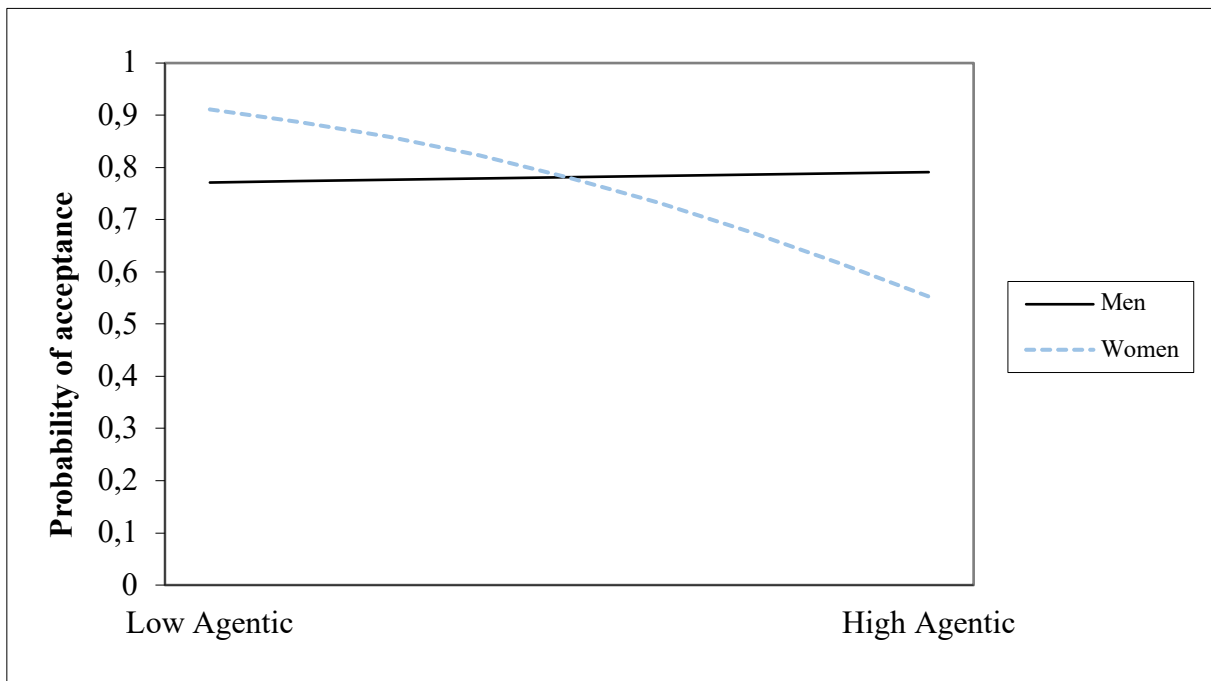


Figure 2: Acceptance probability of agentic message for men and women.

Hypothesis 2b

With regards to hypothesis 2b, which makes the prediction that a feminine-themed recruitment message increases a women's inclination to apply but has no relationship with a men's inclination to apply, another association is observed. Drawing on the statistics in table 1, we can already see that the communal message is accepted by more women (90.7%) relative to the other two conditions (agentic 46.8%; aggregated 87.0%). To test significance, we conducted a chi-square test. Again, we found a significant relationship for women ($\chi^2(1, N = 136) = 8.885$, $p = .003$). To test the association with regards to men, the chi-square test was not sufficient as one cell conveyed an expected count less than five. Therefore, the association with regards to

men is checked for any significant results by means of a Linear-by-Linear association. This test provides an insignificant result ($\chi^2 (1, N = 87); p = .698$). These results indicate that the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that feminine-worded job advertisements increase a women's inclination to apply and have no impact on a men's inclination to apply. Consequently, hypothesis 2b is supported. Using logistic regression, the interaction ($\beta = 1.817, z = 4.847 p = .028$) of the association is plotted (see figure 3). A summary of the stepwise logistic regression results is presented in appendix D, table D2. Figure 3 clearly shows that when the message is more feminine in content, women are more inclined to apply.

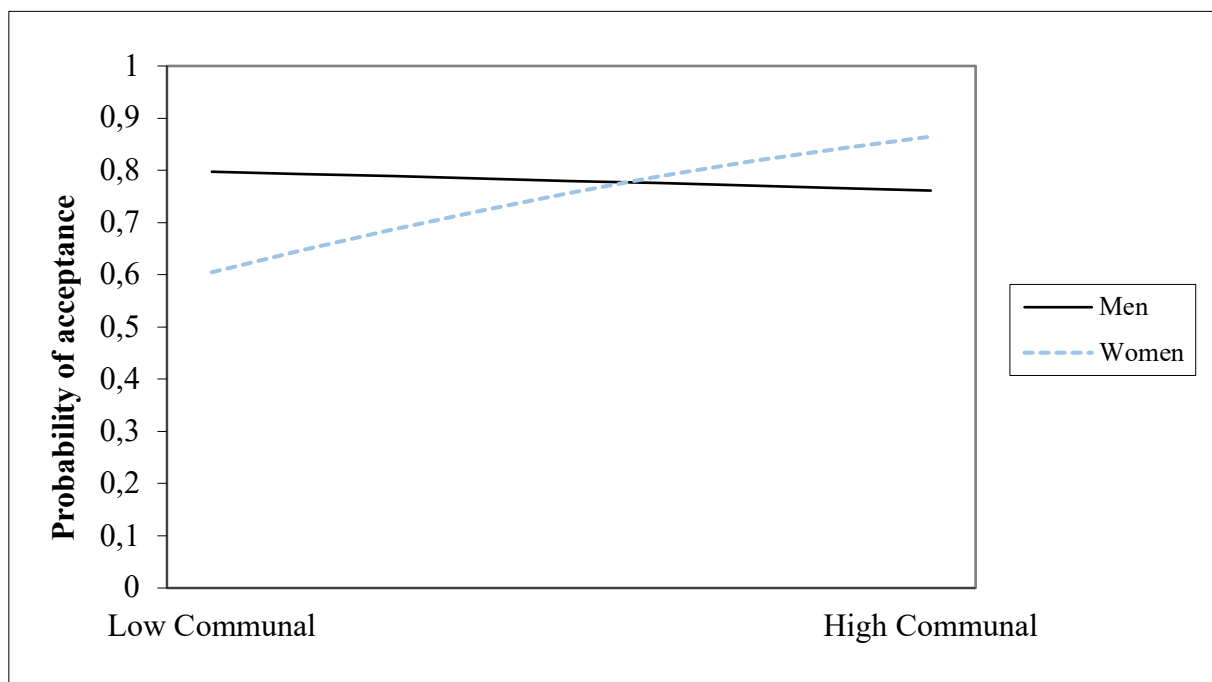


Figure 3: Acceptance probability of communal message for men and women.

Hypothesis 2c

As for our last hypotheses with regards to gender as a moderating variable, we proposed that a message including a combination of agentic and communal words would increase a women's inclination to apply but has no effect on men. Again, the hypothesis was tested by a chi-square

test and again a significant association was found for women ($\chi^2 (1, N = 136) = 5.895$. $p = .016$), but not for men ($\chi^2 (1, N = 87) = .012$. $p = .912$). Thus, the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the gender of the applicant, such that masculine and feminine-worded job advertisements increase a women's inclination to apply and have no impact on a men's inclination to apply. Hence, hypothesis 2c is supported. Again, using logistic regression the interaction effect ($\beta = 1.154$, $z = 5.486$ $p = .019$) is graphically represented in figure 4. A summary of the stepwise logistic regression results is presented in appendix D, table D3. The figure gives a clear indication that when the message contains both masculine and feminine aspects, women are more inclined to apply.

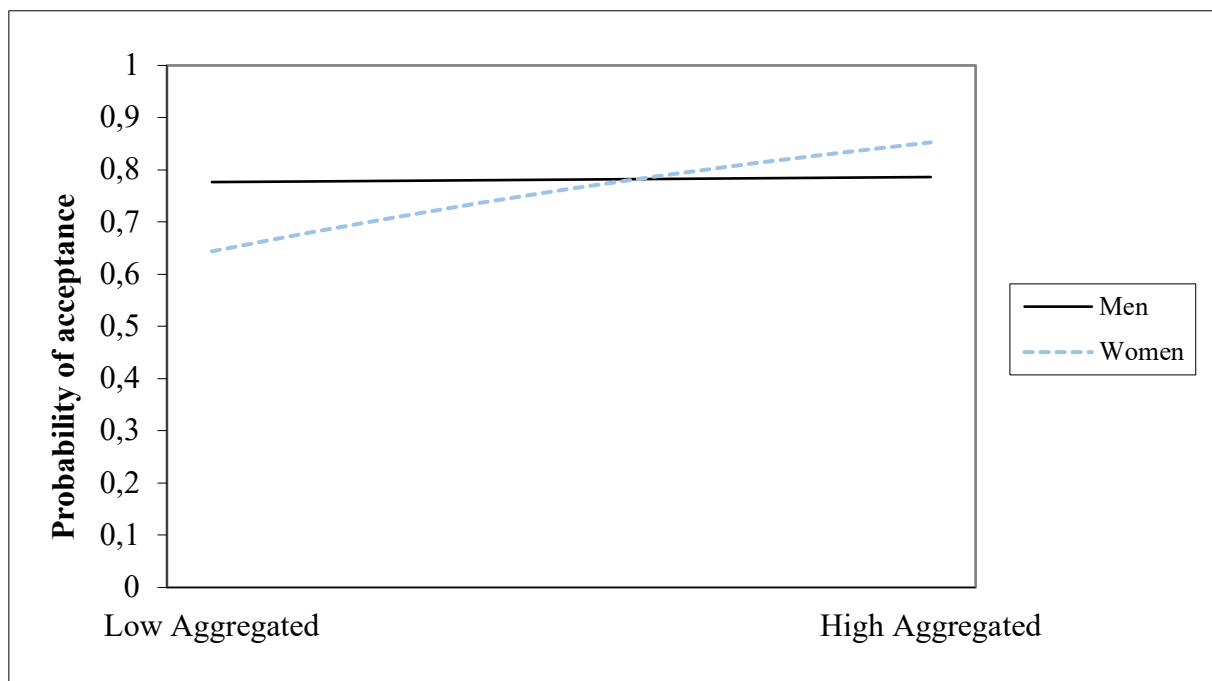


Figure 3: Acceptance probability of communal message for men and women.

In conclusion, all three hypotheses with regards to gender are accepted, implying that the words (i.e., agentic or communal) have an impact on the female inclination to apply.

4.3.1.1 Additional Insights

The histogram in figure 1 visualizes the percentages as described in table 1. This visualization gives a clear indication in the differences of men and women accepting or declining certain types of messages. However, the results as provided by our hypotheses do not indicate whether there is a significant difference between the three types of messages for female acceptance. For this reason, we will check for the significance of differences between types of messages, to further understand the impact of different types of messages on the inclination to apply for female candidates.

As figure 1 shows, women accept 46.8% of the agentic messages, and 90.7% of the communal message. Not surprisingly, a chi-square test for significance confirms that women are significantly more inclined to accept a communal, rather than an agentic message ($\chi^2(1, N = 90) = 19.801, p < .001$).

As clear as the difference acceptance rates of agentic versus communal types of messages were in the percentiles showed in figure 1, less clear is the difference between communal and aggregated types of messages – acceptance of respectively 90.7% and 87.0%. To determine whether there is a significant difference, we conduct a chi-square test. Results of the test show that one cell has an expected count less than 5. Consequently, the lack of significance we found, ($\chi^2(1, N = 89), p = .741$) is based on a Linear-by-Linear association. Concluding, the results indicate that there is no significant difference between the communal and the aggregated message and the female inclination to apply.

Similar to the communal message, the aggregated message shows a relatively large difference in acceptance compared to the agentic one (respectively 87.0% and 46.8%). Logically, as there

is no significant difference between the communal and the aggregated type of message and female inclination to apply, while there was with the agentic type, we expect that women are more inclined to apply when they receive an aggregated message rather than an agentic one. A chi-square test confirms our expectations, $\chi^2(1, N = 93) = 16.862, p < .001$, there is a significant difference in the female acceptance of aggregated vs. agentic types of messages.

In conclusion, we found with this additional analysis that women are more inclined to apply when they receive a communal or aggregated message, rather than an agentic message. However, we found no significant result between the communal and aggregated type. Moreover, we found no significant results for men.

4.3.2 Occupational Area

To test the moderating variable occupational area, the same approach is used as for the gender variable. Again, we introduce the cross-tabulation method (see table 2) and the chi-square test. Occupational area is dichotomous, it is defined as either masculine or feminine, and it is introduced as a layer for statistical interpretation.

Hypothesis 3a

Analyzing table 2, we see that a feminine-themed message (i.e., communal) sent to a candidate employed in a feminine-stereotyped occupation is accepted more often (85.7%) than when the message is agentic (60.9%) or aggregated (84.9%). These descriptive results are in line with what we predicted in hypothesis 3a, where we argued that candidates in feminine-stereotyped occupations are more inclined to accept a communal, rather than another type of message. Moreover, the chi-square test provides evidence that the proposed relation is significant as well ($\chi^2(1, N = 198) = 3.504, p = .041$). It is worth noting that for the masculine-stereotyped

Table 2: Cross-tabulation of Type of Message * Inclination to apply * Occupational Area

		Feminine			Masculine		
		Accepted	Declined	<i>Total</i>	Accepted	Declined	<i>Total</i>
<i>Agentic</i>	Count	42	27	69	7	5	12
	Expected count	52.6	16.4	69.0	8.2	3.8	12.0
	% within message	60.9%	39.1%	100.0%	58.3%	41.7%	100.0%
<i>Communal</i>	Count	48	8	56	6	1	7
	Expected count	43.0	13.0	56.0	4.8	2.2	7.0
	% within message	85.7%	14.3%	100.0%	85.7%	14.3%	100.0%
<i>Aggregated</i>	Count	62	11	73	4	2	6
	Expected count	56.0	17.0	73.0	4.1	1.9	6.0
	% within message	84.9%	15.1%	100.0%	66.7%	33.3%	100.0%
<i>Total</i>	Count	152	46	198	17	8	25
	Expected count	150.8	47.2	198.0	17.0	8.0	25.0
	% within message	76.8%	23.2%	100.0%	68.0%	32.0%	100.0%

occupations no significant results were with regards to communal message based on a Linear-by-Linear association ($\chi^2 (1, N = 25) = 1.346, p = .236$), as one of the cells had an expected count less than five. The lack of significance might be caused by the relatively small number of candidates in this group. Especially because we can see in table one that communal messages (85.7%), as opposed to aggregated or agentic messages (respectively 66.7% and 58.3%), are accepted more even though the stereotype of the occupation is masculine.

Concluding, hypothesis 3a is accepted, the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the occupational stereotype of the applicant, such that candidates in feminine stereotyped occupations have a stronger inclination to apply when the recruitment message is feminine-themed, compared to the masculine themed message.

Hypothesis 3b

With regards to the second hypothesis, we proposed that masculine-themed messages are more often rejected by candidates in a feminine stereotyped occupation. As table 2 shows, 39.1% of the agentic messages sent to candidates occupied in a feminine stereotyped field are rejected, compared to 14.3% of the communal and 15.1% of the aggregated messages. Thus, agentic messages are rejected more often in this situation. To test for the significance of this association, we use the chi-square test. Again, a significant result was found ($\chi^2 (1, N = 198) = 15.009, p < .001$). With regards to the masculine stereotyped occupation, no significant results were found ($\chi^2 (1, N = 25) = .951, p = .329$) based on a Linear-by-Linear association, as multiple cells had an expected count less than five. Here, too, the lack of significance could be caused by the relatively small number of candidates in these conditions, because table 2 does show that agentic messages are declined more often in a masculine stereotyped occupation (41.7%) as

opposed to communal and aggregated messages (respectively 14.3% and 33.3%). Nevertheless, we accept hypothesis 3b stating that the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the occupational stereotype of the applicant, such that candidates in feminine stereotyped occupations have a weaker inclination to apply when the recruitment message masculine-themed, compared to the feminine-themed messages.

4.3.2.1 Additional Insights

Our hypotheses as suggested are in line with the results provided by our data. Hence, both hypotheses are accepted. However, as we found our moderations with regards to the gender related hypotheses to be significant, we wondered whether gender has an interaction effect with the stereotyped occupation. More specifically, we wonder if women, as opposed to men, in a feminine stereotyped occupation are more inclined to apply for a job when the recruitment message is feminine themed. Results from a logistic regression indeed indicate significance of the interaction ($\beta = 1.736$, $z = 4.081$, $p = .045$). A summary of the stepwise logistic regression results are presented in appendix D, table D4. In other words, women, as opposed to men, are more inclined to accept a communal message when occupied in a feminine stereotyped occupation.

The same question was raised with regards to the second hypothesis related to occupational area. That is, we are interested in the question whether women, as opposed to men, reject agentic messages more often when occupied in a feminine stereotype occupation. Again, we used logistic regression to test whether the interaction is significant. Results indicate a significant interaction ($\beta = -2.093$, $z = 8.170$, $p = .004$). A summary of the stepwise logistic regression results are presented in appendix D, table D5. Hence, women, as opposed to men, decline

agentic messages when occupied in a feminine stereotyped occupation more often than when the message is communal or aggregated.

Lastly, we wondered what the associations would be like for women occupied in a masculine stereotyped occupational area. Using logistic regression, we found that women who receive an agentic message and are occupied in masculine stereotyped occupational area, are not significantly more inclined to accept the message ($\beta = -1.067, z = .686, p = .408$). Even more so, the negative direction of the interaction coefficient implies that women are even more inclined to decline the agentic message, despite the masculine stereotyped occupation. A summary of the stepwise logistic regression results is presented in appendix D, table D6. However, as our data only includes twelve subjects, of which five are women, who received an agentic message while occupied in a masculine stereotyped occupation, we believe our lack of significance and even direction might be caused by our dataset.

In conclusion, women are more inclined to apply when they are working in a feminine stereotyped occupational field and receive a communal message. Moreover, women are declining agentic messages more often when they are working in a feminine stereotyped occupation. Insight in women occupied in masculine-stereotyped areas yields no significant results. For men, no significant results were found.

4.3.3 Managerial Experience

In our last hypothesis we proposed that managerial experience would weaken the effect of masculine-themed recruitment messages on the candidate's inclination to apply. To test this hypothesis, we conduct a logistic regression. Results do not show a significant interaction effect ($\beta = .010, z = 1.639, p = .200$). Though, in line with our hypotheses, we did not find a significant

interaction for the communal ($\beta = .010$, $z = 1.639$, $p = .200$) and aggregated message ($\beta = -.006$, $z = .454$, $p = .501$). Hence, we partially accept hypothesis four. That is, we accept the part of the hypothesis that states that there would be no significant interaction for communal and aggregated messages and the managerial experience. We reject the part that states that the relationship between gendered wording in recruitment materials and a candidate's inclination to apply is moderated by the years of managerial experience of the applicant, such that managerial experience of a candidate weakens the interaction for masculine-themed recruitment messages. In other words, managerial experience does not change the association of agentic recruitment messages on a candidate's inclination to apply

4.3.3.1 Additional Insights

Despite the fact that we did not find an association between candidate's managerial experience and their inclination to apply when the recruitment message is masculine themed, we were interested whether there would be an effect for dissimilar sexes. More specifically, we are interested whether women with more experience respond differently to an agentic recruitment message as their managerial experience increases. To do so, we added gender as an interacting explanatory variable to our logistic regression model. The results indicate a significant interaction effect ($\beta = .021$, $z = 4.597$, $p = .049$). Results of the regression are plotted in figure 5 on the next page. A summary of the stepwise logistic regression result is presented in appendix D, table D7. In figure 5, we can clearly see the difference female in acceptance with regards to their managerial experience, indicated by the blue line. In other words, the more managerial experience women have, the more they are inclined to respond to a recruitment message.

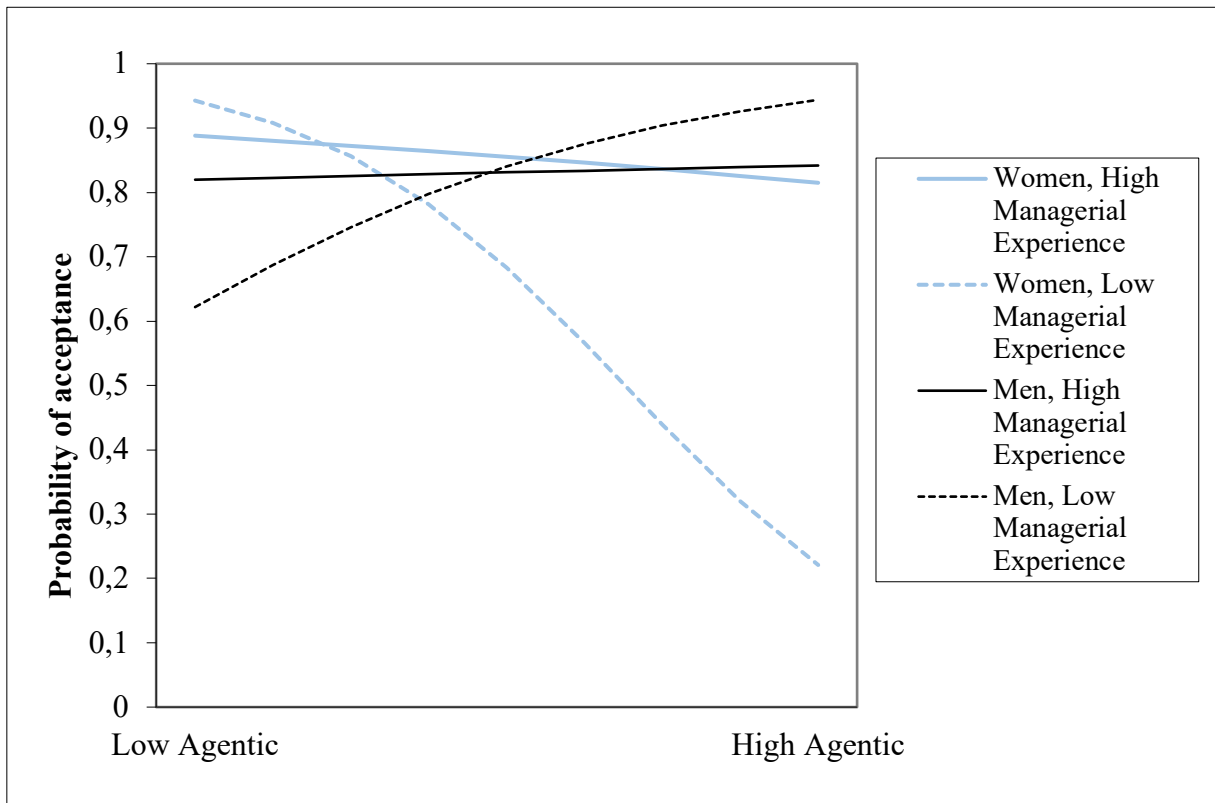


Figure 5: Acceptance probability of agentic * gender * managerial experience

5. DISCUSSION

The goal of this research was to find out whether gendered wording in recruitment materials had a significant impact on a candidate's inclination to apply, and if so, how it would be affected. More specifically, we were interested in what the role and inclination for women would be, as current top-level occupations are primarily held by men.

By using a natural field experiment we were able to test for our main question and associated hypotheses. With the natural field experiment, we aimed to imitate the conditions real-world candidates are exposed to when they are being approached for a new job. We believe this setting was important, as little research has been conducted in the actual field. Our research design is a very accurate representation of how candidates are being approached nowadays. That is, the way people are recruited nowadays has shifted from paper-based practices to electronic information systems (Bonson & Bednarova, 2013) and head hunters increasingly and routinely use the LinkedIn recruiter tool to identify qualified applicants (e.g., Karl & Peluchette, 2013; Parez, 2013; Zide, Elman & Shahani-Denning, 2014). Moreover, LinkedIn is believed to replace the traditional resume in the very early stages in the recruitment process where first contact with candidates is made (Schwabel, 2011). For these reasons, we believe our experimental design has lived up to the setting candidates surround themselves in every day and therefore is an accurate representation of the reality.

5.1 Discussion of Results

The results of our experiment are clear: gendered wording (i.e., agentic, communal or aggregated) has a significant effect on a candidates' inclination to apply for a job. This result is in line with our theoretical ground and answers the question central to this research. Yet, to

understand how the effect works, we introduced several moderations to the main effect. First of all, we introduced gender. Our results indicate that gendered wording has no significant effect on the male inclination to apply for a job. Women, on the other hand, are affected by the use of gendered wording. More specifically, women are significantly more inclined to apply for a job when the message is communal or aggregated, rather than agentic. Not surprisingly, they are also significantly more inclined to decline an agentic recruitment message. The results provided no significant inferences for men, which is in line with our theory. These results are particularly interesting with regards to the ‘labyrinth’. The labyrinth is a metaphor suggested by Eagly and Carli (2007), to describe the visible, invisible, conscious and non-conscious barriers women encounter on their way to top-level occupations. The labyrinth term was primarily introduced to describe the multitude and complexity of barriers, something the ‘glass ceiling’ as proposed by Hymowitz (1986) lacked. That is, the glass ceiling is almost solely focused on the barrier to top-management positions, erroneously assuming that women do have equal access to entry or mid-level positions (Eagly & Carli, 2007). The labyrinth, on the other hand, focusses on the broader career path women are on, on their way to the top. In addition, it takes into account the not so obvious barriers. This is very interesting to our study, as the use of gendered wording in recruitment materials can be seen as such a subtle, non-obvious barrier. Yet, the labyrinth as it is researched today is still very focused on individual-level mechanisms that prevent women from obtain high managerial positions.

Moreover, these results might benefit social network establishment and utilization. Social networks are ties between actors, who are connected on the basis of similarities, relations, interactions or flows (i.e., information, Brass, 2011). A main driver for connections formed on these four bases is identification (Mehra, Kilduff & Brass, 1998). Forming ties based on identification blends into our construct of gendered wording. That is, women identify more with

words that are communal as opposed to agentic (Gaucher et al., 2011). Vast bodies of literature have argued that social networks can help individuals towards greater career accomplishments (e.g. Mehra et al., 1998; Ibarra, 1993), for example promotion (e.g. Brass, 1984; Seibert, Kramer & Liden, 2001) and influence (Sparrow & Liden, 2005). The most beneficial place in the social network to take advantage of these benefits is, of course, the centre (i.e., information broker, Cross & Prusak, 2002), as the most and more diverse ties can be utilized from this position (Kilduff & Tsai, 2003). Yet, minority groups, like women, face greater structural constraints that limit them from these positions and thus from the benefits related to social networks (Khattab, Knippenberg, Nederveen-Pieterse & Hernandez, 2018). Admittedly, their structural position – as opposed to the majority group – is less beneficial. Since the ties in social networks and the extent of utilization are based on identification, we believe gendered wording might be a construct that has an influence on the establishment and utilization of social networks. More specifically, gendered wording might explain why women in social networks remain a minority. This argument can be invigorated by the fact that strong, powerful social networks are currently socially dominated by white males (e.g. Ibarra, 1993; Khattab et al., 2018). Social dominance through group-based hierarchy is one of the constructs the theory of gendered wording was built on as well. In addition, the literary stream is comparable to the body of gender segregation literature. With regards to gender segregation in top-level occupations, theorists started to form arguments based on structural barriers for women (i.e., glass ceiling) whereas later on the complexity is recognized and more unconscious barriers are introduced (i.e., labyrinth). A similar approach can be seen in the social networking literature. At first, individuals who disadvantageously positioned actors were believed to suffer structural constraints, while theorist currently ask for more psychologically based theories that provide an alternative explanation (e.g. Ibarra, Kilduff & Tsai, 2005; Kilduff & Brass, 2005). For this reason, we believe that gendered wording – as an unconscious construct – might provide an

alternative explanation as well as a future solution. That is, we believe that by using gendered wording as a targeting mechanism, women might be able to better position and utilize their network. To our knowledge, no to little research has been done to the topic of gendered wording as a construct for social network advancement, while the two literary streams are highly connected.

Additional insights allowed us to make assumptions about the differences in female inclination to apply when different messages are used. Results show that women more often decline an agentic, rather than a communal or aggregated message, but that there is no significant difference in the acceptance of a communal or aggregated message. The lack of significance between the latter two types of messages might be contingent on a sense of belongingness. Gaucher and colleagues (2011) showed in their research that when the perceived belongingness of a job is increased, how appealing the job is, is increased as well. The extent to how appealing a job is perceived by candidates, can be logically linked to the inclination to apply. That is, if the job is not appealing, the likeliness that someone will apply is inevitably decreased. Hence, an explanation for insignificant difference between a communal or aggregated message could be explained by this belongingness. It could be the case that the aggregated message – containing feminine stereotyped descriptions – increases how appealing the job is to a candidate such that they become inclined to apply, despite the agentic elements in the message. This argument can be invigorated by the fact that research shows that recruitment materials generally are perceived as agentic (Barbelescu & Bidwell, 2013). Hence, when the material does contain communal-themed descriptions, the appealingness is directly increased as women can identify more. Yet, we cannot make implications about the extent to which the appeal, and subsequently inclination to apply is increased, as we did not test the extent to how appealing the managerial vacate was perceived.

Overall, the moderation of gender provided evidence that use of gendered wording in recruitment materials can be viewed as an institutional-level mechanism that withholds women from applying, therefore remaining the status quo where males dominate top-level occupations.

In addition to gender as an interactive effect, we argued for the stereotype of the occupational area as a potential moderator. Our results, in line with our theoretical arguments, indicate that feminine-themed messages (i.e., communal) are more accepted, while masculine themed messages (i.e., agentic) are more declined by candidates occupied in areas that are feminine stereotyped. Moreover, additional insights showed us that women in feminine-stereotyped occupations are more inclined than men when receiving a communal message. Men are equally inclined to accept the different types of messages. This could be explained by the same line as arguments as we used to explain the lack of differences in effects with regards to gender: men are just less sensitive to the influence of gendered wording (e.g. Gaucher et al., 2011), or will do more to seize opportunities that allows them to take a higher job (Born & Taris, 2010). Our results indicate that women do decline masculine themed messages (i.e., agentic), as opposed to other types of messages, more often than men when occupied in a feminine-stereotyped occupation. When we tested for differences in women occupied in masculine-stereotyped occupations, we found that women are not significantly more inclined to accept a masculine themed message. However, the predictive value of our model was slightly increased. We believe we were unable to provide significance for this effect as our sample size ($N = 5$), was too small to establish a potential association.

The last moderator we introduced was the managerial experience of eligible candidates. We argued that the association of masculine-themed worded recruitment materials and message

acceptance would increase as managerial experience was increased. Despite our theoretical reasoning for this proposition to exist, we were unable to establish a significant overall effect (i.e., men and women together). However, as our results with regards to gender indicate, men are not as susceptible gendered wording as women are. Hence, to test whether it would make a difference to introduce gender as an additional interaction variable, we looked into the differences of managerial experience of men and women on their inclination to apply when they are exposed to a masculine themed message. Here, we did find a significant result for women that indicated that the more managerial experience women have, the more they are inclined to accept an agentic message. As we substantiated for under gender, we did not expect to find an effect for men. Yet, the significant effect of women accepting an agentic message more often when their managerial experience increases, has to be looked at with care as only a limited number of subjects in our sample ($N = 32$) met the particular experimental condition and the proposed relation was only just significant. Hence, we provide an alternative explanation.

An alternative explanation for the moderate significant effect is that women might stay true to their feminine values, as presenting or associating themselves with agentic traits might serve as a backlash (Rudman & Glick, 2001), that gives them negative evaluations of effectiveness. This point of view is related to the ‘double-edged sword’ women have to deal with in top-level occupations. The double-edged sword implies that women who adopt agentic traits and behaviors are evaluated negatively as good managers (e.g. Ely, Ibarra & Kolb, 2011; Eikhof, 2012). For this reason, women might not – or might not want to – identify themselves with the masculine associated traits as described in the agentic message, not even when they have profound managerial experience.

This alternative explanation can be further invigorated by the mastery vs. performance orientation theory (e.g. Janssen & Van Yperen, 2004; Elliot, McGregor & Gable, 1999). The core premise of this theory is that goals can be defined as cognitive representations of what is hoped to be accomplished, and they give energy and direction to behavior (Barron & Harackiewicz, 2000). The mastery orientation focuses on developing competence, gaining skill and doing one's best, whereas the performance orientation focuses on establishing one's superiority over others (Van Yperen, 2004). These goal orientations among individuals cause different perceptual cognitive frameworks of how individuals interpret, and respond to achievement situations (Janssen & Van Yperen, 2004; Van Yperen, 2003). Not surprisingly, research shows that these goal orientations differ for men and women. That is, women have been shown to be more mastery oriented (e.g. Meece & Holt, 1993; Gaeddert, 1985; Van Niel, 2017). To illustrate, in the qualitative research of Van Niel (2017), she interviewed highly successful career women, showing that career choices and application decisions are different for women: *"I don't have the urge to become marketing director. I don't care about ranking or positions, my goal is to keep on learning and growing. Working brings along a host of positive benefits, it keeps you young. But this is by no means attached to a certain role or status."* (Van Niel, 2017). Men, however, will take on every opportunity to move up the corporate ladder (Born & Taris, 2010). Moreover, Gaeddert (1985) coupled the agentic-communal model of Bakan (1966) to achievement orientations and found that women were more socially focused (i.e., showed more communal behaviors) with regards to achievement compared to men. Hence, the achievement orientation might be a good explanation for why women that aim for top-level occupations are identify more with communal or aggregated messages and are not influenced by managerial experience. Consequently, it might even be a root cause to the phenomenon of gendered wording. Yet, to our knowledge, no other researchers than Gaeddert (1985) looked into the agentic-communal model in relation to achievement orientation.

Altogether, our study revealed some interesting insights in gendered wording. These insights are very relevant to businesses trying to attract more female applicants. The results can be used to actively promote managerial recruitment materials in order to gain broader and more diverse pool of applicants. In this light, gendered wording in recruitment materials can be put in the ‘four-P’s’ (i.e., price, product, promotion and place) marketing framework (Van Waterschoot & Van den Bulte, 1992), where the recruitment material itself is the product and the use of gendered wording would be promotion. Not only can this be used as a strategy to promote the vacancy, it can also be used to signal employee value propositions to be more competitive (e.g. Bell, 2005; Wilden, Gudergan & Lings, 2010), and to gain a more competitive pool of applicants all together (Collins & Han, 2004).

Yet, in order to test the relevance of our findings, we will conduct a second study to see how managerial recruitment materials are perceived in the actual job market.

6. ADDITIONAL STUDY

As mentioned above, the aim of the additional study is to explore if and how gendered wording actually exists in managerial recruitment materials in the Dutch job market. The relevance of this additional study is profound, as our findings in the main study are only relevant if gendered wording is actually used in the job market and applicants observe it (i.e., are susceptible). Hence, this second study is meant to test how real-world recruitment materials are perceived. The research question of this second study therefore is:

“Are managerial recruitment materials in the Dutch labor market perceived as agentic?”

Moreover, we are also interested if participants are inclined to apply for the recruitment materials. That is, apart from whether the materials do or do not contain any levels of gendered wording, we are interested if individuals do feel inclined to apply. More specifically, we are interested in the gender differences in inclination to apply, relative to the outcomes of gendered wording in the managerial recruitment materials.

6.1 Method

We will test the research questions by means of a Qualtrics survey. In the survey, thirty managerial vacancies are displayed for ratings of masculinity and femininity. We will elaborate on the measurements later on in this chapter. The thirty managerial vacancies are derived from the corporate websites of three recruitment agencies (i.e., Ebbinge, Top of Minds and Career Openers), operating in the Dutch labor market. These three agencies were picked as they constitute the top of managerial job placement. The premise of agencies is that an organization provides the agency with a vacancy, and the agency looks for applicable candidate. One of the

methods agencies use to find the right candidate, is display the recruitment material on their website. Agencies continually receive vacancies form organizations, and thus continually display the managerial recruitment materials they are recruiting for on their websites. For this reason, these agencies are a good representation for recruitment materials in the current job market. We randomly picked ten managerial vacancies from each of the websites. Consequently, we did not alter the content of the vacancies, causing them to be a real-world representation of the recruitment materials. No distinctions were made between occupational area, required experience or the choice of description by the company who published the vacancy. For this reason, descriptions of vacancies differ in lay-out and explanatory context. Worth mentioning is that all the descriptions and questions are in Dutch. Since the original vacancies were in Dutch, and the research is aimed at the Dutch labor market, we did not see the necessity to translate descriptions.

6.2 Raters

The survey was sent out to ten raters. Raters were selected from the personal network of the researcher and included business students – majoring in different areas – and employees occupied in different fields. The rater pool consisted of 3 men and 7 women. The choice of raters is relatively valid, as business students are educated to take up managerial roles in the near future and current employees also might grow into management positions. None of the raters have a background with gendered wording, thus it is unlikely that raters would specifically look for gender themes. Neither was the explicit purpose of the study revealed. It is worth noticing that the sample of this additional study is relatively small. The small size of the survey, however, is due to time constraints as the study was added to provide more insight in our previous results.

6.3 Measures

The aim of our study is to test whether recruitment materials contain either agentic or communal aspects or are perceived as a combination of both. In addition, we are interested in whether participants are inclined to apply for the job as described in the vacancy. Lastly, we ask participants to fill out the demographic characteristics of gender and age. These demographics allow us to test for moderation and dependence of certain characteristics.

6.3.1 Gendered Wording

Whether the managerial recruitment material is perceived to include masculine or feminine-themed words is measured on a non-metric 30 item dichotomous scale. That is, we asked participants to answer two statements for the 30 managerial recruitment materials: the vacancy description is typically male (i.e., agentic; agree or disagree) and the vacancy description is typically female (i.e., communal; agree or disagree).

6.3.2 Inclination to apply

Inclination to apply is the likelihood that participants are to apply for the job described in the vacancy if they were looking for a job in the field, assuming that they would have the relevant background. The variable was measured on a 30 item 7-point Likert scale, where the 30 items represent the 30 managerial recruitment materials. The measure is based on an ordinal scale ranging from ‘not at all’ to ‘very certain’.

6.3.3 Demographic characteristics

The demographic characteristics we measure include gender and age. As we did in our main study, gender is measured as either male or female. Again, we are aware of the public debate allowing for non-defining gender categories (Van Unen, 2018). However, as our focus is on

gendered wording and sex-segregation we are obliged to define gender. Consequently, gender is a dichotomous nominal variable. Age is measured in years, thus metric.

7. ADDITIONAL STUDY RESULTS

The additional study was conducted in order to see how managerial recruitment materials in the Dutch labor market are perceived. To do so, we sent out a survey to ten independent raters who judged thirty managerial vacancies based on whether the descriptions are typically male or female, and whether they would apply for the job described. Before analyzing the results, we checked for an interrater bias by means of Cronbach's alpha. No raters were excluded from the sample, as this did not result in an increase of Cronbach's alpha ($\alpha = .926$).

7.1 Main effect

Figure 6 displays how participants rated the managerial recruitment materials surveyed. Percentages are built on the average perception of single vacancies. For example, if 6 out of 10 raters rated the recruitment material as masculine themed, then on average the material was more agentic (i.e., majority).

Figure 6a clearly show that the majority of the recruitment materials were perceived as agentic (63%). Yet, a frequency distribution showed that of the thirty vacancies, only three (10%) were rated exactly the same by all our raters. These

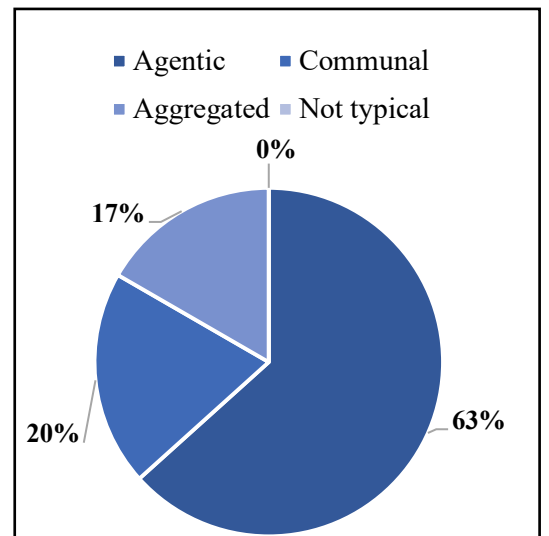


Figure 6a: General rating

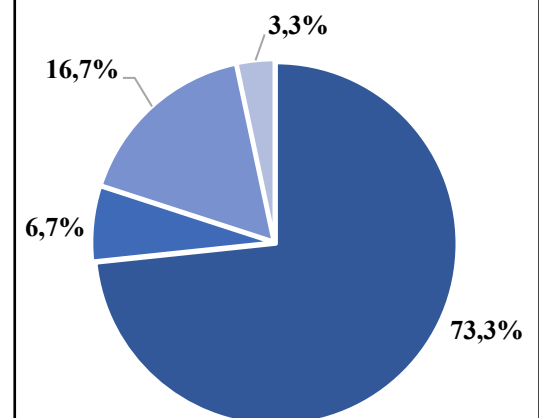


Figure 6b: Female rating

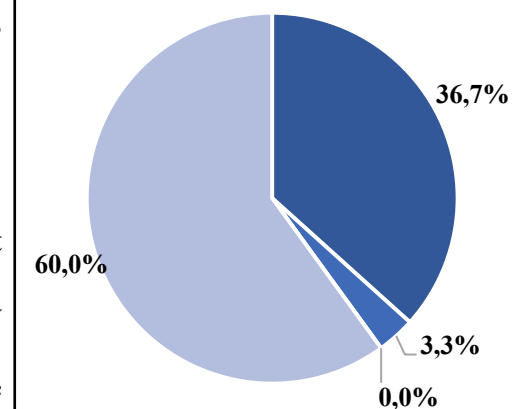


Figure 6c: Male rating

Figure 6: Vacancy rating distribution

were rated as pure agentic, that is, the vacancies were perceived as a solely agentic description by both men and women. Consequently, the other 53% were rated as agentic by the majority of raters. We introduced the term aggregated in the figure, as five (17%) of the materials were rated equally on containing typically masculine and feminine aspects. No material was rated as pure communal. Despite the general ratings of both men and women in figure 6a giving some indication of how recruitment materials are rated, it is important to take a closer look at the different ratings between men and women, especially as our rater sample included more women.

A graphic representation of how women and men rated the recruitment materials is displayed in figure 6b and 6c. Indeed, we see that women, as opposed to men, differ in ratings. Women rated more materials as agentic (73.3% vs 36,7%). In addition, a frequency distribution shows that women were – apart from general pure agentic materials – in agreement that an additional six recruitment materials were described as purely masculine. Only two materials were, on average, described as being femininely described. Moreover, we found materials that were rated as both masculine and femininely described (16,7%). Only two (6,7%) materials were on average rated as communal. More interestingly, results showed that one of the materials (3.3%) was rated as neither agentic nor feminine. Concluding, female raters perceived the materials as primarily agentic, and only very little as communal. Yet, they did rate some materials as containing both typically masculine and feminine descriptions.

Male raters rated eleven of the vacancies (36,7%) as agentic. More interestingly, where women rated only one vacancy as neither agentic nor communal, male raters rated the majority of (60%) of the materials as non-gender typical. In other words, they perceived these eighteen materials as neither masculine nor feminine described. Moreover, while they rated the majority of the

vacancies as non-typical, none of the vacancies were rated as typically both masculine and feminine described. Only one of the materials was rated as typically feminine described. Concluding, men perceived the managerial recruitment materials as less agentic compared to women. Interestingly, they perceived the majority of recruitment materials as non-typical, whereas women did show perceived typicality. Table 3 describes the average of how different raters rated the recruitment materials. Moreover, it portrays their average inclination to apply.

Table 3: Rater characteristics

Rater	Gender	Total Mean Agentic (1 – 2)	Total Mean Communal (1 – 2)	Total Mean Inclination to apply (1 – 7)
<i>Rater 1</i>	Female	2.00	1.17	2.47
<i>Rater 2</i>	Female	1.90	1.13	2.80
<i>Rater 3</i>	Female	1.97	1.10	2.47
<i>Rater 4</i>	Female	1.97	1.23	2.83
<i>Rater 5</i>	Female	2.00	1.23	3.33
<i>Rater 6</i>	Female	1.83	1.10	2.67
<i>Rater 7</i>	Female	1.40	1.00	3.87
<i>Rater 8</i>	Male	1.37	1.03	5.60
<i>Rater 9</i>	Male	1.17	1.03	5.47
<i>Rater 10</i>	Male	1.13	1.03	5.10
Total average		1.6733	1.1067	3.6600
Female average		1.8667	1.1381	2.9190
Male Average		1.222	1.0333	5.3889

From the table we can conclude that on average, women rate managerial recruitment materials as more agentic ($M = 1.8667 > M = 1.2222$). Women also rate the vacancies as somewhat more communal ($M = 1.1381 > M = 1.0333$), however, the difference is less severe. Results also indicate that women are less inclined to apply than men ($M = 2.9190 < M = 5.3889$). This is in

line with our expectations, as we hypothesized that women are less inclined to apply when the recruitment message is perceived as agentic.

Moreover, on average, both men and women rate the recruitment materials as more agentic ($M = 1.6733 > M = 1.1067$). Hence, our main research question of the additional study is answered: managerial recruitment materials in the Dutch labor market are perceived as more agentic. Hence, women are less inclined to apply. We conducted a multiple linear regression to test whether the general inclination to apply based on the perceived masculinity of the recruitment materials differed for men and women. Results indicate significance of the model, $F(3,6) = 57.846$, $p < .001$, with $R^2 = .979$. Yet, results should be looked at with care. The small sample size of our study might have caused the R^2 to near one, hence the extreme significance. Table 4 summarizes the regression results.

Table 4: Summary of regression results

Independent variables	Dependent variable: Inclination to apply	
	Model 1	Model 2
Main Effects		
Agentic	-1.447	1.628
Communal	2.639	5,630*
Gender	-1.537	2.884*
Interaction effects		
Agentic * Gender		-3.430*
F-value (p-value)	28.742 (p = .001)	57.846 (p < .001)
R ²	0,935	.979

(*) $p < .05$

Results of the interaction of gender perceived masculinity of recruitment materials are plotted in figure 7. Despite the fact that we must be careful with the extremity of these results, figure 7 clearly indicates that when the message is perceived as agentic, women are less inclined to apply, while men are slightly more inclined to apply.

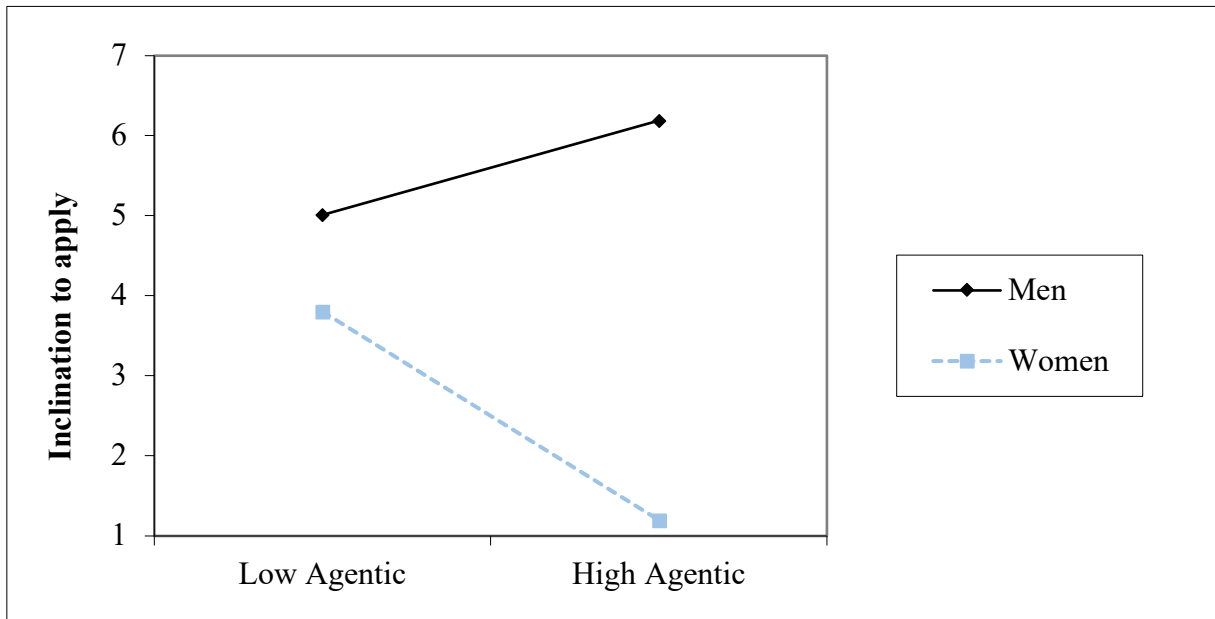


Figure 7: Interaction masculine perceived vacancy and inclination to apply.

Yet, Figure 7 is based on the average inclination to apply for both men and women. Consequently, we are also interested in whether the inclination to apply differ for dissimilar sexes when they rated vacancies, on average, as aggregated/communal versus agentic. The results of our main study indicate that women are more likely to accept messages that are at least feminine-themed to some extent and decline messages that are primarily agentic, we computed means of the vacancies that were rated as agentic or aggregated/communal. We chose to merge the communal and aggregated rated recruitment materials, as our main study showed no significant difference. Table 5 displays the average mean of communality and the associated average inclination to apply, table 6 shows the average mean of agentic rated materials.

Table 5: Rater characteristics when recruitment material is communal or aggregated

Rater	Gender	Mean materials rated communal/aggregated (1 – 2)	Inclination to apply if communal (1 – 7)
<i>Rater 1</i>	Female	2.00	4.00
<i>Rater 2</i>	Female	1.90	4.43
<i>Rater 3</i>	Female	1.97	2.71
<i>Rater 4</i>	Female	1.97	5.29
<i>Rater 5</i>	Female	2.00	5.86
<i>Rater 6</i>	Female	1.83	5.29
<i>Rater 7</i>	Female	1.40	5.14
<i>Rater 8</i>	Male	1.37	3.29
<i>Rater 9</i>	Male	1.17	4.14
<i>Rater 10</i>	Male	1.13	3.43
Total average		1.2429	4.3580
Female average		1.3469	4.6743
Male Average		1.0000	3.6200

Table 6: Rater characteristics when recruitment material is agentic

Rater	Gender	Mean materials rated agentic (1 – 2)	Inclination to apply if agentic (1 – 7)
<i>Rater 1</i>	Female	2.00	2.09
<i>Rater 2</i>	Female	1.95	2.23
<i>Rater 3</i>	Female	2.00	2.09
<i>Rater 4</i>	Female	2.00	2.36
<i>Rater 5</i>	Female	2.00	2.91
<i>Rater 6</i>	Female	1.86	2.50
<i>Rater 7</i>	Female	1.55	3.32
<i>Rater 8</i>	Male	1.36	5.59
<i>Rater 9</i>	Male	1.23	5.50
<i>Rater 10</i>	Male	1.14	5.18
Total average		1.7091	3.3773

Female average	1.9091	2.5000
Male Average	1.2424	5.4242

Comparing the results as described in table 5 and 6, we clearly see gender differences in the inclination to apply, based on whether the managerial recruitment material is rated as communal or aggregated, and agentic. In line with our expectations and the results provided by our main study, women are more inclined to apply when the recruitment material is rated as communal or aggregated ($M = 4.6743 > M = 2.5000$). With regards to men, we also see a difference in their inclination to apply. When the recruitment material is rated as agentic, as opposed to communal or aggregated, men are more inclined to apply ($M = 5.4242 > M = 3.6200$). Yet, the female difference is more severe. Concluding, the results as showed by the additional study, confirm our expectations and are in line with the results found in our main study: women are more inclined to apply when the recruitment material contains at least some feminine aspects.

7.2 Additional Insights

The main objective of this additional study was to understand how managerial recruitment materials are perceived in the Dutch labor market. The main objective has been accomplished by the results described in the prior paragraphs. However, as an additional insight, we wondered how the ratings between recruitment agencies we collected the materials from differed.

How vacancies were rated per agency is graphically represented in figure 8. The figure clearly indicates that half (50%) or more (respectively 60% and 80%) of the managerial recruitment materials were rated as agentic. All three agencies had at least one of their materials rated as feminine themed, yet, the feminine themed recruitment materials are a minority among the vacancies.

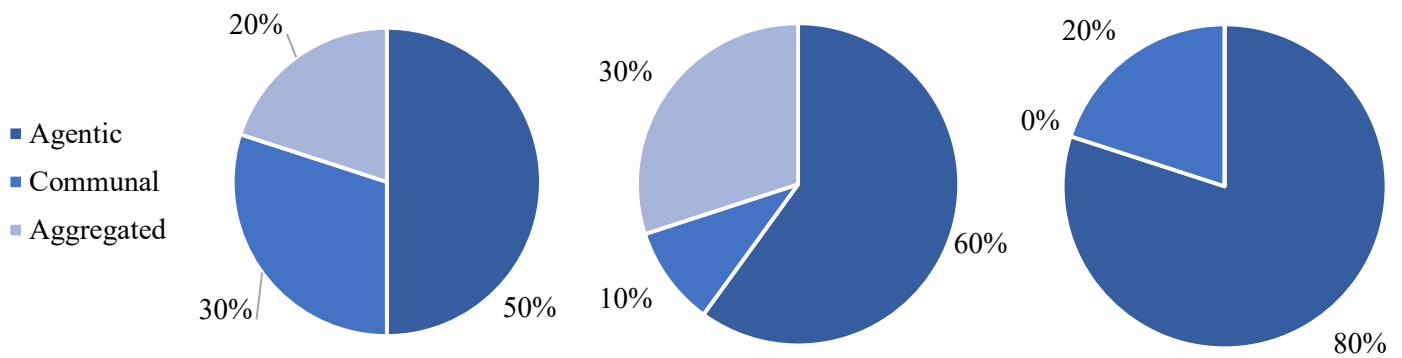


Figure 8: Vacancy rating distribution of respectively Ebbinge, Career Openers and Top of Minds

In conclusion, we see that agencies have a lot of materials that are rated as agentic. If we would apply the results of our main and second studies to the agencies, we would assume that the agency 'Ebbinge' would have the most diverse pool of candidates with regards to sex. That is, half of their materials was rated as agentic, while the other half was rated as either communal or aggregated. As the results of our first study show, there is no significant difference between the communal and aggregated message with regards to the inclination to apply. Consequently, as opposed to Career Openers and Top of Minds, Ebbinge would do better in attracting women as the other agencies have an agentic majority in their vacancies. Moreover, Career Openers would do better than Top of Minds, as Top of Minds only has 20% of their vacancies rated as communal, and nothing as aggregated, whereas Career Openers has one (10%) feminine themed recruitment material, and three aggregated materials (30%).

8. DISCUSSION

The aim of our additional study was to explore the managerial recruitment materials presently conveyed in the Dutch labor market. Insights in how the materials in the real-job market are perceived are very important to our prior findings, as it gives the result of our main study an indication of how severe the effects actually are when candidates are applying for jobs. In the remaining of this chapter, we will discuss the results found in our additional study.

First of all, results found in our additional study are in line with prior research (e.g. Gaucher et al., 2011; Barbelescu & Bidwell, 2013), which advocates that managerial recruitment materials are described as using words which are more associated with agentic traits. Our study, too, indicates that in general, recruitment materials are described as more agentic. Especially women rate recruitment materials as typically masculine described. Not surprisingly, as the result of our main study suggests with regards to the effects of gendered wording, women were also less inclined to apply for a job when they perceived it as more agentic. Men on the other hand, were a little bit more inclined to apply when the recruitment material was perceived as agentic. Yet, interestingly, there is a very limited difference in how men rated the managerial vacancies. That is, they did not necessarily perceive the recruitment materials as agentic or communal. This too, is in line with theory that men do not pay extensive attention traits portrayed in managerial recruitment materials (Darley & Smith, 1995) and do take up every opportunity to make a career step (Born & Taris, 2010). In addition, the indifference of men with regards to content of recruitment materials is in line with the results of our main study. Concluding, the results of our additional study prove the expectations our theory for the first study was built on. Men are less susceptible to the effects of gendered wording, whereas female inclination to apply is contingent on the type of words used in the recruitment message or managerial vacancy.

Another interesting insight related to our additional study, is that the results might contribute to how implicit leader theories exist and keep up the status quo with regards to managers. Junker and Dick (2014) describe implicit leadership theories as the everyday image individuals have of what managers are like in terms of traits and behaviors. As generally the traits and behaviors of managers are described as agentic, women are not categorized as managers as it does not match the implicit image individuals have (e.g. Offerman, Kennedy & Wirtz, 1995; Junker & Dick, 2014). As our research shows, managerial recruitment materials are portrayed as describing primarily masculine traits, hence remaining the status quo of the male manager implicit leadership images. By keeping up this unconscious distribution of male traits as the ‘ideal candidate’, the current implicit leadership image will not be challenged. Consequently, women might keep being categorized as non, or less efficient, leaders. Concluding, our additional study adds to the literature of implicit leadership theories and leader categorization. Moreover, it stresses that agentic recruitment materials might harm the general image of women as good managers.

In the next chapters we will explain how the findings of both our studies contribute to the existing literature and how the insights gained can be used in practice. Lastly, we will discuss the limitations this research and results were subject to, and we will argue for some interesting directions for future research.

10. IMPLICATIONS FOR THEORY

The results of this study have profound implications for theory. Not only does this study add to the vast body of gender-segregation literature, it also adds to the literature of employee self-selection, social network establishment and utilization, goal orientation and employee attraction.

First of all, this research shows men and women respond differently to different types of recruitment messages. Hence, gendered wording in managerial recruitment materials can be described as an institutional-level mechanism that substantiates the status quo in managerial positions – which is male domination. These results add to the literature of social role theory (SRT; Eagly, 2013) and social dominance theory (SDT; Sidanius et al., 2004; Deutsch, 2006), conveying the strength of both theories. While women not necessarily carry the home keeper role anymore in the current society (i.e., SRT), the strength of the psychological effects are still present. That is, women value descriptions based on the associated traits (i.e., communal) over masculine ascribed traits. Strength of SRT is even more invigorated by the fact that women in masculine-stereotyped occupational areas are not more inclined to accept the messages. On the other side, results of our research showed that – although barely significant – the strength of SRT might decrease over time due to the copying of social behavior as the theory of copying behavior would suggest (Chen, Chartrand, Lee-Chai & Bargh, 1998). In other words, women might stray from the belongingness that comes with their social role and consequently perceive fit in line with their social role. If the theory of copying behavior holds true, the strength of SRT over time is challenged. However, an alternative explanation would be that women take up a goal-orientation according to their social role (i.e., mastery orientation) or a goal-orientation in line with the implicit leader image (i.e., performance orientation). Hence, managerial

experience might be coupled to performance orientations. Concluding, this research also adds to the literature of goal orientation, especially to the theory of mastery versus performance goal orientation. Janssen and Van Yperen (2004) argued that goal orientations among individuals cause different perceptual cognitive frameworks of how individuals interpret and respond to achievement situations. Moving up the corporate ladder can be viewed as an achievement situation, thus, the influence of gendered wording in recruitment materials, especially for women, might be such a response to achievement situation which either matches or mismatches their achievement orientation. Coupling gendered wording to goal orientations, extends our understanding of how gender differences and goal orientations might relate.

Results of our second study indicate that implications of SDT are being kept in place. Since managerial recruitment materials are described as primarily masculine, group-based social hierarchies are kept in place through the signaling of gendered words. The social dominance can be further explained through implicit leadership theories. By using gendered wording in recruitment materials, not only the male hierarchy in top-level occupations is being kept in place, the image of traits and behaviors that accompany the male domination is also kept in place. That is, the ideal candidate is described with male characteristics, thus individuals who read the material will associate the male characteristics with the proper candidate, while the principles of gendered wording show they could be female as well. Nevertheless, the current materials portray primarily agentic traits, causing the existence of male implicit leaders. Consequently, women are categorized as non-leaders. In this line of reasoning, our research on gendered wording adds to the body of implicit leadership theories and categorization, as it provides a context for the existence and distribution of implicit leadership images. Hence, our understanding of the impact of SDT is increased. In addition, the scope of SDT is added to by introducing implicit leadership theories to social dominance.

Moreover, our research adds to the body of employee attraction and candidate self-selection literature. With regards to the employee attraction literature, using gendered wording in recruitment materials can function as the promotion of recruitment materials. In this light, a new strategy is added to the body of recruitment strategies. Collins & Han (2004) stress the importance of the examination of independent variables at organizational level, as these are likely to generate prescriptive advice from which organizations can gain competitive advantage. Yet, contingencies and organizational level outcomes of the first phases of recruitment process are well under researched (Turban & Cable, 2003). With regards to candidate self-selection literature, Barbelescu & Bidwell (2013) argued that women select what jobs they apply for based on evaluation of rewards, job identification and job offer success. In line with the majority of research on application decisions, this is primarily focused on individual-level evaluations that happen within the self and are based on a personal social context. The results of this research indicate that factors outside the self, have a severe presence in the evaluation of recruitment materials when application decisions are made. In other words, while candidates engage in self-selection mechanisms individually, they are influenced in their decision making by institutional-level factors (i.e., gendered wording). Consequently, evaluation decisions of candidates are biased as the perceived fit between themselves and the job displayed in the recruitment material mismatches. Hence, an application decision on the basis of perceived fit is erroneously disregarded.

As a part of the literature on gender segregation, this study adds to literature about the women labyrinth of leadership (Eagly & Carli, 2007). The labyrinth proposes that women encounter heaps of barriers on their way to the top. This research provides evidence that gendered wording might be one of the obstacles forming the labyrinth. Current day research on the labyrinth is

primarily focused on gender differences, leadership styles, and consequently collective female behavior to overcome the barriers that constitute the labyrinth (e.g. Eagly & Carli, 2007; Santovec, 2010). The labyrinth can be perceived as a puzzle that can be solved by one's own behavior. This study shows that gendered wording might be one of the non-conscious barriers that is established in the labyrinth and is preventing women from gaining top-level occupations. While women could try to overcome this themselves, institutions could help taking down this barrier of the labyrinth as well. Thus, there might be other solutions to the labyrinth that are less individual, and more institutional. Consequently, the results of our research add to the degree in which we understand the barriers in the labyrinth.

Lastly, the results of this research are a relevant contribution to the literature on career related social network establishment and utilization. In top-level managerial functions, women remain a minority group (e.g., Eagly, 2013; Gaucher et al., 2011). With regards to social networks, women are still a minority group too, being positioned on the outside of social network structures (Kilduff & Tsai, 2003). Hence, the insights of this research are a relevant contribution to this line of research, as we introduced social psychological barriers as well as provide a possible explanation for what problem is at hand.

11. IMPLICATIONS FOR PRACTICE

The results as delivered by this research have profound implications for practice. This is particularly important now that the public debate on greater gender parity in top-level occupations is gaining more and more attention. Over the course of the past decades, the belief that the gender gap would fade as the pipeline of high educated women filled up is an ideology that must be let go of (Ely et al., 2011). In addition, organizations that do adopt policies and practices that allow women to proceed to higher level occupations, only show very limited improvement (Sturm, 2001). The results of our research provide an alternative explanation for why women are not increasingly getting to higher-level occupations. Thus, practical relevance is profound. In this chapter, we will touch upon some interesting implications for practice.

Today, the percentage of females seizing top-level positions increases at such a slow pace, governments believe they have to intervene with rules and regulations to give women a fair chance in the male dominated top. In 2006, Norway kicked-off the women quota trend and enforced all companies listed on the stock exchange to have at least forty percent of women on their supervisory board (Matsa & Miller, 2013). In the years to come, other European countries followed. Recently, the state of California (USA), proclaimed to institutionalize a law that enforces companies to have at least one female member on their board by the end of 2019, bringing quotas to a more operational level of companies (Dohmen, 2018). Yet, the results of our research indicate that organizations possibly lose over fifty percent of their female applicants. For this reason, we can question whether governmental meddling is useful if companies lack the ability to make higher-level occupations appealing to females qualified for the position. In other words, if organizations do not change the way they recruit for top-level occupations – assuming that the managerial recruitment materials are primarily masculine

themed – their applicant pool is less diverse. That is, containing less women as women are less inclined to apply. This implies gender segregation at the early stages of the recruitment process. Consequently, chances that a female applicant would be hired as the best candidate for the managerial positions are lower already at the first stage of the hiring process, despite the challenges that have to be overcome after the application phase of the recruitment process (i.e., labyrinth; Eagly, 2013). Thus, establishing a quota for women without changing the way organizations currently recruit, would force organizations to pick from a limited pool of female applicants, possibly missing out on suitable candidates as they were – erroneously – not inclined to apply. Concluding, the result of our research indicates that a quota would not help organizations to fill their top-level position with the best possible candidate, when they do not change the way they recruit women. In other words, if organizations are not capable of increasing the pool of female applicants for their top-level occupations, a quota might be harmful as it limits the applicant pool.

Another managerial relevant reason for the use of gendered wording is the deeper understanding of how to approach candidates. Extensive marketing research constitutes evidence for idiosyncratic treatments for different consumers (e.g. Wolin, 2003). For example, ads targeted to men benefit from advertorials via internet (Carsky & Zuckerman, 1991), as men are triggered more by interactive, pictorial features (Wolin & Korgaonkar, 2003). In the light of recruitment, the candidate can be perceived as the consumer of recruitment materials. A deeper understanding enables managers to target job advertisements to a specific set of potential hires with the same characteristics (e.g. sex, background, expertise etc.), enlarging the applicant pool.

12. LIMITATIONS & DIRECTIONS FOR FUTURE RESEARCH

Our field experiment and additional study yield important insights into the effects of gendered wording on a candidate's inclination to apply. However, several limitations to our findings must be taken into consideration. In the remaining of this chapter, we will discuss limitations and provide avenues for future research. We conclude the chapter by discussing the ethical considerations of the research.

First of all, in our experiment, we did not take into account the level of agentic or communal words used in the original vacancy which was attached to the recruitment message sent to the candidates we found eligible for our experiment. In this light, the attached vacancy could be viewed as a potential confounding effect, which could affect the variables being studied (Pourhoseingholi, Baghestani & Vahedi, 2012). That is, if a communal message was sent out, and the attached vacancy was perceived as masculine, the inclination to apply might have been affected. However, prior research suggests managerial vacancies contain primarily male associated words (e.g., Barbelescu & Bidwell, 2013; Gauthier et al., 2011). In other words, describing the recruitment material as communal or aggregated, would suffice as a proper experimental condition because all the attached vacancies are then perceived as the same. Moreover, it would be the same for all condition, thus the variation is still the experimental condition. For this reason, we did not initially measure the level of gendered wording in the attached vacancies. However, to invigorate our outcomes, we did conduct a second study to explore the conditions of gendered wording in the labor market. Results from this study indicate that managerial recruitment materials are perceived as agentic, and that women are less inclined to apply when they are. Nevertheless, we believe future research might do well by adding an analysis of the level of agentic and communal words in order to provide even stronger results.

Secondly, a limitation might be the translation of the experimental conditions. In order to create different experimental conditions (i.e., agentic, communal and aggregated), we used the list of gender-related words as established by Gaucher and colleagues (2011). Despite the translation from English to Dutch by Geirnaerd (2018) by means of the parallel translation method (Malhotra & Birks, 2007), we have our doubts whether the translations could not be improved. For example, the word ‘competence’ in the agentic message is translated into the Dutch translation of ‘skills’. Hence, the extent to which ‘competence’ and ‘skills’ are perceived as agentic could differ. Another limitation related to translation is the emotional load that is related to certain words. Emotional load of words can be explained by the feeling that arises when an individual processes a word that triggers an emotion (e.g. Mohammad & Turney, 2010; Pavlenko, 2008). The simplest explanation of this theory contains the study of Dewaele (2008), where he tested the emotional strength of saying and hearing ‘I love you’ in subjects that spoke multiple languages. Results indicate that emotional load was strongest in the native language. With regards to our research, translation of words into Dutch in the experimental conditions might not have the same intended emotional load as in English. In other words, the words as established by Gaucher et al. (2011) might not have triggered the same emotions, for example belongingness and joy with regards to the vacancies, as the English version does. Concluding, the results as showed in the main study could have been moderated by the translation of experimental conditions.

Another limitation we found, again related to a potential confounding effect, is the gender of the professional recruiter who sent out the recruitment message. Again, we found no theoretical support that the recruiter gender would have an impact on the variables we tested (e.g., Harris & Fink, 1987; Born & Taris, 2010). However, controlling for the gender of the recruiter might benefit future research to provide more solid results.

The last limitation worth mentioning, is the measurement of managerial experience. Managerial experience of candidates was measured based on the years of managerial experience a candidate reported on their LinkedIn profile. All information displayed on the profile of the candidate is self-reported (Bonson & Bednarova, 2013). As it would both violate the terms and conditions of individuals using LinkedIn (LinkedIn, 2019) and not be in the own interest of the candidate to display false information, there is an inevitable risk for margins of error. However, the approach for self-reported information does not differ very much from self-reported survey questions. Moreover, other possibilities to measure managerial experience, like the traditional resume of the candidate, might also contain factual errors (Snell, 2007). Even though we believe the error margin is minimal, future research might do well by testing on multiple scales to overcome the error margin.

Future research on the influence of gendered wording on candidates' inclination to apply might do well by looking into individual-level differences related to the impact of gendered wording. Our research did not include individual traits of candidates. A possibility might exist that individual gender-related traits (i.e., agentic and communal traits) might play a role in the evaluation of recruitment materials (e.g., Abele, 2003). Moreover, our research did not test for motivational factors why the message was declined or accepted. Our theoretical support provides one explanation, however, there might be other underlying reasoning. For example, we did not take into account their level of perceived fit or confidence, which might have an impact according to Mohr (2014). Thus, future research might do well by looking into individual motivational factors, to deepen our understanding. By looking into individual level differences, a broader understanding of why women decline masculine messages might come about. This understanding would be very relevant, as this allows for a more idiosyncratic

approach that can be used as a competitive advantage. In other words, it gives practitioners the handles to further specify and target groups of desired candidates.

Another interesting direction for future research might be to understand how gendered wording in recruitment materials might be overcome. As Bonson and Bednarova (2013) argued, the way in which candidates are recruited is changing fast. With an eye on the future and the increasing deployment of technology and video content (Madia, 2011), this might have an impact and even alter results we found in this research, which is primarily based on written content. Over the past few years, several companies have been experimenting with the introduction of video-recruitment (Hendrickson, 2007). An experiment by Hentschel and colleagues (2017) provides evidence that the negative effect of masculine themed recruitment messages can be turned around by having the words communicated by a female representative.

Lastly, future research might do well by looking into the effects of gendered wording and mastery vs. performance orientations. Current research on this topic shows women value a mastery approach (e.g. Van Niel, 2017; Meece & Holt, 1993). The type of orientation can be coupled to agentic and communal behaviors (Geaddert, 1985), the facets where the concept of gendered wording are built on. Hence, the orientation of candidates might influence their sensitivity to gendered wording.

13. CONCLUSION

The aim of our research was to establish whether gendered wording in managerial recruitment materials has an impact on a candidate's inclination to apply. We were also interested under what candidate conditions this effect would be stronger or weaker. For this reason, we introduced gender, occupational area and managerial experience into our research. The motivation for this study was the increased debate on gender segregation in top-level occupations. Where several studies looked into individual-level gender differences, this study looked into institutional level differences that could provide an explanation for the lack of women in higher managerial positions.

In a real-world setting, we examined how the mechanisms of gendered wording impact the inclination to apply for candidates. Our results indicate that gendered wording does have an impact. More specifically, while men show no difference in inclination to apply when exposed to different types of messages, women are affected by the usage of gendered words. We found that women have a stronger inclination to apply when the recruitment message is either communal, or agentic and communal combined (i.e., aggregated). Whether the message is communal or aggregated, makes no significant difference. Moreover, our results indicate that candidates employed in a feminine-stereotyped occupation are more strongly inclined to accept a communal message, regardless the gender of the candidate. Gender does matter when women receive an agentic message while occupied in a feminine stereotyped occupation: women decline these messages more often than men. With regards to managerial experience, we did find a significant result, which indicates that women accept an agentic message more often when they have more managerial experience.

A second study revealed that the results found in the main study are very relevant to current recruitment practices. Overall, managerial recruitment materials were perceived as agentic, making women less likely to apply.

Hence, our findings suggest that there is an institutional mechanism at play that withholds women from applying for top level occupations. Recruitment materials currently used therefore enforce the status quo, which entails men dominating the corporate top. Our findings can help organizations to increase the level of women in their applicant pool, by adding more communal words to their recruitment materials. By doing so, we believe the gender segregation in top-level occupations can be reduced without major costs or effort.

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15. APPENDICES

Appendix A: Distributive results

Table A1: Distributive experimental results per group

<i>Message</i>	<i>Gender</i>	<i>Sent</i>	<i>Responses</i>	<i>Response rate (%)</i>	<i>Accepted</i>	<i>Declined</i>	<i>Acceptance rate (%)</i>
Agentic	Male	53	34	61.15%	25	7	79.41%
Agentic	Female	74	47	63.51%	22	25	46.81%
Communal	Male	41	20	48.78%	15	5	75.00%
Communal	Female	66	43	65.15%	39	4	90.70%
Aggregated	Male	45	33	73.33%	26	7	78.79%
Aggregated	Female	71	46	64.79%	40	6	86.96%
Control	Male	32	20	62.50%	16	4	80.00%
Control	Female	53	34	64.15%	21	13	61.76%
	Total	435	277	63.68%	224	78	74.37%

Appendix B: Agentic and communal words

Table B1: Agentic and communal words

<i>Masculine words</i>	<i>Feminine words</i>
Active	Affectionate
Adventurous	Child*
Aggress_	Cheer_
Ambitio*	Commit*
Analy*	Communal
Assert*	Compassion*
Athlet*	Connect*
Autonom_	Consider
Boast*	Cooperat*
Challeng*	Depend
Compet*	Emotiona*
Confident	Empath*
Courag*	Feminine
Decide	Flatterable
Decisive	Gentle
Decision*	Honest
Determin*	Interpersonal
Dominant	Interdependen_
Domina_*	Interpesona*
Force*	Kind
Greedy	Kindship

Headstrong	Loyal*
Hierarch_	Modesty
Hostil_	Nag
Impulsive	Nurtur*
Independen*	Pleasant*
Individual*	Polite
Intellect_	Quiet_
Lead*	Respon*
Logic	Sensitiv*
Masculine	Submissive
Objective	Support*
Opinion	Sympath_
Outspoken	Tender*
Persist	Together*
Principle*	Trust*
Reckless	Understand*
Stubborn	Warm*
Superior	Whin*
Self-confiden*	Yield*
Self-sufficien*	
Self-relian*	

Note: The asterisk () denotes the acceptance of all letters, hyphens, or numbers following its appearance.*

Appendix C: Outlier Analysis

Figure D1 shows the outlier analysis of the variable 'managerial experience' by means of a boxplot. As indicated in the figure, SPSS identifies three cases (i.e., 98, 123 and 124) as outliers.

However, as shown in figure D2, there is no necessity to remove any of the cases.

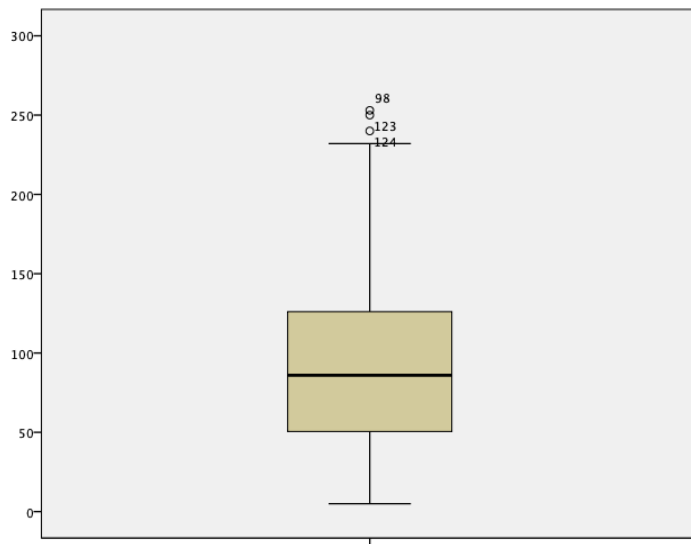


Figure D1: Boxplot of records of the managerial experience variable.

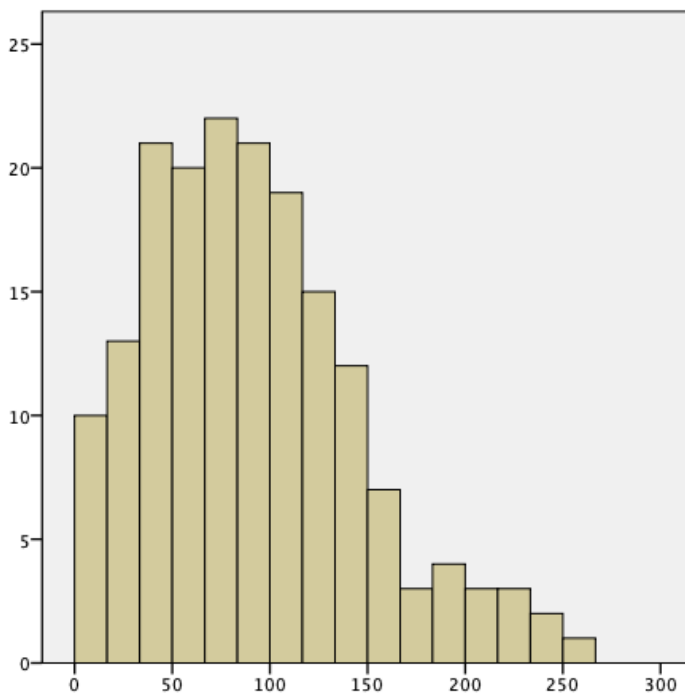


Figure D2: Histogram of the records of the managerial experience variable.

Appendix D: Summary Logistic Regression Results

D1.1: Gender

*Table D1: Summary of logistic regression results agentic * gender*

DV: Inclination to apply		
Variables	Step 1	Step 2
Agentic	-1.289**	.121
Gender	-.297	.838
Agentic * Gender		-2.316**
χ^2	(2, N=223) = 16.516**	(3, N=223) = 28.091**

(*) p < .05, (**) p < 0.01

*Table D2: Summary of logistic regression results communal * gender*

DV: Inclination to apply		
Variables	Step 1	Step 2
Communal	.885*	-.233
Gender	-.288	-.638
Communal * Gender		1.817*
χ^2	(2, N=223) = 5.859	(3, N=223) = 10.698**

(*) p < .05, (**) p < 0.01

Table D3: Summary of logistic regression results aggregated * gender

Variables	DV: Inclination to apply	
	Step 1	Step 2
Aggregated	-.696*	.059
Gender	-.192	-.531
Aggregated * Gender		1.154*
χ^2	(2, N=223) = 4.539	(3, N=223) = 6.797*

(*) p < .05, (**) p < 0.01

D1.2: Occupational area

Table D4: Summary of logistic regression results communal * gender * feminine stereotyped occupation

Variable	DV: Inclination to apply		
	Step 1	Step 2	Step 3
Communal	.839*	1.361	1.391
Gender	-.346	-.344	-.638
Stereotype Occupation	.532	.633	.706
Agentic * Gender		-.537	-1.708
Agentic * Gender * Stereotype Occupation			1.736*
χ^2	(3, N=223) = 7.059	(4, N=223) = 7.252	(5, N=223) = 11.154*

(*) p < 0.05, (**) p < 0.01

*Table D5: Summary of logistic regression results agentic * gender * feminine stereotyped occupation*

<i>DV: Inclination to apply</i>			
<i>Variable</i>	Step 1	Step 2	Step 3
Communal	-1.272*	-.862	-.895
Gender	-.337	-.341	.516
Stereotype Occupation	.376	.645	.419
Agentic * Gender		-.473	.935
Agentic * Gender * Stereotype Occupation			-2.093*
χ^2	(3, N=223) = 17.090**	(4, N=223) = 17.333	(5, N=223) = 26.049**

(*) p < 0.05, (**) p < 0.01

*Table D6: Summary of logistic regression results agentic * gender * masculine stereotyped occupation*

<i>DV: Inclination to apply</i>			
<i>Variable</i>	Step 1	Step 2	Step 3
Communal	-1.272*	-1.335**	-1.328
Gender	-.337	-.341	-.255
Stereotype Occupation	.376	-.645	-.621

Agentic * Gender		.473	.935
Agentic * Gender *			-1.067
Stereotype Occupation			
χ^2	(3, N=223) =	(4, N=223) = 17.333	(5, N=223) =
	17.090**		18.043*

(*) p < 0.05, (**) p < 0.01

D1.3: Managerial Experience

*Table D7: Summary of logistic regression results agentic * gender * managerial experience*

DV: Inclination to apply

<i>Variable</i>	Step 1	Step 2	Step 3
Agentic	-1.050*	.828	2.413
Gender	-.356	.958	1.516
Managerial Experience	.004	.006	.005
Agentic * Gender		-2.955**	-6.625**
Agentic * Gender *			.039*
Managerial Experience			
χ^2	(3, N=223) =	(4, N=223) =	(5, N=223) =
	8.421*	20.749**	27.639**

(*) p < 0.05, (**) p < 0.01