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Gender Stereotypes About Others and Self –

Structure and Consequences for Female and Male Leaders

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Abstract

Women have made considerable inroads into the workforce, but remain underrepresented in many leadership positions. Researchers identified diverse reasons for this inequality (Peus & Welpe, 2011) and many agree that gender stereotypes – generalized assumptions about men and women – play a fundamental role (Heilman, 2012): Men are attributed more agency than women (e.g., assertiveness, dominance); women are attributed more communality than men (e.g., concern for others, cooperativeness). In addition, many leadership positions are perceived to require high-levels of agency. In both the lack-of-fit model (Heilman, 1983, 2012) and role incongruity theory (Eagly & Karau, 2002) it is argued that these stereotypical assumptions trigger the perception of a lower fit of women with leadership positions than of men with leadership positions. This can result in women's self-limiting behaviors (e.g., a lower strive to pursue leadership positions) and biased-decision making by others (e.g., more favorable evaluations of men in leadership positions). Though highly relevant as a basis for research on consequences of stereotyping, there are many open questions about the content and structure of gender stereotypes today (1). We also lack knowledge on (2) contextual factors influencing men's and women's intentions to pursue leadership positions (Bosak & Sczesny, 2008) and (3) factors influencing male and female leader's promotability to higher levels of leadership (Eagly & Carli, 2007). To address these gaps, I conduct a series of 11 studies making use of different methodologies (a video experiment and considering real-world data, amongst others) and samples from diverse backgrounds.

In Chapter 1, I give an overview of important theories and research findings and introduce my research questions in detail. In Chapter 2, I define a multi-dimensional framework to assess current stereotypes of men and women. I determine how they are seen by other men and women, how they see themselves, and how these self- and other-

characterizations differ. In Chapter 3, I investigate a subtle contextual factor that may affect women's self-limiting career choices: The wording of recruitment advertisements. Specifically, I investigate if women perceive a lower fit and show lower intentions to apply for leadership career opportunities if recruitment advertisements employ agentic (rather than communal) characteristics that diverge from women's self-stereotypes. I also test if female recruiters can ameliorate potential negative effects of agentic characteristics on women. In Chapter 4, I examine how stereotypes can influence the evaluation of male and female leaders and thereby affect career outcomes. Specifically, I assess if male and female transformational and autocratic leaders are evaluated differently with regard to leadership effectiveness and promotability. Finally in Chapter 6, I summarize all findings and emphasize the main contributions of this research.

1. Introduction

Women earn more university degrees than men and are almost as likely to receive a PhD degree (GWK, 2016). Despite these educational achievements and women's considerable inroads into the workplace during the last decades (Benko & Weisberg, 2007), women are still underrepresented in leadership positions. Only 29% of leaders in business organizations and only 22% of academic professors in Germany are female (Bundesministerium für Bildung und Forschung, 2015; Statistisches Bundesamt, 2014). This imbalance is similar worldwide (Davidson & Burke, 2016).

Organizations can benefit from women's presence in leadership positions. Research shows that female directors have different values than male directors (e.g., higher levels of benevolence and lower levels of power orientation, Adams & Funk, 2012). This increases value diversity in the boardroom and can potentially lead to better decision making (Adams, 2016). Hiring and promoting women to leadership positions can also be a means for organizations to cope with skill shortages (Dychtwald, Erickson, & Morison, 2013) and women on boards have favorable effects on an organization's reputation (Bear, Rahman, & Post, 2010). Finally, women's presence in top leadership positions is positively related to organizational performance (although it is unclear whether the women's presence directly increases firm performance or if high performing organizations are more likely to hire and promote women, Adams, 2016; Campbell & Mínguez-Vera, 2008; Francoeur, Labelle, & Sinclair-Desgagné, 2008; Reguera-Alvarado, de Fuentes, & Laffarga, 2015; Schmid & Urban, 2015; Schwab, Werbel, Hofmann, & Henriques, 2015; Welbourne, Cycyota, & Ferrante, 2007). Most importantly, it is highly ethical for organizations to offer the same hiring and promotion chances to both women and men (Grosser & Moon, 2005; Mayer & Cava, 1993).

There are several causes for women's underrepresentation in leadership positions. Peus and Welpe (2011) distinguished between individual causes such as differences in communication styles (Tannen, 1990), organizational causes such as limited mentoring

opportunities (Ragins, 1999), and societal causes such as challenges in reconciling work and family life (Lyness & Judiesch, 2008). Research has identified a core reason for women's underrepresentation in leadership that underlies causes on all of the three levels: Gender stereotypes (Heilman, 2012). Gender stereotypes are generalized assumptions about men and women, which are widely shared by a society (Cuddy et al., 2015). They result from men's and women's distributions into different social roles (Eagly & Steffen, 1984). Observing more men than women in the role of family provider and more women than men in the role of family caretaker leads to assumptions about men's and women's characteristics (Koenig & Eagly, 2014). These assumptions are not just about others, but men and women make similar stereotypical assumptions about themselves (Bem, 1974; Spence & Buckner, 2000).

Because of this topic's theoretical and practical relevance, a large body of research has focused on how stereotypes can become an obstacle to women's career advancement (for an overview see, Eagly & Carli, 2007; Heilman, 2012; Heilman, Manzi, & Braun, 2015). What is unclear, however, is the actual content of gender stereotypes today. In addition, much is unclear about the influence of stereotypes on how men and women (1) achieve leadership positions and (2) advance to higher leadership positions. In other words, we lack knowledge about factors influencing men's and women's interest in and pursuit of leadership careers as well as about factors influencing men's and women's advancement to higher leadership positions (e.g., Bosak & Sczesny, 2008; Lyness & Heilman, 2006). More specifically, there is a lack of knowledge about if and how stereotypes about self can influence men's and women's intentions to pursue leadership positions. In addition, we lack knowledge about how leadership behavior that is more or less in line with stereotypical expectations influences men's and women's chances to be promoted.

The central aim of this dissertation is to address these gaps and to contribute to a better understanding of how and when gender stereotypes influence women's and men's advancements in the workplace. To achieve these aims, I will give a short introduction on

what we already know about the reasons for women's underrepresentation in leadership positions in this Chapter. I will also give a short introduction on each of the chapters to follow. In Chapter 2, I set out to identify the current content and structure of gender stereotypes. I assess current gender stereotypes about other men and women. I also assess current gender stereotypes men and women have about themselves and relate these to stereotypes about other men and women. In Chapters 3 and 4, I focus on consequences of gender stereotypes for men's and women's entry in and advancement to leadership positions. In Chapter 3, I look into predictors of men's and women's intentions to apply for leadership career opportunities. Specifically, my interest is whether women and men are hesitant to apply for career opportunities advertised with characteristics less (rather than more) in line with their stereotypical perceptions of themselves. Building on these findings, in Chapter 4, I examine how stereotypes about others can influence men's and women's advancement in the workplace. Specifically, my interest is if gender stereotypes can impact evaluations of leadership effectiveness and promotability of male and female leaders that show stereotype-incongruent leadership styles. Finally, in Chapter 6, I integrate the findings from the previous chapters, and highlight theoretical and practical contributions of this dissertation.

Explanations for women's underrepresentation in leadership

There are different explanations of why there are fewer women in leadership positions (e.g., Hentschel, Braun, & Peus, in press). Peus and Welpe (2011) identified causes for women's underrepresentation in leadership on three levels: (1) individual, (2) organizational, and (3) societal. Individual causes are causes stemming from women themselves. They include women's (compared to men's) lower power motivation (Schuh et al., 2013), lower self-confidence (Heilman, Lucas, & Kaplow, 1990; Instone, Major, & Bunker, 1983), performance underestimation (Sieverding, 2003), higher modesty (Heatherington et al., 1993), and lower perception to be an effective leader (Paustian-Underdahl, Walker, & Woehr, 2014). A favorable self-evaluation is positively related to salary and economic success (Judge

& Hurst, 2007). However, women's lower trust in their own competence can hinder them to strive for and take on leadership positions (Heilman, 1983, 2012).

Organizational causes are defined as barriers women may face in a company or institution. Over 80% of women state that they experience organizational barriers to their career advancement (Simpson, Sturges, Woods, & Altman, 2004). These include organizational norms and structures geared from beliefs and experiences of men (Ruderman & Ohlott, 2005), a limited amount of female leaders who can act as role models to other women (Hoyt & Simon, 2011), and women's exclusion from some informal networks (Lyness & Thompson, 2000). In addition, women's hiring chances can be impeded by unsystematic personnel selection and evaluation, which can result in hiring based on liking or similarities rather than merit (McCarthy, Van Iddekinge, & Campion, 2010; Uhlmann & Cohen, 2005) – especially because women are evaluated less enthusiastically than men in recommendation letters (Madera, Hebl, & Martin, 2009). There are also higher standards for promotion of women (Lyness & Heilman, 2006). Promotion chances may additionally be limited, because women are not always given equal credit for work accomplishments (Heilman & Haynes, 2005) and because they are allocated less challenging work tasks (De Pater, Van Vianen, & Bechtoldt, 2010), which can hinder their career advancement (Woodall, Edwards, & Welchman, 1997).

Societal causes are barriers stemming from culture or the social order. Social role theory states that a highly influential societal cause for women's underrepresentation in leadership is the traditional role distribution of women and men (Eagly & Wood, 2012). Historically, in most societies, men have been the provider of the family and women have been the caretaker of the family (Eagly & Steffen, 1984). These traditional gender roles still influence society today. For example, even if both partners work, women take on the majority of household and family tasks (Lothaller, Mikula, & Schoebi, 2009), which they perceive to influence their career development (Peus, Braun, & Knipfer, 2015). Indeed, women's longer

family leaves (Statistisches Bundesamt, 2015b) have been shown to be negatively related with promotions and salary increases (Judiesch & Lyness, 1999).

Importantly, from perceiving men and women in different social roles, people make assumptions about the characteristics they possess (Koenig & Eagly, 2014). Different attributes are needed to fulfill different social roles. Men as providers needed to take charge and be in control. This requires *agentic* attributes like dominance or assertiveness. Women as caretakers needed to care for others and to build relationships. This requires *communal* attributes like communication skill or supportiveness (Heilman, 2012). These assumptions drawn from observing men and women in different societal roles manifest as gender stereotypes (Eagly & Steffen, 1984; Eagly & Wood, 2012).

Gender stereotypes and consequences for the advancement of women to leadership positions

Gender stereotypes can be descriptive and prescriptive (Heilman, 2012). Descriptive gender stereotypes are perceptions of what men and women *are* like. According to findings on descriptive stereotypes, men are perceived as more agentic than women and women are perceived as more communal than men (Heilman, Block, & Martell, 1995). In addition, prescriptive stereotypes are perceptions of what men and women *should be* like. The content of prescriptive stereotypes is quite similar to that of descriptive stereotypes. According to findings on prescriptive stereotypes, men are expected to be more agentic than women and women are expected to be more communal than men (Prentice & Carranza, 2002). Importantly, gender stereotypes can also be about self (Bem, 1974; Spence & Buckner, 2000) and gender identity is a critical aspect of people's self-concept (D. N. Ruble & Martin, 1998). Seminal research on this topic has shown that men's and women's self-descriptions generally differ in stereotype-consistent ways; men rate themselves higher on agency than women do, and women rate themselves higher on communality than men do (Bem, 1974; Spence & Helmreich, 1978).

The Lack-of-Fit Model

Many leadership positions and other positions in the upper equelons of organizations are perceived to be highly agentic (Duehr & Bono, 2006; Powell, Butterfield, & Parent, 2002). This means that there is a great overlap between the characteristics with which men are described and the characteristics with which leaders are described. This phenomenon has been called "think manager, think male" (Schein, 1973, 1975, 2001). According to the *lack-of-fit model* (Heilman, 1983, 2001, 2012) people make fit assessment by comparing (1) the perceived attributes of the person and (2) the perceived job requirements. On the basis of these fit assessments, people form performance expectations. Further, the model proposes that when perceived attributes of the person and perceived job characteristics fit well together, they expect the person to be successful in this job; when perceived person and job characteristics do not fit well together, they expect the person to fail. These performance expectations lead to a positive or negative bias that influences judgments of others and self. Self-evaluations then influence career choices and career advancement activities; evaluations by others influence selection decisions, performance ratings, and promotion decisions (Heilman, 1983).

A negative fit assessment and expectation of failure can result in negative evaluations by others, who are then likely to show discriminatory behaviors in evaluation, selection, and promotion decisions. A negative fit assessment and expectation of failure can also result in negative self-evaluations. These negative self-evaluations lead to a self-limited range of career-choices and self-limited career advancement activities. The lack-of-fit model assumes that the greater the lack of fit between perceived person and job characteristics, the greater will be the likelihood or magnitude of sex-bias in the workplace (Heilman, 1983).

Research has found support for the predictions of the lack-of-fit model with regard to evaluations of others. Because of the descriptive stereotype that women are less agentic than men (Haines, Deaux, & Lofaro, 2016) and the perception that agency is required for success

in traditionally male-typed positions like upper leadership (Koenig, Mitchell, Eagly, & Ristikari, 2011; Powell et al., 2002), men are perceived as more fitting for such positions. The consequence is that women are less likely to be selected for these raditionally male-typed positions, their performance is evaluated to be lower than men's, and they are less likely to be promoted (Heilman, 2012; Heilman & Haynes, 2005; Heilman et al., 2015; Lyness & Heilman, 2006).

Research has also found support for the predictions of the lack-of-fit model with regard to self-evaluations. Because women perceive themselves to be less agentic than men (Spence & Buckner, 2000) and perceive that agency is required for success in traditionally male-typed positions like upper leadership (Koenig et al., 2011; Powell et al., 2002), they perceive themselves to be less fitting for such positions. In line with this, women show self-limiting behavior. They have been found to show a lower motivation to lead and lesser strives for leadership positions (Elprana, Stiehl, Gatzka, & Felfe, 2012; Powell & Butterfield, 2003; Schuh et al., 2013) and to perceive themselves as less effective in leadership and on male-typed tasks (Haynes & Heilman, 2013; Paustian-Underdahl et al., 2014).

The role incongruity theory of prejudice

Once in a leadership position, women may also face disadvantages because of gender stereotypes. Eagly's and Karau's prominent *role incongruity theory of prejudice* (Eagly & Karau, 2002) postulates that because of the incongruence between the female gender role (e.g., being highly caring) and the leadership role (e.g., necessity to sometimes make unpopular decisions), women face two forms of prejudice. The first form is (in line with predictions of the lack-of-fit model) a less favorable evaluation of women's leadership potential. They postulate that this is the consequence of descriptive stereotypes, because leadership ability is perceived as more stereotypically of men than of women. The second form is a less favorable evaluation of women's as compared to men's actual leadership behavior. This is postulated to be the consequence of prescriptive stereotypes: Agentic

leadership behaviors are perceived as less desirable in women than in men[1]. In line with this, Eagly and colleagues found that women were evaluated especially negative when showing highly agentic leadership styles (Eagly, Makhijani, & Klonsky, 1992). Newer research shows that women are not necessarily evaluated more negative than men when showing more subtle forms of agency (M. J. Williams & Tiedens, 2016).

Introduction to Chapter 2

A large amount of studies on the content of stereotypes has been conducted more than 25 or even 50 years ago (Bem, 1974; Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Heilman, Block, Martell, & Simon, 1989; T. L. Ruble, Cohen, & Ruble, 1984; Spence & Helmreich, 1978; J. E. Williams & Best, 1990) and women have made great progress in the workplace during the last decades (Benko & Weisberg, 2007). What does this imply about gender stereotypes? On the one hand, women's substantial strides suggest that traditional gender stereotypes no longer prevail. On the other hand, women's lower salaries (AAUW, 2016) and stagnation at lower organizational levels (Catalyst, 2016) suggests that traditional gender stereotypes do indeed prevail.

As described above, gender stereotypes stem from men's and women's traditional roles (Eagly & Steffen, 1984). These roles have steadily been changing, perhaps necessitating a revision of gender views. However, stereotypes are difficult to change and cognitive distortion helps maintain them (Heilman, 2001, 2012; Hilton & von Hippel, 1996). What is more, the popular press continues to emphasize the differences between women and men, impacting and reinforcing people's beliefs (Brescoll & LaFrance, 2004).

Recent research on gender stereotypes draws an inconclusive picture. For example, some findings indicate a perception that women's agency is shifting over time (Diekman & Eagly, 2000), and in one investigation women were actually found to be described as more

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[1] Building on the lack-of-fit model (Heilman, 1983), Eagly and Karau (2002) designed the role incongruity theory for a specific application to the management context. While not making predictions about self-stereotypes, they expanded the scope to consequences of prescriptive stereotypes.

agentic now than they were 25 years ago (Duehr & Bono, 2006). However, other investigations have found gender stereotypes to have remained stable over time (Lueptow, Garovich-Szabo, & Lueptow, 2001), and men and women still to be described very differently from one another and in line with traditional stereotyped conceptions (Haines et al., 2016; Spence & Buckner, 2000). There are also conflicting findings concerning self-stereotypes. There is some indication that women's self-perceived deficit in agency has abated over time (Spence & Buckner, 2000; Twenge, 1997), but there also is indication from behavioral studies that women and men still hold traditional stereotypic views of themselves (e.g., Haynes & Heilman, 2013). There are many possible reasons for these inconsistencies, including differences in the types of measures used and the conceptualizations of the stereotypic attributes measured.

Gender stereotypes are typically thought of in terms of agency and communality (Abele, Cuddy, Judd, & Yzerbyt, 2008; Bakan, 1966). However, agency and communality are broad concepts and a more nuanced analysis of the structure of gender stereotypes would provide valuable insights (i.e., an analyses of different facets of agency and communality). Communality has been discussed as encompassing attributes that involve concern for others, sociability, and emotional sensitivity. Agency, on the other hand, has been discussed as encompassing attributes that involve competence, assertiveness, and independence (e.g., Heilman 2012). While these facets of the communality and agency constructs are highly related, they also are conceptually distinct and therefore may be adhered to differently.

Thus, in Chapter 2, I was interested in determining whether men would be perceived as more agentic than women and whether women would be perceived as more communal than men – and if this depended on the particular dimension of agency or communality being observed or the observer's sex. I also was interested in determining whether there were differences in how men and women perceive themselves on the various dimensions of agency and communality, and if these differences paralleled or differed from the pattern of

differences found for how others rated women and men. Finally, I wanted to determine if the ascription of stereotyped attributes is more or less prevalent when the target of description is oneself by comparing men's and women's self-perceptions with perceptions of others of their gender group.

After investigating the structure of gender stereotypes in Chapter 2, I focused on consequences of gender stereotypes for men and women at two stages of the talent management process (Rehbock, Horvath, & Hentschel, 2017): (1) Women's and men's pursuit of leadership careers (Chapter 3) and (2) Promotion of male and female leaders (Chapter 4).

Introduction to Chapter 3

Stereotypes about self also limit women's career advancement because they can lead to women's self-limiting behavior in the workplace. When women evaluate their personal fit with leadership positions they go through a process similar to the one that others use when evaluating them (Heilman, 1983). Women therefore often hold negative expectations of themselves in those roles. This can affect career choices, reactions to opportunities for advancement, and willingness to take risks (Heilman, 1983, 2012). For example, when working jointly with men on a male-typed task, women see themselves as less competent than their male co-workers and are unwilling to take an equal amount of credit for successful work (Haynes & Heilman, 2013). Women also seek out less competition on male-typed tasks (Günther, Ekinci, Schwieren, & Strobel, 2010). In addition, when gender stereotypes are activated in women, they perform worse than men on masculine or managerial tasks (Bergeron, Block, & Echtenkamp, 2006) and are more likely to attribute failures internally (Koch, Müller, & Sieverding, 2008). This may be due to negative thinking (Cadinu, Maass, Rosabianca, & Kiesner, 2005) or self-doubt (Kinias & Sim, 2016).

In this chapter, I am interested in whether women's lack of fit perceptions to leadership positions can be influenced. Research shows that contextual factors can influence

women's pursuit of career opportunities (Bosak & Sczesny, 2008). In other words, circumstances that organizations control may affect to what extent women perceive a fit or lack thereof to a given position. Evident starting points are thereby recruitment advertisements and recruiters. Due to limited sources of information, applicants often use recruitment advertisements and recruiters as signals for unknown organizational characteristics (e.g., Rynes, 1991; M. L. Williams & Bauer, 1994). Hence, men and women may use the recruitment advertisement as well as recruiters to infer requirements of positions to make fit calculations (Heilman, 1983).

Recruitment advertisements

Recruitment advertisement have a large effect on men's and women's application intentions (D. G. Allen, Van Scotter, & Otondo, 2004). They do not only transport the objective information, but also subjective cues (Cable & Judge, 1996). One such subjective cue that may influence people's fit perceptions is the wording used in recruitment advertisements (Gaucher, Friesen, & Kay, 2011). Stereotypes manifest in language (Leaper & Ayres, 2007; Newman, Groom, Handelman, & Pennebaker, 2008). The Sapir-Whorf hypothesis posits that though culture has an effect on language, there is a reciprocal effect of language on culture, i.e., on people's perceptions, cognitions and behaviors (Whorf, 1956). For example, if the generic male form "he" or the generic masculine form of an occupation (e.g., actor) is used to refer to both men and women, people are more likely to think of men and less likely to think of women (Moulton, Robinson, & Elias, 1978; Stahlberg, Sczesny, & Braun, 2001). In recruitment advertisements, the use of the pronoun "he" when referring to men and women rather than the more inclusive "he/she" or "she/he" leads to a lower perception of career attractiveness for women and to fewer applications from them (Bem & Bem, 1973; Briere & Lanktree, 1983; Costello, 1979). In addition, in languages with few gender-neutral terms (e.g., German) it has been found that women are less likely to apply to and less likely to be hired if an advertisement uses the generic masculine title for a job

compared to the joint male and female titles (Horvath, Hentschel, & Peus, 2016; Horvath & Sczesny, 2016).

I propose that less obvious cues in advertisements can lead to similar effects. Many characteristics are not neutral, but rather gender-typed (Eagly, Mladinic, & Otto, 1991). For example, "leadership ability" is perceived to be a masculine or agentic characteristic whereas "communication ability" is perceived to be a feminine or communal characteristic (Taris & Bok, 1998). Thus, in Chapter 3, I claim that depending on how recruitment advertisements are worded with regard to agency and communality, women's intentions to pursue a career opportunity may be helped or harmed.

Building on Chapter 2 and the lack-of-fit model (Heilman, 2012) I propose and test in Chapter 3 if communal and agentic characteristics used in recruitment advertisements can impact women's intentions to apply for career opportunities. Many women see a lack of fit between their perception of their own communality and the agentic characteristics expected for many leadership careers, which may hinder them to apply. I argue that advertisements with many agentic characteristics increase women's perceived lack of fit between self-stereotyped communal attributes and the agentic attributes of the position. In advertisements with many communal characteristics, however, this lack of fit would be reduced.

Characteristics of the recruiter

The gender of the recruiter may be another factor women consider. Women's evaluations of an organization and their intentions to apply to a career opportunity may be affected by the gender of the recruiter. Research shows that applicants are more likely to join an organization, if they perceive themselves to be more similar to the organization (Kristof-Brown, Zimmerman, & Johnson, 2005).

Recruiters are typical organizational representatives who communicate information about the position as well as the organization itself (Breaugh & Starke, 2000). Like agentic and communal characteristics in advertisements, they signal unknown organizational

characteristics like what an ideal member should look like (Rynes, 1991). Can a female

recruiter ameliorate potential negative effects of agentic characteristics on women?

To date research findings on the effects of recruiter gender have been diverse (Harris

& Fink, 1987; Taylor & Bergmann, 1987). We do not know whether female recruiters can

buffer potential negative effects of agentic characteristics in advertisements on women.

Researchers suggest that an organization can portray diversity through organizational

representatives like recruiters, which will make potential applicants believe that diversity is

appreciated in the organization and that women are valued members of an organization

(Avery & McKay, 2006). In addition, female recruiters are perceived as more personable than

male recruiters (Liden & Parsons, 1986). This can be a signal of how an applicant would be

treated if he or she enters an organization (Connerley & Rynes, 1997).

I suggest that women's evaluations of an organization and their intentions to apply to

a career opportunity may be affected by the gender of the recruiter. Specifically, I argue that

women will only perceive a lower fit to and will be less likely to apply to a career opportunity

if it is advertised with agentic characteristics *and* a male recruiter. I assume that not just

communal characteristics but also female recruiters may lead to women's higher fit

perceptions, which in turn will lead to women's higher application intentions for a leadership

career opportunity. I will test these assumptions in Chapter 3.

Introduction to Chapter 4

Even if women have decided to pursue a leadership career, gender stereotypes can be

highly disadvantageous to their career advancement. As described above, descriptive,

prescriptive, and stereotypes about self have distinct consequences. Descriptive stereotypes

inhibit women's career advancement, because leadership (like men) is characterized mostly

by agentic characteristics (Sczesny, Bosak, Neff, & Schyns, 2004). Schein (1973, 1975, 2001)

found that attributes with which managers are described are more similar to attributes with

which men are described than to attributes with which women are described (a finding widely

termed the "think manager, think male" paradigm). Subsequently, both Heilman (1983, 2012) in her lack-of-fit model and Eagly and Karau (2002) in their role incongruity theory of prejudice theorized that women were perceived as less fitting to leadership positions than men. The idea that biased decisions about women in leadership and other traditionally male-typed fields are resulting from this perceived lack of fit has received strong empirical support in research about recruitment (Gaucher et al., 2011), selection (Davison & Burke, 2000), evaluation (Haynes & Lawrence, 2012; Heilman & Haynes, 2005), and promotion (Lyness & Heilman, 2006). It is not that a woman's communality is thought to be bad. Indeed, being kind and caring is considered to be "wonderful" (Eagly & Mladinic, 1994), but being communal is seen as inconsistent with being the tough, decisive, competitive person that upper level organizational positions demand.

Prescriptive stereotypes can also hinder women's career advancement. Women who show high levels of agency (e.g., through assertive self-promotion) are indeed perceived as being highly competent, but also as being low in communality (Phelan, Moss-Racusin, & Rudman, 2008). Similar effects occur when women are successful at traditionally male-typed tasks (Heilman & Okimoto, 2007). Therefore, women are sometimes disliked more than men when showing the same agentic behaviors (Rudman & Phelan, 2008). This can impact women's chances of being hired (Rudman & Glick, 2001) and promoted (Rudman, Moss-Racusin, Phelan, & Nauts, 2012). If women, however, show agency and communality simultaneously (Rudman & Glick, 2001) or in situations in which women's gender-inconsistent agentic behavior is perceived as particularly clever (Meijs, Lammers, & Ratliff, 2015), they are not evaluated more negative than men.

In Chapter 4, I focus on factors influencing the promotability of male and female leaders. I investigate if differing evaluations of leadership effectiveness of male and female leaders are a reason for women's underrepresentation in leadership. Previous theory and research remains ambiguous as to whether different leadership styles and subsequent

evaluations of men's and women's leadership effectiveness have consequences on men's and women's promotion likelihood. Eagly and Carli (2007) argue that people's leadership styles may be a central factor that is considered when it comes to filling managerial positions.

Indeed, showing the same behaviors in the workplace does not always result in the same outcomes for men and women. Certain agentic and communal behaviors may lead to positive evaluations of men and neutral or even negative evaluations of women (Rudman & Phelan, 2008; Shaughnessy, Mislin, & Hentschel, 2015). Agency and communality are also important when it comes to specific leadership styles. Some leadership styles employ only agentic behaviors, like autocratic leadership – a leadership style characterized by exhibiting high levels of control over subordinates and their work (Abele, Uchronski, Suitner, & Wojciszke, 2008; De Cremer, 2006). Other leadership styles employ predominantly communal behaviors, like transformational leadership – a leadership style characterized by motivating, stimulating and caring about subordinates (Avolio, Bass, & Jung, 1999; Kark & Shamir, 2013). In Chapter 4, I examine how men and women will be evaluated if they show highly agentic leadership behaviors (i.e., autocratic leadership) in line with the male gender role versus communal leadership behaviors (i.e., transformational leadership) in line with the female gender role. In other words, I investigate how men and women are evaluated if they show leadership behaviors that are more or less in line with gender stereotypical expectations.

Several researchers argued that transformational leadership may be advantageous for female leaders, because they do not just show agentic behavior, but they additionally show communal behavior which is in line with gender stereotypes about them (Eagly & Carli, 2003; Maher, 1997; Yoder, 2001). However, expectancy violation theory (Prentice & Carranza, 2004) suggests that men may be evaluated more positively for showing communality, because this is less expected of them and is more noticeable. Indeed, researchers have shown that men are sometimes evaluated more positive when they show communal behavior in the workplace (e.g., Heilman & Chen, 2005; Mohr & Wolfram, 2008;

Shaughnessy et al., 2015). To dissolve this disparity, I test whether transformational and autocratic leadership would be more prone to help the advancement of women or men. Specifically, I investigate if and how men and women leading with a transformational or autocratic leadership style are evaluated differently with regard to leadership effectiveness. Further, I examine whether the evaluation of leadership effectiveness will affect their promotion chances. This research aims to uncover whether differing evaluations of male and female leaders will contribute to the disparity of female managers – a question of great practical relevance.

Research approach

To answer the questions on the content of contemporary gender stereotypes on others and self as well as their consequences, I draw from theories from three strands of literature: Basic social psychology, applied organizational psychology, and management by integrating theories on gender stereotypes, leadership, and human resource management. In addition, I employ a mix of laboratory and field experiments. Specifically, I employ experimental vignette studies, as well as a video study, a field study, content analyses, and real-world data. In addition, I recruited different samples from the United States and Germany, as well as samples of students and working adults.

Taken together, my studies contribute to a better understanding of the content and consequences of gender stereotypes. Specifically, in this dissertation I will analyze the structural representation of gender stereotypes (Chapter 2). I will then assess consequences for (1) women's pursuit of leadership careers (Chapter 3) as well as for (2) women's and men's advancement in leadership careers (Chapter 4). Finally, I will give an overview of the findings and discuss theoretical and practical contributions (Chapter 5).

2. The multiple dimensions of gender stereotypes: A current look at men's and women's characterizations of others and themselves[2]

There is no question that a great deal of progress has been made toward gender equality, and this is particularly evident in the workplace. There also is no question that the goal of full gender equality has not yet been achieved – not in pay (AAUW, 2016) or position level (Catalyst, 2016). In a survey about the reasons for the gender gap in leadership positions, more than two-thirds of female executives and more than half of mostly male CEOs agreed or strongly agreed that stereotypes about women are a barrier for women's advancement to the top (Wellington, Kropf, & Gerkovich, 2003). There is a long history of research in psychology that corroborates this belief (for reviews see Eagly & Sczesny, 2009; Heilman, 2012). These investigations support the idea that gender stereotypes held both about others and about self can be impediments to women's career advancement, promoting gender bias in employment decisions and women's self-limiting behavior.

This study is designed to investigate the current state of gender stereotypes about men and women. Much of the original research on the content of gender stereotypes was conducted several decades ago and more recent research findings are inconsistent, some suggesting that traditional gender stereotypes have eroded and others suggesting they have not. Measures of stereotyping in these studies tend to differ, all operationalizing the overarching constructs of agency and communality, but in different ways. I contend that the apparent conflict in these findings derives in part from the fact that different studies have focused on different facets of these constructs. Thus, I seek to obtain a more complete picture of the specific content of today's gender stereotypes by treating agency and communality, the two defining features of gender stereotypes, as multi-dimensioned constructs.

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[2] This chapter is based on a working paper by Hentschel, Heilman, and Peus (2013), currently being prepared for submission.

Because stereotypes about others have different consequences than stereotypes about self, I seek to determine differences both in how women and men are seen and in how they see themselves. I also plan to compare and contrast the content of views of others and views of self, something not typically possible because research measuring stereotypes rarely focuses on stereotypes about others and about self in the same study. I therefore have multiple objectives in this study. I aim to use a multi-dimensional framework for assessing current conceptions of men and women, considering how men and women are seen by male and female others, how men and women see themselves, and how these perceptions of self and other differ.

Gender stereotypes

Gender stereotypes are generalizations about what men and women are like, and there typically is a great deal of consensus about them (Cuddy et al., 2015; Glick et al., 2000). According to social role theory, gender stereotypes derive from gender roles exemplifying the traditional division of labor -- men as breadwinners outside the home and women as caretakers inside the home (Diekman & Eagly, 2000; Eagly & Wood, 2012). Thus, men have been thought to be more agentic than women, taking charge and being in control, and women have been thought to be more communal than men, being attuned to others and building relationships (e.g., Broverman et al., 1972; Eagly & Steffen, 1984).

In general, stereotypes are thought to serve an adaptive cognitive function allowing people to categorize and simplify what they observe and to make predictions about others (e.g., Devine & Sharp, 2009; S. T. Fiske & Taylor, 2013). However, stereotypes also can induce bias by fostering inaccurate assessments of people – i.e., assessments based on a generalization rather than on a person's unique qualities. Stereotypes about gender are especially influential because gender is an aspect of a person that is readily noticed and

remembered (A. P. Fiske, Haslam, & Fiske, 1991). In other words, gender is a commonly

occurring cue for stereotypic thinking (Blair & Banaji, 1996).

Other-directed gender stereotypes

The effect of gender stereotypes can be an impediment for women's career

advancement. The qualities that are thought to be required to successfully perform

traditionally male roles, including many high level positions and positions in STEM fields,

are the agentic attributes that comprise the male stereotype, not the communal attributes that

comprise the female stereotype (Heilman et al., 1989; Powell et al., 2002; Schein, 2001). So,

because of gender stereotypes, women are expected to not have what it takes to succeed. This

idea is at the core of both the lack of fit model (Heilman, 1983, 2001, 2012) and role

incongruity theory (Eagly & Karau, 2002), and the idea that biased decisions about women in

traditionally male pursuits are most prevalent when stereotypes are activated has received

strong empirical support (e.g., Horvath & Sczesny, 2016; Lyness & Heilman, 2006).

Likewise, the qualities that are thought to be required to successfully perform

traditionally female roles are the communal attributes that comprise the female stereotype,

not the agentic attributes that comprise the male stereotype. This also results in a perceived

lack of fit and bias towards men in these female-typed positions (e.g., Brescoll & Uhlmann,

2005; Heilman & Wallen, 2010). Because, however, most upper level and leadership

positions are thought to be male in gender-type, the consequences of gender bias for career

progress in work settings is typically less problematic for men than it is for women.

Self-directed gender stereotypes

Gender stereotypes are used not only to characterize others but also to characterize

oneself (Bem, 1974), and gender identity is a critical aspect of people's self-concept (D. N.

Ruble & Martin, 1998). Young boys and girls learn about gender stereotypes from their

immediate environment and the media, and they learn how to behave in a gender-appropriate

way (Deaux & LaFrance, 1998). These socialization experiences no doubt continue to influence attitudes later in life and, indeed, research has shown that men's and women's self-descriptions differ in ways that are stereotype-consistent (Bem, 1974; Spence & Buckner, 2000).

The idea that women ascribe stereotypic characteristics to themselves suggests that when evaluating their own "fit" with traditionally male positions and roles women feel ill-equipped to succeed. There is support for this idea -- women's self-ratings of expected task competence on a typically male task was not found to differ from self-ratings of individuals who had received negative information about their task ability (Heilman et al., 1990). This stereotype-based assessment can lead to self-limiting behavior (Heilman, 2012), affecting career choices, reactions to opportunities for career advancement, and willingness to take risks. It also is in line with findings demonstrating that, when working together with men, women credit themselves less than they credit their male co-workers for successful joint outcomes (Haynes & Heilman, 2013).

Current gender stereotypes

Stereotypes are tenacious; once established, they tend to have a self-perpetuating quality (Heilman, 2012; Hilton & von Hippel, 1996). However, stereotype maintenance is a product not only of the rigidity of people's belief systems but also of the societal roles women and men enact (Eagly & Steffen, 1984; Koenig & Eagly, 2014), and therefore the persistence of traditional gender stereotypes is fueled by skewed gender distribution into social roles. If there have been recent advances toward gender equality in workforce participation, if the representation of women and men in long-established gender roles has softened, doesn't this suggest that gender stereotypes will have eroded?

The answer to this question is not straightforward; the degree to which there has been a true shift in social roles is unclear. On the one hand, there are more women in the

workforce than ever before. In 1950, 63 percent of U.S. households were made up of a male provider working outside the home and a female caregiver working inside the home; but now only 17 percent of U.S. households concur with this division (Benko & Weisberg, 2007). Moreover, women increasingly pursue traditionally male careers, and there are more women in roles of power and authority. For example, today women hold over 50% of management, professional, and related positions in the United States (Catalyst, 2016). There also are more men taking on a family's main caretaker role. Thus, it is possible that recent societal changes have produced a revision of our gender views.

On the other hand, role segregation, while somewhat abated, has by no means been eliminated. Despite the increase in their labor force participation, women continue to be concentrated in occupations that are perceived to require communal, but not agentic attributes. For example, the three most common occupations for women in the United States involve care for others' needs (secretary and administrative assistant; elementary and middle school teacher; and registered nurse, U.S. Department of Labor, 2014), while men more than women tend to work in occupations requiring agentic characteristics like analytical skills, assertiveness, or forcefulness (e.g., senior management positions, construction, or engineering, Bureau of Labor Statistics, 2016b). In addition, women still perform a disproportionate amount of domestic work (Bureau of Labor Statistics, 2016a), bear the brunt of childcare responsibilities (Craig & Mullan, 2010; Kan, Sullivan, & Gershuny, 2011), and continue to be expected to do so (Park, Smith, & Correll, 2008).

Thus, there is both reason to expect traditional gender stereotypes to be diminished and reason to expect they are not. Relevant research findings are conflicting – especially about views of women's agency. Some findings indicate a perception that women's agency shifts over time (Diekman & Eagly, 2000), and in one investigation women were actually found to be described as more agentic than they were 25 years earlier (Duehr & Bono, 2006).

However, other investigations have found gender stereotypes to have remained the same (Haines et al., 2016; Lueptow et al., 2001), and men and women still to be described very differently from one another and in line with stereotyped conceptions (Spence & Buckner, 2000). There also have been conflicting findings concerning self-stereotypes. There is some indication that women's self-perceived deficit in agency has abated over time (Twenge, 1997), but there also is indication from behavioral studies that women and men still hold traditional stereotypic views of themselves (e.g., Haynes & Heilman, 2013).

There are many possible explanations for these conflicting results. A very compelling one concerns the conceptualization of the agency and communality constructs and the resulting difference in the traits and behaviors used to measure them. In much of the gender literature, agency and communality have been loosely used to denote a set of varied attributes, and different studies have operationalized agency and communality in different ways. I propose that agency and communality are not unitary constructs but rather are comprised of multiple dimensions, each distinguishable from one another. I also propose that considering these dimensions separately will enhance the clarity of our understanding of current differences in the characterization of women and men, and provide a more definitive answer to the question of the structure of gender stereotypes today.

Dimensions of communality and agency

There has been great variety in how the agency construct has been defined and operationalized (e.g., Abele, Cuddy, et al., 2008; McAdams, Hoffman, Day, & Mansfield, 1996; Rudman & Glick, 2001; Schaumberg & Flynn, 2016), and in a number of studies, competence has been shown to be distinct from agency as a separate factor (Carrier, Louvet, Chauvin, & Rohmer, 2014; Koenig & Eagly, 2014; Rosette, Koval, Ma, & Livingston, 2016). Reviewing the literature and the many traits and behaviors used to represent agency in various studies, I distilled three dimensions that seemed most parsimonious in covering the

conceptual range of the construct. I not only separated out competence from agency, as has been suggested by others, but I further decomposed agency into dimensions of assertiveness and independence, which I posited to be conceptually distinct. Competence is about having the necessary skill, knowledge and ability to achieve a task or goal. Assertiveness concerns the inclination to act on the world and influence others. Independence connotes self-reliance and the capability to act on one's own, free of the influence of others.

There also is great variety in how the communality construct has been defined and operationalized (e.g., Abele & Bruckmüller, 2011; Abele, Cuddy, et al., 2008; S. T. Fiske, Cuddy, & Glick, 2007; Hoffman & Hurst, 1990). However, there has not been much attention focused on decomposing the communality construct. Nonetheless, the multiplicity of the terms used to represent communality is highly suggestive that communal content can be decomposed into different components. Reviewing the literature and the traits and behaviors used to represent communality, I again distilled three distinct dimensions that appeared to parsimoniously encompass the scope of the construct: concern for others, sociability, and emotional sensitivity. Concern for others and sociability both are attributes that entail a focus on others, but the former involves a one-way relationship of giving and nurturance while the latter involves a transactional relationship focused on relationship-building. Emotional sensitivity implies an orientation that focuses on feelings as an antecedent or consequence from interactions with others.

While I am proposing that communality and agency can be broken down into components, I am not claiming that the use of these overarching constructs in earlier research has been an error. In the vast majority of studies in which communality or agency has been measured the scale reliabilities have been high and the items highly correlated. Internal consistency does not, however, indicate that the included items are unidimensional (Schmitt, 1996; Sijtsma, 2008) or that the entirety of the construct is being captured in a particular

measure. Based on the multiple meanings included in these constructs as they have been discussed and operationalized in gender research, I am proposing that breaking them down into separate dimensions will provide greater clarity about contemporary characterizations of men and women.

Perceiver sex

Findings often demonstrate that stereotypes are pervasive, outweighing the effects of evaluators' group identities (Heilman, 2001, 2012). However, the steady trajectory in the change of women's societal roles, and its different implications for men and women, may affect the degree to which men and women adhere to traditional gender stereotypes. On the face of it, one would expect women to hold less traditional gender stereotypes than men.

The increase of women in the workforce generally, and particularly in domains typically reserved for men, is likely to be very salient to women. Such changes have distinct implications for them – implications that can impact their expectations, aspirations, and actual experiences. As a result, women may be more attentive than men to changes in gender roles, and more accepting of these roles as the new status quo. They consequently may be more amenable to incorporating changes in gender roles into their understanding of the world, which, according to social role theory (Eagly & Wood, 2012), should result in less traditional stereotypic perceptions.

In addition, just as women are likely to embrace recent societal changes, men may be prone to reject or dismiss them. The same societal changes that present new opportunities for women can present threats to men, who may see themselves as losing their "rightful place" in the social order (see also social dominance theory, Sidanius & Pratto, 1999). Thus, men may be less willing to accept changes in social roles or to see changes as definitive. There may be little impetus for them to relinquish stereotypic beliefs. If this is the case, then less traditional

gender stereotypes are expected to be held by women than by men – at least for the dimensions of communality and agency closely related to changes in gender roles.

Self-stereotyping versus other-stereotyping

Although gender stereotypes are subscribed to by both self and others, there may be a difference in the degree to which stereotypes dominate in self- and other-characterizations. Indeed, both attribution research (Jones & Nisbett, 1987) and construal level theory (Trope & Liberman, 2010) give reason to argue that stereotypes are more likely to be used when characterizing others than when characterizing oneself. Moreover, the impact of societal changes that affect adherence to gender stereotypes is apt to have greater immediacy for self, and therefore be more reflected in self-characterizations than in other-characterizations.

There also is reason to think that it is not the general stereotype but rather particular dimensions of gender stereotypes that are likely to be differentially subscribed to when characterizing self and other. For example, enhancing descriptors are apt to be subscribed to when describing oneself (Swann, 1990), and this may be true whether these descriptors are consistent or inconsistent with gender stereotypes. Furthermore, gender is likely to be an important factor; women and men may be more (or less) reluctant to revise stereotyped perceptions typically associated with their gender. Thus, to assess the current state of gender stereotypes it is important to compare self-descriptions and other-descriptions of men and of women on specific dimensions of gender stereotypes.

Overview of the research

This study is designed to provide an assessment of contemporary gender stereotypes as assessed by men and women, using a large and diverse participant population. I use a set of scales designed to empirically represent different dimensions of the communality and agency constructs. Moreover, because it focuses on stereotypes about others *and* on

stereotypes about self in a single study, it gives us the opportunity to make comparisons between them.

Participants rated either men in general, women in general, or themselves on a set of adjectives that formed scales representing multiple dimensions of the agency and communality constructs. There were three research aims: 1) to compare how male and female targets are characterized by women and men raters; 2) to compare how men and women characterize themselves; and 3) to examine the degree of convergence of characterizations of others with characterizations of self.

Method

Participants

Six hundred and twenty-nine participants (61% female, all U.S. residents) were recruited online via Amazon Mechanical Turk (MTurk). The survey link was visible only to U.S. residents who had a greater than 95% acceptance rate of previous MTurk work, an indication that their earlier work had been handled responsibly. In addition, I included a question asking participants to indicate whether they filled out the questionnaire honestly (I assured them that their answer on this question would not have any consequences for their payment). One person indicated that he hadn't filled out the survey honestly and was therefore excluded from the analyses. 77.6% self-identified as White, 8.4% Asian, 7.0% African American, 4.8% Hispanic, and 2.2% other. Ages ranged from $19 - 83$, with a mean age of 34.5 years ($SD = 13.1$). In addition, education ranged from those who had not attended college (17%), had some college (33%), had graduated from college (37%), or had graduate degrees (13%).

Research design

There were two independent variables: Target gender (male or female) and rater perspective (self or other). To be able to test for rater sex differences, I collected data from

both men and women raters yielding a 2×3 factorial between-subject design with the male or female target being rated by a man, a woman, or a self-rater. The rater perspective manipulation (self versus other) was randomly assigned, and the target gender manipulation was randomly assigned to men and women raters in the other-rater conditions.

Procedure

628 participants were told that I was interested in people perception, and they were asked either to rate others – men in general (N=215) or women in general (N=208) – or to rate themselves (N=205) on an inventory consisting of 109 adjectives[3]. The adjectives were presented in randomized order. Ratings were made using a 7-point scale with responses ranging from 1 ("not at all") to 7 ("very much"). Response time averaged 5.48 minutes and participants were paid $0.21 for their participation.

Scale construction

Scale development proceeded in four steps. In the first step, I identified a pool of 74 adjectives representative of how agency and communality have been measured by researchers (see appendix for the full list of adjectives). The adjectives were chosen from items or synonyms of items used in other investigations of gender stereotypes, including those of Schein (1973), Spence and Helmreich (1978), Broverman and colleagues (1972), Fiske and colleagues (1999), Diekman and Eagly (2000), Oswald and Lindstedt (2006). In the second step, potential scale items were selected through a sorting process done by three judges (the first two authors knowledgeable in the area of gender stereotypes, and another independent researcher). The judges sorted the set of adjectives into as many categories as they deemed to be necessary. The sorting results were then discussed by the judges, and a consensus was reached about the categories that best captured the initial sorting. The remaining adjectives were then sorted again by the same judges, this time with the category labels designated. I

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[3] The total pool of adjectives included the communal and agentic adjectives I was interested in as well as a number of adjectives measuring non-agency and non-communality. The non-agency and non-communality items were included for exploratory purposes but not used in this study.

retained items based on the judges' agreement, keeping only those items that were sorted into the same category by all three of the judges. In the third step, I had a different set of three independent judges (all graduate students in a psychology program) do a sorting of the retained adjectives to make sure that their sorting conformed to the identified categories; any items that were misclassified by any of the judges were eliminated from the item set.

This sorting process resulted in four dimensions of agency (instrumental competence, leadership competence, assertiveness, and independence)[4] and three dimensions of communality (concern for others, sociability, and emotional sensitivity). Thus, altogether I created a total of seven scales. In the fourth step, I conducted an initial confirmatory factor analysis and eliminated all items that showed a low fit to the created dimensions (Byrne, 2010). The final scales ranged from 3 – 4 items, and coefficient alphas for all of them surpassed .75. Table 1 presents the scales as well as the Cronbach alphas and mean corrected-item-to-scale-correlations.

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[4] During the discussion after the initial sorting process it became apparent that there were two different competence categories – one depicting competence in leadership (e.g., leadership ability) and the other depicting competence in performance execution (e.g., productive). There thus were two competence categories created, one termed "leadership competence" and the other termed "instrumental competence."

Table 1

Scales, scale items, and reliability information

Agency Scales	Corrected item-scale-correlation	Communality Scales	Corrected item-scale-correlation
Instrumental Competence (α = .88)		*Concern for Others (α = .91)*	
Competent	.74	Understanding	.75
Effective	.79	Kind	.79
Productive	.78	Compassionate	.82
Task-Oriented	.67	Sympathetic	.80
Leadership Competence (α = .80)		*Sociability (α = .77)*	
Leadership Ability	.71	Communicative	.62
Achievement-Oriented	.62	Collaborative	.58
Skilled In Business Matters	.62	Relationship-oriented	.52
		Likeable	.60
Assertiveness (α = .80)			
Dominant	.62	*Emotional Sensitivity (α = .75)*	
Bold	.56	Emotional	.59
Assertive	.66	Intuitive	.47
Competitive	.60	Sentimental	.68
Independence (α = .82)			
Independent	.72		
Desires Responsibility	.56		
Emotionally Stable	.60		
Self-Reliant	.69		

Results

I conducted a confirmatory factor analysis (using AMOS) to test the factor structure of the four agency scales and the three communality scales. Results revealed that for agency the theoretically assumed four factor model (instrumental competence, leadership competence, assertiveness, and independence as first-order factors) provided adequate fit ($\chi2$= 369.604, df = 84, p < .001, $\chi2$/df=4.40, CFI = .947, RMSEA = .076, SRMR= .044)[5] and also was preferable over a one-factor model in which all agency items loaded on a single factor ($\Delta\chi2$ = 442.35, df = 6, p <. 001). Moreover, it was preferable over a model with a second-order factor in which items loaded onto their four respective factors and these four factors loaded on a second-order agency factor ($\Delta\chi2$ = 87.593, df=2, p < .001). Similarly, for communality the theoretically posited three-factor model (concern for others, sociability, and emotional sensitivity as first-order factors) provided acceptable fit ($\chi2$= 325.45, df = 41, p < .001, $\chi2$/df=7.94, CFI = .931, RMSEA = .108, SRMR = .048) and was preferable over a one-factor model in which all communality items loaded on a single factor ($\Delta\chi2$= 33.66, df = 3, p < .001). With three latent factors the first-order model is mathematically equivalent to the second-order model. Therefore, a comparison between the two models (as conducted for agency) is not meaningful and was therefore omitted. CFA results thus show that even though there were high correlations among the agency scales and also among the communality scales (as I would expect supporting my idea that in each case the multiple scales are part of the same construct, see Table 2) the CFA analyses indicate that the four scales for agency and the three scales for communality indeed represent different dimensions.

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[5] The relatively large RMSEA is likely due to violation of multivariate normality assumptions (joint multivariate kurtosis = 76.55 with a critical ratio of 55.30). The most important implication of non-normality is that chi-square values are inflated, whereas parameter estimates are still fairly accurate (Kline, 2011).

Table 2

Descriptive statistics and intercorrelations of dependent scales and covariates

Scales	A				B			C	
	1	2	3	4	5	6	7	8	9
A. Agentic Scales									
1. Instrumental Competence	-								
2. Leadership Competence	.77***								
3. Assertiveness	.52***	.69***							
4. Independence	.81***	.78***	.58***						
B. Communal Scales									
5. Concern for Others	.63***	.38***	.13**	.50***					
6. Sociability	.70***	.53***	.29***	.57***	.80***				
7. Emotional Sensitivity	.44***	.21***	.02	.27***	.77***	.72***			
C. Covariates									
8. Age	.05	.05	-.01	.05	.00	.01	-.02		
9. Education	.05	.03	.07	.06	-.04	-.06	-.10*	.17***	
10. Race	.06	.07	.06	.02	.04	.03	.02	-.12**	.08

Note. $^*p < .05$; $^{**}p < .01$; $^{***}p < .001$

Preliminary analyses

Because of potential consequences of raters' age and education level on the use of

gender stereotypes (younger and more educated individuals might be less likely to adhere to

them), I conducted initial analyses to identify their independent and interactive effects. I did

not have the opportunity to do the same for race, because our subsamples of Asian, African

American, and Hispanic participants were not big enough. To determine whether there were

differences in the pattern of responses depending upon the age of the respondent I chose the

age of 40 as a midlife indicator, divided our sample into two age groups (39 years and

younger, 40 years and older), and included age as an additional independent variable in our

analyses. Results indicated no main effects or interactions involving age in the ANOVAs

conducted. I also divided our sample into two education level groups (those who had

graduated from college or had advanced degrees and those who had not graduated from

college), and included educational level as an additional independent variable in our

analyses. I found no main effects or interactions involving educational level in the ANOVAs.

As a consequence I combined data from both younger and older participants and from those

who were and were not college educated in the analyses reported below. To further take into

account a potential impact of age, education, and race, I controlled for these variables in the

dependent variable analyses.

Dependent variable analyses

I conducted a 2x3 multivariate analysis of covariance (MANCOVA) on the seven

dependent measure scales, taking age, education and race as covariates. I chose these

covariates, because depending on people's age, education, or race, they may have made

different socialization experiences which could potentially influence their perceptions of

gender stereotypes. Results indicated a significant main effect for target gender, $F(7, 612) =$

$26.25, p < .001, \eta^2 = .23$, for type of rater $F(14, 1224) = 11.09, p < .001, \eta_p^2 = .11$, and for the

interaction between them, $F(14, 1224) = 4.64$, $p < .001$, $\eta^2 = .05$. Accordingly I conducted

univariate analyses of covariance (ANCOVAs) for each scale. ANCOVA results for each

scale are presented in Table 3[6]. There was no difference in the results when the covariates

were not included in the analyses. Means and standard errors for all conditions are presented

in Table 4. To directly address our specific research questions concerning: 1) comparisons of

ratings of male and female targets made by women, men and self-raters; and 2) comparisons

of self and other-ratings, I conducted a series of intercell comparisons using Bonferroni tests,

the results of which also are presented in Table 4.

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[6] With one exception (influence of education on emotional sensitivity ratings), none of the covariates had a
significant effect on any of the communality or agency scales.

Table 3

ANCOVA main and interaction effects of attribute ratings

	Main Effect of Rater	Main Effect of Target	Interaction Effect
Agentic Scales			
Instrumental Competence	$F(2, 618) = 19.62, p < .001, \eta_p^2 = .06$	$F(1, 618) = .67, p = .41, \eta_p^2 = .00$	$F(2, 618) = .52, p = .60, \eta_p^2 = .00$
Leadership Competence	$F(2, 618) = 8.92, p < .001, \eta_p^2 = .03$	$F(1, 618) = 9.93, p = .002, \eta_p^2 = .02$	$F(2, 618) = 1.98, p = .14, \eta_p^2 = .01$
Assertiveness	$F(2, 618) = 7.09, p = .001, \eta_p^2 = .02$	$F(1, 618) = 28.70, p < .001, \eta_p^2 = .04$	$F(2, 618) = .98, p = .38, \eta_p^2 = .00$
Independence	$F(2, 618) = 14.63, p < .001, \eta_p^2 = .05$	$F(1, 618) = 3.98, p = .046, \eta_p^2 = .01$	$F(2, 618) = 3.23, p = .04, \eta_p^2 = .01$
Communal Scales			
Concern for Others	$F(2, 618) = 29.08, p < .001, \eta_p^2 = .09$	$F(1, 618) = 54.36, p < .001, \eta_p^2 = .08$	$F(2, 618) = 2.05, p = .13, \eta_p^2 = .01$
Sociability	$F(2, 618) = 10.07, p < .001, \eta_p^2 = .03$	$F(1, 618) = 45.54, p < .001, \eta_p^2 = .07$	$F(2, 618) = 5.49, p = .004, \eta_p^2 = .02$
Emotional Sensitivity	$F(2, 618) = 9.46, p < .001, \eta_p^2 = .03$	$F(1, 618) = 110.20, p < .001, \eta_p^2 = .15$	$F(2, 618) = 10.25, p < .001, \eta_p^2 = .03$

Note. N=628.

Table 4

Adjusted means (and standard errors) of attribute ratings

	Other-Ratings				Self-Ratings	
	Male Other-Raters		Female Other-Raters			
	Male Target	Female Target	Male Target	Female Target	Male Target	Female Target
Agentic Scales						
Instrumental Competence	4.42 (.14)$_a$	4.47 (.13)$_a$	4.73 (.11)$_{a,b}$	4.95 (.12)$_b$	5.29 (.15)$_b$	5.27 (.11)$_b$
Leadership Competence	4.65 (.14)$_a$	4.21 (.13)$_b$	4.99 (.11)$_a$	4.94 (.12)$_a$	4.94 (.15)$_a$	4.44 (.11)$_b$
Assertiveness	4.73 (.14)$_{a,b}$	4.00 (.13)$_c$	4.94 (.10)$_a$	4.51 (.11)$_b$	4.56 (.14)$_{a,b}$	4.13 (.11)$_c$
Independence	4.57 (.14)$_a$	3.99 (.13)$_b$	4.72 (.11)$_a$	4.69 (.11)$_a$	4.99 (.14)$_a$	4.99 (.11)$_a$
Communal Scales						
Concern for Others	3.98 (.14)$_a$	4.82 (.13)$_b$	4.19 (.11)$_a$	5.15 (.12)$_b$	5.13 (.15)$_c$	5.61 (.11)$_d$
Sociability	4.09 (.13)$_a$	4.85 (.12)$_b$	4.17 (.10)$_a$	5.10 (.11)$_b$	4.89 (.13)$_b$	5.10 (.10)$_b$
Emotional Sensitivity	3.96 (.14)$_a$	4.91 (.13)$_{b,c}$	3.67 (.10)$_a$	5.29 (.11)$_b$	4.63 (.14)$_c$	5.21 (.11)$_b$

Note. N=628. Ratings were done on 7-point scales. The higher the mean, the more the attribute is thought to be characteristic of the target. Means in each row that do not share a subscript differ significantly, $p = .05$.

Comparison of ratings of male and female targets

My first set of analyses was designed to compare how male and female targets are characterized on the stereotype dimensions. I was interested in determining differences in these characterizations depending on the type of rater, i.e., when the ratings were provided by a male rater, a female rater, or a self-rater. Results of the 2 x 3 ANCOVAs indicated a significant main effect for target gender for all but the instrumental competence scale, with male targets generally being rated higher on the agentic scales than female targets, and female targets generally being rated higher on the communal scales than male targets. I then examined characterizations on each scale to determine whether the ratings of male and female targets differed when I took account of rater type. That is, using Bonferroni tests, I compared ratings of male and female targets when the rater was a man, when the rater was a woman, and when the rater was rating him or herself.

Men and women other-raters. Results of the Bonferroni comparisons indicated that, with the exception of the instrumental competence scale (on which there were no differences whether the rater was a man or a woman), men consistently rated male and female targets differently, but women did so only in some instances. Consistent with gender stereotypes, both men and women rated men in general as more assertive, and rated women in general as more concerned for others, sociable, and emotionally sensitive. However, there was a different pattern in ratings of both leadership competence and independence; men rated men in general more favorably on these two dimensions of agency, women rated women in general no less favorably than they rated men in general (see Figure 1).
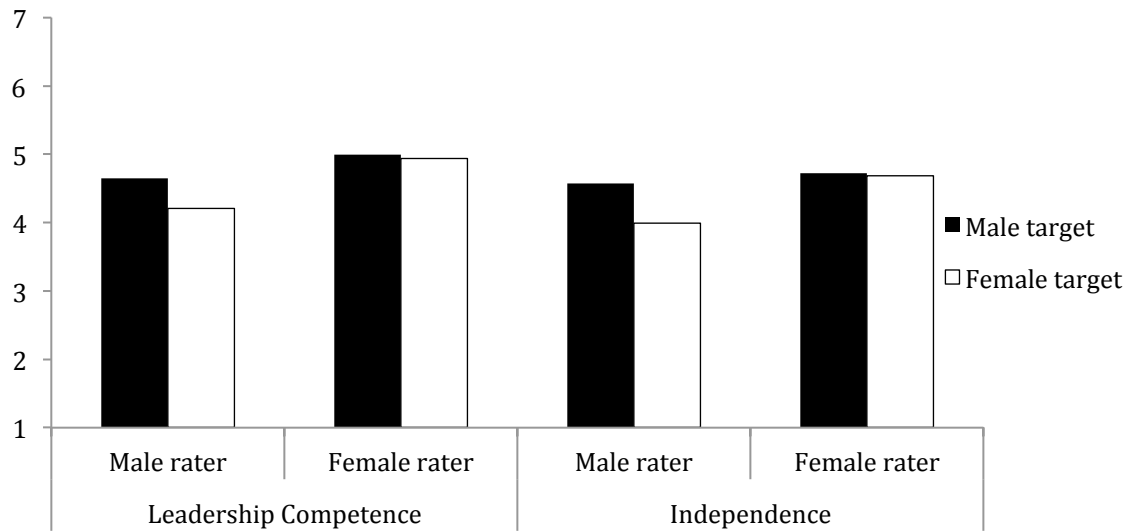
Figure 1. Ratings of leadership competence and independence of male and female targets by male and female other-raters.

Self-raters. Bonferroni tests indicated that male self-raters tended to characterize themselves as more agentic than female self-raters, and female self-raters tended to characterize themselves as more communal than male self-raters, but there were important exceptions to this pattern. Although women rated themselves lower in leadership competence and assertiveness than did men, they did not differ from men in self-ratings of instrumental competence and independence (see Figure 2). And although men rated themselves as lower in concern for others and emotional sensitivity, they did not differ from women in self-ratings of sociability (see Figure 3).
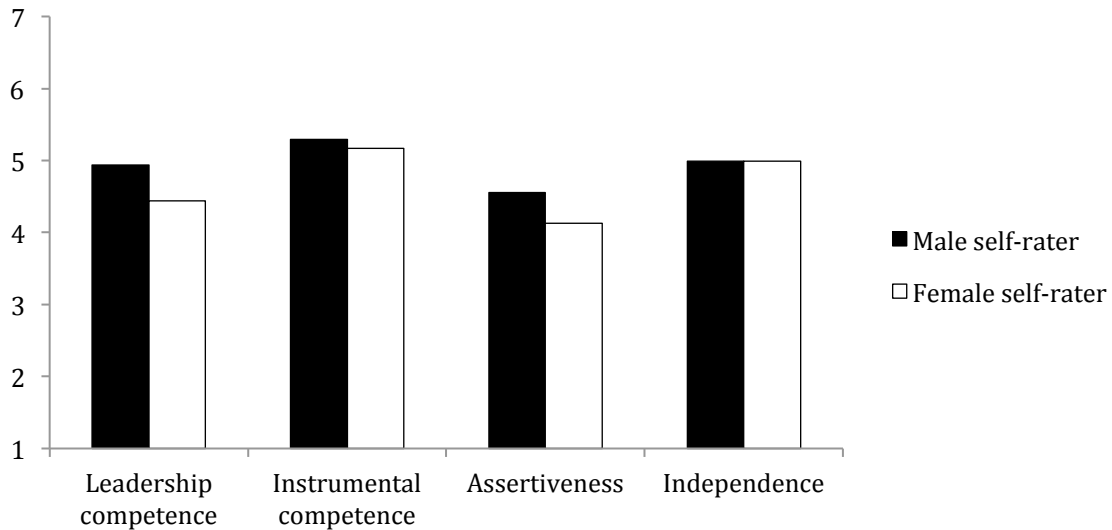
Figure 2. Ratings of leadership competence, instrumental competence, assertiveness, and independence by male and female self-raters.
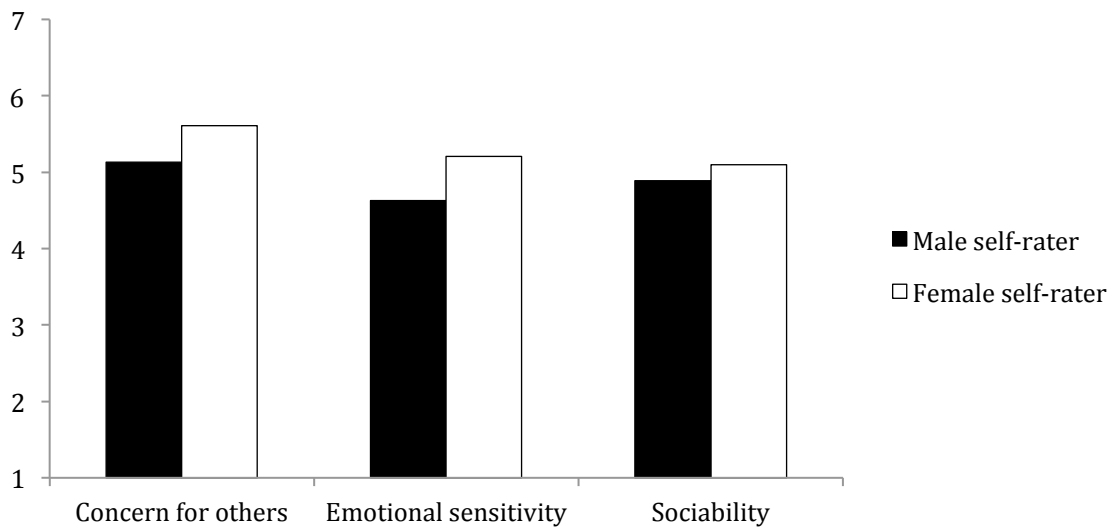
Figure 3. Ratings of concern for others, emotional sensitivity, and sociability by male and female self-raters.

Summary. Thus, women and men did not subscribe to the totality of stereotypic agentic and communal differences when describing others or when describing themselves; when describing others, women deviated from men by rating women in general no differently than men in general in characterizations of leadership competence and independence. Women and men also did not subscribe to the totality of stereotypic agentic and communal differences

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when describing themselves; women's self- ratings of independence were no different than men's self-ratings, and men's self-ratings of sociability were no different than women's self-ratings. Moreover, whether they were being rated by others or by themselves, men and women were not characterized differently on the instrumental competence scale, indicating that they were viewed as equally endowed with attributes enabling effective task functioning.

Comparison of self-ratings and other-ratings

In addition to my goal of comparing discrepancies in ratings of male and female targets, I was interested in examining how the self-ratings of women or men correspond with how others describe their gender group. Although not explicitly comparing ratings of male and female targets, these comparisons are informative because they provide information about the congruence of self and other descriptions on attributes that comprise gender stereotypes.

The ANCOVAs I conducted indicated a main effect of rater for each of the dependent measure scales, indicating that who was doing the rating of the male or female target made a difference. An inspection of Table 4 indicates a general tendency for women, when rating others, to give higher ratings than men. To directly address my research question about differences between ratings of self and ratings of men and women as a group, I first compared men's self-ratings with ratings of men in general. I then did the same for women's self-ratings, comparing them with ratings of women in general.

Men's self-ratings. Bonferroni tests indicated that men tended to rate themselves more highly than others rated men in general, particularly on communal attributes. Compared to ratings of men in general made by both female other-raters and male other-raters, men's self-ratings were significantly higher in concern for others, emotional sensitivity, and sociability (see Figure 4). Men also rated themselves significantly higher in instrumental competence than others rated men in general. There were, however, no differences between how men

rated themselves and how men and women other-raters rated men in general in terms of leadership competence, assertiveness, and independence.
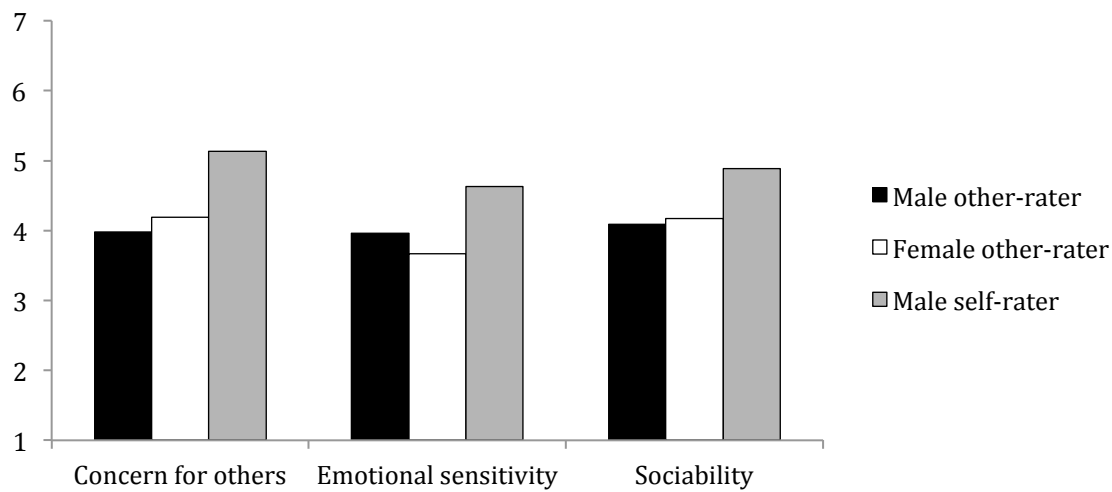
Figure 4. Ratings of concern for others, emotional sensitivity, and sociability of male targets by male and female other-raters and self-raters.

Women's self-ratings. Women rated themselves significantly higher in concern for others than others rating women in general. There were no differences between women's self-ratings and others' ratings of women in general in sociability or emotional sensitivity. There were some differences dependent on the other-rater's sex, and these were in characterizations on agency-related attributes. As with their self-ratings of instrumental competence, their ratings of independence were significantly higher than those of men rating women in general but not women rating women in general. Most striking, however, were the differences in ratings of assertiveness and ratings of leadership competence. In each of these cases, women rated themselves significantly lower than women rating other women, and did not characterize themselves any more favorably than men who rated women in general (see Figure 5).
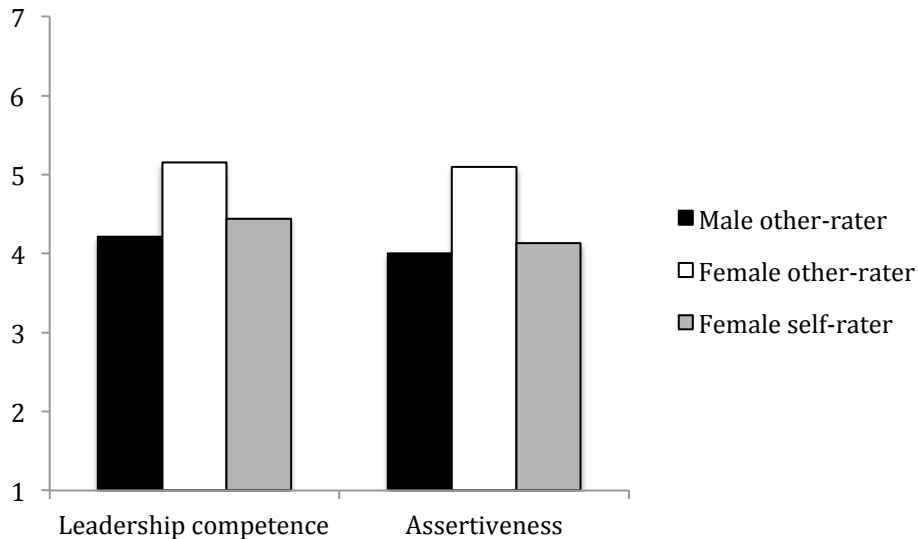
Figure 5. Ratings of leadership competence and assertiveness of female targets by male and female other-raters and self-raters.

Summary. There were differences in how men and women characterized themselves and how others characterized members of their gender group. Men characterized themselves higher in communal attributes than others depicted them and women characterized themselves differently than did others in terms of agentic attributes. In terms of instrumental competence and independence their descriptions of themselves were more favorable than men's descriptions of women, and no different than women's. But in terms of assertiveness and leadership competence their descriptions of themselves, while no less negative than men's descriptions (who had rated women lower than men on these dimensions), were more negative than women's descriptions of women as a group.

Discussion

In this study I was interested in the current state of gender stereotypes. Because I assessed agency and communality on several dimensions, my results provide a nuanced picture. On the one hand, they indicate that despite dramatic societal changes many aspects of gender stereotypes endure. Both male and female respondents viewed men in general as being more assertive than women in general, and also viewed women in general as more concerned

about others, sociable and emotionally sensitive than men in general. On the other hand, my results indicate an important departure from traditional views. This can be seen in the finding that unlike male respondents, female respondents indicated no gender deficit in how independent or competent in leadership they perceived women to be.

Differences in ratings on different dimensions of agency and communality also were evident when men and women described themselves. Although self-descriptions often conformed to gender stereotypes, there were aspects of agency and communality for which self-ratings of men and women did not differ. Women's self-ratings of independence and instrumental competence did not differ from men's self-ratings, and men's self-ratings of sociability did not differ from women's self-ratings. Together with the findings about views of men and women in general, these findings attest not only to the possible changing face of stereotypes, but also to the importance of considering specific dimensions of both agency and communality in stereotype assessment.

The lack of similarity in the pattern of results for the instrumental competence and the leadership competence ratings is interesting. Ratings on the instrumental competence scale did not differ when men and women in general were compared or when male and female respondents described themselves although there were differences in ratings on the leadership competence scale. It thus appears that there is an aspect of competence on which women are rated as highly as men -- the wherewithal to get the work done. However, caution is urged in interpreting this finding. The attributes comprising the instrumental competence scale can be seen as indicative of conscientiousness and willingness to work hard, attributes often associated with women as well as men. Thus there is a question about whether instrumental competence is really part of the agency construct, a question also prompted by its pattern of correlations with the other dependent measure scales (see also Carrier et al., 2014). The consistent perception by men that leadership competence attributes were more prevalent in

male than in female targets suggests that, at least as far as men are concerned, women still are not seen as "having what it takes" to adequately handle traditionally male roles and positions. Whatever the interpretation, however, the different pattern of results found for these two dependent measures indicates that we as researchers have to be very precise in designating what we are measuring and how we are measuring it. It also indicates that we have to keep close to the construct we actually have measured when drawing conclusions from our data.

My results show that women do not entirely embrace the stereotypic view of women as less agentic than men. They did not make distinctions between male and female targets when rating their independence, nor were their self-ratings on the independence scale lower than the self-ratings made by men. These findings are noteworthy. One of the key aspects of agency is independence, and it appears that women do not see themselves or other women to be lacking it more than men. Women also did not make distinctions between male and female targets when rating leadership competence, another key component of agency. These findings suggest that, for women, some important aspects of the agency stereotype have eroded.

However, my results suggest that women have not moved as far along as one would hope in separating themselves from gender stereotypic constraints. In particular, their self-perceptions of assertiveness and leadership competence seem to have resisted modification. My findings indicate that women not only characterized themselves as less assertive and as having less leadership competence than did men, but they also described themselves significantly more negatively on these two agentic attributes than they described women in general. This means that women rated themselves as more deficient in several central aspects of agency than they rated women as a group, adhering more strongly to gender stereotypes when describing themselves than when describing others.

My results also indicate that men continue to accept the stereotyped conception of men lacking communal qualities. They, along with women, rated men in general lower than

women in general on all three communality scales. It therefore is particularly interesting that in their self-ratings on one dimension of communality – sociability – did not differ for men and women. Moreover, it is interesting to note that men's ratings of themselves were significantly higher on all communal attributes than men's ratings of men in general. This suggests that although they strongly adhere to stereotypes in their characterizations of men as a group, there is a tendency for men to be less stereotype-bound when they characterize themselves. This result contrasts with that found for women, for whom gender stereotypes often appeared to exert even more influence in self-characterizations than in characterizations of others.

Future research

The results are suggestive of several avenues for future research. It is important to further investigate the competence component of agency, clarifying what it does and does not entail. It also is important to further explore the apparently contradictory view women have of themselves in terms of agency (no different from men in self-rated independence, but less assertive and having less leadership competence compared to the self-views of men and their own ratings of other women), and its effect on women's behavior. This is particularly interesting in light of women's apparent lesser adherence to stereotyped conceptions regarding agency when they are describing other women than when they are describing themselves. In addition, it would be interesting to determine whether the greater communality men ascribe to themselves than to other men reflects actual beliefs or is merely self-enhancing, and if it has implications for men's approach to traditionally female roles and positions.

There are methodological limitations of this study that are suggestive of follow-up research. Although I was able to tap into a wide-ranging population, I restricted my sample to US citizens. It therefore would be interesting to replicate this research with a sample that is

not exclusively from the US to determine the generalizability of my findings to other cultures. Also, because in this study I chose to have my "other" stimulus targets be gender groups (men and women in general), future research should ensure that my findings replicate when the stimulus target is depicted as an individual man or woman. Additionally, it would be useful to conduct this research using a stimulus target that is more differentiated; in past research, for instance, whether a male or female target was presented as a manager or successful manager produced differences in gender characterizations (Heilman et al., 1989). It therefore is important to determine the extent to which the stereotypes of generalized targets are replicated when particular subtypes of women and men are identified.

Limitations notwithstanding, the results reported here have a number of implications for future studies concerning gender stereotypes. First, they make clear that it is useful to differentiate among the various dimensions of agency and communality and consider them separately. The different patterns of results found for several of the scales measuring these dimensions suggest that information may be lost by not distinguishing among them. Second, the data indicate that competence can be conceived of in multiple ways, and that the distinction between leadership competence and instrumental competence (i.e., the skill to execute a task) is an important one to make. Third, there seems to be much to learn from assessing both self-stereotypes and other-stereotypes. Generally, self-views overlapped with others' views of women and men, but not entirely, and there were distinct differences in self-characterizations and characterizations made by others. Tracking these discrepancies and exploring when they do and do not exist can be very informative about the current state of gender stereotypes and their potential impact.

Conclusion

What are the implications of these findings for understanding the persistence of gender bias? Although the results signal easing in some dimensions of traditional gender stereotypes,

they make clear that gender stereotypes continue to exert influence in impression formation processes. Of particular importance is men's unrelenting image of women as deficient in attributes considered to be essential for success in many traditionally male fields – an image that forms the basis of the lack of fit perceptions that underlie gender bias in employment decisions. But women are not exempt from the influence of gender stereotypes; even though they view women as equal to men in several agentic qualities, they see themselves as more deficient than men do in both leadership competence and assertiveness, and more deficient in these attributes than women in general. These findings, which suggest that women have a more stereotype-free image of other women than of themselves, augurs ill for the tempering of women's tendency to limit their opportunities. Evidently we still have a way to go before gender stereotypes completely dissipate and recede, allowing men and women to be judged, and to judge themselves, on the basis of their merits, not their gender.

3. Consequences of stereotypes for women's pursuit of leadership careers: The role of agentic and communal characteristics in recruitment advertisements[7]

In his review on challenges of staffing in the 21st century, Ployhart (2006) notes that a major unsolved question for research and practice is how organizations can effectively recruit to enhance diversity. In addition, aims for gender diversity in leadership, skill shortages (Dychtwald et al., 2013), and women's educational achievements (United States Census Bureau, 2015) are reasons why organizations invest considerable resources to recruit women into leadership positions (Thaler-Carter, 2001). Yet, the low percentages of women in leadership positions (Davidson & Burke, 2016) show that current endeavors are not always working out as intended.

To enhance diversity in leadership positions it is important to recruit women early on and to encourage them to take advantage of career opportunities that may path the way for a future leadership career. Therefore, I am particularly interested in women's intentions to take advantage of career opportunities which comprise both entry-level leadership positions like management trainee programs and formal programs for leadership development (e.g., fellowships, Kraimer, Seibert, Wayne, Liden, & Bravo, 2011). I argue that attracting relatively young women, i.e., young female professionals or students, to career opportunities can heighten their leadership ambitions and ultimately their chances of becoming a leader[8]. The intent of leadership development programs is to prepare people for leadership positions and enhance existing leadership skills. Some leadership development programs directly target university students from all study areas to qualify them for future leadership careers through

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[7] This chapter is based on a working paper by Hentschel, Braun, Peus, and Frey (2014) currently being prepared for submission.

[8] Data from an influential leadership development program in Germany revealed that 50 % of program alumni who had worked for three years or longer after finishing the program held leadership positions (Frey, Gietl, Fischer, & Köppl, 2010). This is above the average of other German university graduates: Five years after graduation only 29 % held a leadership position (Grotheer, Isleib, Netz, & Briedis, 2011).

skills workshops and networking events (e.g., Frey et al., 2010). In a similar vein, the intent of management trainee programs is to train new (and often inexperienced) employees of an organization to eventually take on a leadership position. If women miss out on these early (and often prestigious) career opportunities, they are likely to lag behind more qualified men. In addition, recruiting women early on is particularly important because decisions made early in people's careers can have tremendous consequences for their advancement (c.f., Martell, Lane, & Emrich, 1996).

Despite plenty of research on the effects of recruitment strategies, many issues remain unclear. Several researchers criticize that it is not well understood how organizations can target applicants from underrepresented groups such as women (Breaugh, Macan, & Grambow, 2008; Walker & Hinojosa, 2013). One reason why there are fewer women in leadership positions may be that women show less motivation to pursue a leadership career (Powell & Butterfield, 2003; Schuh et al., 2013). Lack of Fit theory suggests that this could be due to the fact that women perceive a lower fit between their personal characteristics and the characteristics of the leadership role (Heilman, 1983, 2012). Research on gender stereotypes indicates that men generally perceive themselves as more agentic than women (e.g., assertive or dominant), while women generally perceive themselves as more communal than men (e.g., understanding or kind; Hentschel, Heilman, et al., 2013). Because people tend to perceive leadership as agentic (Koenig et al., 2011) women may, perceive a lack of fit between their own communal characteristics and the agentic characteristics expected for many leadership careers (Heilman, 1983, 2012). That said, it is plausible that a high prevalence of agentic characteristics in recruitment advertisements for leadership career opportunities triggers lack of fit perceptions and women may be less likely to apply.

In this research, I propose that women's fit perceptions can be altered depending on the recruitment messages the organization sends. Specifically, I propose that including communal characteristics in recruitment advertisements can heighten women's fit perceptions and

therefore their application intentions to career opportunities. Based on previous research, I assume that recruitment advertisements are often not gender-neutral but contain characteristics through which one gender is targeted more than the other (Gaucher et al., 2011; Schneider & Bauhoff, 2013). Furthermore, it is not known if such advertisements could be a potential reason for women not to show lower ambitions to pursue career opportunities in leadership. Finally, so far, we do not know if through the inclusion of communal characteristics in advertisements women's perceived lack of fit to leadership careers can be reduced and if this can lead to higher intentions to take advantage of career opportunities.

Yet, for some advertisements the use of agentic characteristics may not be avoidable – for example, if the position requires dominant and assertive behaviors (e.g., managing a workforce reduction program). If women are indeed less likely to apply to career opportunities advertised with agentic characteristics, it is crucial to find out what alternative measures organizations can take in order to recruit more women. I argue that recruiter gender (a representative of the organization) will moderate the relationship of advertisement characteristics and women's application intentions for career opportunities. Applicants feel more attracted to positions if they perceive themselves to be similar to others in the organization (Devendorf & Highhouse, 2008), and female recruiters may signal communality. Therefore, I intend to test whether a female recruiter will diminish the negative effects of agentic characteristics in advertisements for women.

With the above gaps in mind, I intend the following contributions. I draw attention to factors that organizations can influence to attract more women for leadership career opportunities. Specifically, I investigate if women are less prone to apply for career opportunities if advertisements are predominantly composed of agentic characteristics, and if women can be more easily recruited for leadership career opportunities when advertisements are composed of communal characteristics. I will test this experimentally and will also employ real-world advertisements. Further, I investigate whether women's perceived fit and appeal

perceptions mediate the influence of advertisement characteristics on women's intentions to apply for career opportunities. Finally, I explore if female recruiters represent an alternative means to increase women's intentions to apply for career opportunities if advertisements contain predominantly agentic characteristics.

Lack of fit theory in the context of recruitment

Social identity theory (Tajfel & Turner, 1986) proposes that in order to define oneself in the social environment, people classify themselves into meaningful social categories. One such category is gender. Women (and men) know that they belong to the group of women (or men) and also know which traits are associated with their group – and these traits become part of their so-called social identity. Ashforth and Mael (1989) argue that "individuals tend to choose activities congruent with salient aspects of their identities, and they support the institutions embodying those identities." (p.25). According to Person-Organization fit theory (P-O-Fit theory; Cable & Judge, 1996) people look for a good fit between their own characteristics and characteristics of an organization. Subjective fit perceptions are primary drivers of people's attraction to an organization (Judge & Cable, 1997; Uggerslev, Fassina, & Kraichy, 2012). Due to a lack of information about the organization, potential applicants will likely use the limited information they get from advertisements as signals about what the organization is like (Signaling theory, e.g.; Gully, Phillips, Castellano, Han, & Kim, 2013). Therefore, I propose that recruitment advertisements are likely to influence personnel fit assessment and decisions to apply for a position.

Women compared to men perceive themselves to possess more communal characteristics (characteristics associated with building relationships) and fewer agentic characteristics (characteristics associated with taking charge and being in control; Hentschel, Heilman, et al., 2013; Spence & Buckner, 2000). In her lack of fit theory, Heilman (1983, 2012) argues that women will be less likely to perceive a fit with a leadership career than men, because women's self-views are often not in line with agentic attributes associated with many

leadership careers (see also; Eagly & Karau, 2002). Indeed, research shows that women's perceived lack of fit to leadership positions can cause self-limiting behaviors, and can affect women's career aspirations and choices. For example, women are less likely than men to judge themselves as suitable for leadership careers (Bosak, Sczesny, & Eagly, 2008) and women also often have a lower ambition to pursue a leadership career (Powell et al., 2002; Schuh et al., 2013). In addition, in leaderless groups women are less likely than men to emerge as leaders (Eagly & Karau, 1991; Ritter & Yoder, 2004). Interestingly, how tasks are framed can influence emergence of leadership: Women are more likely to emerge as leaders if tasks are framed as feminine (art project) as compared to masculine (building project; Ho, Shih, & Walters, 2012). Similar effects might occur through the emphasis of different characteristics in recruitment advertisements.

As earlier research on more obvious gender-bias in recruitment advertisements demonstrates, the use of the pronoun "he" in advertisements when referring to men and women rather than the more inclusive "he/she" or "she/he" leads to a lower perception of career attractiveness and to fewer applications from women (Bem & Bem, 1973; Stout & Dasgupta, 2011). In addition, in languages with few gender-neutral terms (e.g., German) it has been found that women are less likely to apply for a project leader position if advertisements use the generic masculine title compared to the joint male and female titles (Horvath & Sczesny, 2013). Can organizations, thus, recruit more women to pursue career opportunities if they highlight the communal aspects required for such a position?

Though leadership is still perceived to require mainly agentic characteristics, communal characteristics are becoming increasingly important (Koenig et al., 2011; Powell et al., 2002) The most effective leadership styles incorporate communal behaviors – e.g., transformational leadership (Eagly & Carli, 2003; Peus, Braun, & Frey, 2013) or servant leadership (Pircher Verdorfer & Peus, 2014; van Dierendonck, 2011). Building on lack of fit theory (Heilman, 1983, 2012), I propose that if organizations use agentic as compared to communal

characteristics in their advertisements for career opportunities, women's lack of fit to a career opportunity would be heightened. In other words, I argue that agentic characteristics in the advertisement can reduce women's perceived fit – i.e., women will experience a lower belongingness – because they will be less likely to perceive a match between their own communality and the advertisement's information. I argue that because of their lower fit perceptions women's intentions to apply for career opportunities will be reduced. I further argue that agentic characteristics will lead women to find a career opportunity to be less appealing and that they will be less likely to expect an application to be successful. However, if an advertisement for a career opportunity is composed of communal characteristics, the communality of the position will be made salient. Therefore, women will perceive a greater fit and will be more likely to apply for the career opportunity.

Men may not be as strongly affected by characteristics in advertisements. Communal characteristics are generally more inclusive (Abele & Bruckmüller, 2011). In addition, though men perceive themselves as less communal than women, they do perceive themselves as more communal than others perceive men in general (Hentschel, Heilman, et al., 2013). Thus, I do not expect men to evaluate advertisements for career opportunities differently depending on the composition with communal or agentic characteristics. On this basis, I specified the following prediction:

Hypothesis 1. Women (but not men) will evaluate a career opportunity advertised with agentic rather than communal characteristics as more negative (appeal, fit), will expect an application to be less successful, and will report a lower intention to apply.

Based on lack of fit theory (Heilman, 1983, 2012), I predict that women's fit perceptions will mediate their evaluation of the position. Specifically, I predict a serial mediation, that is, women's fit perceptions will impact position appeal, which will then impact their application intentions (please see Figure 6 for my mediation model). Hence, I propose the following:

Hypothesis 2: The effect of advertisement characteristics on women's intentions to apply will be mediated by perceived fit and appeal.
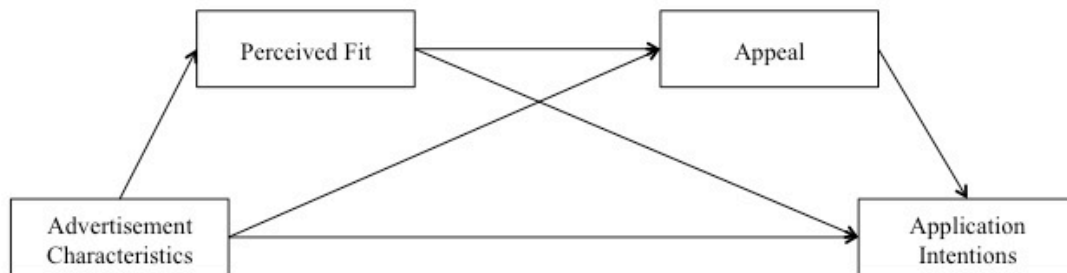
Figure 6. Proposed mediation model for women's intentions to apply to career opportunities.

Recruiter gender

I have proposed that communal characteristics in the advertisement will increase women's perceived fit and thereby intentions to apply for career opportunities. Yet, for some advertisements the use of agentic characteristics may not be avoidable – for example, if the position requires dominant and assertive behaviors (e.g., managing a workforce reduction program). If women are indeed less likely to apply to career opportunities advertised with agentic characteristics, it is crucial to find out what alternative measures organizations can take in order to recruit more women.

I argue that recruiter gender (a representative of the organization) will influence the relationship of advertisement characteristics and women's application intentions for career opportunities. Applicants feel more attracted to positions if they perceive themselves to be similar to others in the organization (Devendorf & Highhouse, 2008). In addition, female recruiters may signal communality. Therefore, I intend to test whether a female recruiter will diminish the negative effects of agentic characteristics in advertisements I proposed. This is

important, because I thereby explore if female recruiters represent an alternative means to increase women's intentions to apply for career opportunities if advertisements contain predominantly agentic characteristics. In addition, I thereby again answer calls for more research on recruitment for diversity (Breaugh et al., 2008; Ployhart, 2006).

Because sometimes it may not be possible to reduce the use of agentic characteristics in advertisements, organizations will need to use other means of communication to heighten women's interest in career opportunities – a most significant one being the recruiter. Recruiters are organizational representatives who communicate information about the position and the organization (Breaugh & Starke, 2000). Potential applicants will likely be in contact with a recruiter even before they decide to apply for a career opportunity. Recruiters are often deployed for job fairs, in recruitment video commercials, or during site visits. Signaling theory suggests that like advertisements, recruiters signal unknown organizational characteristics such as organizational culture or ideal members of an organization (Rynes, 1991).

To date, research findings on the effects of recruiter gender are mixed. Some studies found no effects of recruiter gender on the likelihood of applicants joining an organization (Harris & Fink, 1987). Others found female recruiters to have a negative (Taylor & Bergmann, 1987) or a positive effect on women (Liden & Parsons, 1986). When looking at recruiter characteristics and recruitment message combined, Young and colleagues (Young, Place, Rinehart, Jury, & Baits, 1997) found that in a job interview African Americans were more attracted to an organization if the recruiter was female and addressed the work or the work environment, while white participants were more attracted if the recruiter was male and addressed economic incentives. These findings leave open many questions. At this point, we do not know from research, if female recruiters may buffer potential negative effects of agentic characteristics on women.

The similarity/attraction paradigm (Byrne 1971) implies that people are attracted by similarity. Applicants will choose situations or careers in which they will meet people who are

similar to them. Female recruiters are likely be perceived to be more similar to women than male recruiters. Furthermore, when people believe that they possess the same characteristics as prototypical members of an occupation (e.g., the recruiter), they are more likely to identify with and enter a career (Peters, Ryan, Haslam, & Fernandes, 2012). Female recruiters may, thus, be a signal to women that similar people are represented in the organization. Would this increase women's pursuit of career opportunities?

In an interview study, women stated that organizational representatives were cues for their interest in an organization, their fit assessments, and their decisions to accept a job offer (Rynes, Bretz, & Gerhart, 1991). In their review on organizational tactics to attract women and minority applicants Avery and McKay (2006) draw the conclusion that portraying diversity through organizational representatives will lead people to believe that women are valued members of an organization. However, what we do not know is whether these effects would be strong enough to diminish potential negative effects of agentic characteristics.

If female recruiters signal that women are valued members of an organization and are valued participants of a career opportunity program, then maybe women would perceive a greater fit to the organization and be more likely to apply for a career opportunity – even though it is advertised with agentic characteristics. In other words, I expect a female recruiter to mitigate the potential negative effects that advertisements with agentic characteristics may have on women. However, if the recruiter is male, I again expect that advertisements with agentic characteristics lead to more negative effects on women than advertisements with communal characteristics.

Hypothesis 3: If the recruiter is male, women will evaluate career opportunities advertised with agentic characteristics as compared with communal characteristics as less positive and will report a lower intention to apply; whereas if the recruiter is female, women will evaluate career opportunities advertised with agentic and communal characteristics similarly.

The current research

In a pretest, I explored if real-world advertisements for leadership careers are comprised of more agentic characteristics than communal characteristics. Building on these results, I conducted Studies 1a and 1b to analyze how communal and agentic characteristics in advertisements influence women's evaluations of career opportunities. While in Study 1a, I test the consequences of advertisement characteristics on male and female applicants, in Study 1b, I replicate and extent my findings and focus on female applicants. In both studies, I used a similar approach and focused on career opportunities in the form of fellowships for leadership development programs for university students. In Study 2, I corroborate the results with evaluations of real-world advertisements for a leadership career opportunity and relate these to the respective numbers of applicants. In Study 3, I focused on a career opportunity in the form of a management trainee position and a sample of young professionals. In this study, I also extended my design to test the effects of advertisements with a combination of both agentic and communal characteristics. The aim of Study 4, a video-based experiment, is to investigate if recruiter gender influences the effects of agentic and communal characteristics in advertisements. The studies advance our theoretical understanding of how advertisements and recruiter gender affect application intentions. They also facilitate evidence-based recommendations for how organizations can recruit more women into leadership careers.

Pretest

Recruitment advertisements are often not composed in a way that targets all genders equally. Indeed, in a field study looking at the neutrality of recruitment advertisements in large newspapers in 2005 and 2010 in Germany, where my studies were conducted, it was found that approximately 30 % of advertisements were not gender-neutral (Schneider & Bauhoff, 2013). In line with this, Gaucher and colleagues (2011) found that jobs that are typically executed by men (e.g., plumber) are often advertised with more masculine wording than jobs typically executed by women (e.g., nurse). In this pretest, I want to find out if advertisements for

leadership positions typically put a greater emphasis on agentic characteristics in line with the male stereotype than on communal characteristics in line with the female stereotype. Because leadership is still associated with more agentic and less communal characteristics (Powell et al., 2002), I assume that advertisement for leadership positions will be made up of more agentic and fewer communal characteristics. I assume this not to be the case for positions without leadership responsibilities.

Method

   Procedure. I investigated recruitment advertisements for positions at three organizational levels: Positions without leadership responsibilities, lower-level leadership positions, and higher-level leadership positions. To cover line positions as well as staff positions that have been shown to influence women's career progress differently (Lyness & Heilman, 2006), I focused on Finance (a line position) and Human Resources (a staff position) as two important organizational areas present in almost all organizations. In addition, Finance is traditionally perceived to be male-typed with more men than women working in this area, and Human Resources is traditionally perceived to be female-typed with more women than men working in this area. I collected advertisements from Germany's leading job search website – www.stepstone.de. In a preset timeframe of two weeks, I collected all advertisements for positions in finance and human resources from the website. This resulted in 204 recruitment advertisements in total, comprising the three levels described above. Three independent raters then rated the advertisements with regard to the three organizational levels. Initial interrater reliability was .74 and the classification of the majority of raters was used. This resulted in 48 higher-level leadership positions, 76 lower-level leadership positions, and 80 positions without leadership responsibility.

   Consistent with previous research on differences in language use, I coded the advertisements for communal and agentic characteristics (cf., Newman et al., 2008). From gender stereotypical words and their synonyms (e.g., Heilman et al., 1995; Sczesny et al.,

2004; Taris & Bok, 1998), I made a list of 119 agentic characteristics (e.g., assert*, demand*, ambition*) and 119 communal characteristics (e.g., communica*, sympath*, responsi*). The full list can be found in Appendix 1. Using content analysis software (MaxQDR), I calculated the amount of agentic and communal characteristics in each advertisement.

Results

I conducted a 2 (advertisement characteristics: agentic vs. communal) x 3 (position level: no leadership responsibility vs. lower-level leadership position vs. higher-level leadership position) mixed model analysis of variance (ANOVA), with characteristics as the repeated measure. A main effect for characteristics emerged, $F(1, 201) = 57.89$, $p < .001$, $\eta_p^2 = .22$, indicating that overall advertisements contained more agentic ($M = 12.07$; $SD = 6.67$) than communal characteristics ($M = 9.41$; $SD = 5.13$). A main effect for level of position emerged as well, $F(2, 204) = 10.55$, $p < .001$, $\eta_p^2 = .14$, indicating that the higher the position level the more characteristics overall (both agentic and communal) were found in advertisements. Importantly, the predicted characteristics × position level interaction was found, $F(2, 201) = 14.33$, $p < .001$, $\eta_p^2 = .13$. In line with my assumptions, advertisements for both higher-level and lower level leadership positions were comprised of significantly more agentic characteristics ($M_{High} = 14.20$; $SD_{High} = 6.72$; $M_{Low} = 14.03$; $SD_{Low} = 6.98$) than communal characteristics ($M_{High} = 9.00$; $SD_{High} = 4.79$; $M_{Low} = 11.00$; $SD_{Low} = 5.79$). As expected, for advertisements for positions without leadership responsibility there was no difference in the number of agentic ($M = 8.89$; $SD = 4.91$) and communal characteristics ($M = 8.05$; $SD = 4.14$). Results are displayed in Figure 7.
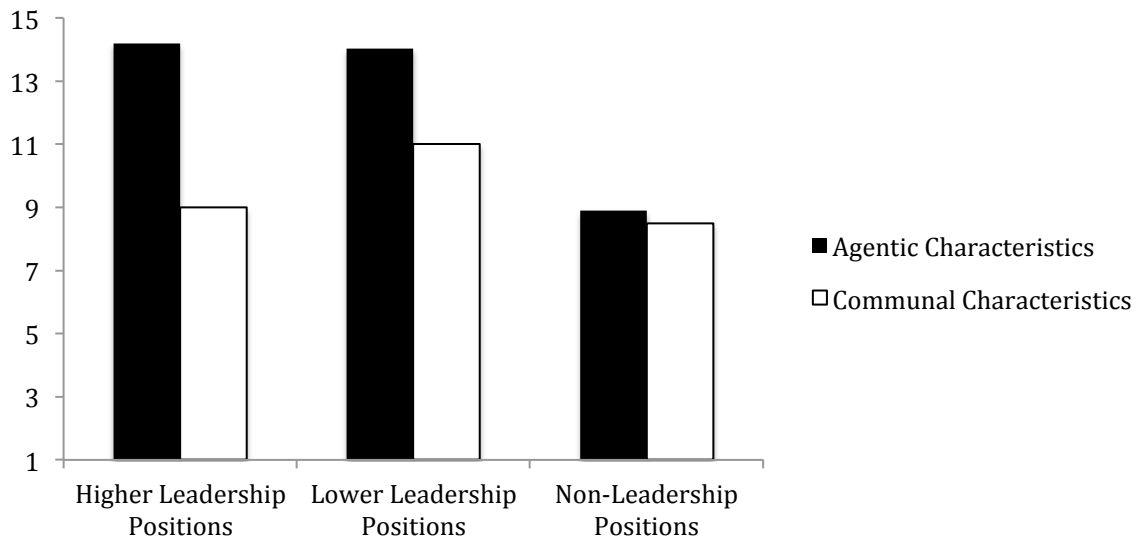
Figure 7. Absolute number of agentic and communal characteristics for all position levels.

Discussion

In this pretest, I found that recruitment advertisements for leadership positions (both higher and lower-level) contained more agentic and fewer communal characteristics. This was not the case for advertisements for positions without leadership responsibility. If recruitment advertisements are composed of agentic rather than communal characteristics, they may discourage women from pursuing a leadership career. However, if organizations were to include communal characteristics in their advertisements, this may not be the case. Thus, in Study 1a, I test the consequences of agentic and communal characteristics in recruitment advertisements for male and female applicants.

Study 1a

Method

Design and participants. I used a 2 (participant gender: male, female) × 2 (advertisement characteristics: agentic, communal) experimental design with the second factor being varied within participants. Participants were 45 students (47% female) from a large German university who were 21.50 years old on average ($SD = 1.79$). They had been recruited from a business school class and were not paid.

Procedure. Participants were informed that this study was designed to investigate how students evaluate different fellowship programs. At first, participants were asked to specify whether they currently or ever held a fellowship. I then told participants that they would review three randomly selected advertisements for fellowships to different programs. Participants then received a list of ten fellowship organizations (five existing, five fictitious) and were always assigned to the same three fictitious advertisements.

Following the definition stated above, I operationalized career opportunities as fellowships for leadership development programs. Advertisements included information about the leadership development program contents (i.e., workshops for individual development, networking opportunities, financial support), and stated the major aim of the program to qualify students for a leadership position. After reading each advertisement, participants were administered a short questionnaire to indicate their evaluation of the leadership development program. After they had rated all advertisements, participants made comparative judgments of the programs and specified demographic information.

Experimental manipulations. Participants reviewed three leadership development program advertisements: One with agentic characteristics, one with communal characteristics, and one dummy. The first two advertisements differed only in the use of agentic and communal characteristics; the dummy advertisement differed from these two in structure and content. It was included to make the cover story more plausible and the structural similarity of the other two advertisements less salient. The order of the advertisements with agentic and communal characteristics was counterbalanced. Participants always saw the dummy advertisement last.

Because of the within-participants design, I used two program descriptions for the agentic and communal advertisements, which were both read by participants. The two program descriptions contained virtually the same information apart from the manipulation (see Table 5).

Table 5

Advertisement content and manipulations Studies 1a and 1b

Advertisement with *agentic* (*communal*) characteristics

- The organization has sponsored *determined* (*committed*) and *autonomous* (*responsible*) students to take part in the program over the last 50 years
- Important *competencies* (*talents*) for students are developed through different workshops
- Students can form a *direct* (*helpful*) network with personalities from business who *champion* (*support*) the students
- Program aim is to qualify students for a *leadership position* (to prepare to take *responsibility for employees*)
- In the workshops, students will develop *assertive* (*sociable*) behavior and an *analytical* (*conscientious*) work style
- Interactions among fellowship students shall be *outspoken* (*collaborative*)
- All students must earn the fellowship to attend the program which is awarded independently of parents' earnings
- Applicants should have a high motivation and a very good grade transcript

Characteristics in the advertisements were manipulated by systematically substituting agentic and communal characteristics taken from the literature (e.g., Bem, 1974; Heilman et al., 1995). The agentic characteristics include: determined, autonomous, competencies, champion, leadership position, direct, assertive, analytical, and outspoken. The communal characteristics include: committed, responsible, talents, helpful, support, responsibility for employees, sociable, conscientious, and collaborative. All study materials were presented in German. Characteristics were translated and back translated from English to German by independent bilinguals (Brislin, 1980). In a pretest thirty-seven male and female students rated extent to which they perceived the characteristics as stereotypically masculine (i.e., agentic) or feminine (i.e., communal). I operationalized agency as masculinity and communality as femininity such that laypersons could easily understand the measures (cf., Scott & Brown,

2006). Overall, participants perceived the communal characteristics to be significantly more communal than the agentic characteristics, $t(36) = 10.16$, $p < .001$, $d = 2.30$.

Dependent measures. I used the following dependent measures: appeal, perceived fit to the organization (both based on Gaucher et al., 2011), expected success of an application, and intention to apply. Ratings for all measures were conducted on 7-point Likert scales ranging from 1 "do not agree at all" to 7 "totally agree".

Appeal was measured with a composite score of the items "This fellowship looks interesting", "I think this fellowship could appeal to me", and "This fellowship would be a good opportunity" ($\alpha = .86$ and $\alpha = .90$ for the agentic and communal advertisements, respectively).

Fit was measured with the three items "My values and this organization's values are similar", "I am similar to most of the fellowship students", "There is a good fit between the culture of this organization and me" ($\alpha = .90$, .87).

Expected application success was measured with the two items "If I applied for it, I would get this fellowship" and "I believe, if I applied I would be accepted for this fellowship" ($\alpha = .94$, .96). Table 6 summarizes means, standard deviations, and correlations between the dependent variables.

Table 6

Overall means, standard deviations, and correlations Study 1a

Variable	*M*	*SD*	1	2
1. Appeal	4.60	1.31	-	
2. Fit	3.86	1.21	.80***	-
3. Expected success	3.70	1.58	.36***	.42***

Note. ***$p < .001$

Results

Subsequent analyses used a 2 (participant gender: male vs. female) × 2 (advertisement characteristics: agentic vs. communal) mixed measures ANOVA, with repeated measures on the second factor. Whether participants currently or ever held a fellowship was inserted as a covariate for all analyses[9]. ANOVA results were followed up with post hoc tests (Bonferroni). There were no order effects of the advertisements. All means and standard deviations for the conditions are presented in Table 7.

Table 7

Means (and standard deviations) for each condition in Study 1a

| | Men | | Women | |
	Agentic characteristics	Communal characteristics	Agentic characteristics	Communal characteristics
Appeal	4.76 (1.38)	4.52 (1.41)	4.06 (1.11)	5.02 (1.41)
Fit	4.01 (1.40)	3.94 (1.22)	3.37 (0.98)	4.13 (1.16)
Expected success	4.33 (1.42)	4.21 (1.43)	2.86 (1.37)	3.26 (1.71)

Note. N=45. Ratings were given on a 7-point scale in which higher scores indicate more positive ratings (higher appeal, higher fit, higher success).

Appeal. No main effects emerged. I found a significant interaction of advertisement characteristics and participant gender, $F(1, 42) = 8.79$, $p < .01$, $\eta_p^2 = .17$. In line with Hypothesis 1, women rated the leadership development program advertised with agentic characteristics as less appealing than the program advertised with communal characteristics. There was no significant difference for men when rating appeal for the communal advertisement and the agentic advertisement. Results are illustrated in Figure 8.

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[9] This did not significantly predict any variables.
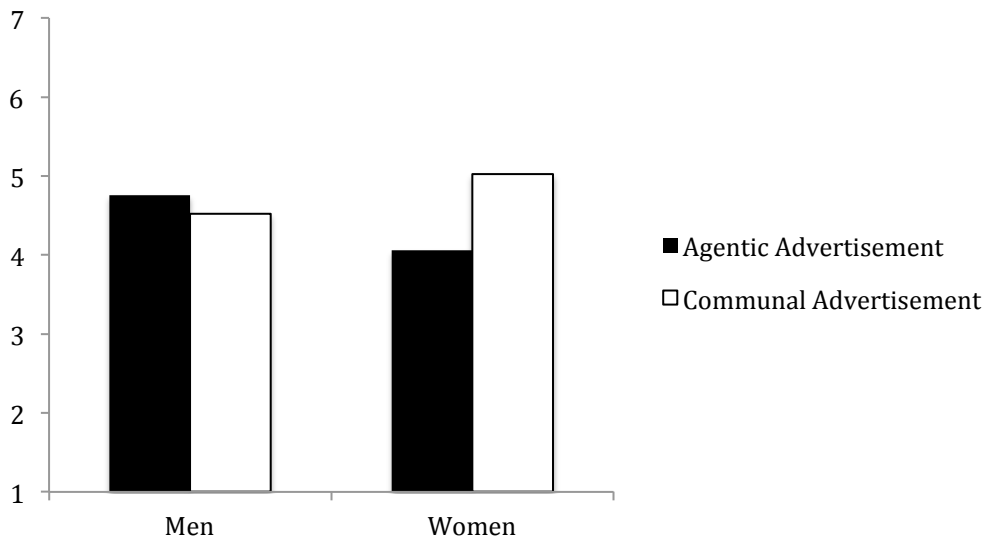
Figure 8. Men's and women's ratings of appeal to the leadership program by advertisement characteristics (Study 1a). Higher ratings indicate higher levels of appeal.

Fit. Again, no main effects emerged. As expected a significant interaction of advertisement characteristics and gender occurred, $F(1, 42) = 4.08$, $p < .05$, $\eta_p^2 = .09$. In line with Hypothesis 1, women indicated a lower fit to the organization portrayed in the agentic advertisement than in the communal advertisement. However, men indicated the same fit. Results are displayed in Figure 9.
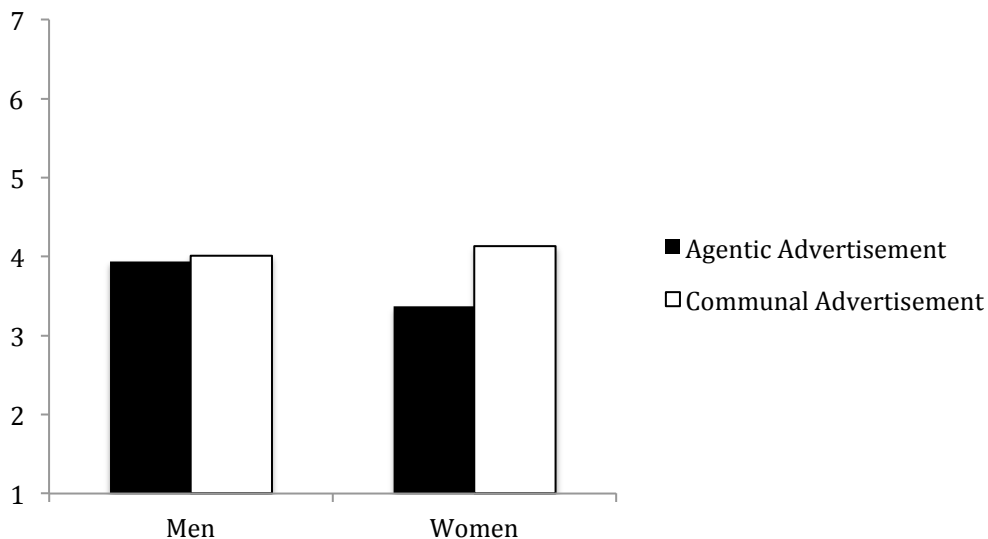
Figure 9. Men's and women's ratings of fit to the foundation by advertisement characteristics (Study 1a). Higher ratings indicate higher levels of fit.

Expected application success. I found a significant main effect for gender, $F(1, 42) = 5.72$, $p < .05$, $\eta_p^2 = .12$, indicating that men generally were more likely to believe that their application would be successful. Interestingly, contrasts showed that women only expected an application to be less successful than men in the agentic (not the communal) advertisement condition. The interaction of characteristics and gender was non-significant but trending, $F(1, 42) = 3.75$, $p = .06$, $\eta_p^2 = .08$. Men did not differ in their expectations of success depending on the advertisements; by trend women expected less success for the agentic advertisement as compared to the communal advertisement. Hypothesis 1 was therefore partially supported for success. Results can be found in Figure 10.
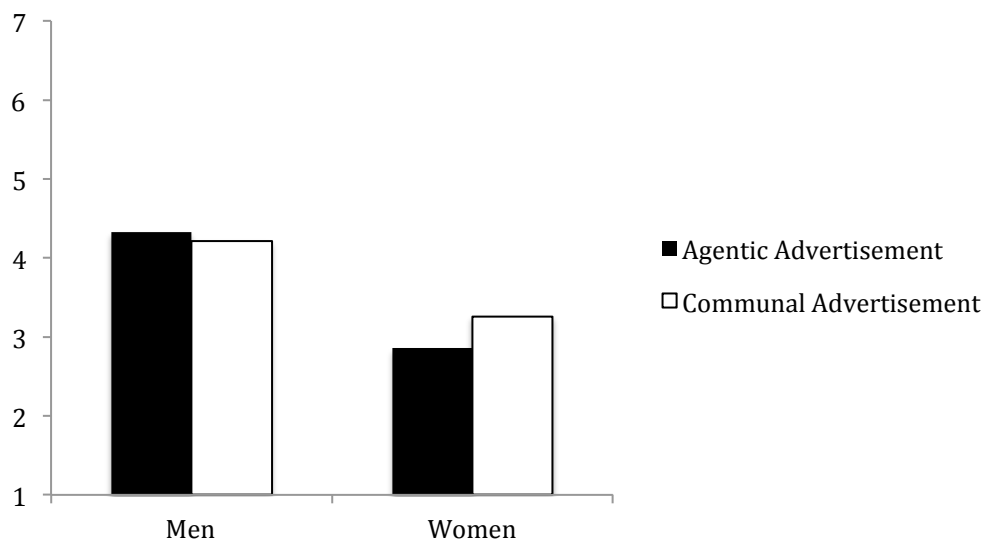
Figure 10. Men's and women's ratings of expected application success by advertisement characteristics (Study 1a). Higher ratings indicate higher levels of expected application success.

Discussion

In Study 1a, I demonstrated that women rated career opportunities advertised with agentic characteristics as opposed to communal characteristics as less appealing and felt a lower fit to the organization. For men, there were no differences in appeal and fit ratings

depending on the characteristics of the advertisements. Men also thought their applications to be more likely to succeed than women – though only for the agentic advertisement. The results of this study may be limited because of the within-participants design, which implies a direct comparison of communal and agentic advertisements. In reality, applicants may make independent decisions for each career opportunity when they become available to them. Thus, I opted to conduct Study 1b, in which a between-participants design allowed me to corroborate my findings about the effects of advertisement characteristics on women's evaluation of career opportunities. I also opted to test the effects of advertisement characteristics on intentions to apply. Because my aim was to identify factors that influence women's (lack of) fit perceptions to career opportunities and Study 1a yielded no effects of advertisement characteristics on men, I focused on women's reactions.

Study 1b

Method

Design and participants. This study applies an experimental between-participants design with advertisement characteristics (agentic, communal) as the independent variable. Participants were 50 female university students of different majors from a large German university. I included participants from different majors in this study rather than business students only to account for the fact that leadership development programs are typically open to students of all majors. I excluded three participants from the analyses who currently held a fellowship, which may have affected their ratings. This left us with a final sample of 47 participants. Age ranged from 17 to 43 years ($M = 21.20$ years, $SD = 4.39$ years). There was no compensation for participation.

Procedure. Participants were recruited during on-site class registration. The cover story and materials were the same as in Study 1. Female participants were asked to evaluate only one advertisement for a leadership development program.

Experimental manipulations. The agentic advertisement was virtually identical to the

one used in Study 1. I slightly adapted the communal advertisement to reflect the agentic advertisement word for word – apart from the communal characteristics manipulated. In contrast to Study 1a the term leadership was used in both advertisements, because the goal of this study was to find out under which conditions women would be more likely to apply for positions that may ultimately lead them to pursue a leadership career. The agentic characteristics include: determined, autonomous, competencies, direct, champion, assertive, analytical, and outspoken. The communal characteristics include: committed, responsible, talents, helpful, support, sociable, conscientious, and collaborate. A pretest with eighteen female students indicated that the communal characteristics were perceived to be significantly more communal than the agentic characteristics, $t(17) = 5.91$, $p < .001$, $d = 2.17$.

Measures. The same measures as in Study 1 were administered for appeal ($\alpha = .87$), fit ($\alpha = .84$), and expected application success ($\alpha = .88$). In addition, intention to apply was measured with the item "I would apply for this fellowship". Means, standard deviations, and correlations between all dependent variables can be found in Table 8.

Table 8

Overall means, standard deviations, and correlations Study 2

Variable	*M*	*SD*	1	2	3
1. Appeal	4.85	1.32	-		
2. Fit	3.60	1.27	.59***	-	
3. Expected success	2.92	1.56	.32***	.57***	-
4. Intention to apply	3.21	1.95	.56***	.74***	.63***

Note. ***$p < .001$

Results

To test Hypothesis 1 I analyzed the data using t-tests and calculated effect sizes (*d*). Results are displayed in Figure 11.

Appeal. A t-test analysis indicated a marginally significant effect for appeal, $t(46) = -1.44$, $p = .08$, $d = .41$. In line with Hypothesis 1, by trend women rated the agentic advertisement ($M = 4.48$, $SD = 1.38$) as less appealing than the communal advertisement ($M = 4.97$, $SD = .96$).

Fit. I found a significant effect for fit, $t(46) = -2.00$, $p < .05$, $d = .58$, indicating that women experienced a lower fit to the organization when the leadership development program was advertised with agentic characteristics ($M = 3.43$, $SD = 1.08$) than with communal characteristics ($M = 4.05$, $SD = 1.06$). Hypothesis 1 was supported for fit.

Expected application success. Analyses showed no significant differences of ratings for expected application success, $t(45) = -.05$, $p =$ ns. Unexpectedly, for both advertisements, women indicated comparable levels of application success ($M_A = 2.91$; $M_C = 2.94$). Hypothesis 1 was not supported for expected application success.

Intention to apply. I found a significant effect for intention to apply, $t(45) = -1.72$, $p < .05$, $d = .51$. In line with Hypothesis 1, women showed a lower intention to apply for the leadership development program when it was advertised with agentic characteristics ($M = 2.78$, $SD = 1.54$) as compared to communal characteristics ($M = 3.63$, $SD = 1.81$).
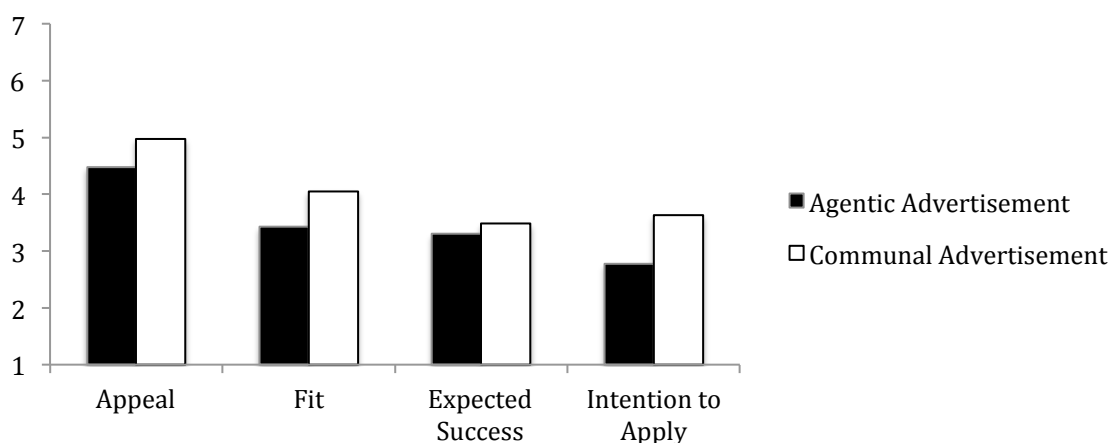

Figure 11. Women's ratings of appeal, fit, and expected success of an application as well as intention to apply for the leadership program by advertisement characteristics (Study 1b). Higher ratings indicate higher levels of appeal, fit, success and application intention.

Discussion

Study 1b replicated and corroborated the initial empirical evidence provided by Study 1a. Women rated the agentic advertisement as less appealing and expressed lower fit when the advertisement was comprised of agentic rather than of communal characteristics. Under these circumstances, women also expressed lower intentions to apply. Interestingly, characteristics did not influence women's expectations of application success. Taken together, Studies 1a and 1b highlight the importance of characteristics in advertisements for the recruitment of women for career opportunities. Studies 1a and 1b have high internal validity but limited ecological validity. Therefore, while acknowledging the importance of application intentions (Rynes, 1991), I cannot conclude that advertisement characteristics are linked with actual applications. Thus, I further explored the relations between characteristics of advertisements and applications by using real-world advertisements.

Study 2

In Study 2, I was interested in whether the composition of two real-world advertisements would affect women's evaluations and application intentions. I gained access to field data and complimented this analysis with actual application numbers of women and men. Again, career opportunities were operationalized as fellowships for leadership development programs. I was able to obtain real-world advertisements from a large fellowship organization in Germany. The organization aims at recruiting students for a leadership development program (i.e., leadership and skills training, networking opportunities). Advertisements were written as two-page single spaced letters to students. Advertisements barely differed in content or structure, but the organization had adapted the wording. The original advertisements were not modified apart from blackening the organization's name to avoid familiarity bias.

On the basis of three independent judges ratings, I selected an advertisement perceived to be predominantly agentic (from the year of 2003, henceforth referred to as advertisement 1) and an advertisement perceived to be predominantly communal (from the year of 2013,

henceforth referred to as advertisement 2). I then pretested the two advertisements with 44 German female university students of different majors from a big German university (M_{Age} = 24.43 years, SD_{Age} = 3.41 years), who were recruited on campus and were asked to read one of two advertisements for a leadership development program (between-participants design)[10]. They were informed that I would ask them questions about the text. I asked participants to rate either advertisement 1 or 2. I again operationalized agency as masculinity and communality as femininity such that laypersons could easily understand my dependent measures (Scott & Brown, 2006). Participants rated the extent to which they found that the advertisements contained masculine words and to what extent it contained feminine words on a 7 mm line (0.28 inches). They were able to indicate their perception of the masculinity and femininity of the advertisement at any place on the line with the endpoints "few masculine (feminine) words" and "many masculine (feminine) words". The lower the number, the fewer masculine (feminine) words were perceived to be in the advertisements. A t-test indicated a significant effect for agency, $t(42) = 2.16$, $p < .05$, $d = .66$, indicating that advertisement 1 was rated as more agentic ($M = 4.68$, $SD = .85$) than advertisement 2 ($M = 3.88$, $SD = 1.50$). This was in line with the initial ratings provided by the three raters. I found no significant effect for communality, $t(41) = -.66$, $p = ns$, indicating that advertisement 1 ($M = 3.02$, $SD = 1.23$) was perceived equally communal to advertisement 2 ($M = 2.76$, $SD = 1.36$). Overall, the two advertisements differed in agency but not in communality. This reflects the underlying problematic that leadership is mostly seen as agentic (e.g., Schein, 2001). It is also in line with the main pretest in which I found that advertisements for leadership positions employ more agentic and less communal characteristics.

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[10] I opted to content analyze advertisements using the same words and procedure as in the main pretest. Advertisement 1 contained 24 agentic characteristic and 19 communal characteristics; advertisement 2 contained 18 agentic characteristic and 21 communal characteristics. Because the differences between the two advertisements – especially regarding the communal characteristics – was not grand, I decided to further pretest the advertisements by a sample of my target population.

Method

Study 2 differs from Studies 1a and 1b, because I investigate advertisements with high versus low levels of agency, which depicts organizational reality (see results of the main pretest).

Design, procedure, and participants. This study was based on an experimental between-participants design with agency (high vs. low) as the independent variable. Participants were recruited on campus and were asked to evaluate an advertisement. 124 female students with different majors from a big German university participated in this study. Ages ranged from 18 to 40 years with a mean age of 23.03 ($SD = 3.14$). There was no compensation for participation in the study.

Experimental manipulations. I used the two real-world advertisements to manipulate agentic characteristics (high-agentic advertisement and low-agentic advertisement).

Measures. The measures of appeal ($\alpha = .81$), fit ($\alpha = .86$), expected application success ($\alpha = .96$), and intention to apply were used as before. As an additional dependent measure, I calculated the percentage of applications the organization had received from women in response to the two advertisements. For this purpose, the organization provided us with the overall number of applications and the number of male and female applicants. Overall means, standard deviations, and correlations between all dependent variables can be found in Table 9.

Table 9

Overall means, standard deviations, and correlations Study 2

Variable	M	SD	1	2	3
1. Appeal	4.85	1.32	-		
2. Fit	3.60	1.27	.59***	-	
3. Expected success	2.92	1.56	.32***	.57***	-
4. Intention to apply	3.21	1.95	.56***	.74***	.63***

Note. ***$p < .001$

Results

To test Hypothesis 1 I analyzed the data using t-tests and calculated effect sizes (*d*). Results are illustrated in Figure 12.

Appeal. A t-test indicated a marginally significant effect for appeal, $t(122) = -1.45$, $p = .08$, $d = .27$. In line with my assumptions, by trend women rated the high-agentic advertisement ($M = 4.67$, $SD = 1.30$) as less appealing than the low-agentic advertisement ($M = 5.02$, $SD = 1.33$).

Fit. As expected, there was a significant effect for perceived fit, $t(122) = -1.92$, $p < .05$, $d = .34$. Women perceived lower levels of fit in the high-agentic advertisement condition ($M = 3.38$, $SD = 1.30$) than in the low-agentic advertisement condition ($M = 3.81$, $SD = 1.23$).

Expected application success. Similar to my results in Study 1b, I found no significant differences of ratings for expected application success, $t(122) = -.95$, $p = .18$, indicating that women anticipated an application to be equally successful in the high-agentic ($M = 2.78$, $SD = 1.51$). and low-agentic advertisements ($M = 3.05$, $SD = 1.61$).

Intention to apply. As expected, when asked about their application intentions, women indicated a lower intention to apply to the high-agentic advertisement ($M = 2.84$, $SD = 1.80$) than to the low-agentic advertisement ($M = 3.53$, $SD = 2.04$), $t(118) = -1.96$, $p < .05$, $d = .36$.

Actual applications from the field. A Chi-square test confirmed that actual numbers of applications in the two years the advertisements were used in were in line with this finding. When the high-agentic advertisement was used to recruit students, men had more often applied to the leadership development program than women, $\chi^2(1) = 33.71$, $p < .001$. Indeed, only 31% of the applicants were female. However, when the low-agentic advertisement was used to recruit students 51% of the applicants were female. Thus, women and men had applied in equal numbers, $\chi^2(1) = .43$, $p = .51$.
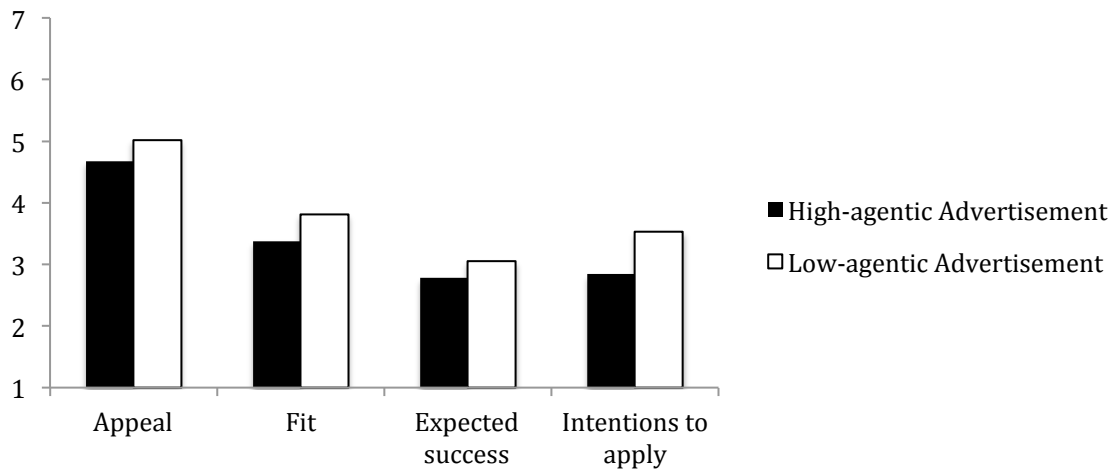
Figure 12. Women's ratings of appeal, fit, and expected success of an application as well as intention to apply for the leadership program by advertisement characteristics (Study 2). Higher ratings indicate higher levels of appeal, fit, success and application intention.

Discussion

Using real-word advertisements, I replicated my findings of Study 1a and 1b. Importantly, I additionally found that the actual percentage of female applicants was lower for the high-agentic advertisement. The latter result cannot be solely attributed to advertisement characteristics, because the advertisements had been used in different years (i.e., 2003, 2013) and hence other factors may have contributed to the effect (e.g., different recruitment strategies). However, taken together with the ratings of appeal, fit, and intention to apply in this study, the results suggest that the agentic characteristics of advertisements played an important role. Studies 1a, 1b, and 2 focused on leadership development programs as career opportunities. To make sure that actual job advertisements lead to similar effects, I conducted a final study.

Study 3

In Study 3, I wanted to replicate and extent the findings of the previous studies. To stay within the focus of career opportunities and my question with regard to women's lower perceived fit to leadership positions early in their career, I focused on management trainee

programs[11]. The explicit goal of these programs is for employees to take on a leadership

position after successful accomplishment of the program. In this Study, I also wanted to test

how men and women react to advertisements that contain both agentic and communal

characteristics. Specifically, I wanted to find out if some communal characteristics would be

sufficient to buffer the negative effects of agentic characteristics on women? Therefore, I

included advertisements with both agentic and communal characteristics combined. Finally, I

was interested whether advertisement characteristics would impact women's ambitions to

pursue a leadership career.

Method

Design and participants. I included male participants and applied a 2 x 3 between-

participants design with participant gender (male, female) and advertisement characteristics

(agentic, communal, mixed) as my independent variables. My sample consisted of 179

participants who were 28.5 years old on average (SD = 4.6 years), 96% were German, and 58.9

% of them were female. Over 90% had a university or college degree – 40% in a business

science, 18% in a technical or engineering science, 16% in humanities, 12% in a social science,

and 9% in math or natural sciences (less than 5% did not indicate the area of their degree).

Over 85% were currently employed (with regard to economic sectors, 40% worked in the

information sector, 39% in the service sector, and 11 % in the production sector). Participants

had been in the workforce for about 3.7 years on average (SD = 4.5 years) and 83%

categorized themselves as young professionals. 19% indicated that they currently already held

a leadership position.

Procedure. I recruited participants online. An invitation to take part in a study on the

influence of recruitment advertisements on young professionals was posted in several groups

of social media websites and distributed via email. The procedure then was similar to Studies

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[11] Management trainee programs are 18 – 24 month long programs in an organization in which employees get to
know and work in different organizational divisions. Their daily working life is accompanied by personal
development initiatives (e.g., mentoring or coaching).

1a and 1b. I asked participants to imagine that they are looking for a trainee position and assigned them a recruitment advertisement of the fictitious company Avan Nelt. The job advertisement was adapted from an actual management trainee position advertisement and can be seen in Table 10.

Table 10.

Job advertisement used in Study 3.

	Advertisement with *agentic* (*communal*) characteristics
Description of the trainee program	The management trainee program from Avan Nelt is aimed at college graduates. Within the 24-month duration you will be prepared for a leadership position in a central field or a key position within one of my divisions. I place special value on a wide range of practical experience alongside expertise and management knowledge. You, therefore, will change divisions every 6 months to *analyze (become acquainted with)* different problems and tasks, as well as to show your *analytical skills (interpersonal skills)* and your *determination (communication skill)*. Build a network – from your mentor you will learn *strategic (intuitive) planning*, *task-oriented (people-oriented)* leadership, as well as *ambitious (socially responsible)* behavior. Seminar days will take place in between the separate rotations and will consist of presentations, discussion rounds, and seminar blocks.
Description of applicant's profile	- You have a college/university degree (or equivalent) and/or several years of work experience - You have the motivation to carry out *demanding leadership tasks (engaging tasks with responsibility for employees)* - You show high *ambition (goal commitment)* and *entrepreneurial thinking (orientation towards sustainability)* - You wish to take on positions with *influence (responsibility)* - You are *confident (sociable)* and show very high *assertiveness (team skill)*
Description of what the organization offers	Along with a combination of education and training you will work with an experienced team and in a *vigorous (cooperative)* work atmosphere. An *influential (supporting)* mentor will continuously *challenge (encourage)* you on your way through the trainee program. After completion you take on a leadership position in a central area.

Experimental manipulations. To strengthen generalizability of my results, I used a new set of agentic and communal characteristics (see Table 10). A pretest with 24 participants confirmed that agentic characteristics were perceived to be agentic, $t(24) = -7.01, p < .001, d = 2.86$, and that communal characteristics were perceived communal, $t(24) = 6.69, p < .001, d = 2.73$. In the mixed advertisement condition, both agentic and communal characteristics were used. To make sure that no specific communal or agentic characteristics would drive the effects, I used two different advertisements. In the first mixed advertisement the first characteristic was agentic; in the second mixed advertisement the first characteristic was communal. I alternated all subsequent characteristics. Of the participants randomly allocated to the mixed advertisement condition, half were randomly allocated to read the first and the other half the second mixed advertisement. T-tests on my dependent measures showed that neither male nor female participants evaluated the two mixed advertisements significantly different. I therefore combined the two advertisements for all subsequent analyses.

Measures. Substituting fellowship for trainee program the same measures as in the previous studies were administered for appeal ($\alpha = .95$) and expected application success ($\alpha = .96$). In this study, I created an intention to apply scale with the additional item "How likely would you be to apply to this fellowship?" (7-point Likert Scale, 1 "not at all" to 7 "very") to test application intentions ($\alpha = .94$). In my previous studies, I measured fit in terms of perceived fit to a fellowship organization, because students did not apply for an actual job. For the current study, fit was more appropriately measured in terms of perceived fit to the advertised position[12]. Position fit ($\alpha = .88$) was measured with the three items "I think I would fit well to this trainee position.", "I perceive a high fit between myself and the trainee position.", "I don't think I would fit to the trainee position." (reverse coded). My new dependent variable leadership ambition was measured with the three items "I can picture

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[12] Including a parallel measure of perceived fit to the organization yielded similar results as obtained for perceived fit to the position.

myself having a leadership position later on.", "I think I would enjoy leading employees.", and

"In the future, I see myself as a leader." (α = .92). Both position fit and leadership ambition

were measured on a 7-point Likert Scale form 1 "do not agree at all" to 7 "agree very much".

Means, standard deviations, and correlations between all dependent variables can be found in

Table 11.

Table 11

Overall means, standard deviations, and correlations Study 3

Variable	*M*	*SD*	1	2	3	4
1. Appeal	4.41	1.58	-			
2. Position fit	4.19	1.52	.66***			
3. Expected success	4.18	1.63	.36***	.55**		
4. Intention to apply	3.94	1.93	.84***	.75***	.34***	
5. Leadership ambition	5.68	1.23	.22**	.40***	.43***	.19*

Note. *p* < .05, **p* < .01, ***p* < .001

Results

     I conducted initial analyses using ANCOVAs. To test my hypotheses that there would

only be effects of advertisement on women but not men, I report the advertisement main

effects separately for male and female participants. Whether or not participants were in a

leadership position was inserted as covariate[13], because independent of advertisement

characteristics participants with leadership experience might perceive a higher fit to a

management trainee program as compared to participants without leadership experience. All

means and standard deviations are presented in Table 12. In addition, results are displayed in

Figure 13.

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[13]One person did not indicate their leadership experience and was therefore automatically excluded
from the analyses. Including the covariate did not change any results.

Table 12

Means (and standard deviations) for each condition in Study 3

	Women			Men		
	Agentic characteristics	Mixed characteristics	Communal characteristics	Agentic characteristics	Mixed characteristics	Communal characteristics
Appeal	3.79 (1.91)	4.63 (1.22)	4.74 (1.59)	4.44 (1.25)	4.10 (1.88)	4.37 (1.69)
Position Fit	3.58 (1.63)	3.97 (1.48)	4.57 (1.46)	4.14 (1.15)	4.36 (1.78)	4.54 (1.64)
Expected success	3.35 (1.56)	3.97 (1.75)	4.38 (1.37)	4.90 (1.50)	4.11 (1.71)	4.21 (1.78)
Intention to apply	3.11 (1.92)	3.76 (1.81)	4.62 (2.05)	3.58 (1.40)	3.91 (2.08)	4.37 (2.00)
Leadership Ambition	5.17 (1.49)	5.63 (1.20)	5.67 (1.26)	5.90 (1.09)	5.77 (1.10)	6.02 (1.00)

Note. N=178. Ratings were given on a 7-point scale in which higher scores indicate more positive ratings (higher appeal, higher fit, higher success, higher intention to apply, and higher leadership ambition).

Appeal. There was no effect of advertisement characteristics on men's appeal ratings, $F(2, 171) = .29$, $p = .75$, $\eta_p^2 = .00$, but a significant main effect of advertisement characteristics on women's appeal ratings, $F(2, 171) = 3.61$, $p = .03$, $\eta_p^2 = .04$. In line with Hypothesis 1, women rated the agentic advertisement significantly less appealing than the communal advertisement and marginally less appealing than the mixed advertisement. Women perceived the mixed and the communal advertisement as similarly appealing (see Figure 13).

Figure 13. Women's and men's ratings of appeal for the leadership position by advertisement characteristics (Study 3). Higher ratings indicate higher levels of appeal.

Position fit. The effect of advertisement characteristics on fit perceptions was significant for women, $F(2, 171) = 3.79$, $p = .025$, $\eta_p^2 = .04$, but not for men, $F(2, 171) = .43$, $p = .65$, $\eta_p^2 = .01$. In line with Hypothesis 1, women perceived a significantly lower fit to the management trainee position when the advertisement contained agentic as compared to communal characteristics. Women rated their fit to the organization in the mixed advertisement condition not significantly different from the agentic and communal

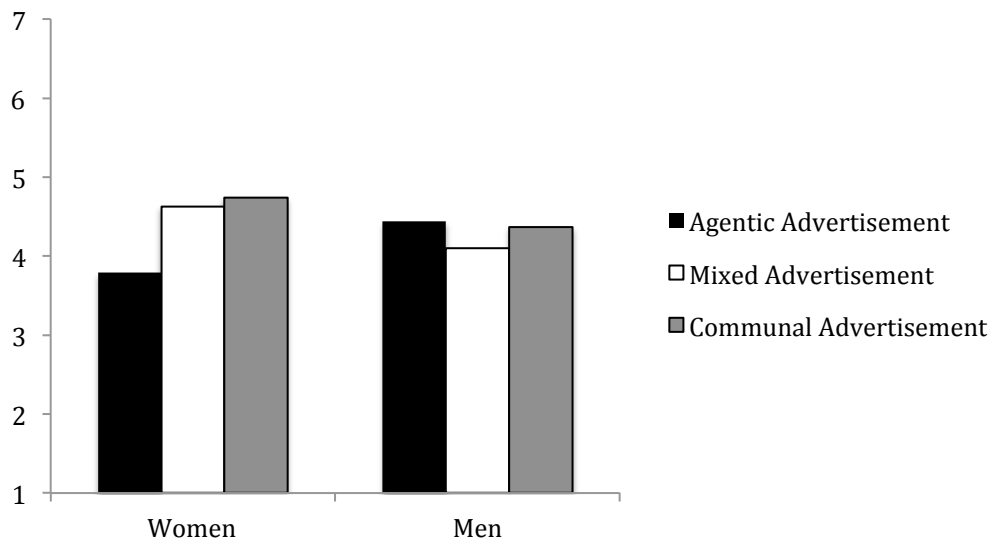advertisement conditions (with ratings in-between). Results are displayed in Figure 14.

Figure 14. Women's and men's ratings of fit to the leadership position by advertisement characteristics (Study 3). Higher ratings indicate higher levels of fit.

Expected application success. I did not find a significant effect for advertisement characteristics on expected application success for men, $F(2, 171) = 1.99$, $p = .14$, $\eta_p^2 = .02$, but for women, $F(2, 171) = 3.36$, $p = .04$, $\eta_p^2 = .04$. Women expected more success of an application after reading the communal advertisement as compared to the agentic advertisement. Women expected the success of an application after reading the mixed advertisement not significantly different than after reading the agentic or communal advertisement (with ratings in-between). Exploratory post hoc tests showed that men had higher success expectations than women only after reading the agentic advertisement but not the communal or mixed advertisement (see Figure 15).
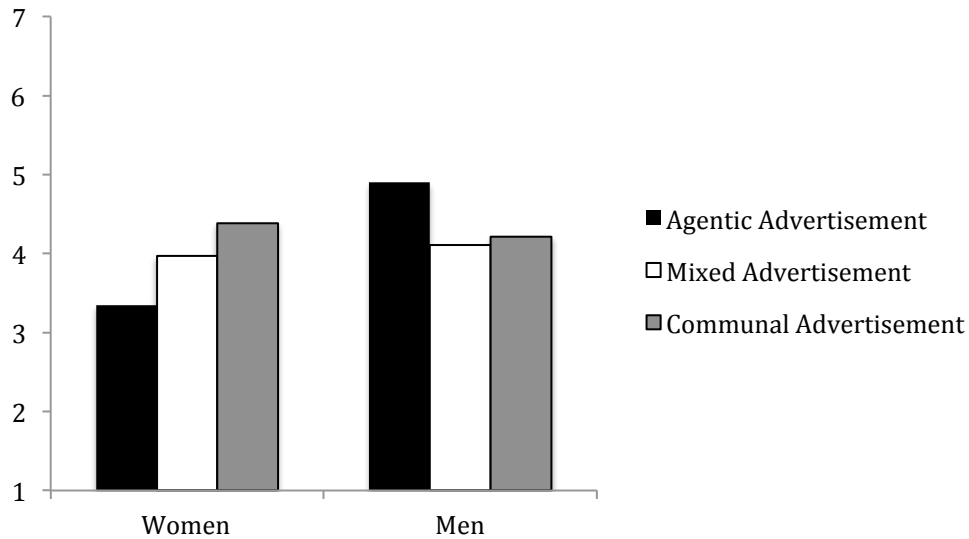
Figure 15. Women's and men's ratings of expected application success by advertisement characteristics (Study 3). Higher ratings indicate higher levels of expected success.

Intention to apply. In line with Hypothesis 1, I found no significant main effect of advertisement characteristics on men's intentions to apply, $F(2, 171) = 1.01$, $p = .37$, $\eta_p^2 = .01$, but I did on women's, $F(2, 171) = 5.56$, $p = .005$, $\eta_p^2 = .06$. Women were significantly more likely to apply to the communal advertisement as compared to the agentic advertisement. Their application intentions to the mixed advertisement did not differ from neither the agentic nor the communal advertisement (with ratings in-between). Results are illustrated in Figure 16.
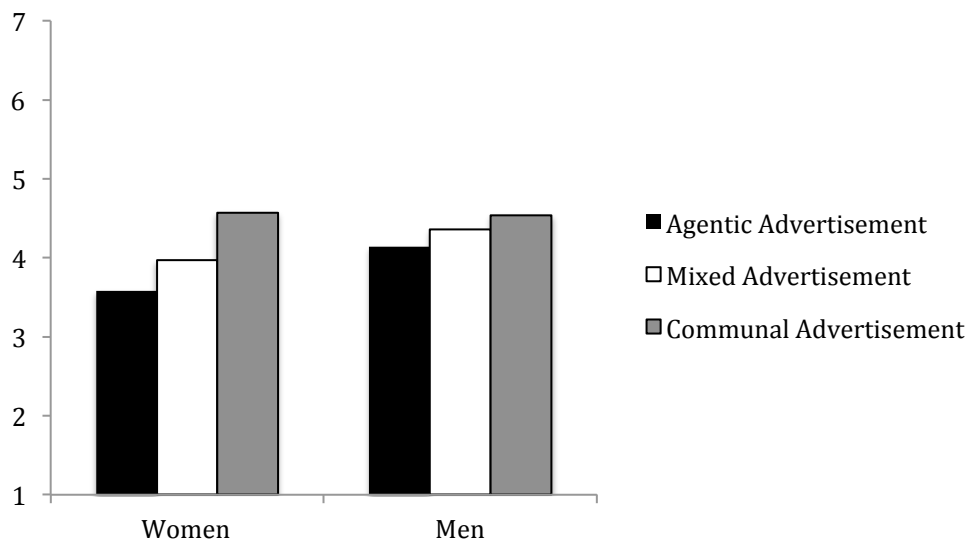
Figure 16. Women's and men's intentions to apply for the leadership position by advertisement characteristics (Study 3). Higher ratings indicate higher application intentions.

Leadership ambitions. There was no significant effect of advertisement characteristics on men, $F(2, 171) = .36$, $p = .70$, $\eta_p^2 = .00$, nor women, $F(2, 171) = 1.26$, $p = .29$, $\eta_p^2 = .02$. However, in an exploratory analyses I found that men had higher leadership ambitions than women, but only in the agentic advertisement conditions, $F(1, 171) = 4.28$, $p = .04$, $\eta_p^2 = .02$. Men's and women's leadership ambitions did not differ after reading the communal, $F(1, 171) = 1.19$, $p = .28$, $\eta_p^2 = .01$, nor in the mixed advertisement, $F(1, 171) = .14$, $p = .71$, $\eta_p^2 = .00$. Results are displayed in Figure 17.
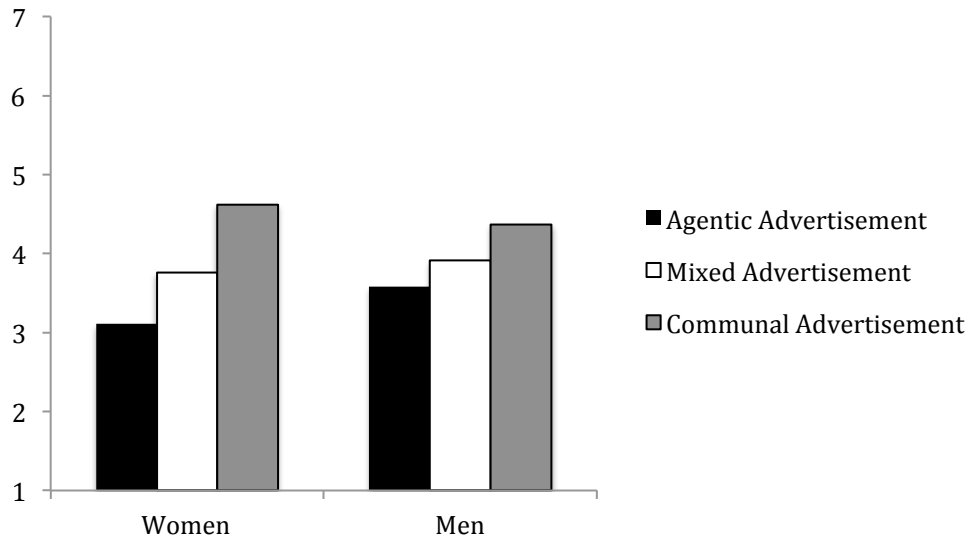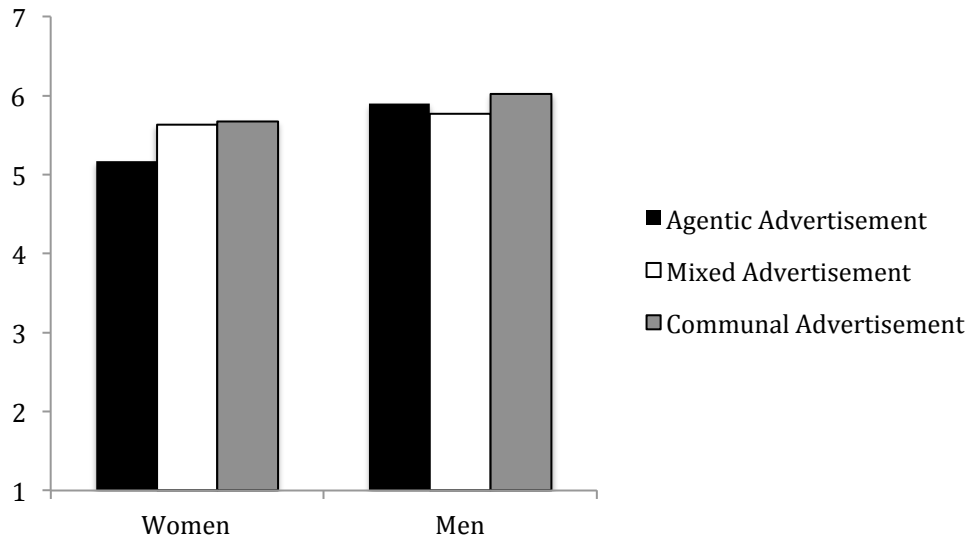
Figure 17. Women's and men's ambitions to pursue a leadership career by advertisement characteristics (Study 3). Higher ratings indicate higher levels of leadership ambitions.

Mediation analysis. I tested my mediation hypothesis for female participants using PROCESS SPSS macro (Hayes, 2013). As it is only possible to compare two conditions and I was interested in the difference between agentic and communal advertisements, I excluded the mixed advertisement. I inserted advertisement characteristics (coded as 0 = agentic, 1 = communal) as the independent variable and application intentions as the dependent variable. I tested a serial mediation model (Model 6 using 5,000 bootstraps and 95% bias correction) on female participants with position fit as the first and appeal as the second mediator. As in the other analyses participants' leadership experience was kept as a covariate. The significant effects were as follows: Advertisement characteristics significantly predicted women's position fit (b = 1.00, *SE* = .38, CI [.24, 1.76]), fit then predicted appeal (b = .88, *SE* = .08, CI [.71, 1.05]), and both position fit (b = .45, *SE* = .09, CI [.27, .64]) and appeal (b = .76, *SE* = .08, CI [.59, .92]) predicted application intentions. Indirect effects tests showed that the indirect effect of advertisement characteristics on position fit, then fit on appeal, and then appeal on application intentions was significant (*Indirect effect* = .67, *SE* = .26, CI [.13, .91]).

Therefore, Hypothesis 2 was supported. The same mediation was not supported for male participants.

Discussion

In Study 3, I replicated and extended my findings of the previous studies. I used a sample of young professionals and a career opportunity within an organization (management trainee positions). I also used different agentic and communal characteristics and investigated how advertisements comprised of both agentic and communal characteristics would be evaluated. I found that women (but not men) perceived a lower fit and appeal when the advertisement is composed of agentic rather than communal characteristics. Further, they showed lower application intentions and expected an application to be less successful. Women evaluated the mixed advertisement somewhat more positive than the agentic and somewhat more negative than the communal advertisement. Importantly, women only expressed lower ambitions to pursue a leadership career than men after reading the agentic advertisement, but not after reading the communal or mixed advertisement.

In spite of these findings, some advertisements may require agentic characteristics for an appropriate description of the organization or position. Because such characteristics are not solely communicated through recruitment advertisements, organizations can rely on other factors – like recruiters – to assure women to apply. Potential applicants will likely be in contact with a recruiter even before they decide to apply for a career opportunity. Recruitment videos, on campus site visits, or job fairs are only some examples on where recruiters can be meaningful signals to potential applicants. Both advertisement and recruiter characteristics can thus influence people's perceptions of career opportunities. Can a female recruiter diminish the negative effects of agentic characteristics in job advertisements? I intend to answer this question in Study 4.

Study 4

The aim of this study is to find out whether a female recruiter can mitigate the negative effects of agentic advertisements on women. I again focus on career opportunities in the form of leadership programs and am again interested in appeal, fit, application intentions, and leadership ambitions. I further investigate if recruiter gender is relevant for women's identification with the recruiter (i.e., will women be more or less likely to identify with the recruiter depending on advertisement characteristics and recruiter gender?). I want to test my Hypothesis, which posits that agentic characteristics would lead to less positive evaluations and decrease intentions to apply when recruiters are male; however, for female recruiters, communal and agentic advertisements should be evaluated similarly.

Method

Design and participants. I applied a 2×2 between-subjects design with advertisement characteristics (agentic, communal) and recruiter gender (male, female) as the independent variables. My sample included 159 female students of different majors from a German university. Their ages ranged from 18 to 40 years ($M = 21.96$, $SD = 2.89$).

Procedure. Participants were recruited via email and on campus and invited to a computer lab. Participants first read an introduction to the study and answered demographic questions. Next, participants watched a short video in which a leadership program was described. They saw a male or a female recruiter describing the leadership program either with agentic characteristics or communal characteristics. After watching the video, participants were asked to fill in the questionnaire measuring the dependent variables. They received 5 Euro for participation.

Experimental manipulations. Characteristics in advertisements and recruiter gender were manipulated in a video scenario. I transformed the communal and agentic advertisements into professional scripts, which contained virtually the same information as in

Studies 1a and 1b[14]. The agentic characteristics included: determined, autonomous, outstanding, competencies, leadership position, direct, active, analytical, rational, push, outspoken, corporate influence, and assert. The communal characteristics included: committed, responsible, talents, helpful, responsibility for employees, sociable, conscientious, sensible, sincere, support, cooperate, social responsibility, and communicate. A pretest with eighteen female students indicated that they perceived the communal characteristics overall to be significantly more communal than the agentic characteristics overall, $t(17) = 6.05, p < .001, d = 2.18$.

Professional actors and actresses portrayed the recruiters. For reasons of external and construct validity, I employed stimulus sampling (Wells & Windschitl, 1999): I recorded two women and two men to present the agentic and communal advertisement. They wore grey business suits and were filmed from the waist up in front of a white wall. No significantly different results occurred between the two actors or between the two actresses representing the same condition. Data were therefore combined for the two actors and actresses per condition.

Measures. I measured appeal ($\alpha = .83$), perceived fit ($\alpha = .82$) as in Studies 1a and 1b. As in Study 3, I created an intention to apply scale with the additional item "How likely would you be to apply to this fellowship?" (7-point Likert Scale, 1 "not at all" to 7 "very") to test application intentions ($\alpha = .90$). Leadership ambitions were measured on a 7-point Likert Scale form 1 "do not agree at all" to 7 "agree very much" with the three items "I can picture myself having a leadership position later on.", "I think I would enjoy leading employees.",

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[14] In this study, I strengthened the communal and agency manipulations in both conditions. In the communal wording condition, the organization had a female name (Andrea Reichle Foundation) and all actors and actresses were asked to communicate in a rather communal communication style, while in the agentic wording condition the organization had a male name (Andreas Reichle Foundation) and all actors and actresses were asked to communicate with a rather agentic communication style. This allowed for a more conservative test of my hypothesis that female recruiters can mitigate the effects of (even strong) agency in advertisements.

and "In the future, I see myself as a leader." (α = .90). I additionally measured identification with the recruiter with the single item "How much do you identify with this person [the recruiter]?". Answers were given on a Venn-diagram measure with 1 showing a white and a black circle (representing the self and the recruiter) that did not overlap at all to 7 showing a single grey circle indicating a full overlap of both circles. Numbers in between represented different stages of circle overlap (based on, van Quaquebeke & Brodbeck, 2008). Means, standard deviations, and correlations between dependent variables can be found in Table 13[15].

Table 13

Overall means, standard deviations, and correlations

Variable	M	SD	1	2	3	4
1. Appeal	4.86	1.24	-			
2. Fit	4.09	1.22	.77***	-		
3. Expected success	3.58	1.49	.30***	.54***	-	
4. Intention to apply	3.18	1.62	.52***	.61***	.52***	-

Note. ***p < .001

Results

[15] I also measured perceived amount of women in the foundation with the single item „What do you think, how many female students are part of this foundation? Please check the percentage of women." Participants were asked to mark the percentage of women on a continuous line from 0% to 100% that had numbers specified on the line equidistant in increments of ten. I found significant main effects of advertisement characteristics and of recruiter gender. The interaction between them was also significant. Participants perceived significantly fewer women in the foundation when the advertisement deployed agentic characteristics and was communicated by a male recruiter (M = 32 %; SD = 10 %) than when the advertisement was communicated by a male recruiter and deployed communal characteristics (M = 41 %, SD = 16 %) or when it was communicated by a female recruiter and deployed agentic characteristics (M = 42 %, SD = 13 %). Participants significantly perceived the advertisement that deployed communal characteristics and was communicated by a female recruiter to have the highest percentage of women (M = 59 %, SD = 19 %).

I conducted initial analyses using ANOVA followed by post hoc tests (LSD) to test my hypotheses or used simple effects tests, where applicable. Participants' fellowship status (at the time of data collection or previously) as well as participants' majors and semesters of study were inserted as covariates[16]. All means and standard deviations are presented in Table 14.

Table 14

Means (and standard deviations) for each condition

	Male Recruiter		Female Recruiter	
	Agentic characteristics	Communal characteristics	Agentic characteristics	Communal characteristics
Recruiter identification	2.15 (1.06)	2.38 (1.17)	2.83 (1.10)	2.79 (1.23)
Appeal	4.68 (1.31)	4.87 (1.28)	5.16 (1.13)	5.04 (1.20)
Fit	3.78 (1.33)	4.35 (1.02)	4.12 (1.15)	4.00 (1.19)
Expected success	3.05 (1.45)	3.70 (1.41)	3.52 (1.30)	3.34 (1.41)
Intention to apply	2.63 (1.52)	3.36 (1.59)	3.12 (1.46)	2.82 (1.45)
Leadership Ambition	4.99 (1.56)	5.59 (1.11)	5.60 (1.13)	4.97 (1.31)

Note. N=159. Ratings were given on a 7-point scale in which higher scores indicate more positive ratings (higher appeal, higher fit, higher success, and higher intention to apply).

Identification with the recruiter. I found no significant main effect for advertisement characteristics, $F(1, 150) = .25$, $p = $ ns, and no significant interaction of characteristics and recruiter gender, $F(1, 150) = .64$, $p = $ ns. I did find a significant main effect for recruiter gender, $F(1, 150) = 8.69$, $p < .01$, $\eta_p^2 = .06$, indicating that women were more likely to identify with female recruiters independent of advertisement characteristics (see

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[16] Two participants had not specified their semester and were thus automatically excluded from the analyses. I did not find any significant effects for any of these factors.

Figure 18).

Figure 18. Women's identification with a male and female recruiter by advertisement characteristics (Study 4). Higher ratings indicate higher levels of identification.

Appeal. I found no effect for advertisement characteristics, $F(1, 150) = .08$, $p = .77$, a marginally significant effect for recruiter gender, $F(1, 150) = 2.90$, $p = .09$, $\eta_p^2 = .02$, and no interaction effect, $F(1, 150) = 1.03$, $p = .31$. Overall there was a trend that women rated advertisements as more appealing when the recruiter was female independently of the characteristics deployed. Results are illustrated in Figure 19.

Figure 19. Women's ratings of appeal by male and female recruiters and advertisement characteristics (Study 4). Higher ratings indicate higher levels of appeal.

Fit. The ANOVA indicated no main effects for advertisement characteristics, $F(1, 150) = 2.03$, $p = .17$, or recruiter gender, $F(1, 150) = .01$, $p = .92$. However, I found a significant interaction effect of characteristics and recruiter gender, $F(1, 150) = 3.99$, $p = .047$, $\eta_p^2 = .03$. As expected in Hypothesis 2a, post hoc tests showed that women felt a significantly lower fit in response to the leadership program described with agentic characteristics than to the one described with communal characteristics when the recruiter was male. However, when the recruiter was female they indicated similar levels of fit to the leadership program (see Figure 20).
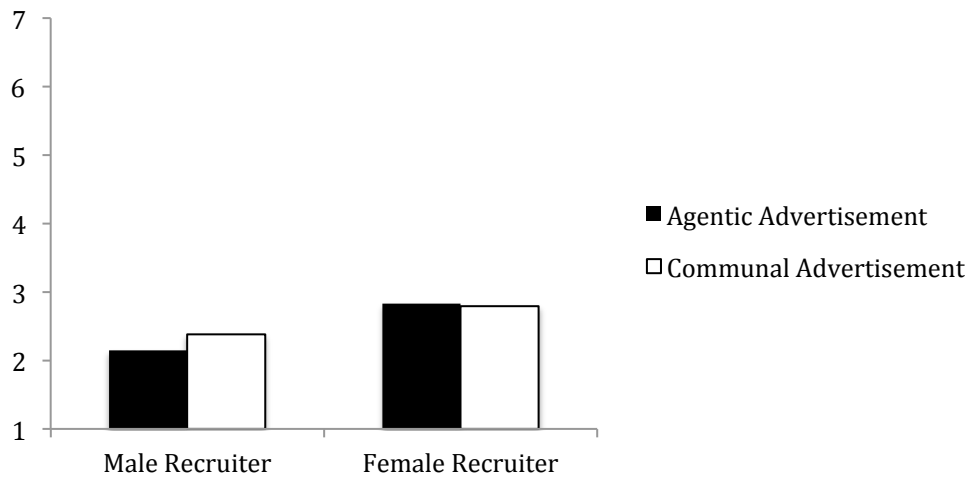

Figure 20. Women's ratings of fit by male and female recruiters and advertisement characteristics (Study 4). Higher ratings indicate higher feelings of fit.

Expected application success. I did not find a significant effect for advertisement characteristics, $F(1, 149) = 1.90$, $p = .17$, recruiter gender, $F(1, 149) = .00$, $p = .99$, or the interaction of characteristics and recruiter gender, $F(1, 149) = 3.15$, $p = .08$. The interaction was approaching significance. As expected in Hypothesis 2a, post hoc tests showed that women expected a significantly lower application success in response to the leadership program described with agentic characteristics than to the one described with communal characteristics when the recruiter was male. However, when the recruiter was female they indicated similar levels of expected application success (see Figure 21).
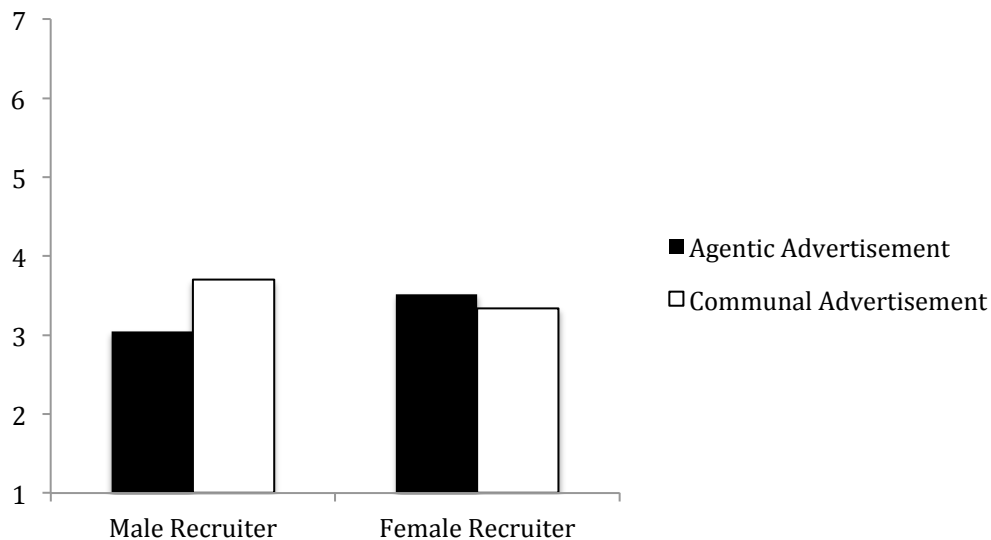
Figure 21. Women's expected application success by male and female recruiters and advertisement characteristics (Study 4). Higher ratings indicate higher success of an application.

Intention to apply. Results showed no significant main effects for advertisement characteristics, $F(1, 150) = .76$, $p = .38$, nor recruiter gender, $F(1, 150) = .00$, $p = .998$. In line with Hypothesis 2a, a significant interaction effect of the two occurred, $F(1, 150) = 5.45$, $p = .02$, $\eta_p^2 = .04$. Post hoc tests indicated that when the recruiter was male, women expressed lower intentions to apply to the leadership program advertised with agentic characteristics than to the one advertised with communal characteristics. However, when the recruiter was female, women indicated similar levels of application intention (see Figure 22).
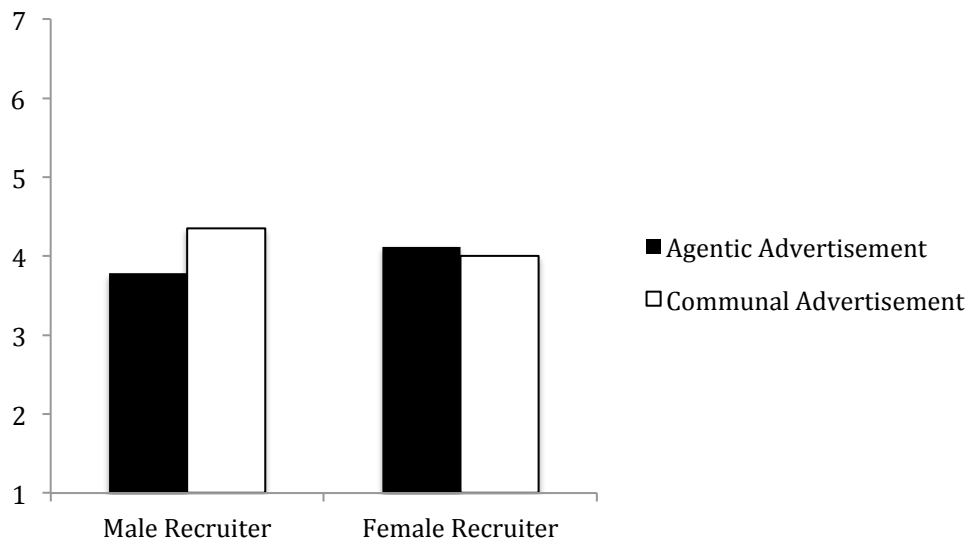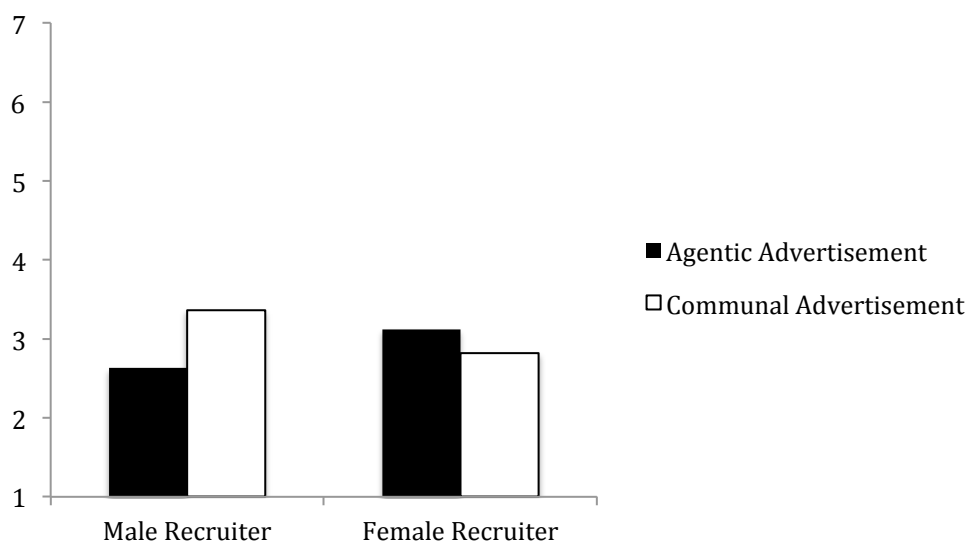

Figure 22. Women's intentions to apply by male and female recruiters and advertisement characteristics (Study 4). Higher ratings indicate higher intentions to apply for the leadership program.

Leadership ambitions. Again, I found no significant main effects for advertisement characteristics, $F(1, 150) = .02$, $p = .88$, nor recruiter gender, $F(1, 150) = .01$, $p = .92$. However, a significant interaction emerged, $F(1, 150) = 9.17$, $p = .003$, $\eta_p^2 = .06$. When the recruiter was male, women had significantly higher ambitions to enter a leadership career under the condition that the advertisement contained communal characteristics as compared to agentic characteristics. Unexpectedly, when the recruiter was female, women had significantly lower ambitions to enter a leadership career under the condition that the advertisement contained communal characteristics as compared to agentic characteristics. Results are displayed in Figure 23.
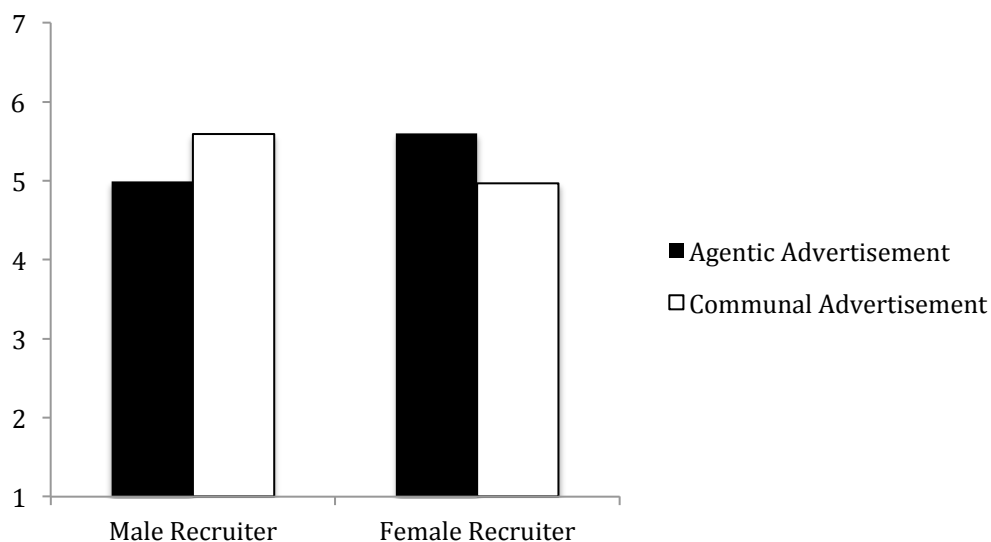
Figure 23. Women's ambition to pursue a leadership position by male and female recruiters and advertisement characteristics (Study 4). Higher ratings indicate higher leadership ambitions.

Discussion

Extending my earlier findings, in Study 4 I found that women felt a lower fit, expected less success, and were less likely to apply to career opportunities advertised with agentic characteristics – but only if advertised by a male recruiter. Importantly, those differences in

evaluations disappeared when the recruiter was female. Female recruiters also led to more identification with the recruiter and to higher appeal of the career opportunity. I conclude that recruiter gender is a relevant cue for women's evaluations of career opportunities.

General discussion

Recruitment of women to ensure gender diversity in leadership is an essential goal for organizations (Ployhart, 2006). I answered calls for more research on this topic and on recruitment advertisements in particular (cf., Breaugh et al., 2008; Walker & Hinojosa, 2013). Applying lack of fit theory to the recruitment context, I build on the idea that self-directed gender stereotypes can inhibit women's career aspirations (Heilman, 1983, 2012). In a series of studies I uncovered effects of agentic and communal characteristics in advertisements for career opportunities. My main findings were as follows: (1) Recruitment advertisements for both higher and lower-level leadership positions included more agentic than communal characteristics. Advertisements for positions without leadership responsibility did not. Further, (2) women (but not men) perceived advertisements less appealing, perceived a lower fit to the position and organization, and in some instances expected less success if a career opportunity was advertised with agentic as opposed to communal characteristics. Due to this lower perceived fit to the position women were also less likely to apply if the advertisement included agentic characteristics. Finally, (3) women only had lower leadership ambitions then men after reading an advertisement containing agentic characteristics (but not after reading an advertisement containing communal or both agentic and communal characteristics). I corroborated my findings with real-world advertisements showing that women rated advertisements high in agency as less appealing and experienced a lower fit to the organization. In addition, women had lower intentions to apply and had actually applied less often for a leadership career opportunity if the advertisement was high in agency.

Women perceived advertisements that were composed of agentic as well as communal

characteristics as somewhat more positive than agentic advertisements and as somewhat more negative than communal advertisements. This finding is important. It corroborates my theoretical reasoning that women's fit to a career opportunity or more specifically a leadership position is higher if more characteristics in line with women's self-stereotypes are contained in the advertisement. Research shows that women perceive themselves more communal but less assertive and less leadership competent than men (Hentschel, Heilman, et al., 2013). They, therefore, perceived a greater fit with their self-view of being communal when the advertisement contained at least some communal characteristics. Indeed, as expected on the bases of Heilman's lack of fit theory (1983, 2012), I found that women's higher fit perceptions affected appeal of the position and (ultimately) their intentions to apply.

I also looked at the expected success of an application. The two studies including male participants showed that men generally expected higher success from an application than women. Importantly, I only found this difference for expected success of an application to a position advertised with the agentic advertisement. On average, women have been shown to be less self-confident and more modest than men (Heatherington et al., 1993; Lenney, 1977), and may therefore have underestimate the success of an application – especially when the advertisement consisted of characteristics not in line with their gender role.

Because organizations are unlikely to banish agentic characteristics from advertisements altogether, the aim of this research was to identify which factors buffer the negative influence of agentic characteristics on women. I showed that women only experienced negative effects of agentic characteristics when a male recruiter communicated the advertisement. However, when the organization's recruiter was female, women had the same fit perceptions, expected an application to be similarly successful, and were equally likely to apply for career opportunities. In addition, if the recruiter was female they rated advertisements overall as more appealing (by trend) and identified more with the recruiter.

These findings are in line with Bosak and Sczesny's (2008) study on pictures in advertisements for leadership positions in which the authors found that men and women are more likely to apply to positions if the advertisement included mixed gender pictures.

It is viable to assume that female recruiters signaled that women are successful in the organization. Possibly, women perceived female recruiters as role models. Research has shown that female role models can have a beneficial impact on women (Lockwood, 2006). Female recruiters may also have been perceived as a viable signal for women that they belonged to the organization. Thus, women's perceived lack of fit to the career opportunity (Heilman, 1983, 2012) may have been reduced.

In contrast to what I expected, when a female recruiter communicated advertisements with communal characteristics women were less likely to show leadership ambitions as compared to when a female recruiter communicated advertisements with agentic characteristics (for male recruiters the finding was reversed and in the expected pattern with women showing more leadership ambitions if the advertisement contained communal characteristics). Possibly, a female recruiter communicating an advertisement with communal characteristics made gender salient for women, resulting in a perceived discrepancy between the female gender role and leader role. This finding would be in line with experiences of stereotype threat. When experiencing stereotype threat, women have less aspirations when working on a leadership task (Davies, Spencer, & Steele, 2005). In future studies these unexpected effects need to be untangled.

Practical implications

This research has fundamental practical implications. Organizations strive for gender diversity in leadership and more female applicants. However, women often choose not to apply for career opportunities. My research corroborates that to encourage more women to apply for career opportunities, organizations must adapt their recruitment tools. Recruitment

advertisements are the organization's main means of communicating with potential applicants and persuading them to apply (D. G. Allen et al., 2004). Thus, organizations are well advised to take into account which characteristics they use in recruitment advertisements. This is rarely reflected when writing advertisements. Thus, researchers and practitioners need to raise awareness for the relevance of agentic and communal characteristics in advertisements.

The most evident practical implication of my studies is that if organizations want to attract more women to career opportunities, they should include more communal characteristics in their advertisements. Because men are just as likely to apply for a career independent of the characteristics deployed, using communal characteristics to attract women is generally beneficial. Importantly, advertisements can easily be adapted. These are low cost changes with conceivably a big impact on organizational diversity.

Women's leadership ambitions were only lower when they read advertisements containing only agentic characteristics. Thus, including communal characteristics in any advertisement texts for career opportunities or into organizational definitions of leadership could result in women and men showing similar ambitions for a leadership career. As good leadership incorporates both communal and agentic characteristics (e.g., Eagly & Carli, 2003) this would certainly be the most accurate description of what leadership should look like.

This research further shows that in order to assure more women to apply for career opportunities, a female recruiter is a promising strategy– especially if advertisements contain predominantly agentic characteristics. This is in line with the finding that the more similar to the organization applicants perceive themselves to be, the more likely they are to join it (Kristof-Brown et al., 2005). I recommend that organizations seize the chance to purposefully include female representatives in different stages of the recruitment process – for example, in recruitment videos, at employment fairs, on site visits, and during interviews.

Limitations and future research

This research has several strengths. In a series of studies and with a range of methods in laboratory and field settings I uncovered effects of agentic and communal characteristics in advertisements for career opportunities. My studies go above and beyond earlier research. I have a clear focus on how to attract more women to leadership careers. I am the first to focus on a mitigating factor – recruiter gender. I considered recruitment from an integrated perspective, that is, the combined effects of advertisement characteristics and recruiter gender. Integrative perspectives have been to be of particular value in recruitment research (Breaugh, 2012).

There are some limitations to my findings. In two of my experimental studies the results for the dependent variable perceived appeal of the position indicated only marginal effects in the expected direction. There is no standard interpretation of this data in my research field. A marginally significant finding may result in the interpretation of (1) hesitance to fully accept the null hypothesis, (2) a preliminary result in line with the proposed alternative hypothesis, (3) satisfactory evidence for a non-essential hypothesis, or (4) as comparable to a significant finding (Pritschet, Powell, & Horne, 2016). In line with other researchers (see Pritschet et al., 2016), I decided to interpret my marginally significant findings for appeal considering the pattern of results in all studies conducted.

I focused on career opportunities and women on the brink of making decisions that will influence their future careers. On the one hand, advertisements for higher-level leadership positions may also discourage women from applying in later stages of their professional careers. On the other hand, at later career stages self-selection may have already occurred. Future research could test if women who already occupy middle management leadership positions perceive themselves as more agentic than women who do not. Possibly, these women would not perceive a lack of fit to higher leadership positions when advertised with agentic characteristics. In this research, however, I was interested in how to increase women's

fit perceptions to leadership in early career stages with the purpose to broaden the pool of qualified women who can move up the organizational ladder.

Ii is also important to stress the point that the differences I uncovered will of course not be generalizable to every single women. With my experimental approach I detected mean differences within the group of women, but there will of course be women (and men) who evaluate advertisements differently. I purposefully decided to employ randomization. Women with different self-stereotypes, personality traits, or different levels of self-confidence were distributed across experimental groups, such that these differences do not account for the effects found.

Finally, I only focused on gendered characteristics in advertisements. Male and female applicants may evaluate other aspects of advertisements differently. These aspects may interact with agentic and communal characteristics. For instance, future research could address the effects of pictures (Bosak & Sczesny, 2008), affirmative action statements (Heilman, Battle, Keller, & Lee, 1998), or information regarding the organizational culture on work-life balance, childcare opportunities, and the like.

A limitation of this research is that I only looked at the effects of advertisement characteristics and recruiter gender on women but not on men. However, with very few exceptions (e.g., Bosak & Sczesny, 2008), men have usually been shown to be unaffected by gender-cues in recruitment advertisements (e.g., Gaucher et al., 2011; Taris & Bok, 1998).

Future research could analyze factors influencing the positive effects of female recruiters that I found, and investigate under which circumstances the effects do or do not hold. If recruiters are perceived to be overly successful, other women may be less likely to apply. For example, research showed that even though female leaders (representing an organization) can cause higher leadership aspirations in other women, leadership aspirations

may be lowered if the female leader is perceived to be overly successful and this success as unattainable (Hoyt & Simon, 2011).

Conclusion

This research demonstrates what organizations can do to influence women's pursuit of career opportunities to increase gender diversity in leadership – namely, rely on communal characteristics in recruitment advertisements and on female recruiters. Researchers and practitioners are called upon to devote more attention to these factors in order to foster equal career opportunities for both women and men.

4. Consequences of stereotypes for the evaluation of male and female leaders: The communality-bonus effect for male transformational leaders[17]

To understand issues related to gender and leadership, researchers reason that analysis of when and why differences in *perceived* leadership effectiveness occur is more important than investigating actual gender differences in leadership styles (Paustian-Underdahl et al., 2014). I agree with this view and argue that one reason for women's underrepresentation in leadership positions (Davidson & Burke, 2016) is that male and female leaders are perceived differently in effectiveness despite showing the same leadership styles. Differences in perceived effectiveness will prospectively impact their chances of promotion (e.g., Eagly & Carli, 2007).

Previous research has demonstrated that the same behaviors do not always result in the same consequences for men and women. For example, self-promotion can lead to positive evaluations of men, but neutral or even negative evaluations of women (Rudman & Phelan, 2008). The reasons for such differing evaluations are gender stereotypical expectations that men should be more agentic (e.g., assertive, dominant) than women, and that women should be more communal (e.g., considerate, understanding) than men (Prentice & Carranza, 2002). Leaders are also expected to be agentic, such that expectations about men (more than women) are in line with what is expected from leaders (Eagly & Karau, 2002). Importantly, if men and women do not follow these expectations, they face social consequences (e.g., Heilman, 2012). Building on this idea, I set out to test how men and women are evaluated in terms of leadership effectiveness and promotability when they show leadership styles that are in line with or violate stereotypical expectations for their gender.

I focus on transformational leadership, a style that consists of both agentic and

[17] This chapter is based on a working paper by Hentschel, Braun, Peus, & Frey (2015) ,
currently under review at the European Journal of Work and Organizational Psychology.

communal attributes, compared to autocratic leadership, a style characterized by agentic attributes only. I chose autocratic leadership as a comparison to transformational leadership, because it is an agentic leadership style without communal attributes (Judge, Piccolo, & Ilies, 2004). This is not necessarily true for transactional leadership, which transformational leadership has traditionally been contrasted with, because followers' perspectives would likely be considered during goal setting agreements, for example.

Transformational leadership is a particularly effective leadership style (Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramaniam, 1996) that will likely lead to higher evaluations of leadership effectiveness and promotability than autocratic leadership. Scholars have argued for a female leadership advantage through transformational leadership. Although leadership is generally agentic in nature, transformational leadership also incorporates the communal attributes expected of women (female leadership advantage hypothesis; Eagly & Carli, 2003; Yoder, 2001). However, this theoretical view is controversial (Vecchio, 2002, 2003). Expectancy violation theory (Jussim, Coleman, & Lerch, 1987; Prentice & Carranza, 2004) states that people, who show stereotypically *unexpected but positive* behaviors will be evaluated more favorably than people for whom that same behavior is stereotypically expected. This might mean that a man who shows communal behavior like transformational leadership could be evaluated more favorably than a woman would, because this behavior is less expected of him than of his female counterpart. Indeed, some researchers have shown that communal behavior can improve evaluations of men more than those of women (e.g., Bettencourt, Dill, Greathouse, Charlton, & Mulholland, 1997; Heilman & Chen, 2005). To address this disparity between theoretical perspectives, I set out to test whether transformational leadership fosters evaluations of effectiveness and promotability for male leaders more than for female leaders.

This research makes the following contributions to the literature on gender and

leadership. I integrate expectancy violation theory (e.g., Jussim et al., 1987) with research on leadership styles (e.g., Eagly et al., 1992) to argue that transformational leadership advantages men's rather than women's promotability. I predict that exhibiting transformational leadership confers a communality bonus to men that makes them seem more promotable than women. To test our claims, I use a mixed-methods approach, comparing the effect of leadership styles (autocratic versus transformational) on male and female leaders' perceived promotability. The integration of findings from experimental and correlational research designs, enables us to draw causal conclusions as well as to increase the external validity of subsequent findings (e.g., Aguinis & Bradley, 2014; Highhouse, 2009).

In making these predictions, our work challenges the breadth of the hypothesis that transformational leadership style confers particular benefits to female leaders (Eagly & Carli, 2003). It also contributes to research on gender stereotypes by showing benefits of perceived communality for men's career outcomes (e.g., Heilman & Chen, 2005). Our work also extends knowledge on the factors influencing career success (Ng, Eby, Sorensen, & Feldman, 2005) by shifting the focus from leadership outcomes for organizations or followers to leaders' personal career gains. Thus, this work may have high practical relevance as it may influence a leader's motivation to participate in leadership trainings (e.g., Knipfer, Shaughnessy, Hentschel, & Schmid, 2017).

Leadership styles and perceptions of leadership effectiveness

Leaders show different patterns of behavior to influence followers. These leadership styles elicit perceptions of leadership effectiveness. One leadership style that after decades of research has been deemed to be very effective is transformational leadership (e.g., Judge & Piccolo, 2004; Lowe et al., 1996). Transformational leadership has many positive outcomes, including increased followers' satisfaction, organizational citizenship behavior, development, and performance (Braun, Peus, Weisweiler, & Frey, 2013; Dvir, Eden, Avolio, & Shamir,

2002; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Research has also uncovered some of the underlying mechanisms through which transformational leadership produces its positive effects. Important mediators to these mechanisms include the psychological empowerment of individuals (Kark, Shamir, & Chen, 2003) and teams (Jung & Sosik, 2002) supervisory career mentoring (Scandura & Williams, 2004), trust in the leader (Braun et al., 2013), and perceptions of fairness (Pillai, Schriesheim, & Williams, 1999).

Transformational leadership builds on four fundamental dimensions: (1) Intellectual stimulation, that promotes innovative thinking in followers; (2) Inspirational motivation that encourages followers to pursue a shared vision; (3) Idealized influence, that is, communicating and acting in line with personal values and being a role model; (4) Individualized consideration, namely, supporting and caring about followers' needs and interests (Avolio et al., 1999). Using these four dimensions, transformational leaders mentor and empower followers and support their development (Avolio et al., 1999; Bass & Avolio, 1993).

Building on the tradition of the 'great men theory' in leadership research, effective leadership was historically predominantly characterized in autocratic terms (e.g., Shaw, 1955). Autocratic leaders assert control over followers, make decisions for them, and structure task assignments (De Cremer, 2006; White & Lippitt, 1960). Behaviors such as dominance and control are considered agentic and associated with a lack in communality (Abele, Uchronski, et al., 2008). I therefore consider autocratic leadership a leadership style consisting of predominately agentic behaviors. Autocratic leadership is considered to be effective only under certain circumstances, for example in situations requiring clear direction, forcefulness or strong centralized control (Fiedler, 1964; Foels, Driskell, Mullen, & Salas, 2000). Thus, while transformational leadership is considered to be generally effective nowadays, the effectiveness of autocratic leadership seems rather limited. I argue that

organizational decision makers will anticipate the positive effects of transformational leadership and the limitations of autocratic leadership. Indeed, research suggests that perceptions of transformational leadership are positively related to objective effectiveness as well as effectiveness perceptions (Bass & Bass, 2008; Johnson, Venus, Lanaj, Mao, & Chang, 2012). Building on these findings, I expect to find that transformational leadership is perceived to be more effective than autocratic leadership.

Hypothesis 1a: Transformational leadership results in higher evaluations of leadership effectiveness than autocratic leadership.

In addition, I anticipate that transformational leaders will be perceived as more promotable, because of their flexibility in matching different requirements in modern organizations such as diversity, continuous innovation and fast changes (Hitt, Keats, & DeMarie, 1998; Kearney & Gebert, 2009; Nijstad, Berger-Selman, & De Dreu, 2014). Indeed, transformational behaviors are continually associated with being in a leadership position (Hernandez Bark, Escartín, Schuh, & van Dick, 2015). Transformational leaders are often extraverted and agreeable (Judge & Bono, 2000) – personality traits predictive of career advancement and promotion (Ng et al., 2005). Finally, because autocratic leadership has been shown as ineffective in the long-term (Bass & Bass, 2008), which evaluators are likely to recognize instantaneously from prior experience with similar individuals, I assume that individuals with a transformational leadership style are evaluated as more promotable than those with an autocratic leadership style.

Hypothesis 1b: Transformational leadership results in higher evaluations of promotability than autocratic leadership.

Gender stereotypes and leadership effectiveness

Showing the same leadership style does not necessarily result in the same evaluations of leadership effectiveness for men and women. Previous research indicates that gender

stereotypes have a significant impact on the evaluation of leaders as well as hiring and promotion decisions (Darley & Fazio, 1980; Deaux & Major, 1987; Heilman, 2012). Gender stereotypes represent overgeneralized perceptions that individuals have of the different attributes of women and men (Heilman, 2012). Gender stereotypes fall under the two dimensions that have been described as the fundamental categories of social perception (Abele, 2003; Abele, Uchronski, et al., 2008; Bakan, 1966): agency and communality. Agency is defined as the action of taking charge and being in control of a situation or group; communality is defined as taking care of others and building relationships (Hentschel, Heilman, et al., 2013). Gender stereotypes stem from the traditional distribution of men and women into social roles (Eagly & Wood, 2012): Men as providers and women as caretakers of the family. Because these roles require different characteristics, I have differentiated perceptions of men's and women's characteristics (Eagly & Steffen, 1984). Women are generally perceived to be more communal than men (e.g., helpful, supportive), while men are generally perceived to be more agentic than women (e.g., assertive, determined, Haines et al., 2016; Heilman, 2012). Gender stereotypes are also prescriptive, that is, they comprise norms for the appropriate behavior of women and men. Women are not only perceived to be more communal than men, they are also *expected* to show more communal attributes (Burgess & Borgida, 1999; Prentice & Carranza, 2002).

Agency and communality both relate to stereotypes individuals have about leadership (Heilman et al., 1995). Being a leader is traditionally perceived to require agentic characteristics (Eagly & Sczesny, 2009; Schein, 2001). Accordingly, men have been deemed as more fitting to leadership positions than women (Eagly & Karau, 2002). However, in contemporary organizations, leadership also requires communality such as empathy and taking care of others (Duehr & Bono, 2006; Koenig et al., 2011; Schyns & Schilling, 2011). Transformational leadership is a style that addresses such requirements, because it

incorporates behaviors focused on relationships (Kark & Shamir, 2013). Thus, while being inherently agentic (due to the nature of leadership per se), transformational leadership is made up of communal behaviors in line with the female gender role (Hackman, Furniss, Hills, & Paterson, 1992). On average women tend to show more transformational leadership than men – though the difference is small as indicated by meta-analysis (Eagly, Johannesen-Schmidt, & van Engen, 2003). Consequently, Eagly and Carli (2003) suggested (on the basis of research findings on social influence, e.g., Carli, 2001) that female leaders could overcome disadvantages resulting from agentic leadership behavior by combining it with communal behavior. They call this the *female leadership advantage hypothesis*. Other scholars agree and also argue that transformational leadership could lead to significantly more positive evaluations of female leaders (Eagly et al., 2003; Yoder, 2001). Because female transformational leaders show both the desired characteristics for their gender as well as the desired characteristics for leaders, Maher (1997) suggests that transformational leadership may contribute to a lower bias against female leaders and heighten women's' chances of promotion. Thus, arguments based on the female leadership advantage hypothesis might suggest that female transformational leaders would either be equally or even more likely to be promoted than male transformational leaders.

On the contrary, *expectancy-violation theory* suggests that violating a stereotype – in comparison to confirming a stereotype – can have a stronger influence on evaluations (Jussim et al., 1987) because gender-incongruent behavior is unexpected and therefore more noticeable. For example, one study found that men and women who performed well in a gender-incongruent job (e.g., male fashion writers) were evaluated more favorable than men and women working in gender-congruent jobs (e.g., female fashion writers, Bettencourt et al., 1997). According to expectancy-violation theory, transformational leadership would likely be more beneficial for male rather than female leaders. Even though it is expected of women to

be communal (more so than being agentic), being communal is not necessarily undesirable in men (Prentice & Carranza, 2002). Thus, when a man displays counter-stereotypical communal behavior (e.g., individualized consideration), he may actually *overachieve* perceivers' expectations (see also Prentice & Carranza, 2004).

Initial research findings are in line with the reasoning of expectancy violation theory. Men are evaluated more positively than women when showing verbal consideration in the workplace (e.g., asking about subordinates' views; Mohr & Wolfram, 2008) and reach more effective outcomes than women when starting negotiations with small talk, a form of communal communication (Shaughnessy et al., 2015). Men are also perceived as more deserving of organizational rewards when helping a colleague (Heilman & Chen, 2005). These findings promote the idea that men get more credit for communal behavior than women do. I refer to these findings as the *communality-bonus effect for men*.

There is also some research evidence that communal men face societal penalties (e.g., Judge, Livingston, & Hurst, 2012; Moss-Racusin, Phelan, & Rudman, 2010). I argue that male transformational leaders would not face such penalties because they are in a high status, traditionally male position of power (Moss-Racusin et al., 2010).

Transformational leadership

Initial findings indicate that the outcomes of transformational leadership depend on the leader's gender (e.g., Schyns, von Elverfeldt, & Felfe, 2008; Wolfram & Gratton, 2014). Men's (but not women's) transformational leadership behavior is positively related to followers' work satisfaction (Wolfram & Mohr, 2010). In addition, men's (more so than women's) transformational leadership behavior is associated with followers' innovative behaviors (Reuvers, Van Engen, Vinkenburg, & Wilson-Evered, 2008). Vinkenburg and colleagues (2011) surveyed people's beliefs about gender, transformational leadership, and promotability. They found that people assumed both men and women to profit from

transformational leadership. However, whereas female leaders were assumed to be particularly promotable when showing individualized consideration (i.e., communality), male leaders were expected to particularly benefit from inspirational motivation (Vinkenburg, van Engen, Eagly, & Johannesen-Schmidt, 2011). Note that these findings about laypeople's beliefs differ from predictions of expectancy violation theory which would suggest that men would profit more than women from individualized consideration and transformational leadership overall. While the research by Vinkenburg et al. (2011) offers important insights, laypeople's beliefs might be grounded in stereotypes (i.e., an assumption that women need to display communality in the form of individualized consideration to get ahead). Beliefs are not always accurate and intentions or actual behaviors may indeed be different (Fishbein & Ajzen, 1975). Our research designs enable us to test people's actual reactions to transformational leaders. I can assess how transformational leadership causally impacts evaluations of women's and men's promotability.

Overall, based on expectancy violation theory and research supporting a communality-bonus effect for men, I hypothesize that the impact of leadership style on perceived leadership effectiveness and promotability will depend on leader gender. So far, I have argued that when men show transformational leadership, they are likely to be seen as more effective and promotable than women because they overachieve evaluators' expectations, while women merely fulfill pre-determined expectations. Thus, I make the following hypothesis:

Hypothesis 2a: Male transformational leaders are perceived to be more effective than female transformational leaders.

Hypothesis 2b: Male transformational leaders are evaluated to be more promotable than female transformational leaders.

Autocratic leadership

Research indicates that when men and women violate gender role stereotypes in a way considered as negative, they often face social penalties. These "backlash-effects" entail that under certain circumstances, women who display high levels of agency are liked less and receive lower organizational rewards than men who demonstrate the same exact behaviors (see Rudman & Phelan, 2008, for a review). When women behave in a highly agentic manner, evaluators are likely to assume that they lack communality (i.e., implied communality deficit, Heilman & Okimoto, 2007). I apply this finding to the leadership context. Autocratic leadership comprises predominantly agentic characteristics (Judge et al., 2004). Hence, evaluators are likely to assume that autocratic leaders do not possess communal attributes. Since women are expected to show communality, autocratic leadership should result in backlash for female leaders (Heilman & Okimoto, 2007; Rudman & Phelan, 2008). Meta-analytical findings, however, only partly support this logic. M. J. Williams and Tiedens (2016) showed that dominant men and women are seen as equally competent overall. Eagly et al. (1992) found that male leaders are evaluated to be more competent than female leaders when employing agentic leadership styles. Thus, when women show autocratic leadership, they should be seen as less effective and promotable than men because they violate evaluators' expectations in a negative manner, while men merely fulfill their expectations.

Hypothesis 3a: Female autocratic leaders are perceived to be less effective than male autocratic leaders.

Hypothesis 3b: Female autocratic leaders are evaluated to be less promotable than male autocratic leaders.

The mediating role of perceived leadership effectiveness

Finally, I suggest that the moderating effect of leader gender on the relationship between leadership style and evaluations of promotability will be mediated by the perceived effectiveness of a leader. Researchers suggest that leadership effectiveness will be considered

when making promotion decisions (Eagly & Carli, 2007). Building on the idea that organizations seek to promote the most effective leaders to higher leadership positions (Lyness & Heilman, 2006), I expect that higher perceived leader effectiveness result in higher evaluations of promotability.

Hypothesis 4: The effect of leadership style and leader gender on evaluations of promotability is mediated by perceived leadership effectiveness.

To summarize, this research aims to identify whether different effectiveness evaluations of male and female leaders with transformational leadership styles result in lower evaluations of promotability. To test the hypotheses described above, I conducted a pretest, and two experimental studies: an experimental paper-pencil study focused on an academic context (Study 1) and an experimental online study focused on a business context (Study 2). Finally, I conducted a field study (Study 3) and tested the generalizability of the previous findings from experimental research.

Pretest

To test whether evaluators indeed expect women to show more transformational leadership than men, I conducted a pretest. Our sample consisted of 45 participants (42.2 % female, M_{age} = 40.2, SD_{age} = 9.6, 94% working, 42.2 % work in a leadership position) recruited online. Participants were asked to imagine a typical male leader and a typical female leader (in randomized order) and to indicate on a 7-point Likert scale how much they expected the leader to show transformational leadership (4 items, α_{male} = .85, α_{female} = .91; e.g., "The male (female) leader encourages his (her) employees to think about problems from different points of view") and autocratic leadership behaviors (4 items, $\alpha_{Male\ leader}$ = .84, $\alpha_{Female\ leader}$ = .76; e.g., "The male (female) leader takes on the responsibility to assign tasks to each subordinate"). The items were taken from widely used operationalizations of autocratic and transformational leadership (Felfe & Goihl, 2002; Molero, Cuadrado, Navas, & Morales,

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2007; White & Lippitt, 1960) and were presented in a randomized order. Results show that transformational leadership behaviors were expected significantly more in female leaders (M = 5.09; SE = .22) than in male leaders (M = 4.67; SE = .22), $F(1, 44) = 8.05$, $p = .007$, η_p^2 = .16. However, there was no significant difference in the expectation of autocratic leadership behaviors, $F(1, 44) = .49$, $p = .487$, $\eta_p^2 = .01$, of female leaders ($M = 4.72$; $SE = .19$) and male leaders ($M = 4.57$; $SE = .17$). The results of this pretest provide an initial indication that evaluators hold differential expectations about transformational (though not autocratic) leadership of women and men. Other researchers have found similar results for transformational leadership (Stempel, Rigotti, & Mohr, 2015). However, the finding for autocratic leadership is surprising because agentic behavior has been found to be expected more of men than for women (Diekman & Eagly, 2000). Further testing was needed to understand the extent to which these expectations affect perceptions of leaders' effectiveness and promotability.

Study 1

In Study 1, I set out to test whether transformational as compared to autocratic leadership results in higher evaluations of leadership effectiveness and promotability. Furthermore, the purpose of this study was to investigate to what extent leaders' gender moderates these relationships.

Method

Participants and design. I conducted a 2 x 2 between-subject experiment with leader gender (male, female) and leadership style (transformational, autocratic) as the independent variables. The sample consisted of 85 students from a university in Germany (55 % female, M_{age} = 24.5, SD_{age} = 4.0). Students were advanced in their studies (7 study semesters on average, SD = 4 semesters) and represented a variety of majors ranging from humanities (History, English) and social sciences (Law, Sociology) to natural sciences (Physics,

Medicine).

Procedure and manipulation. With the purpose of increasing experimental realism (Aguinis & Bradley, 2014), this study focused on the academic context, which students were familiar with. Moreover, the academic context has been often argued to be male dominated (Carli, Alawa, Lee, Zhao, & Kim, 2016; van den Brink & Benschop, 2012). Therefore, the equal representation of both men and women in leadership is an important issue in this context . Participants were given the role of student members of a university committee for tenure track evaluations. Student representation in tenure evaluation committees is a formal requirement in German universities, where the study was conducted. Participants evaluated an assistant professor going up for tenure. Given that students from different majors were invited, I did not specify a field of study. All participants read an excerpt from an interview with an assistant professor describing how this professor lead his or her team. I manipulated leadership style (transformational, autocratic) and leader gender (male, female) in the interview. Leader gender was manipulated with the name of the assistant professor (Christiane or Thomas). Leadership style was manipulated in the interview excerpt.

I carefully constructed two short vignettes (Atzmüller & Steiner, 2010) to manipulate transformational and autocratic leadership. Transformational leadership was manipulated based on the German validation of items from the Multifactor Leadership Questionnaire (MLQ; Felfe & Goihl, 2002), a widely used instrument to assess transformational leadership (Avolio et al., 1999). Specifically, leaders were asked two interview questions ("How do you make sure your team meets the high performance requirements of our university?" and "How do you lead your subordinates?") and the responses were as follows:

> I believe that one should point out to employees how important it is to commit 100% *(idealized influence)*. This way, they can see how meaningful their work is, that is to say that they do their part to a common goal. This encourages high performance! This is also why I often speak with enthusiasm about goals that should be achieved in our team *(inspirational motivation)*.

I think that it is important to consider the individuality of one's employees. This is why I treat each person in the team as an individual, not just as one amongst many *(individual consideration)*. It is also important to me that my employees learn to look at problems from different points of view *(intellectual stimulation)*.

In the autocratic leadership condition (manipulated on the basis of Molero et al., 2007; White & Lippitt, 1960), leaders were again asked the same two questions and the responses indicated the following:

I believe that one should clearly assign tasks to employees. This way, they can see what exactly they ought to do. This encourages high performance! With some employees one just has to say what they need to do. If necessary, I specify this step-by-step.
I think that one does not need to handle employees with velvet gloves, but can also lead with a firm hand. Because who, if not I as team leader, should make decisions about strategies and tasks and should specify explicitly how to get them done.

Manipulation checks were employed to determine whether participants perceived the leadership styles as intended. Participants indicated their perceptions on 7-point Likert scales (from 1 "do not agree at all" to 7 "totally agree"). Statements similar to those used in the pretest and based on the manipulations (Felfe & Goihl, 2002; Molero et al., 2007; White & Lippitt, 1960) measured perceptions of transformational leadership (4 items, $\alpha = .81$; e.g., "This person encourages his/her employees to think about problems from different points of view") and autocratic leadership (4 items, $\alpha = .80$; e.g., "This person leads his/her subordinates with a firm hand"). Manipulation checks confirmed that participants perceived the leadership styles as intended. Participants in the transformational ($M = 5.77$, $SD = 1.35$) compared to the autocratic leadership condition ($M = 4.26$, $SD = 1.00$) perceived leaders to show significantly more transformational leadership, $t(83) = 5.83$, $p < .001$. Participants in the autocratic ($M = 6.28$, $SD = .67$) as compared to the transformational ($M = 4.99$, $SD = .98$) leadership condition perceived leaders to show significantly more autocratic leadership, $t(83) = -7.07$, $p < .001$.

Dependent Measures. Leadership effectiveness was measured with the three items: "This person is a competent leader", "This person is highly competent in leading employees",

and "This person can lead a team effectively" (α = .95). Evaluations of promotability were measured with the three items: "This person should be given tenure", "This person should be excluded from the selection process for tenure" (reversed), and "This person should be recommended for tenure" (α = .91). Participants responded to the items on 7-point Likert scales (from 1 "do not agree at all" to 7 "totally agree").

Results

Table 15 presents means, standard deviations, and correlations. Because of the high correlation between leadership effectiveness and evaluations of promotability, I tested the discriminant validity of the two constructs. I adopted a confirmatory factor analysis (similar to other studies with similar dependent variables, e.g., Heilman & Chen, 2005) approach in the R package lavaan (Rosseel, 2012) and compared the fit of two nested models. The first was a 1-factor model with all 6 items loading on the same factor. The second was a correlated 2-factor model in which items were allowed to load onto their respective factors (i.e., leadership effectiveness and evaluations of promotability). Results indicated that the 2-factor model showed a reasonable fit (χ^2 = 21.00, df = 8, p < .001, CFI = .98, RMSEA = .11) and was clearly preferable over the 1-factor model (χ^2 = 92.82, df = 9, p < .001, CFI =.91, RMSEA = .27, $\Delta\chi^2$ = 71.82, df = 1, p < .001)[18] indicating that leadership effectiveness and evaluations of promotability are overlapping, but not redundant constructs.

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[18] The high RMSEA in the correlated 2-factor model results from small degrees of freedom and relatively low sample size (Kenny, Kaniskan, & McCoach, 2015)

Table 15

Overall means, standard deviations, and correlations Study 1

Variable	M	SD	1	2	3	4
1. Leadership Style	.52	.50	-			
2. Leader Gender	.48	.50	-.11	-		
3. Leadership Effectiveness	4.98	1.40	.37***	-.11	-	
4. Evaluations of promotability	4.62	1.45	.44***	-.04	.79***	-
5. Semester of study (covariate)	6.83	4.06	-.15	.05	.02	.10

Note. ***$p < .001$. Leadership style is coded as 0 autocratic, 1 transformational. Leader gender is coded as 0 male leader, 1 female leader.

To test the effects of leadership style and leader gender on leadership effectiveness and evaluations of promotability a multivariate analysis of covariance (MANCOVA) was conducted with semester of study as a covariate. I included the covariate, because – based on their more extensive experience with different professors – more advanced students as compared to less advanced students might hold more specific expectations about the skills and behaviors of a tenured professor (the pattern of results did not change with inclusion of the covariate)[19]. Results of the MANCOVA indicated a significant main effect of leadership style, $F(2, 74) = 10.53$, $p < .001$, $\eta_p^2 = .22$, but not of leader gender, $F(2, 74) = .62$, $p = .544$,

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[19] Five participants did not specify their semester of study and had to be left out of the analyses.

$\eta_p^2 = .02$. In addition, a significant interaction effect of the two emerged, $F(2, 74) = 4.18$, $p = .019$, $\eta_p^2 = .10$. To test our hypotheses I conducted univariate analyses of covariance (ANCOVAs) on the dependent measures and followed them up with pairwise comparisons. I then calculated the moderated mediation effect. Table 16 presents means and standard deviations for each study condition. There were no effects of participant gender.

Table 16

Means (and standard errors) for each condition in Study 1

	Transformational Leadership Style		Autocratic Leadership Style	
	Male Leader	Female Leader	Male Leader	Female Leader
Leadership Effectiveness	5.69$_a$ (.28)	4.52$_b$ (.30)	3.79$_c$ (.33)	4.37$_{b,c}$ (.28)
Evaluations of promotability	6.00$_a$ (.25)	5.27$_b$ (.27)	4.13$_c$ (.30)	4.61$_{b,c}$ (.26)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher leadership effectiveness and higher evaluations of promotability. Means are adjusted for the covariate participant semester of study. Means in a row with different subscripts differ significantly at $p < .05$ (one-tailed) as indicated by pairwise comparisons using bootstrapping.

Ratings of leadership effectiveness. A significant effect for leadership style emerged, $F(1, 75) = 11.52$, $p = .001$, $\eta_p^2 = .13$, supporting the verity of Hypothesis 1a that transformational leaders were seen as more effective than autocratic leaders. There was no significant effect for leader gender, $F(1, 75) = 1.02$, $p = .316$, $\eta_p^2 = .01$. In line with Hypothesis 2a and 3a, I found a significant interaction between leader gender and leadership

style, $F(1, 75) = 8.47$, $p = .005$, $\eta_p^2 = .10$. In line with Hypothesis 2a, pairwise comparisons (using the robust method bootstrapping, because of heterogeneity of cell variances discovered using Levene's test; Field, 2013) showed that male transformational leaders were perceived as more effective than female transformational leaders. In Hypothesis 3a I expected female autocratic leaders to be evaluated as less effective than male autocratic leaders. Contrary to our assumptions, but in line with our findings in the pretest, male autocratic leaders and female autocratic leaders did not differ in leadership effectiveness ratings (see Figure 24).
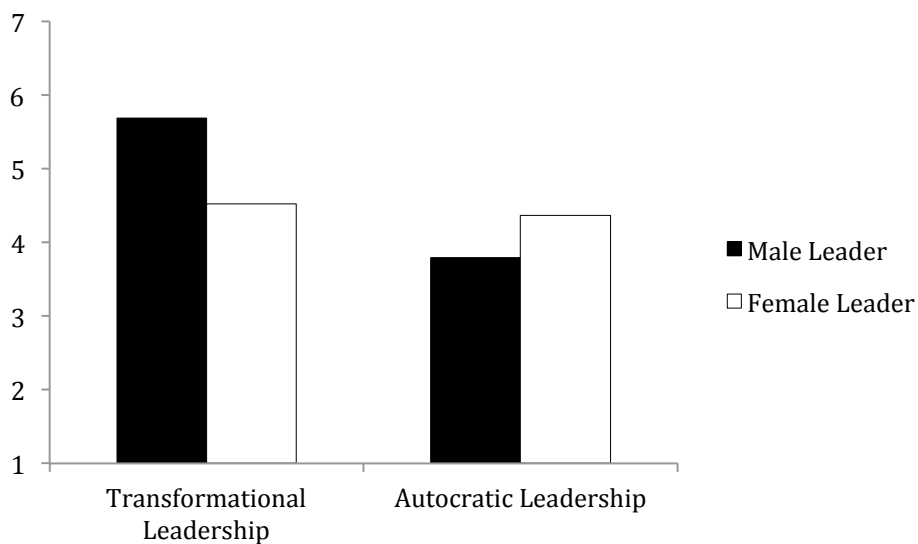
Figure 24. Ratings of leadership effectiveness of male and female leaders by transformational and autocratic leadership style (Study 1). Higher ratings indicate higher perceived leadership effectiveness.

Evaluations of promotability. I again found a significant main effect for leadership style, $F(1, 75) = 21.31$, $p < .001$, $\eta_p^2 = .22$, indicating in line with Hypothesis 1b that transformational leaders were evaluated to be more promotable than autocratic leaders. There was no significant main effect for leader gender, $F(1, 75) = .21$, $p = .646$, $\eta_p^2 = .00$. In line with Hypothesis 2b and 3b, the interaction between leader gender and leadership style was significant, $F(1, 75) = 4.94$, $p = .029$, $\eta_p^2 = .06$. There was also a significant effect of the covariate semester of study, $F(1, 75) = 4.22$, $p = .043$, $\eta_p^2 = .05$. As expected in Hypothesis

2b, pairwise comparisons (again using bootstrapping) indicated that male transformational leaders were evaluated to be significantly more promotable than female transformational leaders. Again, contrary to Hypothesis 3b, male autocratic leaders and female autocratic leaders did not differ in evaluations of promotability (see Figure 25).
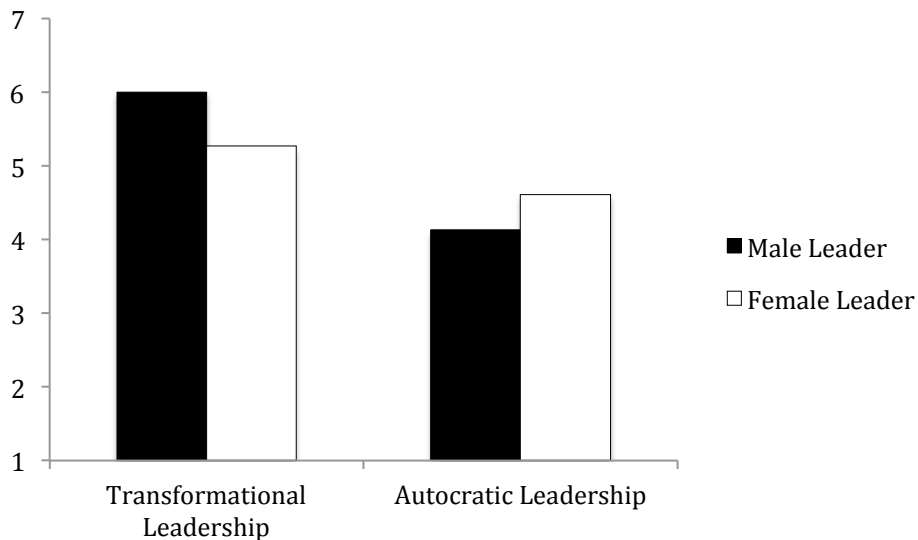
Figure 25. Ratings of evaluations of promotability of male and female leaders by transformational and autocratic leadership style (Study 1). Higher ratings indicate higher likelihood of being promoted.

Moderated mediation analyses. Hypothesis 4 predicted perceived leadership effectiveness to mediate the relationship between leadership style, leader gender, and evaluations of promotability. To test this hypothesis, I used the PROCESS SPSS macro (Hayes, 2013) with leadership style (coded as 0 = autocratic, 1 = transformational) as the independent variable, leadership effectiveness as the mediator, and promotability as the dependent variable (and semester of study as a covariate). I further tested whether leader gender (coded as 0 = male, 1 = female) moderated the mediation model. I used Model 8 with 5,000 bootstraps and 95% bias correction. Effects were denoted as statistically significant when confidence intervals (CI) did not include zero. Results indicate that leadership style significantly predicted perceived leadership effectiveness ($b = 1.89$, *SE* = .44, CI [1.02, 2.76]),

as did the interaction between leadership style and leader gender (b = -1.75, SE = .60, CI [-2.94, -.55]). Leadership effectiveness predicted evaluations of promotability (b = .69, SE = .07, CI [.56, .83]). This moderated mediation model was significant for male leaders (indirect effect = 1.31, SE = .36, CI [.65, 2.08]), but not for female leaders (indirect effect = .10, SE = .28, CI [-.45, .65]). Therefore, Hypothesis 4 was supported only for male leaders.

Discussion

Study 1 demonstrated that even though transformational leaders were generally perceived to be more effective and evaluated to be more promotable to higher positions in academia than autocratic leaders, male leaders had an advantage over female leaders. Male and female autocratic leaders did not differ in perceived leadership effectiveness and evaluations of promotability. However, male transformational leaders were seen as more effective and promotable than female transformational leaders. Furthermore, leadership style only influenced evaluations of promotability through perceived leader effectiveness for male leaders, but not for female leaders. Therefore, in Study 2, I set out to test whether the positive evaluations of male transformational leaders stem from a communality bonus.

Study 2

In Study 2, I aim to replicate the findings of Study 1 with a sample of working adults. In addition, I am interested in how leadership styles influence communality perceptions. I assume that transformational leaders will be perceived as more communal than autocratic leaders, because transformational (but not autocratic) leadership behaviors are concerned with relationships (Kark & Shamir, 2013). In line with this reasoning, transformational leadership has been found to correlate positively with communal attributes (Ross & Offermann, 1997). Thus, I argue that evaluators will infer a leader's communal attributes from transformational leadership.

Hypothesis 5a: Transformational leaders will be perceived as more communal than

autocratic leaders.

Without additional information men are perceived as less communal than women (Haines et al., 2016). However, with additional information about the person this can change. When men and women are described as homemakers (a role requiring communal attributes), they are perceived as equally communal (Bosak et al., 2008). I argue that a similar effect will occur when people receive information about a person's leadership style. Since transformational leadership fuels communality perceptions, male and female transformational leaders are likely to be perceived as equally communal. These communality perceptions are likely to mediate the relationship of transformational leadership on effectiveness and promotability. Building on expectancy violation theory and the idea that communality is less expected of men (Jussim et al., 1987), men may be exceeding expectations for communality by showing transformational leadership. Thus, men's effectiveness and promotability evaluations would be influenced to a greater extent than women's (see Figure 26). In line with this, shifting standards theory (Biernat, 2012; Biernat & Manis, 1994; Biernat & Thompson, 2002) suggests that men will be judged in relation to other men, while women will be judged in relation to other women. Because people assume that men are less communal than women, they have a lower standard for men to be perceived as notably communal. This means that a man, who is being perceived as communal (because of his transformational leadership style) would likely be perceived as especially communal and thus as particularly effective in leadership and highly promotable. Contrarily, the standard for women to be perceived as highly communal is higher due to assumptions of women's generally high levels of communality. Thus, a women who is also being perceived as communal (because of her transformational leadership style) would not be seen as exceptionally communal, which would not increase her evaluations of leadership effectiveness and promotabiliy to the same extent as it would for men.

Hypothesis 5b: Perceived communality will mediate the relationship of leadership style on leadership effectiveness and evaluations of promotability to a greater extent for male than for female leaders.
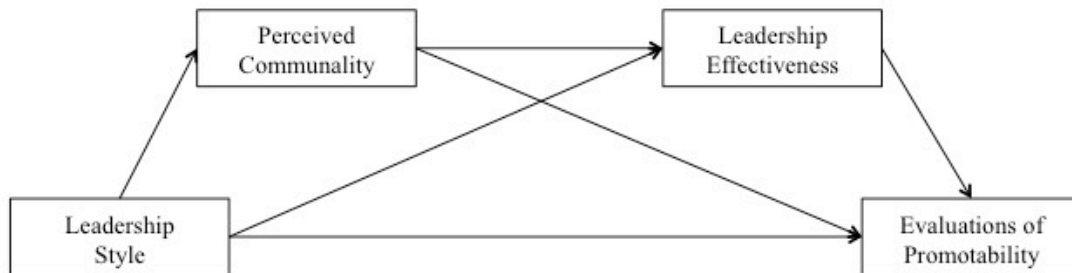
Figure 26. Proposed model of the relationship between leadership style, perceived communality, leadership effectiveness perceptions, and evaluations of promotability for male leaders.

Method

Design and participants. I conducted a 2 x 2 between-subject experiment with leader gender (male, female) and leadership style (transformational, autocratic) as the independent variables. Our sample consisted of 185 participants who were all employed at the time of the survey (93% full-time). Sixty-three percent of the participants were men, the mean age was 38.14 years ($SD = 8.09$), and 90% were of German nationality. Fifty-four percent of the participants held a leadership position at the time of the survey, and 84 % had prior experience with personnel selection and evaluation. Regarding the level of education, 77% held a university degree, 23 % a high school diploma.

Procedure. I conducted an online study and posted the invitation to take part in the study on a professional social networking website. Participants first read a short introduction to the scenario, which was similar to that of Study 1. Because this study was set in the context

of business organizations, participants were asked to assume the role of a committee member, evaluating candidates for promotion. Instructions and information given was similar to that of Study 1. To distract any attention from our interest in leadership styles and leader gender as predictors of promotion decisions, I provided a short study introduction. I informed participants that the study dealt with promotion decisions on the basis of limited information and that I would randomly allocate a specific piece of information to them.

Again all participants received an excerpt of an interview with the candidate. Leadership style and leader gender were manipulated in the interview excerpt. After reading the interview excerpt, participants evaluated the candidate by answering a short questionnaire. I collected data from 389 employees. Due to the greater susceptibility of rash or careless responses in online surveys that pose a threat to data quality, I followed the suggestions of many researchers and added several checks for inappropriate responses in Study 2 (Goodman, Cryder, & Cheema, 2013; Huang, Curran, Keeney, Poposki, & DeShon, 2011; Huang, Liu, & Bowling, 2015; Meade & Craig, 2012; Oppenheimer, Meyvis, & Davidenko, 2009; Tabachnik & Fidell, 2007). Researchers found that participants in online experiments may not pay enough attention to experimental materials, which can reduce statistical power (Goodman et al., 2013). Therefore, to ensure data quality, I employed three robust manipulation and data quality checks, and excluded participants who did not meet these criteria (Meade & Craig, 2012). Participants were only included in the final sample if they answered the manipulation checks correctly (see below) as well as a test question ("It is important to us that you read all questions. Please answer this question with "1 not at all"."; cf., Oppenheimer et al., 2009). The excluded participants did not differ from the final sample regarding demographic variables, but differed in how conscientiously they had participated in the study[20].

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[20] Excluded participants were 68% male. They were 39.76 years old (SD = 9.12) on average and 89 % were of German nationality. Levels of education were as follows: 6% PhD, 65% college or university degree, 20% 12-year high school degree, and 9 % 9- or 10-year high school degree.

Manipulation. The manipulation of gender and leadership style was the same as in

Study 1. Descriptions of the context were slightly adapted to fit the business setting (i.e.,

words related to academia like university or field were interchanged with words related to the

business context like organization or division). I employed three manipulation checks and

excluded participants who did not answer the checks correctly to ensure that all participants in

our final sample understood the manipulation as intended[21] (cf., Casler, Bickel, & Hackett,

2013; Huang, Liu, et al., 2015). I was strict about excluding participants with careless

responses and those who failed the manipulation checks, because I was specifically interested

in reactions to the target leader dependent on whether his or her behavior was indeed

perceived to be autocratic or transformational. If participants did not *perceive* the leader's

behavior in line with our intended manipulation, then their responses would not have been

useful in answering our research questions. As in Study 1, the leadership style manipulation

was successful. Participants in the transformational leadership condition (M_{Trans} = 5.77,

SD_{Trans} = 1.35; M_{Aut} = 4.99, SD_{Aut} = .98) compared to the autocratic leadership condition

(M_{Trans} = 4.26, SD_{Trans} = 1.00; M_{Aut} = 6.28, SD_{Aut} = .67) perceived leaders to show

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[21] I asked participants to describe the leadership style of the target person on the basis of the information that they read in the interview ("On the basis of the information you have just received, how would you describe the leadership behavior of the target person?"). Participants chose between three options: "The person shows enthusiasm about common goals and treats each follower as an individual" (transformational leadership), "The person leads with a strong hand by allocating tasks to followers and specifying how to execute them" (autocratic leadership), and "I don't know". Participants passed the manipulation check if they selected the option in line with the manipulation they read previously. Further, I asked participants to recall the name of the target person (Thomas Heller or Christiane Heller). This served as a manipulation check of leader gender. Finally, I looked at whether participants actually perceived the target person to only show transformational leadership and not also autocratic leadership in the transformational leadership style condition, and if they perceived the target person to only show autocratic leadership and not also transformational leadership in the autocratic leadership style condition. Participants indicated their perceptions of the target person's leadership style on 7-point Likert scales (from 1 "do not agree at all" to 7 "totally agree"): Transformational leadership (4 items, α = .90; e.g., "This person encourages his/her subordinates to think about problems from several points of view") and autocratic leadership (4 items, α = .85; e.g., "This person leads his/her subordinates with a strong hand"). For each participant, this criterion required a mean difference of at least one scale point in the direction of the leadership style manipulation they read.

significantly more transformational leadership, $t(171) = 5.83$, $p < .001$, and less autocratic leadership, $t(171) = -7.07$, $p < .001$.

Dependent measures

Leadership effectiveness ($\alpha = .93$) and evaluations of promotability ($\alpha = .88$) were measured on 7-point Likert scales (from 1 "do not agree at all" to 7 "totally agree") with the same items as in Study 1 (the word "tenure" being exchanged with the word "promotion" in the evaluations of promotability measure). Perceived communality ($\alpha = .85$) was computed based on three 7-point bipolar items (not supportive-supportive, not encouraging-encouraging, not selfish-selfish (reverse coded)) and response to the item, "How likeable is this person?" (1 "not at all " to 7 "very"; based on items from Bosak & Sczesny, 2011; Bridges & Etaugh, 1995; Rudman et al., 2012)[22].

<div align="center">

Results

</div>

Table 17 presents the means, standard deviations, and correlations found in study 2. Based on the high correlations of leadership effectiveness and evaluations of promotability, I again conducted a CFA to ensure that effectiveness, promotability, and communality were indeed distinguishable. The 3-factor model showed a reasonable fit ($\chi^2 = 84.35$, df = 32, $p < .001$, CFI = .97, RMSEA = .096) and was clearly preferable over the 2-factor model with promotability and effectiveness loading on the same factor ($\chi^2 = 186.71$, df = 34, $p < .001$, CFI =.90, RMSEA = .16, $\Delta\chi^2 = 102.37$, df = 2, $p < .001$), confirming that our measured variables may be overlapping but are empirically separate constructs.

Table 17

Overall means, standard deviations, and correlations Study 2

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[22] I included likeability to be an indicator of communality, because it is often described as part of the communality construct (Abele, Uchronski, et al., 2008). Similar to other communal attributes, it is also more prescriptive for women to be likeable than for men (Rudman et al., 2012).

Variable	M	SD	1	2	3	4	5
1. Leadership Style	.38	.49	-				
2. Leader Gender	.51	.50	.07	-			
3. Perceived Communality	3.61	1.39	.77***	.10	-		
4. Leadership Effectiveness	4.10	1.68	.63***	.11	.65***	-	
5. Evaluations of promotability	3.73	1.56	.68***	.02	.70***	.79***	-
6. Evaluator age (covariate)	38.14	8.09	-.06	.05	-.04	-.18**	-.18**

Note. **$p < .001$, ***$p < .001$. Leadership style is coded as 0 autocratic, 1 transformational. Leader gender is coded as 0 male leader, 1 female leader.

To test the effects of leadership style and leader gender on communality, perceived leadership effectiveness and evaluations of promotability, I conducted a MANCOVA with participant age as a covariate. I included age because older participants are likely to have more experience with different leadership styles as compared to younger participants, which might influence their ratings. In line with this reasoning, Table 17 indicates that participant age correlated significantly with both dependent measures. Ratings of leadership effectiveness and evaluations of promotability declined with participants' age. One person did not indicate their age and was not included in the analyses. Results of the MANCOVA indicated a significant main effect of leadership style, $F(3, 177) = 106.25$, $p < .001$, $\eta_p^2 = .64$, but not of

leader gender, $F(3, 177) = 1.06$, $p = .368$, $\eta_p^2 = .02$. The interaction effect between leadership style and leader gender was not significant, however, I found a trend in the expected direction, $F(3, 177) = 2.33$, $p = .076$, $\eta_p^2 = .04$.

It is important to note that results would slightly change if I did not exclude participants who failed the manipulation checks. In this case, I only find a significant main effect for leadership style, $F(2, 362) = 127.55$, $p < .001$, $\eta_p^2 = .41$, but not for leader gender, $F(2, 362) = 1.74$, $p = .18$, $\eta_p^2 = .01$, nor for the interaction, $F(2, 362) = .96$, $p = .39$, $\eta_p^2 = .01$. However, because I am interested in perceptions of people, who were influenced by the experimental manipulations as intended, I analyzed the subsample of participants, who passed the manipulation checks. I then conducted the same analyses as in Study 1 to test our hypotheses. Table 18 presents the means and standard deviations for each study condition. Again, there were no effects of participant gender.

Table 18

Means (and standard errors) for each condition in Study 2

	Transformational Leadership Style		Autocratic Leadership Style	
	Male Leader	Female Leader	Male Leader	Female Leader
Perceived Communality	4.99_a (.16)	4.94_a (.14)	2.63_b (.12)	2.90_b (.12)
Leadership Effectiveness	5.14_a (.21)	4.80_a (.19)	2.67_b (.16)	3.27_c (.16)
Evaluations of promotability	5.78_a (.21)	5.32_b (.19)	3.11_c (.16)	3.32_c (.16)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher leadership effectiveness and higher evaluations of promotability. Means are adjusted for the covariate evaluator age. Means in a row with different subscripts differ significantly at $p < .05$ (one-tailed) as indicated by pairwise comparisons using bootstrapping.

Perceived communality. In line with Hypothesis 5a, I found a significant main effect for leadership style, $F(1, 179) = 265.56$, $p < .001$, $\eta_p^2 = .60$, indicating that transformational leaders were perceived as much more communal than autocratic leaders. I did not find a significant effect of leader gender, $F(1, 179) = .67$, $p = .413$, $\eta_p^2 = .00$, nor a significant interaction, $F(1, 179) = 1.525$, $p = .22$, $\eta_p^2 = .01$. Results are displayed in Figure 27.

Figure 27. Ratings of perceived communality of male and female leaders by transformational and autocratic leadership style (Study 2). Higher ratings indicate higher perceived communality.

Leadership effectiveness. A significant main effect for leadership effectiveness emerged, $F(1, 179) = 124.20$, $p < .001$, $\eta_p^2 = .41$, indicating in line with Hypothesis 1a that transformational leaders were generally perceived as more effective than autocratic leaders. There was no significant effect for leader gender, $F(1, 179) = .52$, $p = .474$, $\eta_p^2 = .00$, but a significant interaction between leader gender and leadership style, $F(1, 179) = 6.84$, $p = .01$, $\eta_p^2 = .04$. Regarding Hypothesis 2a, pairwise comparisons using bootstrapping (Field, 2013) showed that male transformational leaders were perceived as similarly effective as female transformational leaders, though there was a trend in the expected direction. Regarding Hypothesis 3a, where I assumed that male autocratic leaders would be evaluated to be more

effective than female autocratic leaders, the opposite effect occurred: Female autocratic leaders were evaluated to be more effective than male autocratic leaders (see Figure 28).

Figure 28. Ratings of leadership effectiveness of male and female leaders by transformational and autocratic leadership style (Study 2). Higher ratings indicate higher levels of perceived leadership effectiveness.

Evaluations of promotability. I again found a significant main effect for leadership style, $F(1, 179) = 161.76$, $p < .001$, $\eta_p^2 = .48$, indicating in line with Hypothesis 1b that transformational leaders were more likely to be recommended for promotion than autocratic leaders. There was no significant main effect for leader gender, $F(1, 179) = .44$, $p = .51$, $\eta_p^2 = .00$, and the interaction between leader gender and leadership style was approaching significance, $F(1, 179) = 3.33$, $p = .07$, $\eta_p^2 = .02$. In line with Hypothesis 2b, pairwise comparisons with bootstrapping showed that male transformational leaders were evaluated to be more promotable than female transformational leaders. Hypothesis 3b assumed that male autocratic leaders would be evaluated to be more promotable than female autocratic leaders. Yet, results indicate that female autocratic leaders and male autocratic leaders were evaluated to be equally promotable. Results are illustrated in Figure 29.
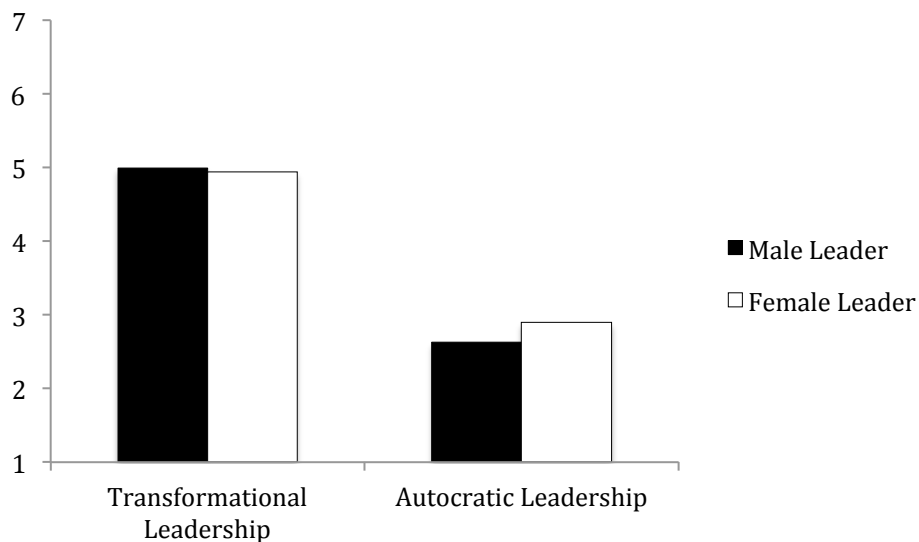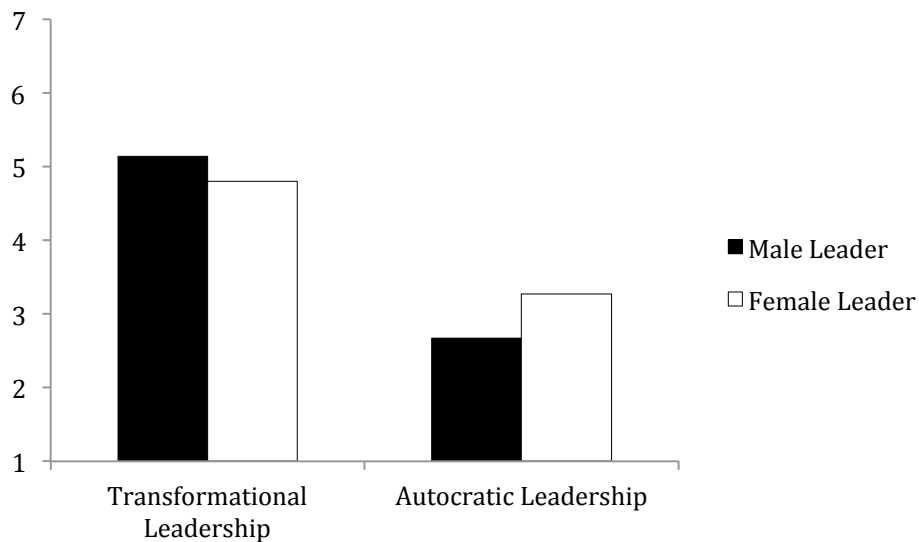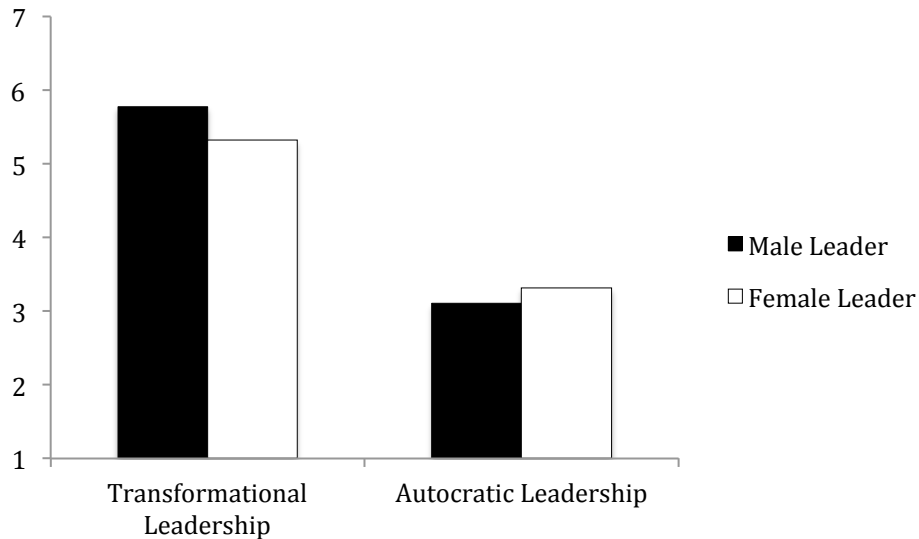
Figure 29. Ratings of promotability of male and female leaders by transformational and autocratic leadership style (Study 2). Higher ratings indicate higher promotability evaluations.

Mediation analyses. To test Hypotheses 5b which stated that communality perceptions would mediate the relationship of leadership style on evaluations of leadership effectiveness and promotability more strongly for women than for men, I again used the PROCESS SPSS macro (Hayes, 2013). To be able to test a serial mediation model with leadership style (coded as 0 = autocratic, 1 = transformational) as the independent variable, perceived communality as the first mediator, leadership effectiveness as the second mediator, and evaluations of promotability as the dependent variable, I tested the mediation model separate for male and female leaders. Participant age was kept as a covariate. I used Model 6 with 5,000 bootstraps and 95% bias correction. Results for male leaders showed that leadership style (b = 2.37, *SE* = .20, CI [1.97, 2.77]) significantly predicted perceived communality. Both leadership style (b = 1.25, *SE* = .35, CI [.56, 1.94]) and perceived communality (b = .51, *SE* = .11, CI [.28, .74]) predicted leadership effectiveness. Finally, leadership style (b = .84, *SE* = .33, CI [.18, 1.49]), perceived communality (b = .28, *SE* = .11, CI [.06, .51]), and leadership effectiveness (b = .47, *SE* = .10, CI [.28, .66]) predicted evaluations of promotability. The proposed indirect effect of leadership style influencing

perceived communality, which then influences leadership effectiveness and evaluations of promotability was significant (*Indirect Effect* = .57, *SE* = .24, CI [.19, 1.16]).

Results for female leaders also showed that leadership style (*b* = 2.05, *SE* = .18, CI [1.69, 2.41]) significantly predicted perceived communality. Only perceived communality (*b* = .36, *SE* = .15, CI [.07, .66]) predicted leadership effectiveness. Finally, perceived communality (*b* = .33, *SE* = .13, CI [.07, .59]) and leadership effectiveness (*b* = .55, *SE* = .09, CI [.37, .72]) predicted evaluations of promotability. Importantly, the proposed indirect effect of leadership style influencing perceived communality, which then influences leadership effectiveness and evaluations of promotability was not significant for female leaders (*Indirect Effect* = .41, *SE* = .28, CI [-.04, 1.08]). This means that perceived communality mediated the relationship between leadership style, leadership effectiveness, and evaluations of promotability only for male but not for female leaders.

Discussion

In Study 2, I replicated and extended the findings of Study 1 in a business context. Again, transformational leaders were generally perceived to be more effective and were evaluated to be more promotable to higher leadership positions than autocratic leaders. However, paralleling the results from Study 1, male leaders gained more from displaying a transformational leadership style than female leaders did. In addition, female autocratic leaders were perceived as more effective in leadership than male autocratic leaders. In addition, only for male but not for female leaders did the communality-bonus caused by transformational leadership behavior result in higher perceptions of leadership effectiveness which in turn resulted in higher evaluations of promotability.

Study 3

I followed up our two experimental studies with a field study, which had three aims. First, I wanted to test the generalizability of findings to organizational contexts. I am thereby

able to heighten the external validity of this research. Second, I opted to analyze if specific dimensions of transformational leadership would lead to different effects (Kunze, de Jong, & Bruch, 2013; Vinkenburg et al., 2011; Wang & Howell, 2010). I thereby extended the first two studies, in which all dimensions were manipulated simultaneously and an analyses of differentiated outcomes was not possible. The dimensions individualized consideration and intellectual stimulation have a strong focus on individual people, while inspirational motivation and idealized influence have a strong focus on the collective of all people in a given work group (Wu, Tsui, & Kinicki, 2010). Vinkenburg et al. (2011) found that laypeople assume women to be more promotable when showing individualized consideration and men to be more promotable when showing inspirational motivation. On the basis of expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004), I disagree with the assumptions of their study participants: All dimensions of transformational leadership are concerned with relationships (either with individual members or with the group as a whole). Thus, they all are likely to fuel perceptions of communality, resulting in male leaders being evaluated more positively than female leaders. Therefore, I do not expect differentiated effect for individual dimensions. Nonetheless, this has to be tested and I opted in this study to investigate if a particular dimension of transformational leadership is driving the communality-bonus effects for men.

Finally, the third aim of this study was to test the role of agency as a mediator of the relationship between leadership styles and perceptions of effectiveness as well as promotability. Researchers widely agree that alongside communality, agency is the second big driver of human behavior (Bakan, 1966; Bruckmüller & Abele, 2013). It encompasses characteristics concerned with reaching personal goals or skill manifestations (like self-confidence or assertiveness). Without additional information, women are often perceived to be less agentic than men (Haines et al., 2016). Autocratic leadership is defined as dominance

and control (De Cremer, 2006) – behaviors that are part of the agency construct (Abele, Uchronski, et al., 2008). I argue that an autocratic leadership style may increase perceptions of women's agency, which may mediate the effects of autocratic leadership on evaluations of leadership effectiveness and promotability. Perceptions of agency may thereby account for women's positive evaluations. Because men are already perceived as highly agentic, I expect this mediation to be less strong for male autocratic leaders.

Hypothesis 6: Perceived agency will mediate the relationship of autocratic leadership on leadership effectiveness and evaluations of promotability to a greater extent for female than for male leaders.

Method

I decided to survey managers and to ask them about the level of autocratic and transformational behaviors that team members show when interacting with others in the team. In other words, I asked supervisors about a target person's lateral leadership behaviors. I decided on this approach rather than asking upper level managers to rate leadership behaviors of lower level managers because I assumed that in many cases upper level managers may not have sufficient knowledge about the leadership style of subordinate managers. I also could not recreate the promotion committee setting I had used in our earlier experimental studies. In addition, I think that the approach to look at supervisors' perceptions of a person's lateral leadership behaviors is of particular value because it closely reflects organizational reality and is likely something supervisors will take into account when making promotion decisions (Eagly & Carli, 2007).

Design and participants. To avoid common method bias, I employed a two-wave panel design and measured our predictor (autocratic and transformational leadership style) and outcome variables (communality, agency, leadership effectiveness, and promotability evaluations) at different times (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). I sampled

supervisors and asked them to rate a randomly selected member of their team. Our final sample consisted of 74 supervisors who had participated at both time 1 and time 2. Our sample size is larger than the recommended minimum sample size for studies like this (Wilson VanVoorhis & Morgan, 2007). Supervisors were 48.1 years (*SD* = 8.9) old on average, 42% were female, 96% were German, 60% held a university degree and 40% a high school degree. They had 14.3 years of leadership experience and led their team (*Med*~Team Size~ = 6.5 members) for about 8.6 years. 57% categorized themselves as top-level managers, 28% as mid-level managers, and 15% as lower-level managers. They came from a variety of work areas and indicated that the majority was from the service sector (65%) followed by production (22%) and the public sector (11%). I asked about their influence on promotion decisions and they indicated a value of 5.2 (*SD* = 2.0) on a scale from 1 "not at all" to 7 "very much". The team members selected were 49% female, the majority were between 30 and 60 years old (younger than 20 years: 3%, 20 – 29 years: 14%, 30 – 39 years: 28%, 40 – 49 years: 24%, 50 – 60 years: 23 %), with a team tenure of 6.4 years.

Procedure. Data was collected in collaboration with a professional panel provider. I told participants that I was interested in teamwork in organizations and asked them to participate in two surveys separated by one week. I collected data from 166 supervisors who had completed the questionnaire at Time 1. However, data from 12 respondents was deemed inadequate and I did not invite them to the second survey (e.g., who stated that they had not answered honestly, had a large amount of missing values, indicated that they were retired). 128 people completed the questionnaire at Time 2. Because 16 respondents did not answer our control questions adequately ("Cross your heart: Can your answers be used?", "I have never used a computer."), they were excluded (Aust, Diedenhofen, Ullrich, & Musch, 2013; Huang, Bowling, Liu, & Li, 2015).

At Time 1, I asked participants to rate a member of their team. They were instructed to

choose the target person by selecting the person in the team whose given name would be first of all given names in alphabetical sequence and explained this with an example. At Time 2, I asked participants to think about the same team member and reiterated how they had chosen the person at Time 1.[23] At Time 1, I measured the predictors: Supervisors' perceptions of transformational and autocratic behaviors of the target person, as well as statistical questions. At Time 2, I measured the outcomes: supervisors' evaluations of promotability, leadership effectiveness, perceived communality and perceived agency of the target person. Because I did not manipulate either transformational *or* autocratic leadership, but *measured* the perceived levels of autocratic and transformational leadership (in peer interactions), I cannot compare autocratic and transformational leadership in this study. Instead, I investigated the influence of *low versus high levels* of transformational leadership and *low versus high levels* of autocratic leadership separately on supervisors' evaluations of men and women.

Measures. Transformational leadership (α = .96) was measured with items from the German translation of the MLQ (Felfe & Goihl, 2002). Items were slightly adapted to fit the lateral leadership context: individualized consideration (4 items, e.g., "The person helps others in the team to develop their strengths.", α = .90), inspirational motivation (4 items, e.g., "The person talks optimistically about the future.", α = .91), intellectual stimulation (4 items, e.g., "The person brings others in the team to think about problems from different points of view.", α = .93), and idealized influence behaviors (3 items, e.g., "The person emphasizes the importance of team spirit and a joint task understanding.", α = .83). Autocratic leadership was measured with six items from White and Lippitt (1960) which was also adapted slightly so as to fit the lateral leadership context (e.g., "The person tells other team members clearly what to

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[23] To make sure participants rated the same team members at both time points, I asked them to indicate the team member's gender, age (in categorical increments of 10 years), and team tenure. If participants indicated the same gender, were not off by more than one age category and simultaneously not more than 3 years off with regard to team tenure, I included them in the analyses. However, despite my instructions, the team member demographics of 39 participants did not match and I had to exclude them from the analyses.

do.", "The person decides strategies and tasks for other team members.", α = .94). Our outcome measures leadership effectiveness (α = .98) and communality (α = .90) were measured as in Study 2, as was promotability (α = .89) with the additional item, "If I had to choose a successor for my position, it would be this person." (Thacker & Wayne, 1995). Agency was measured based on Abele and Wojciszke (2007) with a 7-point semantic differential of the four items; "not assertive – assertive", "not self-confident – self-confident", "not active – active", and "not self-reliant – self-reliant" (α = .93).

Results

Correlations of all variables are depicted in Table 19. Participant age again correlated significantly with evaluations of promotability, which contrary to findings from Study 2, indicated that older participants gave higher evaluations. I thus again included participant age as a control variable for all analyses. As in the other two studies (and similar to other studies in the literature, e.g., Heilman & Chen, 2005), our measures of promotability and effectiveness were highly correlated. In addition, I wanted to show that transformational leadership and communality as well as autocratic leadership and agency were distinct. I therefore subjected all our variables to a CFA (Rosseel, 2012). Results revealed that our six factor model (in which transformational leadership, autocratic leadership, communality, agency, leadership effectiveness, promotability were separated) had an acceptable fit ($\chi2 = 1008.57$, df = 579, $p < .001$, CFI = .86, RMSEA = .10) and was clearly preferable over other potentially valid five factor models in which (1) leadership effectiveness and promotability ($\chi2 = 1120.27$, df = 584, $p < .001$, CFI =.83, RMSEA = .11, $\Delta\chi2 = 111.7$, df = 5, $p < .001$), (2) transformational leadership and communality ($\chi2 = 1111.83$, df = 584, $p < .001$, CFI =.83, RMSEA = .11, $\Delta\chi2 = 103.3$, df = 5, $p < .001$), (3) transformational leadership and autocratic leadership ($\chi2 = 1354.93$, df = 584, $p < .001$, CFI =.75, RMSEA = .13, $\Delta\chi2 = 354.9$, df = 5, $p < .001$), or autocratic leadership and agency loaded on the same factor ($\chi2 = 1526.68$, df =

588, $p < .001$, CFI $=.70$, RMSEA $= .15$, $\Delta\chi2 = 518.1$, df $= 9$, $p < .001$).

Table 19

Overall means, standard deviations, and correlations Study 3

Variable	*M*	*SD*	1	2	3	4	5	6	7
1. Autocratic Behaviors	3.60	1.66	-						
2. Transformational Behaviors	4.76	1.32	.24*						
3. Target Gender	.50	.50	-.19	-.14					
4. Communality	5.00	1.39	-.01	.52***	-.16				
5. Agency	5.25	1.31	.37**	.41***	-.22*	.57***			
6. Leadership Effectiveness	4.10	1.86	.37**	.52***	-.25*	.66***	.69***		
7. Evaluations of promotability	4.28	1.85	.22	.43***	-.32**	.63***	.51***	.85***	
8. Evaluator age (covariate)	48.12	8.91	.12	.10	.06	.11	.01	.10	.23*

Note. *$p < .05$, **$p < .01$, ***$p < .001$. Autocratic and transformational behaviors are coded as 0 low levels, 1 high levels. Target gender is coded as 0 men, 1 women.

The goal of this study was to compare evaluations of men and women with low versus high levels of transformational and autocratic leadership. I thus conducted median splits of

our transformational scale, the transformational subscales, and the autocratic scale. All results discussed below are based on the median split scales. For greater comparability of our three studies and to be able to calculate group differences between men and women with high or low levels of transformational and autocratic leadership styles, I started out conducting analyses of variance rather than regressions (which make essentially the same calculations). Afterwards, I calculated our mediation models using regression analyses via PROCESS (Hayes, 2013). I first calculated a MANCOVA with high versus low levels of perceived transformational leadership. Results revealed a significant main effect of transformational leadership, $F(4, 66) = 7.56$, $p < .001$, $\eta_p^2 = .31$, but not of leader gender, $F(4, 66) = 2.37$, $p = .062$, $\eta_p^2 = .13$ (though there was a marginal trend), and no significant interaction, $F(4, 66) = .85$, $p = .500$, $\eta_p^2 = .05$. I then calculated a MANCOVA with high versus low levels of perceived autocratic leadership and found a significant main effect of autocratic leadership, $F(4, 66) = 7.44$, $p < .001$, $\eta_p^2 = .31$, but not of leader gender, $F(4, 66) = 2.31$, $p = .067$, $\eta_p^2 = .12$ (though there was again a marginal trend), and no significant interaction, $F(4, 66) = 1.60$, $p = .184$, $\eta_p^2 = .09$. I followed up with ANCOVAs, paired comparisons, and mediation analyses. As in the previous two studies, there were no effects of participant gender. In addition, there were no effects of work sector. To test our assumptions, I again compared means of interest independent of whether the interaction effect was significant (Rosnow & Rosenthal, 1991). If not otherwise indicated, the pattern of results for the sub-facets of transformational leadership paralleled the results for the overall construct. Results for the individual dimensions can be found in the Appendix.

ANCOVA results for both transformational and autocratic leadership can be found in Table 20. The ANCOVAs indicated positive main effects of transformational leadership on all outcome variables, indicating that team members with high (as compared to low) levels of transformational leadership were perceived as more effective in leadership, more promotable,

more communal, and more agentic. The ANCOVAs also indicated main effects of autocratic leadership on leadership effectiveness and agency, indicating that team members with high (as compared to low) levels of autocratic leadership were perceived as more competent in leadership as well as more agentic. Means and standard errors for all conditions can be found in Table 21.

Table 20

ANCOVA main and interaction effects for transformational and autocratic leadership

	Main Effects		Interaction Effect
	Transformational Behaviors	*Target Gender*	*Transformational Behaviors x Target Gender*
Communality	$F(1, 69) = 23.83, p < .001, \eta_p^2 = .26$	$F(1, 69) = .76, p = .386, \eta_p^2 = .01$	$F(1, 69) = .84, p = .362, \eta_p^2 = .01$
Agency	$F(1, 69) = 12.87, p < .001, \eta_p^2 = .16$	$F(1, 69) = 2.15, p = .147, \eta_p^2 = .03$	$F(1, 69) = .13, p = .724, \eta_p^2 = .00$
Leadership Effectiveness	$F(1, 69) = 23.09, p < .001, \eta_p^2 = .25$	$F(1, 69) = 3.54, p = .064, \eta_p^2 = .05$	$F(1, 69) = .31, p = .577, \eta_p^2 = .01$
Promotability	$F(1, 69) = 13.48, p < .001, \eta_p^2 = .16$	$F(1, 69) = 8.03, p = .006, \eta_p^2 = .10$	$F(1, 69) = .70, p = .406, \eta_p^2 = .01$
	Autocratic Behaviors	*Target Gender*	*Autocratic Behaviors x Target Gender*
Communality	$F(1, 69) = .18, p = .674, \eta_p^2 = .00$	$F(1, 69) = 2.01, p = .161, \eta_p^2 = .03$	$F(1, 69) = .78, p = .379, \eta_p^2 = .01$
Agency	$F(1, 69) = 10.45, p = .002, \eta_p^2 = .13$	$F(1, 69) = 1.71, p = .196, \eta_p^2 = .02$	$F(1, 69) = 5.05, p = .028, \eta_p^2 = .07$
Leadership Effectiveness	$F(1, 69) = 8.50, p = .005, \eta_p^2 = .11$	$F(1, 69) = 3.01, p = .087, \eta_p^2 = .04$	$F(1, 69) = .48, p = .49, \eta_p^2 = .01$
Promotability	, $F(1, 69) = 1.54, p = .22, \eta_p^2 = .02$	$F(1, 69) = 7.86, p = .007, \eta_p^2 = .10$	$F(1, 69) = .00, p = .999, \eta_p^2 = .00$

Note. N = 74.

Table 21

Means (and standard errors) – Study 3

	Transformational Leadership				Autocratic Leadership			
	Low		High		Low		High	
	Men	Women	Men	Women	Men	Women	Men	Women
Communality	4.58$_a$ (.30)	4.07$_a$ (.27)	5.71$_b$ (.26)	5.73$_b$ (.31)	5.49$_a$ (.36)	4.72$_a$ (.30)	5.05$_a$ (.30)	4.88$_a$ (.37)
Agency	5.00$_a$ (.30)	4.48$_a$ (.27)	5.92$_b$ (.27)	5.61$_b$ (.31)	5.36$_a$ (.31)	4.33$_b$ (.26)	5.63$_a$ (.26)	5.92$_a$ (.32)
Leadership Effectiveness	3.44$_a$ (.40)	2.95$_a$ (.35)	5.44$_b$ (.35)	4.53$_b$ (.40)	4.03$_{a,b}$ (.45)	3.03$_a$ (.37)	4.94$_{a,b}$ (.37)	4.52$_b$ (.46)
Promotability	3.95$_a$ (.40)	3.21$_a$ (.35)	5.62$_b$ (.35)	4.26$_a$ (.40)	4.60$_{a,b}$ (.44)	3.46$_a$ (.37)	5.11$_b$ (.37)	3.97$_{a,b}$ (.46)

Note. N = 74. Ratings were given on a 7-point scale in which higher scores indicate higher communality, agency, leadership effectiveness and higher evaluations of promotability of target team members. Means are adjusted for the covariate evaluator age. Means in a row for *each* leadership style with different subscripts differ significantly at *p* < .05 as indicated by pairwise comparisons.

Leadership effectiveness. Pairwise comparisons showed that men and women with high levels of transformational leadership were evaluated similarly on leadership effectiveness, though in line with our assumptions in Hypothesis 2a there was a marginally significant trend favoring men (see Figure 30). As in Studies 1 and 2, but contrarily to our initial assumptions in Hypothesis 3a, pairwise comparisons showed that men and women with high levels of autocratic leadership were perceived as similarly effective in leadership.

Figure 30. Ratings of leadership effectiveness for men and women by levels of transformational leadership (Study 3). Higher ratings indicate higher evaluations of leadership effectivess.

Evaluations of promotability. In line with Hypothesis 2b, pairwise comparisons showed that men as compared to women demonstrating high (but not low) levels of transformational leadership were evaluated to be more promotable (see Figure 31). This effect was not significant for the dimension idealized influence. When showing high levels of idealized influence both men ($M = 5.64$; $SE = .33$) and women ($M = 4.78$; $SE = .42$) were evaluated to be similarly promotable. Another exception from the overall pattern of results for transformational leadership was the finding that when showing low levels of individualized consideration, women ($M = 2.93$; $SE = .36$) were evaluated to be significantly less promotable

than men (M = 4.16; SE = .37). In line with Studies 1 and 2, but contrarily to our initial

Hypothesis 3b, I found men and women with high levels of autocratic leadership to be

evaluated as similarly promotable (though there was a marginally significant trend favoring

men).

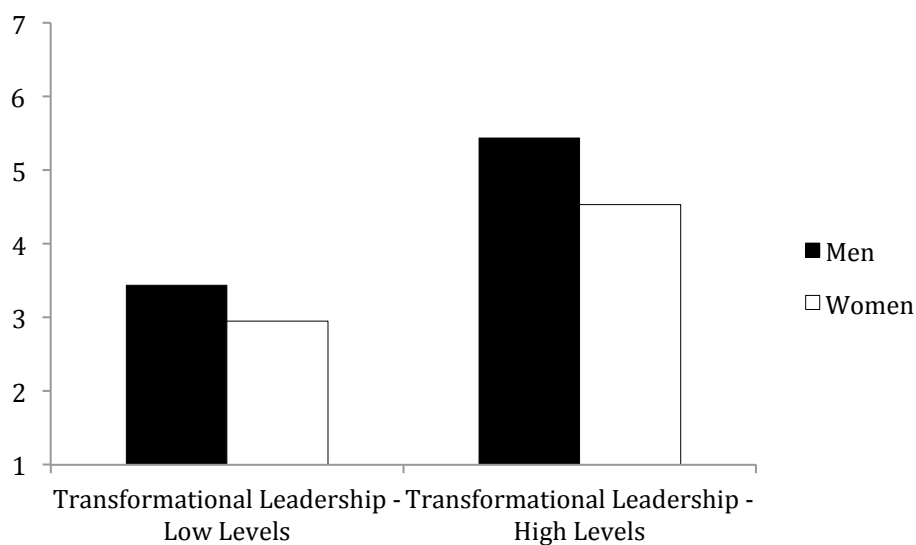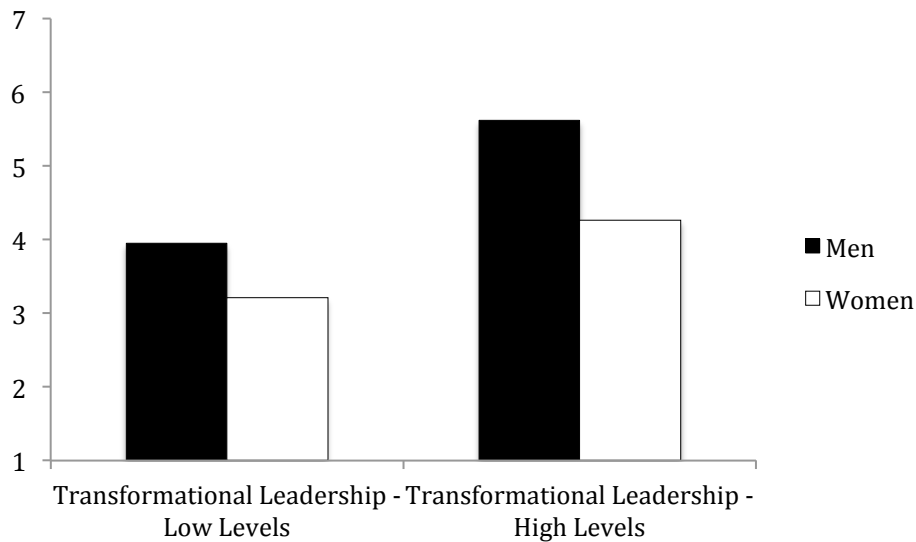*Figure 31*. Ratings of promotability of men and women by levels of transformational
leadership (Study 3). Higher ratings indicate higher evaluations of promotability.

Mediation analyses. To calculate the mediations, I again used the PROCESS SPSS

macro (Hayes, 2013) and again tested the serial mediation model separate for men and

women (Model 6 with 5,000 bootstraps and 95% bias correction). Participant age was kept as

a covariate. To test Hypothesis 5b, I tested a serial mediation model with transformational

leadership (coded as 0 = low, 1 = high) as the independent variable, perceived communality

as the first mediator, leadership effectiveness as the second mediator, and evaluations of

promotability as the dependent variable. Results for men showed that transformational

leadership (b = 1.15, SE = .35, CI [.43, 1.86]) significantly predicted perceived communality.

Both transformational leadership (b = 1.29, SE = .42, CI [.45, 2.14]) and communality (b =

.60, SE = .18, CI [.24, .96]) predicted leadership effectiveness. Only effectiveness (b = .71, SE

= .17, CI [.36, 1.06]) predicted promotability. The total (b = 1.67, SE = .50, CI [.67, 2.68])

and the indirect (b = .49, SE = .33, CI [.11, 1.70]) effect were significant. The pattern of

results for the subdimensions of transformational leadership paralleled these findings.

Diverging somewhat from our results in Study 2, all depicted effects were very similar for

women showing transformational leadership, though the total effect did not reach significance

(b = 1.01, SE = .58, CI [-.17, 2.19]). Because the total mediation effect is larger for men than

for women, I found support for Hypotheses 5b.

To test Hypothesis 6, I employed a serial mediation model with autocratic leadership

(coded as 0 = low, 1 = high) as the independent variable, perceived agency as the first

mediator, leadership effectiveness as the second mediator, and evaluations of promotability as

the dependent variable. Results for women indicated that autocratic leadership (b = 1.59, SE =

.51, CI [.55, 2.63]) significantly predicted perceived agency. Only agency (b = .80, SE = .19,

CI [.42, 1.18]) predicted leadership effectiveness. Effectiveness (b = .90, SE = .08, CI [.73,

1.07]) then predicted promotability. Only the indirect (b = 1.14, SE = .39, CI [.54, 2.11])

effect was significant. Contrarily, autocratic leadership (b = .26, SE = .33, CI [-.40, .93]) did

not influence agency for men, and neither the direct (b = -.27, SE = .39, CI [-1.05, .52]) nor

indirect (b = .26, SE = .33, CI [-.33, 1.02]) effect was significant. This is partially in line with

Hypothesis 6 and indicates that agency only mediated the relationship of autocratic leadership

on leadership effectiveness and promotability for women but not for men.

Discussion

Study 3 extended the effects of our previous two studies. Focusing on supervisors'

perceptions of team member's lateral leadership, I replicated the expected communality-

bonus effect. Though higher levels of transformational leadership increased evaluations of

both women and men, men showing high levels of transformational leadership were evaluated

to be more promotable than women. In this study, perceived communality mediated the effect

of transformational leadership on leadership effectiveness and promotability for both men and women. In addition, I found that women showing high (but not low) levels of autocratic leadership were perceived as equally agentic as men and perceptions of agency mediated the relationship of autocratic leadership on leadership effectiveness and promotability for women but not men. Theoretical and practical implications of all studies will be discussed in the following section.

General discussion

In this research, I set out to investigate whether differing evaluations of male and female leaders are a reason for the persisting gender inequality in leadership. Previous theory and research remains ambiguous as to whether different leadership styles and subsequent evaluations of men's and women's leadership effectiveness cause different probabilities of promotion to higher level leadership positions. Specifically, some researchers, in line with the leadership advantage hypothesis, propose that female transformational leaders would be more promotable (e.g., Maher, 1997). I argued on the basis of expectancy violation theory (Prentice & Carranza, 2004) that transformational leadership would result in a communality bonus effect for men. In two studies, I found that transformational leaders were perceived to be more effective and evaluated as more promotable than autocratic leaders. In a third study, I found that people showing high rather than low levels of transformational leadership were perceived as more communal, more agentic, more effective in leadership and more promotable. Importantly, men showing transformational leadership received advantages over women showing transformational leadership. Somewhat unexpectedly, results indicated that female autocratic leaders were not evaluated as less effective than male autocratic leaders.

Transformational leadership has been shown to be effective in academic (Braun et al., 2013) and business contexts (Dvir et al., 2002; Podsakoff et al., 1990). Evaluators may expect that transformational leaders offer employees the freedom and motivation required for doing

their work, and are supportive advisors whom employees can talk to if problems arise. Evaluators may also have (correctly) assumed that this leadership style will result in higher employee performance. Accordingly, in our study, evaluators perceived transformational leaders as most effective, which in turn increased evaluations of promotability.

Importantly, however, men and women did not profit to the same extent from transformational leadership. In fact, in line with expectancy violation theory (Prentice & Carranza, 2004), male as compared to female transformational leaders were perceived to be more effective (though only by trend in Studies 2 and 3) and evaluated to be more promotable. This finding represents the primary contribution of our research. With transformational leadership women are, "doing everything right", that is, they lead in a style that has been shown to have many positive outcomes for employees and organizations and they demonstrate both agentic characteristics required of leaders and communal characteristics required of women (Eagly et al., 2003). However, this does not help them in promotion and career advancement to the same extent as it helps men. Transformational leadership was shown to be an advantage for men – of whom communality is less expected than in women (Prentice & Carranza, 2002). In line with this, I showed in a pretest that transformational leadership behaviors were expected more of women than of men.

On the basis of expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004) I had predicted that this lower expectation of men showing transformational leadership would result in more favorable evaluations for men. Shifting standards theory (Biernat, 2012; Biernat & Kobrynowicz, 1997) also argues that men and women will be compared to people from their own gender group when evaluated subjectively rather than objectively. Thus, men seem to be evaluated compared to a lower stereotypical expectation of communality whilst women were compared to a higher stereotypical expectation of communality. In line with this, I found that a man's transformational leadership causally impacted perceptions of his

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communality and that he was thus evaluated as especially effective in leadership and promotable. For female transformational leaders, this relationship was less strong. A male transformational leader seems to have *over*achieved his requirement to be communal while a female transformational leader just seems to have achieved hers (Biernat & Thompson, 2002; Prentice & Carranza, 2004). We, therefore, found evidence of a communality-bonus effect for men showing transformational leadership. This finding is related to initial research indicating that men are evaluated particularly positively when showing certain communal behaviors (Heilman & Chen, 2005; Mohr & Wolfram, 2008; Shaughnessy et al., 2015).

I did not find many distinct effects of transformational leadership dimensions. All dimensions of transformational leadership focus at least in part on relationships – either on relationships with individuals or the whole group (Wu et al., 2010) – and thus seem to fuel perceptions of a leader's communality. Importantly, our findings differ in part from Vinkenburg et al. (2011). Their study participants had assumed men to only profit more than women from inspirational motivation and women to profit more than men from individualized consideration. Those beliefs may have been grounded in stereotypical assumptions about potential benefits for women who demonstrate stereotype-congruent communal behavior in the form of individualized consideration. In examining this assumption, I showed that men are perceived as more promotable when showing all but one transformational leadership dimension. Only for idealized influence behaviors were men and women perceived as equally promotable. This is important. Our study suggests that fostering team spirit and referring to values may be a strategy for women to achieve equal career success than men. Partially in line with Vinkenburg et al.'s study, I found that women who show only low levels of individualized consideration were evaluated to be less promotable than men (see also Heilman & Chen, 2005). This is also in line with research on the implied communality deficit effect – when women did not show interest in or concern for the other

team members individually, they have to anticipate more negative consequences than their male counterparts (Heilman & Okimoto, 2007). Thus, showing individualized consideration is indeed important for women and prevents them from experiencing backlash – they just do not profit from it as much as men do.

Interestingly, I found that women were evaluated similarly or in one instance even more effective than men when showing autocratic behaviors (autocratic leadership behaviors were also expected similarly of men and women). This finding is important, because I did not observe the expected penalization effect of autocratic leadership on evaluations of female leaders (Eagly et al., 1992): In a recent meta-analyses, M. J. Williams and Tiedens (2016) found that, overall, dominant women were less liked and faced more negative downstream consequences (such as lower hiring chances), but they were seen as equally competent than men.[24] In addition and in line with our studies, Luthar (1996) demonstrated that male and female autocratic leaders were evaluated similarly on leadership ability and performance.

Accordingly, women are not necessarily penalized for showing agentic behaviors like autocratic leadership. Showing agency is sometimes assumed with a lack of communality – and this assumed lack of communality may cause women (but not men) to be evaluated negatively (Heilman & Okimoto, 2007). However, this is not always the case. Schaumberg and Flynn (2016) found that with no explicit mention of communality (or a lack of communality), self-reliant female leaders were evaluated more positively than self-reliant male leaders because they were perceived to be similarly competent but more communal (they also found mixed evaluations of dominant female leaders with no or weak backlash effects). I found that though autocratic leaders were perceived as less communal than transformational leaders, female autocratic leaders were not perceived as lower on

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[24] When focusing on studies in which dominance was operationalized in behaviors related to leadership, the authors identified a similar amount of studies in which dominant men were perceived as more competent (e.g., Atwater, Carey, & Waldman, 2001) or more hirable (e.g., Phelan et al., 2008) and of studies in which dominant women were perceived to be more competent and more hirable (e.g., Aguinis & Adams, 1998; Steffens, Schult, & Ebert).

communality than male autocratic leaders. This finding may be seen as tentative evidence of an assimilation effect. Assimilation theory suggests that people perceive information confirming their preexisting beliefs as more convincing than disconfirming information (Munro & Ditto, 1997). Thus, the female autocratic leader may have been perceived at least somewhat in line with the group stereotype of women being communal.

There may also be an alternative explanation. Arguing from the perspective of expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004), the stereotype violation of female autocratic leaders may not have been perceived as a strong negative violation. It may have been perceived as an effort to overcome stereotypes. Similarly to male transformational leaders showing communality, female autocratic leaders may have been perceived to overachieve their requirement to show agency. Our finding that perceived agency mediated the effect of autocratic leadership on evaluations of effectiveness and promotability for women but not men is in line with this idea. Demonstrating agency by showing autocratic leadership seems to have increased effectiveness evaluations of women.

Strengths, limitations and future research

This research has several strengths and contributions. First, it investigates the highly relevant and highly practical question of whether men or women profit similarly in career advancement due to their transformational leadership behaviors. Our findings indicate that transformational leadership boosts men's more than women's evaluations of promotability. This supports expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004) and the hypothesized communality-bonus effect for male transformational leaders. Second, I showed that female autocratic leaders were not penalized more than male leaders in terms of leadership effectiveness and evaluations of promotability. This finding is important as it shows that agentic approaches to leadership do not always lead to backlash effects against women. Third, with these new results, I advance the literature on gender and the evaluation of

leadership and contribute to the current understanding of a female leadership advantage (Eagly, 2007; Eagly & Carli, 2003; Paustian-Underdahl et al., 2014; Vecchio, 2002, 2003).[25] I was able to show that indeed transformational leadership is perceived to be positive in women – but it seems to be perceived to be even more positive in men, potentially even being a *male leadership advantage* when it comes to promotability. Finally, bridging the divide between science and practice, I employ theory and mix research methods from interdisciplinary research fields (ranging from organizational and social psychology to human resources and leadership) to derive recommendations for organizational decision-makers as well as male and female leaders.

This research also has limitations. Findings are based on a field study and two experimental studies, one of which was conducted with a student sample. Having said this, the experimental method allowed us to establish causal relationships between the variables of interest and the field study replicated the findings and increased external validity. In addition, all our studies showed very high correlations between perceived leadership effectiveness and evaluations of promotability. However, confirmatory factor analyses in all studies showed that the two measures are not assessing the same construct. In addition, the two constructs are theoretically distinct: While leadership effectiveness is a specific type of competence attributed to the leader, evaluations of promotability measure a behavioral intention to foster the career of the leader. Further, in Studies 1 and 2 I did not mention the specific context or field in which the male and female leaders were working. Though this is a more contrived setting, I did not want the type of field to influence our findings as I was interested in evaluations of promotability more generally. In addition, in Study 3 I did not find that the work area was related to any of the variables measured. Because top positions in academia

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[25] It is somewhat unclear what type of advantage researchers refer to when talking about transformational leadership as a female leadership advantage: (1) Women being more likely to lead with an effective leadership style, (2) women showing behaviors in line with both the female gender role and the leadership role potentially resulting in less social backlash, and (3) women being more likely to advance to higher leadership positions.

and business are usually male-dominated (Eagly & Karau, 2002; van den Brink & Benschop, 2012), a replication for higher positions in more female-typed fields would be of value. In addition, in Study 3, I did not look at traditional downward leadership, but rather at lateral leadership behaviors. Though this is a slightly altered approach, I believe that it can also be a strength of this research. Because I was able to replicate our first two studies, the generalizability of our findings has increased. I showed that direct supervisor perceptions of men's and women's leadership behaviors when leading fellow team members is related to promotability evaluations. Related to that point, it is important to note that our findings are not about the effects of transformational or autocratic leadership *per se,* but about the effects of observer's *perceptions* of men's and women's leadership styles. Therefore, I had to exclude several participants in Study 2 who did not perceive the leadership styles as I had intended in our manipulations. Considering people's perceptions on specific workplace issues has at times been found to be more relevant than objective realities in shaping workplace outcomes (Hentschel, Shemla, Wegge, & Kearney, 2013; Shemla, Meyer, Greer, & Jehn, 2016).

In future studies, it would be interesting to find out how big the impact of leadership style are compared to other factors in promotion or hiring decisions, for example, past performance or attractiveness (Braun, Peus, & Frey, 2012; Hosoda, Stone-Romero, & Coats, 2003). In addition, it would be important to investigate under which circumstances evaluations of female leaders would be less biased. For example, it would be interesting to find our if promotability evaluations of female transformational leaders would be as high as men's if the leadership position would be framed in more communal or gender-neutral ways (Horvath & Sczesny, 2016) or if the leadership position is precarious (Ryan et al., 2016). Finally, it would also be valuable to investigate under which circumstances female leaders will be faced with negative evaluations based on an implied communality deficit for agentic

behavior (Heilman & Okimoto, 2007) – as well as for which situations the communality-bonus effect for men holds and under which circumstances communal men may be faced with negative evaluations (cf., Biron, De Reuver, & Toker, 2016; Brescoll & Uhlmann, 2005; Heilman & Wallen, 2010). Relatedly, it would be interesting to analyze which types of evaluations of men may be affected by the communality-bonus effect: While I found communality-bonus effects for men's work related outcomes, others found communal women to be evaluated as more likeable than men (Heilman & Okimoto, 2007).

Practical implications

Researchers and practitioners consider leadership effectiveness as an important factor for promotion decisions (Eagly & Carli, 2007). In recent years, policy makers and the public place more emphasis on the selection of effective leaders (Howard, 2001) – not just in business but also in academia (Braun, Peus, Frey, & Knipfer, 2016). Our study suggests that transformational leaders have higher chances of advancement to higher leadership positions. I therefore recommend expanding current approaches to leadership development on the basis of transformational leadership (Bass & Bass, 2008; Knipfer et al., 2017). However, both men and women should be cautious not to lead in a style that is unaligned with their (gender) identity. Transformational leadership should not become a, "requirement" for men's or women's advancement. This could potentially make them feel obligated to behave in a way that does not seem natural to them.

Many trade books and public media articles argue that women may be better leaders than men (Helgesen, 2011; Loden, 1985; Rosener, 1995; Smith & Bryant, 2009; R. Williams, 2012). Women are thought to lead in a more collaborative style, which modern organizations require (Fletcher, 2004). However, even though on average, women are somewhat more likely to show transformational leadership than men (Eagly et al., 2003), gender differences in leadership styles are small and conform to the overlapping distributions of men and women

(Eagly et al., 2003; Hyde, 2005). It is important that evaluators are made aware of societal and potentially personal stereotypes.

Because our findings indicate that women are unlikely to profit from transformational leadership regarding career advancement to the same extent as men, it is essential to de-bias promotion decisions. One way to achieve this goal is to train organizational decision-makers to evaluate all men and women individually on the basis of their skills and credentials. Importantly, these trainings need to be done on a voluntary basis. Mandatory trainings have been shown to lead to reactance and can actually increase biased decisions (Dobbin & Kalev, 2016). In line with this, structuring evaluation processes by defining specific criteria for advancement can help reduce the effects of stereotypes in organizations (Heilman, 2012). To counteract evaluation bias, practitioners are advised to establish an organizational norm about unbiased ethical decision making (Duguid & Thomas-Hunt, 2015).

5. General Conclusions

Gender stereotypes have been identified as a core cause for women's underrepresentation in leadership positions (Heilman, 2012). However, the content and structure of current gender stereotypes has not yet been identified satisfactorily. In addition, much is still unknown about the contextual factors that influence the consequences of stereotypes. Specifically research was thin regarding contextual factors that influence men's and women's intentions to pursue leadership positions (Bosak & Sczesny, 2008) as well as factors that influence their evaluations of promotability to higher levels of leadership (Eagly & Carli, 2007).

In this dissertation, I addressed these research gaps. The main research objectives were to investigate the composition of current gender stereotypes and to investigate their consequences for men and women in leadership. In Chapter 2, I examined the content of stereotypes about other men and women, as well as the content of self-stereotypes. I then focused on the consequences of stereotypes at two stages of the talent management process: (1) Men's and women's intentions to apply for leadership career opportunities and (2) male and female leader's promotability to a higher leadership position. In Chapter 3, I assessed if women's self-perception of being communal keep them from pursuing career opportunities advertised with agentic characteristics. I also investigated whether female recruiters can ameliorate presumed negative consequences of agentic characteristics in recruitment advertisements. In Chapter 4, I examined how men and women with either an autocratic or transformational leadership style (i.e., a style more or less in line with gender stereotypic expectations) are evaluated with regard to leadership effectiveness and promotability. In the following sections, I will first give a summery of the main results of Chapters 2 to 4. I will

then discuss the main contributions of each chapter and point out implications for theory and practice.

Summary of findings

The multiple dimensions of gender stereotypes

In Chapter 2, I argued that it is relevant and necessary to investigate the content and composition of current gender stereotypes. Only with the knowledge about what current gender stereotypes look like can I examine how they may hinder or help men and women in the workplace. Reviewing prior research on gender stereotypes, I argued that heterogeneous findings (Diekman & Eagly, 2000; Lueptow, Garovich, & Lueptow, 1995) could potentially be explained by the idea that agency and communality – the two constructs with which gender stereotypes are consistently described – are not unidimensional. I argued that agency and communality are composed of several dimensions that have distinct effects on the shape of gender stereotypes. The data confirmed that agency consists of the dimensions "instrumental competence", "leadership competence", "assertiveness", and "independence"; and that communality consists of the dimensions "concern for others", "sociability", and "emotional sensitivity". In addition, findings of Chapter 2 showed that though overall men are still perceived to be more agentic than women and women are still perceived to be more communal than men, this is not the case for all individual dimensions of agency and communality. I will briefly outline the main findings for (1) stereotypes about other men and women and (2) stereotypes men and women have about self.

Though research has often found men to be evaluated as being more agentic than women by both male and female raters (Eagly & Sczesny, 2009), I found that this was only the case for one aspect of agency: Only on the agency dimension "assertiveness" did male and female raters perceive men to be higher than women. On the agency dimensions "independence" and "leadership competence" only male but not female raters perceived men

to be higher than women; and on the agency dimension "instrumental competence" neither male nor female raters perceived men and women different from one another. Yet, on all three communality dimensions – "concern for others", "sociability", and "emotional sensitivity" – were women perceived to be higher than men by both male and female raters, which is in line with traditional findings on gender stereotypes.

Regarding stereotypes about self, women described themselves lower than men on the agency dimensions "assertiveness" and "leadership competence", but no different from men on the agency dimensions "independence" and "instrumental competence". Men only described themselves lower than women on the communality dimensions "concern about others" and "emotional sensitivity", but no different from women on the communality dimension "sociability", which differs from traditional findings on gender stereotypes about self (Bem, 1974).

When comparing men's and women's stereotypes about self with their stereotypes about others, I found that men and women tended to perceive themselves higher on the communality dimensions than they were perceived by others in their gender group. Women, however, tended to perceive themselves as lower on the agency dimensions "assertiveness" and "leadership competence" than they were perceived by other women, indicating that they hold more stereotypical views about their own agency than about the agency of other women.

Consequences of stereotypes for women's pursuit of leadership careers

In Chapter 3, I concentrated on women's stereotypes about self and how these can affect women's decisions to pursue career opportunities. Specifically, I was interested in how more women could be encouraged to apply for career opportunities early in their career, which may eventually help them to advance to a leadership position. I focused on a matter that organizations can influence: The recruitment advertisement. In a pretest, I found that advertisements for leadership positions employ more agentic characteristics than communal

characteristics, but that advertisements for positions without leadership ability do not. In a line of studies I then showed that women have lower intentions to apply for career opportunities (leadership development programs, management trainee positions) when these are advertised with agentic as compared to communal characteristics. This corresponded to women's actual application rate. The explanation for these findings is women's lower perceived fit. Because women perceive themselves to be more communal than men, women perceive a greater lack of fit with career opportunities when the advertisement features more agentic characteristics. By contrast, communal and agentic characteristics in recruitment advertisements did not influence evaluations and application intentions of men.

I also identified a boundary condition for the negative effect of agentic characteristics on women's pursuit of career opportunities. Specifically, if female recruiters communicated and described the career opportunity, women perceived the career opportunity as equally appealing, rated their fit similarly, and showed similar intentions to apply for agentic and communal characteristics in recruitment advertisements. However, if male recruiters communicated and described the career opportunity women rated the career opportunity advertised with agentic (rather than communal) characteristics as less appealing, perceived a lower fit, expected an application to be less successful, and showed lower application intentions. Thus, only when solely stereotypically masculine cues were used in the recruitment process (i.e., agentic characteristics in the advertisement *and* a male recruiter) women indicated to be less likely to pursue the advertised career opportunity.

Consequences of stereotypes for the evaluation of male and female leaders

In Chapter 4, I was interested in how stereotypes about other men and women might affect their career advancement. Building on the idea that the same behaviors can lead to different consequences depending on who the actor is (Heilman & Chen, 2005), I argued that male and female leaders would be perceived to be differently competent even when showing

the same leadership styles. I focused on transformational leadership – a leadership style incorporating agentic behaviors in line with the leader role (and the male gender role) and communal behaviors in line with the female gender role. I also focused on autocratic leadership – a leadership style only incorporating agentic behaviors. In two studies, I found that though transformational leaders are overall perceived as more effective than autocratic leaders and are evaluated as more promotable, men profit more from transformational leadership than women. Male transformational leaders were evaluated as more effective in leadership and more promotable than female transformational leaders. Male transformational leaders were also perceived as more communal than male autocratic leaders (by trend), which had positive effects on their effectiveness and promotability evaluations. Unexpectedly, female autocratic and male autocratic leaders were not evaluated differently.

Theoretical contributions

Because women and men often perform different social roles, observers infer that men and women have different characteristics (Koenig & Eagly, 2014). Men as providers of the family are attributed more agentic characteristics than women (e.g., being dominant or assertive) and women as caretakers of the family are attributed more communal characteristics than men (e.g., being helpful or understanding, Eagly & Steffen, 1984). However, nowadays social roles are less traditional than several decades ago: Women have made inroads into the workforce and into traditionally male-typed jobs (Bureau of Labor Statistics, 2016b; Statistisches Bundesamt, 2015a) and more men are taking on caretaking responsibilities (Statistisches Bundesamt, 2015b). This somewhat greater role flexibility might have affected the stereotypical characteristics I associate with men and women. However, this needed to be tested.

In addition, the lack-of-fit model (Heilman, 1983, 2012) suggests that men and women make fit assessments by comparing their own self-stereotypes with the perceived

characteristics of a position. Because of women's perceived higher levels of communality and lower levels of agency (compared to men), they are thought to estimate a lower level of fit for positions that are perceived to be agentic. The lack-of-fit model further suggest that this leads to a lower ambition to pursue the leadership position. I argued that women are likely to infer the characteristics of a career position from the recruitment advertisement. Building on this idea, I further suggested that women's fit perceptions could be decreased by agentic characteristics in recruitment advertisements and increased by communal characteristics in recruitment advertisements. However, this also needed to be tested.

Finally, role incongruity theory of prejudice suggests that female leaders will be evaluated more negatively than male leaders (Eagly & Karau, 2002) – especially when showing agentic behavior like autocratic leadership (Eagly et al., 1992). The female-leadership advantage hypothesis suggests that female leaders may be evaluated more positively when showing transformational leadership – a leadership style incorporating communal behaviors expected of them (Eagly & Carli, 2003). However, expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004) suggests that transformational leadership may be more beneficial for men than for women: Positive communal behavior is not necessarily expected of them and with showing such behavior they may overachieve their requirement of communality (Prentice & Carranza, 2004). These predictions needed to be tested.

By addressing these research gaps, this dissertation makes the following contributions: First, gender stereotypes were mostly described in terms of communality and agency. I showed that neither agency nor communality are one-dimensional but consist of different dimensions with distinct effects on the stereotyped perception of men and women. More specifically, to my knowledge this is the first study showing that men and women are perceived to be more similar to one another on some dimensions and less similar to one

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another on other dimensions of agency and communality. This contributes to and is likely to impact the design of future studies on consequences of gender stereotypes. Researchers are invited to think about which dimension of agency and communality they manipulate or measure because the respective results can be quite disparate. For example, Schaumburg and Flynn (2016) found that female leaders were evaluated more positively when they were described as being independent instead of dominant – both are agentic attributes but representative of different dimensions.

Second, I discovered that women (but not men) perceive themselves as more stereotypical than they perceived others in their gender group. Especially women's perceptions of being less leadership competent and less assertive than they perceive other women to be has implications for workplace decisions and behavior. Thus, in future studies it may be of particular interest to investigate how this translates into self-limiting behavior (Heilman, 1983) in the workplace that potentially affects their career advancement. It would further be interesting to compare such effects of stereotypes about self with effects of stereotypes about others (Haynes & Heilman, 2013; Heilman & Haynes, 2005).

Third, I found that men describe themselves as more communal than others describe them and they even describe themselves as equally sociable as women. This is a new and highly informative insight and contributes to research focusing on effects of stereotyping of men (Heilman & Wallen, 2010; Moss-Racusin et al., 2010). In future studies it would be of great interest to find out how men's self-perceived communality affects their decisions – in the workplace as well as regarding family life and relationships. For example, men might be rather willing to take on more family responsibilities, but stereotypes that others have of their lower communality may inhibit them to openly state or exhibit such behavior (see men's reactions to masculinity threats, Willer, Rogalin, Conlon, & Wojnowicz, 2013). In addition, women can be hesitant to allocate the main caretaking responsibility to men (S. M. Allen &

Hawkins, 1999). A potential reason may be that they see men as insufficiently communal and lacking a fit with caretaking requirements (constituting a potential application of the lack-of-fit model with regard to men and caretaking positions, Heilman, 1983). Thus, this dissertation suggests that it would be an interesting area for future research to investigate the outcomes of self- and other-stereotypes regarding men's communality.

Forth, my finding that women are less likely to apply for career opportunities if these are advertised with agentic characteristics than with communal characteristics supports Heilman's lack-of-fit theory (Heilman, 1983, 2012). It demonstrates that women's self-assessments of fit are very important for women's career decisions. Interestingly, my results also revealed that women only have lower career ambitions than men after reading a recruitment advertisement containing predominantly agentic characteristics, but not when they read an advertisement containing mixed or predominantly communal characteristics. As the finding that leadership positions are often advertised with a higher number of agentic characteristics suggests, this could be a reason why fewer women apply to such early career positions. My findings also establish the question for future research whether women would show equally low application intentions for leadership career opportunities if they were advertised with agentic characteristics representative of independence (for which men and women perceive themselves as equally high) versus assertiveness (for which women perceive themselves as lower than men). In addition, it would be intriguing to investigate if women later in their career would also prefer recruitment advertisements for leadership positions employing communal characteristics. It could be that a self-selection of female leaders occurred in earlier career stages so that mainly highly agentic women occupy leadership positions (Adams & Funk, 2012). Possibly these women would not be bothered by agentic recruitment advertisements and might even perceive some communal advertisements as incongruent with their self-perceptions.

Fifth, an important finding is that women are only less likely to apply for career opportunities if both agentic characteristics in the advertisement *and* male recruiters were employed. When either communal characteristics, a female recruiter, or both were employed, women were more interested and more likely to apply for the career opportunity. This is an important insight. Only when exclusively stereotypically masculine cues were present in the recruitment process, women were less likely to pursue the career opportunity. This is in line with another finding of mine that is not part of this dissertation (Hentschel, Horvath, Sczesny, & Peus, 2017): I found women to be less interested in and less likely to apply to entrepreneurship programs if they were advertised with solely masculine characteristics, that is, male-typed pictures *and* masculine linguistic forms. Confronted with several male-biased gender cues, women may have inferred that the career opportunity had a highly masculine culture. Because women have a lower preference for masculine organizational culture than men (Van Vianen & Fischer, 2002), women showed the most negative reactions towards career opportunities advertised with solely masculine cues. Importantly, when there was at least one gender cue in the advertisement that did not exclude women – either a communal characteristics *or* a female recruiter – did women react favorably to the career opportunity.

Sixth, my research on the evaluation of male and female leaders with different leadership styles contributes to research about how and under which circumstances stereotypes can hinder women's career advancement. Hence, I contribute to the current scientific debate on whether transformational leadership is advantageous for women (Eagly & Carli, 2003; Vecchio, 2003). My results are in line with expectancy violation theory – a theory rarely applied to research on gender stereotypes (for exceptions see, Bettencourt et al., 1997; Prentice & Carranza, 2004; Schaumberg & Flynn, 2016). The results suggest that men gain more from transformational leadership than women and that it would be worthwhile to find out if there is a leadership style from which women would profit more than men. These

findings also demonstrate the potential of applying expectancy violation theory to research on gender stereotypes.

Seventh, combining my finding that women are perceived to lack assertiveness more than men with the finding that female autocratic leaders (who show assertive leader behaviors) are not evaluated more negatively than male autocratic leaders offers new theoretical insights. Based on expectancy violation theory (Jussim et al., 1987; Prentice & Carranza, 2004) this suggests that women may overcome lower perceptions of their agency by demonstrating highly agentic leadership styles. However, autocratic leadership and potentially other more assertive leadership styles are likely seen as less fitting to today's workplace challenges and my findings show that transformational leaders were evaluated to be more promotable overall. Thus, future research should address if there are certain leadership behaviors that will result in similar chances for women of being promoted compared to men.

Finally, my findings indicate that male leaders profit from transformational leadership because they receive a boost in perceived communality. Other research shows that men get extra credit for communal behavior (Heilman & Chen, 2005). However, there is also research that shows that men are penalized and derogated for communal behavior (Moss-Racusin et al., 2010). Thus, a relevant question for future research is: Under which conditions is communal behavior an asset and under which conditions is communal behavior a liability for men?

Overall, this dissertation contributes to the large body of research on gender stereotypes about others and extends the much smaller body of research on gender stereotypes about self. It shows that both kinds of stereotypes are of great importance when it comes to personal choices in the workplace as well as to evaluations by others. As stereotypes about self and gender stereotypes about men are often less examined in research on gender

stereotypes, the thesis concentrates the attention on phenomena of great theoretical and practical relevance.

Implications for practice

The findings of this dissertation are highly relevant for organizations and society in general because they indicate that gender stereotypes are alive and still have effects on women's choices as well as on evaluations of men and women in the workplace. However, women have come far during these last decades (Benko & Weisberg, 2007), gender equality is yet to be achieved. It is important to keep in mind that though I found differences in self-perceptions of men and women, as well as in their behavior regarding application intentions, those differences do not apply to all men and women alike. Nevertheless, my findings have several practical implications. I will outline these implications for (1) individual men and women and (2) for organizations.

First, knowing about the structure and current state of stereotypes enables people to be aware of their own stereotypical thinking. This could lead them to questioning some initial assumptions and less thought through decisions. This may be especially relevant for women when making career related decisions (or for men when making family related decisions). Knowing about men's self-perception of being more communal than others perceive them might mean they will become more interested in taking on a bigger role as family caretaker (Statistisches Bundesamt, 2015b). It is important that others are generally open to men's and women's gender-incongruent decisions. Additionally, if women were to learn more about their own stereotypes and how these can lead them to behave in a self-limiting manner, they might be able to develop strategies for overcoming this behavior (Ely, Ibarra, & Kolb, 2011; Knipfer et al., 2017). For example, negative effects of stereotype threat can be reduced through women's affirmation of personal values (Kinias & Sim, 2016).

Second, an easy practice for organizations to implement would be to create advertisements that contain predominantly communal characteristics. Women in general would be more likely to apply for career opportunities advertised with communal characteristics while this does not have negative effects on men's application intentions. As recruitment advertisement characteristics can be altered effortlessly, this is a highly relevant and easy to implement measure for practitioners. In addition, my findings show that it is possible to assure women early in their careers to apply for career opportunities. By addressing students or young professionals, more women might enter and might be willing to pursue a leadership career to the highest organizational levels.

Third, it is highly important to train organizational decision makers about the value of diversity and the effects of gender stereotypes (Bezrukova, Jehn, & Spell, 2012; Hanover & Cellar, 1998). Unfortunately, even organizations that advertise pro-diversity in recruitment advertisements tend to discriminate no less than other organizations (Kang, DeCelles, Tilcsik, & Jun, 2016). Diversity trainings can even lead to an increase of bias if they are mandatory, insofar as they create reactance (Dobbin & Kalev, 2016). Thus, trainings should be voluntary. In addition, potentially even more critical than gender sensitivity trainings is to establish organizational norms against stereotyping and discrimination (Duguid & Thomas-Hunt, 2015) – not just in terms of gender but also other (demographical) features as well. Further, organizations have the opportunity to consider women's self-stereotypes on lower assertiveness and leadership competence and implement practices to support them in their careers.

Finally, the extent to which stereotypes influence organizational decisions can be limited if criteria for hiring and promotions are defined before making a decision (Heilman, 2012). For example, a study showed that if decision makers don't reflect on requirements for a specific position, they are more likely to consider stereotypes when making a decision

(Uhlmann & Cohen, 2005). In addition, the influence of stereotypes can be minimized if organizational decision makers are not strained by other simultaneous tasks (Gilbert & Hixon, 1991) and if they are not under time pressure (Pratto & Bargh, 1991).

Conclusion

In this dissertation, I described the current content and structure of gender stereotypes about others and self as well as consequences that these stereotypes can have for men and women in the workplace. Even though some stereotypes seem to have eroded during the last decades – especially that men and women are now perceived as similarly competent – other stereotypes have not. They still affect workplace decisions and career advancement. I hope, that this dissertation is one step on the way to greater equality in all areas of human life.

<center>**References**</center>

AAUW. (2016). *The simple truth about the gender pay gap (Spring 2016)*. Retrieved from

http://www.aauw.org/research/the-simple-truth-about-the-gender-pay-gap/

Abele, A. E. (2003). The dynamics of masculine-agentic and feminine-communal traits: Findings

from a prospective study. *Journal of Personality and Social Psychology, 85*(4), 768-776

Abele, A. E., & Bruckmüller, S. (2011). The bigger one of the "Big Two"? Preferential processing

of communal information. *Journal of Experimental Social Psychology, 47*(5), 935-948. doi:

10.1016/j.jesp.2011.03.028

Abele, A. E., Cuddy, A. J. C., Judd, C. M., & Yzerbyt, V. Y. (2008). Fundamental dimensions of

social judgment. *European Journal of Social Psychology, 38*(7), 1063-1065. doi:

10.1002/ejsp.574

Abele, A. E., Uchronski, M., Suitner, C., & Wojciszke, B. (2008). Towards an operationalization of

the fundamental dimensions of agency and communion: Trait content ratings in five

countries considering valence and frequency of word occurrence. *European Journal of

Social Psychology, 38*(7), 1202-1217. doi: 10.1002/ejsp.575

Abele, A. E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus

others. *Journal of Personality and Social Psychology, 93*(5), 751-763. doi: 10.1037/0022-

3514.93.5.751

Adams, R. B. (2016). Women on boards: The superheroes of tomorrow? *The Leadership Quarterly,

27*(3), 371-386. doi: 10.1016/j.leaqua.2015.11.001

Adams, R. B., & Funk, P. (2012). Beyond the glass ceiling: Does gender matter? *Management

Science, 58*(2), 219-235. doi: 10.1287/mnsc.1110.1452

Aguinis, H., & Adams, S. K. R. (1998). Social-role versus structural models of gender and influence use in organizations: A strong inference approach. *Group & Organization Management, 23*(4), 414-446. doi: 10.1177/1059601198234005

Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods, 17*(4), 351-371. doi: 10.1177/1094428114547952

Allen, D. G., Van Scotter, J. R., & Otondo, R. F. (2004). Recruitment communication media: Impact on pre-hire outcomes. *Personnel Psychology, 57*(1), 143-171. doi: 10.1111/j.1744-6570.2004.tb02487.x

Allen, S. M., & Hawkins, A. J. (1999). Maternal gatekeeping: Mothers' beliefs and behaviors that inhibit greater father involvement in family work. *Journal of Marriage and Family, 61*(1), 199-212. doi: 10.2307/353894

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*(1), 20-39. doi: 10.5465/amr.1989.4278999

Atwater, L. E., Carey, J. A., & Waldman, D. A. (2001). Gender and discipline in the workplace: Wait until your father gets home. *Journal of Management, 27*(5), 537-561. doi: 10.1177/014920630102700503

Atzmüller, C., & Steiner, P. M. (2010). Experimental vignette studies in survey research. *Methodology, 6*(3), 128-138. doi: 10.1027/1614-2241/a000014

Aust, F., Diedenhofen, B., Ullrich, S., & Musch, J. (2013). Seriousness checks are useful to improve data validity in online research. *Behavior Research Methods, 45*(2), 527-535. doi: 10.3758/s13428-012-0265-2

Avery, D. R., & McKay, P. F. (2006). Target Practice: An organizational impression management approach to attracting minority and female job applicants. *Personnel Psychology, 59*(1), 157-187. doi: 10.1111/j.1744-6570.2006.00807.x

Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology, 72*(4), 441-462. doi: 10.1348/096317999166789

Bakan, D. (1966). *The duality of human existence: An essay on psychology and religion*. Chicago, IL: Rand McNally.

Bass, B. M., & Avolio, B. J. (1993). Transformational leadership: A response to critiques. In M. M. Chemers & R. Ayman (Eds.), *Leadership theory and research: Perspectives and directions* (pp. 49-80). San Diego: Academic Press.

Bass, B. M., & Bass, R. (2008). *Bass handbook of leadership: Theory, research, and managerial applications*. New York: The Free Press.

Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics, 97*(2), 207-221. doi: 10.1007/s10551-010-0505-2

Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42*(2), 155-162. doi: 10.1037/h0036215

Bem, S. L., & Bem, D. J. (1973). Does sex-biased job advertising 'aid and abet' sex discrimination? *Journal of Applied Social Psychology, 3*(1), 6-18. doi: 10.1111/j.1559-1816.1973.tb01290.x

Benko, C., & Weisberg, A. (2007). *Mass career customization: Aligning the workplace with today's nontraditional workforce*. Boston: Harvard Business Review Press.

Bergeron, D. M., Block, C. J., & Echtenkamp, B. A. (2006). Disabling the able: Stereotype threat and women's work performance. *Human Performance, 19*(2), 133-158. doi: 10.1207/s15327043hup1902_3

Bettencourt, B. A., Dill, K. E., Greathouse, S. A., Charlton, K., & Mulholland, A. (1997). Evaluations of ingroup and outgroup members: The role of category-based expectancy

violation. *Journal of Experimental Social Psychology, 33*(3), 244-275. doi: 10.1006/jesp.1996.1323

Bezrukova, K., Jehn, K. A., & Spell, C. S. (2012). Reviewing diversity training: Where we have been and where we should go. *Academy of Management Learning & Education, 11*(2), 207-227. doi: 10.5465/amle.2008.0090

Biernat, M. (2012). Stereotypes and shifting standards. *Advances in Experimental Social Psychology, 45*, 1-59. doi: 10.1016/B978-0-12-394286-9.00001-9

Biernat, M., & Kobrynowicz, D. (1997). Gender- and race-based standards of competence: Lower minimum standards but higher ability standards for devalued groups. *Journal of Personality and Social Psychology, 72*(3), 544-557. doi: 10.1037/0022-3514.72.3.544

Biernat, M., & Manis, M. (1994). Shifting standards and stereotype-based judgments. *Journal of Personality and Social Psychology, 66*(1), 5-20. doi: 10.1037/0022-3514.66.1.5

Biernat, M., & Thompson, E. R. (2002). Shifting standards and contextual variation in stereotyping. *European Review of Social Psychology, 12*(1), 103-137. doi: 10.1080/14792772143000030

Biron, M., De Reuver, R., & Toker, S. (2016). All employees are equal, but some are more equal than others: dominance, agreeableness, and status inconsistency among men and women. *European Journal of Work and Organizational Psychology, 25*(3), 430-446. doi: 10.1080/1359432X.2015.1111338

Blair, I. V., & Banaji, M. R. (1996). Automatic and controlled processes in stereotype priming. *Journal of Personality and Social Psychology, 70*(6), 1142-1163. doi: 10.1037/0022-3514.70.6.1142

Bosak, J., & Sczesny, S. (2008). Am I the right candidate? Self-ascribed fit of women and men to a leadership position. *Sex Roles, 58*(9-10), 682-688. doi: 10.1007/s11199-007-9380-4

Bosak, J., & Sczesny, S. (2011). Exploring the dynamics of incongruent beliefs about women and leaders. *British Journal of Management, 22*(2), 254-269. doi: 10.1111/j.1467-8551.2010.00731.x

Bosak, J., Sczesny, S., & Eagly, A. H. (2008). Communion and agency judgments of women and men as a function of role information and response format. *European Journal of Social Psychology, 38*(7), 1148-1155. doi: 10.1002/ejsp.538

Braun, S., Peus, C., & Frey, D. (2012). Is beauty beastly? Gender-specific effects of leader attractiveness and leadership style on followers' trust and loyalty. *Zeitschrift für Psychologie, 220*(2), 98-108. doi: 10.1027/2151-2604/a000101

Braun, S., Peus, C., Frey, D., & Knipfer, K. (2016). Leadership in academia: Individual and collective approaches to the quest for creativity and innovation. In C. Peus, S. Braun & B. Schyns (Eds.), *Leadership lessons from compelling contexts* (pp. 353 - 369). Bingley, UK: Emerald.

Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly, 24*(1), 270-283. doi: 10.1016/j.leaqua.2012.11.006

Breaugh, J. A. (2012). Employee Recruitment: Current Knowledge and Suggestions for Future Research. In N. Schmitt (Ed.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 68-87). New York: Oxford University Press.

Breaugh, J. A., Macan, T. H., & Grambow, D. M. (2008). Employee recruitment: Current knowledge and directions for future research. In J. K. Ford & G. P. Hodgkinson (Eds.), *International Review of Industrial and Organizational Psychology* (Vol. 23, pp. 45 - 82). New York: Wiley.

Breaugh, J. A., & Starke, M. (2000). Research on employee recruitment: So many studies, so many remaining questions. *Journal of Management, 26*(3), 405-434. doi: 10.1177/014920630002600303

Brescoll, V. L., & LaFrance, M. (2004). The correlates and consequences of newspaper reports of research on sex differences. *Psychological Science, 15*(8), 515-520. doi: 10.1111/j.0956-7976.2004.00712.x

Brescoll, V. L., & Uhlmann, E. L. (2005). Attitudes toward traditional and nontraditional parents. *Psychology of Women Quarterly, 29*(4), 436-445. doi: 10.1111/j.1471-6402.2005.00244.x

Bridges, J. S., & Etaugh, C. (1995). College students' perceptions of mothers: Effects of maternal employment-childrearing pattern and motive for employment. *Sex Roles, 32*(11), 735-751. doi: 10.1007/bf01560187

Briere, J., & Lanktree, C. (1983). Sex-role related effects of sex bias in language. *Sex Roles, 9*(5), 625-632. doi: 10.1007/BF00290069

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology: Vol. 2. Methodology* (pp. 137-164). Boston, MA: Allyn and Bacon.

Broverman, I. K., Vogel, S. R., Broverman, D. M., Clarkson, F. E., & Rosenkrantz, P. S. (1972). Sex-role stereotypes: A current appraisal. *Journal of Social Issues, 28*(2), 59-78. doi: 10.1111/j.1540-4560.1972.tb00018.x

Bruckmüller, S., & Abele, A. E. (2013). The density of the Big Two: How are agency and communion structurally represented? *Social Psychology, 44*(2), 63-74. doi: 10.1027/1864-9335/a000145

Bundesministerium für Bildung und Forschung. (2015). *Tab.2.5.83 Anteil von Männern und Frauen an verschiedenen Status- und Abschlussgruppen im Hochschulbereich Zeitreihe: 1993 - 2014*. Retrieved from http://www.datenportal.bmbf.de/portal/de/K257A.hide - chapters

Bureau of Labor Statistics. (2016a). *American Time Use Survey*. Retrieved from http://www.bls.gov/tus/charts/household.htm

Bureau of Labor Statistics. (2016b). *Labor force statistics from the current population survey*. Retrieved from http://www.bls.gov/cps/cpsaat11.htm

Burgess, D., & Borgida, E. (1999). Who women are, who women should be: Descriptive and prescriptive gender stereotyping in sex discrimination. *Psychology, Public Policy, and Law, 5*(3), 665-692. doi: 10.1037//1076-8971.5.3.665

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York: Routledge.

Byrne , D. (1971). *The attraction paradigm*. New York: Academic Press.

Cable, D. M., & Judge, T. A. (1996). Person–organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes, 67*(3), 294-311. doi: 10.1006/obhd.1996.0081

Cadinu, M., Maass, A., Rosabianca, A., & Kiesner, J. (2005). Why Do Women Underperform Under Stereotype Threat? *Psychological Science, 16*(7), 572-578. doi: 10.1111/j.0956-7976.2005.01577.x

Campbell, K., & Mínguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics, 83*(3), 435-451. doi: 10.1007/s10551-007-9630-y

Carli, L. L. (2001). Gender and social influence. *Journal of Social Issues, 57*(4), 725-741. doi: 10.1111/0022-4537.00238

Carli, L. L., Alawa, L., Lee, Y., Zhao, B., & Kim, E. (2016). Stereotypes about gender and science - Women ≠ scientists. *Psychology of Women Quarterly, 40*(2), 244-260. doi: 10.1177/0361684315622645

Carrier, A., Louvet, E., Chauvin, B., & Rohmer, O. (2014). The primacy of agency over competence in status perception. *Social Psychology, 45*(5), 347-356. doi: doi:10.1027/1864-9335/a000176

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior, 29*(6), 2156-2160. doi: 10.1016/j.chb.2013.05.009

Catalyst. (2016). *Statistical overview of women in the workforce*. Retrieved from http://www.catalyst.org/knowledge/statistical-overview-women-workforce

Connerley, M. L., & Rynes, S. L. (1997). The influence of recruiter characteristics and organizational recruitment support on perceived recruiter effectiveness: Views from

applicants and recruiters. *Human Relations, 50*(12), 1563-1586. doi: 10.1023/A:1016923732255

Costello, E. M. (1979). The impact of language in job advertising on fair practices in hiring: A research note. *Journal of Applied Social Psychology, 9*(4), 323-325. doi: 10.1111/j.1559-1816.1979.tb00806.x

Craig, L., & Mullan, K. (2010). Parenthood, gender and work-family time in the United States, Australia, Italy, France, and Denmark. *Journal of Marriage and Family, 72*(5), 1344-1361. doi: 10.1111/j.1741-3737.2010.00769.x

Cuddy, A. J. C., Wolf, E. B., Glick, P., Crotty, S., Chong, J., & Norton, M. I. (2015). Men as cultural ideals: Cultural values moderate gender stereotype content. *Journal of Personality and Social Psychology, 109*(4), 622-635. doi: 10.1037/pspi0000027

Darley, J. M., & Fazio, R. H. (1980). Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist, 35*(10), 867-881. doi: 10.1037/0003-066X.35.10.867

Davidson, M. J., & Burke, R. J. (2016). *Women in management worldwide: Progress and prospects*. Farnham, UK: Grower Publishing.

Davies, P. G., Spencer, S. J., & Steele, C. M. (2005). Clearing the air: Identity safety moderates the effects of stereotype threat on women's leadership aspirations. *Journal of Personality and Social Psychology, 88*(2), 276-287. doi: 10.1037/0022-3514.88.2.276

Davison, H. K., & Burke, M. J. (2000). Sex discrimination in simulated employment contexts: A meta-analytic investigation. *Journal of Vocational Behavior, 56*(2), 225-248. doi: 10.1006/jvbe.1999.1711

De Cremer, D. (2006). Affective and motivational consequences of leader self-sacrifice: The moderating effect of autocratic leadership. *The Leadership Quarterly, 17*(1), 79-93. doi: 10.1016/j.leaqua.2005.10.005

De Pater, I. E., Van Vianen, A. E. M., & Bechtoldt, M. N. (2010). Gender differences in job challenge: A matter of task allocation. *Gender, Work & Organization, 17*(4), 433-453. doi: 10.1111/j.1468-0432.2009.00477.x

Deaux, K., & LaFrance, M. (1998). Gender. In D. T. Gilbert, S. T. Fiske, G. Lindzey, D. T. Gilbert, S. T. Fiske & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 788-827). New York, NY: McGraw-Hill.

Deaux, K., & Major, B. (1987). Putting gender into context: An interactive model of gender-related behavior. *Psychological Review, 94*(3), 369-389. doi: 10.1037/0033-295X.94.3.369

Devendorf, S. A., & Highhouse, S. (2008). Applicant-employee similarity and attraction to an employer. *Journal of occupational and organizational psychology, 81*(4), 607 - 617. doi: 10.1348/096317907X248842

Devine, P. G., & Sharp, L. B. (2009). Automaticity and control in stereotyping and prejudice. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp. 61-87). New York, NY: Psychology Press.

Diekman, A. B., & Eagly, A. H. (2000). Stereotypes as dynamic constructs: Women and men of the past, present, and future. *Personality and Social Psychology Bulletin, 26*(10), 1171-1188

Dobbin, F., & Kalev, A. (2016). Why diversity programs fail. *Harvard Business Review, July-August 2016 Issue*, 52-60

Duehr, E. E., & Bono, J. E. (2006). Men, women, and managers: Are stereotypes finally changing? *Personnel Psychology, 59*(4), 815-846. doi: 10.1111/j.1744-6570.2006.00055.x

Duguid, M. M., & Thomas-Hunt, M. C. (2015). Condoning stereotyping? How awareness of stereotyping prevalence impacts expression of stereotypes. *Journal of Applied Psychology, 100*(2), 343-359. doi: 10.1037/a0037908

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal, 45*(4), 735-744. doi: 10.2307/3069307

Dychtwald, K., Erickson, T. J., & Morison, R. (2013). *Workforce crisis: How to beat the coming shortage of skills and talent*. Boston: Harvard Business Press.

Eagly, A. H. (2007). Female leadership advantage and disadvantage: Resolving the contradictions. *Psychology of Women Quarterly, 31*(1), 1-12. doi: 10.1111/j.1471-6402.2007.00326.x

Eagly, A. H., & Carli, L. L. (2003). The female leadership advantage: An evaluation of the evidence. *The Leadership Quarterly, 14*(6), 807-834. doi: 10.1016/j.leaqua.2003.09.004

Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Boston, MA: Harvard Business School Press.

Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin, 129*(4), 569-591. doi: 10.1037/0033-2909.129.4.569

Eagly, A. H., & Karau, S. J. (1991). Gender and the emergence of leaders: A meta-analysis. *Journal of Personality and Social Psychology, 60*(5), 685-710. doi: 10.1037/0022-3514.60.5.685

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*(3), 573-598. doi: 10.1037/0033-295X.109.3.573

Eagly, A. H., Makhijani, M. G., & Klonsky, B. G. (1992). Gender and the evaluation of leaders: A meta-analysis. *Psychological Bulletin, 111*(1), 3-22. doi: 10.1037/0033-2909.111.1.3

Eagly, A. H., & Mladinic, A. (1994). Are people prejudiced against women? Some answers from research on attitudes, gender stereotypes, and judgments of competence. *European Review of Social Psychology, 5*(1), 1-35. doi: 10.1080/14792779543000002

Eagly, A. H., Mladinic, A., & Otto, S. (1991). Are women evaluated more favorably than men?: An analysis of attitudes, beliefs, and emotions. *Psychology of Women Quarterly, 15*(2), 203-216. doi: 10.1111/j.1471-6402.1991.tb00792.x

Eagly, A. H., & Sczesny, S. (2009). Stereotypes about women, men, and leaders: Have times changed? In M. Barreto, M. K. Ryan & M. T. Schmitt (Eds.), *The glass ceiling in the 21st*

century: Understanding barriers to gender equality (pp. 21-47). Washington, DC: American Psychological Association.

Eagly, A. H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology, 46*(4), 735-754. doi: 10.1037/0022-3514.46.4.735

Eagly, A. H., & Wood, W. (2012). Social role theory. In P. van Lange, A. Kruglanski & E. T. Higgins (Eds.), *Handbook of theories in social psychology* (pp. 458-476). Thousand Oaks, CA: Sage Publications.

Elprana, G., Stiehl, S., Gatzka, M., & Felfe, J. (2012). Gender differences in motivation to lead in Germany. In C. Quaiser-Pohl & M. Endepohls-Ulpe (Eds.), *Women's choices in Europe - Influence of gender on education, occupational career and family development* (pp. 135-150). Münster, New York: Waxmann.

Ely, R. J., Ibarra, H., & Kolb, D. M. (2011). Taking gender into account: Theory and design for women's leadership development programs. *Academy of Management Learning & Education, 10*(3), 474-493. doi: 10.5465/amle.2010.0046

Felfe, J., & Goihl, K. (2002). Deutsche überarbeitete und ergänzte Version des „Multifactor Leadership Questionnaire" (MLQ). In A. Glöckner-Rist (Ed.), *ZUMA-Informationssystem. Elektronisches Handbuch sozialwissenschaftlicher Erhebungsinstrumente. Version 6.00.* Mannheim: Zentrum für Umfragen, Methoden und Analysen.

Fiedler, F. E. (1964). A contingency model of leadership effectiveness. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 149-190). London, UK: Academic Press.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. London: Sage.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Fiske, A. P., Haslam, N., & Fiske, S. T. (1991). Confusing one person with another: What errors

    reveal about the elementary forms of social relations. *Journal of Personality and Social*

    Psychology, 60(5), 656-674. doi: 10.1037/0022-3514.60.5.656

Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: warmth

    and competence. *Trends in Cognitive Sciences, 11*(2), 77-83. doi: 10.1016/j.tics.2006.11.005

Fiske, S. T., & Taylor, S. E. (2013). *Social cognition: From brains to culture*. London: Sage.

Fiske, S. T., Xu, J., Cuddy, A. C., & Glick, P. (1999). (Dis)respecting versus (dis)liking: Status and

    interdependence predict ambivalent stereotypes of competence and warmth. *Journal of*

    Social Issues, 55(3), 473-489. doi: 10.1111/0022-4537.00128

Fletcher, J. K. (2004). The paradox of postheroic leadership: An essay on gender, power, and

    transformational change. *The Leadership Quarterly, 15*(5), 647-661. doi:

    10.1016/j.leaqua.2004.07.004

Foels, R., Driskell, J. E., Mullen, B., & Salas, E. (2000). The effects of democratic leadership on

    group member satisfaction: An integration. *Small Group Research, 31*(6), 676-701. doi:

    10.1177/104649640003100603

Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity in corporate

    governance and top management. *Journal of Business Ethics, 81*(1), 83-95. doi:

    10.1007/s10551-007-9482-5

Frey, D., Gietl, R., Fischer, P., & Köppl, J. (2010). *Statistische Auswertung der Alumni-Befragung*

    anlässlich des 10-jährigen Bestehens der Bayerischen EliteAkademie [Statistical analysis of

    the Alumni survey on the occasion of the 10 year anniversary of the Bayerische

    EliteAkademie].

Gaucher, D., Friesen, J., & Kay, A. C. (2011). Evidence that gendered wording in job

    advertisements exists and sustains gender inequality. *Journal of Personality and Social*

    Psychology, 101(1), 109-128. doi: 10.1037/a0022530

Gilbert, D. T., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60*(4), 509-517. doi: 10.1037/0022-3514.60.4.509

Glick, P., Fiske, S. T., Mladinic, A., Saiz, J. L., Abrams, D., Masser, B., . . . López, W. L. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology, 79*(5), 763-775. doi: 10.1037//0022-3514.79.5.763

Goodman, J. K., Cryder, C. E., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of mechanical turk samples. *Journal of Behavioral Decision Making, 26*(3), 213-224. doi: 10.1002/bdm.1753

Grosser, K., & Moon, J. (2005). Gender mainstreaming and corporate social responsibility: Reporting workplace issues. *Journal of Business Ethics, 62*(4), 327-340. doi: 10.1007/s10551-005-5334-3

Grotheer, M., Isleib, S., Netz, N., & Briedis, K. (2011). *Hochqualifiziert und gefragt. Ergebnisse der zweiten HIS-HF Absolventenbefragung des Jahrgangs 2005 [Highly qualified and in demand. Results of the second HIS-HF alumni survey of the class of 2005]*. Retrieved from http://www.dzhw.eu/pdf/pub_fh/fh-201214.pdf

Gully, S. M., Phillips, J. M., Castellano, W. G., Han, K., & Kim, A. (2013). A mediated moderation model of recruiting socially and environmentally responsible job applicants. *Personnel Psychology, 66*(4), 935-973. doi: 10.1111/peps.12033

Günther, C., Ekinci, N. A., Schwieren, C., & Strobel, M. (2010). Women can't jump?—An experiment on competitive attitudes and stereotype threat. *Journal of Economic Behavior & Organization, 75*(3), 395-401. doi: 10.1016/j.jebo.2010.05.003

GWK. (2016). *Chancengleichheit in Wissenschaft und Forschung [Equal opportunites in academia and research]*. Retrieved from http://www.gwk-bonn.de/fileadmin/Papers/GWK-Heft-50-Chancengleichheit.pdf

Hackman, M. Z., Furniss, A. H., Hills, M. J., & Paterson, T. J. (1992). Perceptions of gender-role characteristics and transformational and transactional leadership behaviours. *Perceptual and Motor Skills, 75*(1), 311-319. doi: 10.2466/pms.1992.75.1.311

Haines, E. L., Deaux, K., & Lofaro, N. (2016). The times they are a-changing … or are they not? A comparison of gender stereotypes, 1983–2014. *Psychology of Women Quarterly, 40*(3), 353-363. doi: 10.1177/0361684316634081

Hanover, J. M. B., & Cellar, D. F. (1998). Environmental factors and the effectiveness of workforce diversity training. *Human Resource Development Quarterly, 9*(2), 105-124. doi: 10.1002/hrdq.3920090203

Harris, M. M., & Fink, L. S. (1987). A field study of applicant reactions to employment opportunities: Does the recruiter make a difference? *Personnel Psychology, 40*(4), 765-784. doi: 10.1111/j.1744-6570.1987.tb00623.x

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: Guilford Press.

Haynes, M. C., & Heilman, M. E. (2013). It had to be you (not me)!: Women's attributional rationalization of their contribution to successful joint work outcomes. *Personality and Social Psychology Bulletin, 39*(7), 956-969. doi: 10.1177/0146167213486358

Haynes, M. C., & Lawrence, J. S. (2012). Who's to blame? Attributions of blame in unsuccessful mixed-sex work teams. *Basic and Applied Social Psychology, 34*(6), 558-564. doi: 10.1080/01973533.2012.727312

Heatherington, L., Daubman, K., Bates, C., Ahn, A., Brown, H., & Preston, C. (1993). Two investigations of "female modesty" in achievement situations. *Sex Roles, 29*(11-12), 739-754. doi: 10.1007/BF00289215

Heilman, M. E. (1983). Sex bias in work settings: The Lack of Fit model. *Research in Organizational Behavior, 5*, 269-298. doi: apa.org/?uid=1984-10927-001

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*(4), 657-674. doi: 10.1111/0022-4537.00234

Heilman, M. E. (2012). Gender stereotypes and workplace bias. *Research in Organizational Behavior, 32*(0), 113-135. doi: 10.1016/j.riob.2012.11.003

Heilman, M. E., Battle, W. S., Keller, C. E., & Lee, R. A. (1998). Type of affirmative action policy: A determinant of reactions to sex-based preferential selection? *Journal of Applied Psychology, 83*, 190-205. doi: 10.1037/0021-9010.83.2.190

Heilman, M. E., Block, C. J., & Martell, R. F. (1995). Sex stereotypes: Do they influence perceptions of managers? *Journal of Social Behavior & Personality, 10*(6), 237-252

Heilman, M. E., Block, C. J., Martell, R. F., & Simon, M. C. (1989). Has anything changed? Current characterizations of men, women, and managers. *Journal of Applied Psychology, 74*(6), 935-942. doi: 10.1037/0021-9010.74.6.935

Heilman, M. E., & Chen, J. J. (2005). Same behavior, different consequences: Reactions to men's and women's altruistic citizenship behavior. *Journal of Applied Psychology, 90*(3), 431-441. doi: 10.1037/0021-9010.90.3.431

Heilman, M. E., & Haynes, M. C. (2005). No credit where credit is due: Attributional rationalization of women's success in male-female teams. *Journal of Applied Psychology, 90*(5), 905-916. doi: 10.1037/0021-9010.90.5.905

Heilman, M. E., Lucas, J. A., & Kaplow, S. R. (1990). Self-derogating consequences of sex-based preferential selection: The moderating role of initial self-confidence. *Organizational Behavior and Human Decision Processes, 46*(2), 202-216. doi: 10.1016/0749-5978(90)90029-9

Heilman, M. E., Manzi, F., & Braun, S. (2015). Presumed incompetent: Perceived lack of fit and gender bias in recruitment and selection. In A. M. Broadbridge & S. L. Fielden (Eds.),

Handbook of gendered careers in management: Getting in, getting on, getting out (Vol. 90-104). Cheltenham: Edward Elgar.

Heilman, M. E., & Okimoto, T. G. (2007). Why are women penalized for success at male tasks?: The implied communality deficit. *Journal of Applied Psychology, 92*(1), 81-92

Heilman, M. E., & Wallen, A. S. (2010). Wimpy and undeserving of respect: Penalties for men's gender-inconsistent success. *Journal of Experimental Social Psychology, 46*(4), 664-667. doi: 10.1016/j.jesp.2010.01.008

Helgesen, S. (2011). *The female advantage: Women's ways of leadership*. New York: Crown Publishing Group.

Hentschel, T., Braun, S., & Peus, C. (in press). Warum wird sie nicht Führungskraft? Geschlecht und Karriereentwicklung [Why doesn't she become a leader? Gender and career development]. In S. Kauffeld & D. Spurk (Eds.), *Handbuch Laufbahnmanagement und Karriereplanung [Handbook career management and planning]*. Heidelberg: Springer.

Hentschel, T., Braun, S., Peus, C., & Frey, D. (2014). *Wording of advertisements influences women's intention to apply for career opportunities*. 74th Annual Meeting der Academy of Management, Philadelphia, USA.

Hentschel, T., Braun, S., Peus, C., & Frey, D. (2015). *With which leadership styles are men and women most likely to advance to top positions?* . 17th Congress of the European Association of Work and Organizational Psychology, Oslo, Norway.

Hentschel, T., Heilman, M. E., & Peus, C. (2013). *Have gender stereotypes changed?: Ratings of women, men and self.* Fourteenth annual meeting of The Society for Personality and Social Psychology (SPSP), New Orleans, LA, USA.

Hentschel, T., Horvath, L. K., Sczesny, S., & Peus, C. (2017). *Raising Women's Interest in Entrepreneurship - Effects of Images and Language in Advertisements*. 77th Annual Meeting der Academy of Management, Atlanta, USA.

Hentschel, T., Shemla, M., Wegge, J., & Kearney, E. (2013). Perceived diversity and team

    functioning: The role of diversity beliefs and affect. *Small Group Research, 44*(1), 33-61.

    doi: 10.1177/1046496412470725

Hernandez Bark, A. S., Escartín, J., Schuh, S. C., & van Dick, R. (2015). Who leads more and why?

    A mediation model from gender to leadership role occupancy. *Journal of Business Ethics*, 1-

    11. doi: 10.1007/s10551-015-2642-0

Highhouse, S. (2009). Designing experiments that generalize. *Organizational Research Methods,*

    12(3), 554-566. doi: 10.1177/1094428107300396

Hilton, J. L., & von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology, 47*, 237-271.

    doi: 10.1146/annurev.psych.47.1.237

Hitt, M. A., Keats, B. W., & DeMarie, S. M. (1998). Navigating in the new competitive landscape:

    Building strategic flexibility and competitive advantage in the 21st century. *The Academy of*

    Management Executive, 12(4), 22-42. doi: 10.5465/ame.1998.1333922

Ho, G. C., Shih, M., & Walters, D. J. (2012). Labels and leaders: The influence of framing on

    leadership emergence. *The Leadership Quarterly, 23*(5), 943-952. doi:

    10.1016/j.leaqua.2012.06.003

Hoffman, C., & Hurst, N. (1990). Gender stereotypes: Perception or rationalization? *Journal of*

    Personality and Social Psychology, 58(2), 197-208. doi: 10.1037/0022-3514.58.2.197

Horvath, L. K., Hentschel, T., & Peus, C. (2016). *Impacting fit-perceptions: Effects of linguistic*

    inclusion of women in the context of entrepreneurship. 50th Conference of the German

    Society for Psychology (DGPs), Leipzig, Germany.

Horvath, L. K., & Sczesny, S. (2013). *Language as a barrier and facilitator for women's career*

    progress. 16th Congress of the European Association of Work and Organizational

    Psychology, Münster, Germany.

Horvath, L. K., & Sczesny, S. (2016). Reducing women's lack of fit with leadership positions? Effects of the wording of job advertisements. *European Journal of Work and Organizational Psychology, 25*(2), 316-328. doi: 10.1080/1359432X.2015.1067611

Hosoda, M., Stone-Romero, E. F., & Coats, G. (2003). The effects of physical attractiveness on job-related outcomes: A meta-analysis of experimental studies. *Personnel Psychology, 56*(2), 431-462. doi: 10.1111/j.1744-6570.2003.tb00157.x

Howard, A. (2001). Identifying, assessing, and selecting senior leaders. In S. J. Zaccaro & R. J. Klimoski (Eds.), *The nature of organizational leadership - Understanding the performance imperatives confronting today's leaders* (pp. 305 - 346). San Francisco: Jossey-Bass.

Hoyt, C. L., & Simon, S. (2011). Female leaders: Injurious or inspiring role models for women? *Psychology of Women Quarterly, 35*(1), 143-157. doi: 10.1177/0361684310385216

Huang, J. L., Bowling, N. A., Liu, M., & Li, Y. (2015). Detecting insufficient effort responding with an infrequency scale: Evaluating validity and participant reactions. *Journal of Business and Psychology, 30*(2), 299-311. doi: 10.1007/s10869-014-9357-6

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2011). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology, 27*(1), 99-114. doi: 10.1007/s10869-011-9231-8

Huang, J. L., Liu, M., & Bowling, N. A. (2015). Insufficient effort responding: Examining an insidious confound in survey data. *Journal of Applied Psychology, 100*(3), 828-845. doi: 10.1037/a0038510

Hyde, J. S. (2005). The gender similarities hypothesis. *The American Psychologist, 60*(6), 581-592. doi: 10.1037/0003-066X.60.6.581

Instone, D., Major, B., & Bunker, B. B. (1983). Gender, self confidence, and social influence strategies: An organizational simulation. *Journal of Personality and Social Psychology, 44*(2), 322-333. doi: 10.1037/0022-3514.44.2.322

Johnson, R. E., Venus, M., Lanaj, K., Mao, C., & Chang, C.-H. (2012). Leader identity as an antecedent of the frequency and consistency of transformational, consideration, and abusive leadership behaviors. *Journal of Applied Psychology, 97*(6), 1262-1272. doi: 10.1037/a0029043

Jones, E. E., & Nisbett, R. E. (1987). The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 79-94). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Judge, T. A., & Bono, J. E. (2000). Five-Factor Model of Personality and Transformational Leadership. *Journal of Applied Psychology, 85*(5), 751-765

Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. *Personnel Psychology, 50*(2), 359-394. doi: 10.1111/j.1744-6570.1997.tb00912.x

Judge, T. A., & Hurst, C. (2007). Capitalizing on one's advantages: Role of core self-evaluations. *Journal of Applied Psychology, 92*(5), 1212-1227. doi: 10.1037/0021-9010.92.5.1212

Judge, T. A., Livingston, B. A., & Hurst, C. (2012). Do nice guys—and gals—really finish last? The joint effects of sex and agreeableness on income. *Journal of Personality and Social Psychology, 102*(2), 390-407. doi: 10.1037/a0026021

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*(5), 755-768. doi: 10.1037/0021-9010.89.5.755

Judge, T. A., Piccolo, R. F., & Ilies, R. (2004). The forgotten ones? The validity of consideration and initiating structure in leadership research. *Journal of Applied Psychology, 89*(1), 36-51. doi: 10.1037/0021-9010.89.1.36

Judiesch, M. K., & Lyness, K. S. (1999). Left behind? The impact of leaves of absence on managers' career success. *Academy of Management Journal, 42*(6), 641-651. doi: 10.2307/256985

Jung, D. I., & Sosik, J. J. (2002). Transformational leadership in work groups. *Small Group Research, 33*(3), 313-336. doi: 10.1177/10496402033003002

Jussim, L., Coleman, L. M., & Lerch, L. (1987). The nature of stereotypes: A comparison and integration of three theories. *Journal of Personality and Social Psychology, 52*(3), 536-546. doi: 10.1037/0022-3514.52.3.536

Kan, M. Y., Sullivan, O., & Gershuny, J. (2011). Gender convergence in domestic work: Discerning the effects of interactional and institutional barriers from large-scale data. *Sociology, 45*(2), 234-251. doi: 10.1177/0038038510394014

Kang, S. K., DeCelles, K. A., Tilcsik, A., & Jun, S. (2016). Whitened résumés: Race and self-presentation in the labor market. *Administrative Science Quarterly, 61*(3), 469-502. doi: 10.1177/0001839216639577

Kark, R., & Shamir, B. (2013). The dual effect of transformational leadership: Priming relational and collective selves and further effects on followers. In B. J. Avolio & F. J. Yammarino (Eds.), *Transformational and Charismatic Leadership: The Road Ahead* (pp. 77-101).

Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: Empowerment and dependency. *Journal of Applied Psychology, 88*(2), 246-255. doi: 10.1037/0021-9010.88.2.246

Kearney, E., & Gebert, D. (2009). Managing diversity and enhancing team outcomes: The promise of transformational leadership. *Journal of Applied Psychology, 94*(1), 77-89. doi: 10.1037/a0013077

Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research, 44*(3), 486-507. doi: 10.1177/0049124114543236

Kinias, Z., & Sim, J. (2016). Facilitating women's success in business: Interrupting the process of stereotype threat through affirmation of personal values. *Journal of Applied Psychology*, No Pagination Specified. doi: 10.1037/apl0000139

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York: Guilford Press.

Knipfer, K., Shaughnessy, B. A., Hentschel, T., & Schmid, E. (2017). Unlocking women's leadership potential: A curricular example for developing female leaders in academia. *Journal of Management Education, 41*(2), 272-302. doi: 10.1177/1052562916673863

Koch, S. C., Müller, S. M., & Sieverding, M. (2008). Women and computers. Effects of stereotype threat on attribution of failure. *Computers & Education, 51*(4), 1795-1803. doi: 10.1016/j.compedu.2008.05.007

Koenig, A. M., & Eagly, A. H. (2014). Evidence for the social role theory of stereotype content: Observations of groups' roles shape stereotypes. *Journal of Personality and Social Psychology, 107*(3), 371-392. doi: 10.1037/a0037215

Koenig, A. M., Mitchell, A. A., Eagly, A. H., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin, 137*(4), 616-642. doi: 10.1037/a0023557

Kraimer, M. L., Seibert, S. E., Wayne, S. J., Liden, R. C., & Bravo, J. (2011). Antecedents and outcomes of organizational support for development: The critical role of career opportunities. *Journal of Applied Psychology, 96*(3), 485-500. doi: 10.1037/a0021452

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology, 58*(2), 281-342. doi: 10.1111/j.1744-6570.2005.00672.x

Kunze, F., de Jong, S. B., & Bruch, H. (2013). Consequences of collective-focused leadership and differentiated individual-focused leadership. *Journal of Management, 42*(4), 886-914. doi: 10.1177/0149206313498903

Leaper, C., & Ayres, M. M. (2007). A meta-analytic review of gender variations in adults' language use: Talkativeness, affiliative speech, and assertive speech. *Personality and Social Psychology Review, 11*(4), 328-363. doi: 10.1177/1088868307302221

Lenney, E. (1977). Women's self-confidence in achievement settings. *Psychological Bulletin, 84*(1), 1-13. doi: 10.1037/0033-2909.84.1.1

Liden, R. C., & Parsons, C. K. (1986). A field study of job applicant interview perceptions, alternative opportunities, and demographic characteristics. *Personnel Psychology, 39*(1), 109-122. doi: 10.1111/j.1744-6570.1986.tb00577.x

Lockwood, P. (2006). "Someone like me can be successful": Do college students need same-gender role models? *Psychology of Women Quarterly, 30*(1), 36-46. doi: 10.1111/j.1471-6402.2006.00260.x

Loden, M. (1985). *Feminine leadership, or how to succeed in business without being one of the boys*. New York: Times Books.

Lothaller, H., Mikula, G., & Schoebi, D. (2009). What Contributes to the (Im)Balanced Division of Family Work Between the Sexes? *Swiss Journal of Psychology, 68*(3), 143-152. doi: doi:10.1024/1421-0185.68.3.143

Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the mlq literature. *The Leadership Quarterly, 7*(3), 385-425. doi: 10.1016/S1048-9843(96)90027-2

Lueptow, L. B., Garovich, L., & Lueptow, M. B. (1995). The persistence of gender stereotypes in the face of changing sex roles: Evidence contrary to the sociocultural model. *Ethology and Sociobiology, 16*(6), 509-530. doi: 10.1016/0162-3095(95)00072-0

Lueptow, L. B., Garovich-Szabo, L., & Lueptow, M. B. (2001). Social change and the persistence of sex typing: 1974–1997. *Social Forces, 80*(1), 1-36. doi: 10.1353/sof.2001.0077

Luthar, H. K. (1996). Gender differences in evaluation of performance and leadership ability: Autocratic vs. democratic managers. *Sex Roles, 35*(5), 337-361. doi: 10.1007/bf01664773

Lyness, K. S., & Heilman, M. E. (2006). When fit is fundamental: Performance evaluations and

promotions of upper-level female and male managers. *Journal of Applied Psychology,*

91(4), 777-785. doi: 10.1037/0021-9010.91.4.777

Lyness, K. S., & Judiesch, M. K. (2008). Can a manager have a life and a career? International and

multisource perspectives on work-life balance and career advancement potential. *Journal of*

Applied Psychology, 93(4), 789-805. doi: 10.1037/0021-9010.93.4.789

Lyness, K. S., & Thompson, D. E. (2000). Climbing the corporate ladder: Do female and male

executives follow the same route? *Journal of Applied Psychology, 85*(1), 86-101. doi:

10.1037//0021-9010.85.1.86

Madera, J. M., Hebl, M. R., & Martin, R. C. (2009). Gender and letters of recommendation for

academia: Agentic and communal differences. *Journal of Applied Psychology, 94*(6), 1591-

1599. doi: 10.1037/a0016539

Maher, K. J. (1997). Gender-related stereotypes of transformational and transactional leadership.

Sex Roles, 37(3), 209-225. doi: 10.1023/a:1025647811219

Martell, R. F., Lane, D. M., & Emrich, C. (1996). Male-female differences: A computer simulation.

American Psychologist, 51(2), 157-158. doi: 10.1037/0003-066X.51.2.157

Mayer, D., & Cava, A. (1993). Ethics and the gender equality dilemma for U.S. multinationals.

Journal of Business Ethics, 12(9), 701-708. doi: 10.1007/bf00881384

McAdams, D. P., Hoffman, B. J., Day, R., & Mansfield, E. D. (1996). Themes of agency and

communion In significant autobiographical scenes. *Journal of Personality, 64*(2), 339-377.

doi: 10.1111/j.1467-6494.1996.tb00514.x

McCarthy, J. M., Van Iddekinge, C. H., & Campion, M. A. (2010). Are highly structured job

interviews resistant to demographic similarity effects? *Personnel Psychology, 63*(2), 325-

359

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological*

Methods, 17(3), 437-455. doi: 10.1037/a0028085

Meijs, M. H. J., Lammers, J., & Ratliff, K. A. (2015). Gender stereotype-inconsistent acts are seen

    as more acceptable than stereotype-consistent acts, if they are clever. *Social Psychology,*

    46(5), 291-305. doi: doi:10.1027/1864-9335/a000244

Mohr, G., & Wolfram, H.-J. (2008). Leadership and effectiveness in the context of gender: The role

    of leaders' verbal behaviour. *British Journal of Management, 19*(1), 4-16. doi:

    10.1111/j.1467-8551.2007.00521.x

Molero, F., Cuadrado, I., Navas, M., & Morales, J. F. (2007). Relations and effects of

    transformational leadership: A comparative analysis with traditional leadership styles. *The*

    Spanish Journal of Psychology, 10(02), 358-368. doi: doi:10.1017/S1138741600006624

Moss-Racusin, C. A., Phelan, J. E., & Rudman, L. A. (2010). When men break the gender rules:

    Status incongruity and backlash against modest men. *Psychology of Men & Masculinity,*

    11(2), 140

Moulton, J., Robinson, G. M., & Elias, C. (1978). Sex bias in language use: "Neutral" pronouns that

    aren't. *American Psychologist, 33*(11), 1032-1036. doi: 10.1037/0003-066X.33.11.1032

Munro, G. D., & Ditto, P. H. (1997). Biased assimilation, attitude polarization, and affect in

    reactions to stereotype-relevant scientific information. *Personality and Social Psychology*

    Bulletin, 23(6), 636-653. doi: 10.1177/0146167297236007

Newman, M. L., Groom, C. J., Handelman, L. D., & Pennebaker, J. W. (2008). Gender differences

    in language use: An analysis of 14,000 text samples. *Discourse Processes, 45*, 211-236. doi:

    10.1080/01638530802073712

Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and

    subjective career success. A meta-analysis. *Personnel Psychology, 58*(2), 367-408. doi:

    10.1111/j.1744-6570.2005.00515.x

Nijstad, B. A., Berger-Selman, F., & De Dreu, C. K. W. (2014). Innovation in top management

    teams: Minority dissent, transformational leadership, and radical innovations. *European*

Journal of Work and Organizational Psychology, 23(2), 310-322. doi: 10.1080/1359432X.2012.734038

Oppenheimer, D. M., Meyvis, T., & Davidenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology, 45*(4), 867-872. doi: 10.1016/j.jesp.2009.03.009

Oswald, D., & Lindstedt, K. (2006). The content and function of gender self-stereotypes: An exploratory investigation. *Sex Roles, 54*(7-8), 447-458. doi: 10.1007/s11199-006-9026-y

Park, B., Smith, J. A., & Correll, J. (2008). "Having it all" or "doing it all"? Perceived trait attributes and behavioral obligations as a function of workload, parenthood, and gender. *European Journal of Social Psychology, 38*(7), 1156-1164. doi: 10.1002/ejsp.535

Paustian-Underdahl, S. C., Walker, L. S., & Woehr, D. J. (2014). Gender and perceptions of leadership effectiveness: A meta-analysis of contextual moderators. *Journal of Applied Psychology, 99*(6), 1129-1145. doi: 10.1037/a0036751

Peters, K., Ryan, M., Haslam, S. A., & Fernandes, H. (2012). To belong or not to belong: Evidence that women's occupational disidentification is promoted by lack of fit with masculine occupational prototypes. *Journal of Personnel Psychology, 11*(3), 148-158. doi: 10.1027/1866-5888/a000067

Peus, C., Braun, S., & Frey, D. (2013). Situation-based measurement of the full range of leadership model — Development and validation of a situational judgment test. *The Leadership Quarterly, 24*(5), 777-795. doi: 10.1016/j.leaqua.2013.07.006

Peus, C., Braun, S., & Knipfer, K. (2015). On becoming a leader in Asia and America: Empirical evidence from women managers. *The Leadership Quarterly, 26*(1), 55-67. doi: 10.1016/j.leaqua.2014.08.004

Peus, C., & Welpe, I. (2011). Frauen in Führungspositionen - Was Unternehmen wissen sollten [Women in leadership positions - What organizations need to know]. *OrganisationsEntwicklung, 2*, 47 - 55

Phelan, J. E., Moss-Racusin, C. A., & Rudman, L. A. (2008). Competent yet out in the cold: Shifting criteria for hiring reflect backlash toward agentic women. *Psychology of Women Quarterly, 32*(4), 406-413. doi: 10.1111/j.1471-6402.2008.00454.x

Pillai, R., Schriesheim, C. A., & Williams, E. S. (1999). Fairness perceptions and trust as mediators for transformational and transactional leadership: A two-sample study. *Journal of Management, 25*(6), 897-933. doi: 10.1177/014920639902500606

Pircher Verdorfer, A., & Peus, C. (2014). The measurement of servant leadership. *Zeitschrift für Arbeits- und Organisationspsychologie A&O, 58*(1), 1-16. doi: 10.1026/0932-4089/a000133

Ployhart, R. E. (2006). Staffing in the 21st century: New challenges and strategic opportunities. *Journal of Management, 32*(6), 868-897. doi: 10.1177/0149206306293625

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. doi: 10.1037/0021-9010.88.5.879

Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly, 1*(2), 107-142. doi: 10.1016/1048-9843(90)90009-7

Powell, G. N., & Butterfield, D. A. (2003). Gender, gender identity, and aspirations to top management. *Women in Management Review, 18*(1/2), 88-96. doi: doi:10.1108/09649420310462361

Powell, G. N., Butterfield, D. A., & Parent, J. D. (2002). Gender and managerial stereotypes: Have the times changed? *Journal of Management, 28*(2), 177-193. doi: 10.1177/014920630202800203

Pratto, F., & Bargh, J. A. (1991). Stereotyping based on apparently individuating information: Trait and global components of sex stereotypes under attention overload. *Journal of Experimental Social Psychology, 27*(1), 26-47. doi: 10.1016/0022-1031(91)90009-U

Prentice, D. A., & Carranza, E. (2002). What women and men should be, shouldn't be, are allowed to be, and don't have to be: The contents of prescriptive gender stereotypes. *Psychology of Women Quarterly, 26*(4), 269-281. doi: 10.1111/1471-6402.t01-1-00066

Prentice, D. A., & Carranza, E. (2004). Sustaining cultural beliefs in the face of their violation: The case of gender stereotypes. In M. Schaller & C. C.S. (Eds.), *The psychological foundations of culture* (pp. 259–280). London: Lawrence Erlbaum Associates.

Pritschet, L., Powell, D., & Horne, Z. (2016). Marginally significant effects as evidence for hypotheses: Changing attitudes over four decades. *Psychological Science, 27*(7), 1036-1042. doi: 10.1177/0956797616645672

Ragins, B. R. (1999). Gender and mentoring relationships. In G. N. Powell (Ed.), *Handbook of gender and work* (pp. 347 - 357). Thousand Oaks, CA: Sage.

Reguera-Alvarado, N., de Fuentes, P., & Laffarga, J. (2015). Does board gender diversity influence financial performance? Evidence from Spain. *Journal of Business Ethics*, 1-14. doi: 10.1007/s10551-015-2735-9

Rehbock, S., Horvath, L. K., & Hentschel, T. (2017). Geschlechtergerechtes Talentmanagement in der Wissenschaft. [Gender-fair Talent Management in Academia]. *Personal- und Organisationsentwicklung (P-OE) [Personnel and organizational development], 12*(1), 19-25

Reuvers, M., Van Engen, M. L., Vinkenburg, C. J., & Wilson-Evered, E. (2008). Transformational leadership and innovative work behaviour: Exploring the relevance of gender differences. *Creativity and Innovation Management, 17*(3), 227-244. doi: 10.1111/j.1467-8691.2008.00487.x

Ritter, B. A., & Yoder, J. D. (2004). Gender differences in leader emergence persist even for dominant women: An updated confirmation of role congruity theory. *Psychology of Women Quarterly, 28*(3), 187-193. doi: 10.1111/j.1471-6402.2004.00135.x

Rosener, J. B. (1995). *America's competitive secret: Utilizing women as a management strategy*. New York: Oxford University Press.

Rosette, A. S., Koval, C. Z., Ma, A., & Livingston, R. (2016). Race matters for women leaders: Intersectional effects on agentic deficiencies and penalties. *The Leadership Quarterly, 27*(3), 429-445. doi: 10.1016/j.leaqua.2016.01.008

Rosnow, R. L., & Rosenthal, R. (1991). If you're looking at the cell means, you're not looking at only the interaction (unless all main effects are zero). *Psychological Bulletin, 110*(3), 574-576. doi: 10.1037/0033-2909.110.3.574

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*(2), 1-36

Ruble, D. N., & Martin, C. L. (1998). Gender development. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology* (5th ed., Vol. 3. Social, emotional, and personality development, pp. 933-1016). Hoboken, NJ: Wiley.

Ruble, T. L., Cohen, R., & Ruble, D. N. (1984). Sex stereotypes. *American Behavioral Scientist, 27*(3), 339-356. doi: 10.1177/000276484027003006

Ruderman, M. N., & Ohlott, P. J. (2005). Leading Roles: What coaches of women need to know. *Leadership in Action, 25*(3), 3-9. doi: 10.1002/lia.1115

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57*(4), 743-762. doi: 10.1111/0022-4537.00239

Rudman, L. A., Moss-Racusin, C. A., Phelan, J. E., & Nauts, S. (2012). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders. *Journal of Experimental Social Psychology, 48*(1), 165-179. doi: 10.1016/j.jesp.2011.10.008

Rudman, L. A., & Phelan, J. E. (2008). Backlash effects for disconfirming gender stereotypes in organizations. *Research in Organizational Behavior, 28*, 61-79. doi: 10.1016/j.riob.2008.04.003

Ryan, M. K., Haslam, S. A., Morgenroth, T., Rink, F., Stoker, J., & Peters, K. (2016). Getting on top of the glass cliff: Reviewing a decade of evidence, explanations, and impact. *The Leadership Quarterly, 27*(3), 446-455. doi: 10.1016/j.leaqua.2015.10.008

Rynes, S. L. (1991). Recruitment, job choice, and post-hire consequences: A call for new research directions. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (2nd ed., pp. 399-444). Palo Alto, CA: Consulting Psychologists Press.

Rynes, S. L., Bretz, R. D., & Gerhart, B. (1991). The importance of recruitment in job choice: A different way of looking. *Personnel Psychology, 44*(3), 487-521. doi: 10.1111/j.1744-6570.1991.tb02402.x

Scandura, T. A., & Williams, E. A. (2004). Mentoring and transformational leadership: The role of supervisory career mentoring. *Journal of Vocational Behavior, 65*(3), 448-468. doi: 10.1016/j.jvb.2003.10.003

Schaumberg, R. L., & Flynn, F. (2016). Self-reliance: A gender perspective on its relationship to communality and leadership evaluations. *Academy of Management Journal.* doi: 10.5465/amj.2015.0018

Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. *Journal of Applied Psychology, 57*(2), 95-100

Schein, V. E. (1975). Relationships Between Sex Role Stereotypes and Requisite Management Characteristics Among Female Managers. *Journal of Applied Psychology, 60*(3), 340-344

Schein, V. E. (2001). A global look at psychological barriers to women's progress in management. *Journal of Social Issues, 57*(4), 675-688. doi: 10.1111/0022-4537.00235

Schmid, T., & Urban, D. (2015). *Women and Firm Performance: Evidence from Board Member Deaths.* Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2344786

Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment, 8*(4), 350-353. doi: 10.1037/1040-3590.8.4.350

Schneider, M. R., & Bauhoff, F. (2013). Stellenanzeigen und AGG: Von Geschlechtsneutralität noch weit entfernt. [Job advertisements and the General Equal Treatment Act: Far away from gender neutrality.]. *Personal Quarterly, 3*, 15-20

Schuh, S. C., Hernandez Bark, A. S., Van Quaquebeke, N., Hossiep, R., Frieg, P., & Dick, R. (2013). Gender differences in leadership role occupancy: The mediating role of power motivation. *Journal of Business Ethics, 120*(3), 1-17. doi: 10.1007/s10551-013-1663-9

Schwab, A., Werbel, J. D., Hofmann, H., & Henriques, P. L. (2015). Managerial gender diversity and firm performance: An integration of different theoretical perspectives. *Group & Organization Management*. doi: 10.1177/1059601115588641

Schyns, B., & Schilling, J. (2011). Implicit leadership theories: Think leader, think effective? *Journal of Management Inquiry, 20*(2), 141-150. doi: 10.1177/1056492610375989

Schyns, B., von Elverfeldt, A., & Felfe, J. (2008). Is there a male advantage in the effects of feedback and leadership on leaders' occupational self-efficacy? *Equal Opportunities International, 27*(7), 596-612. doi: doi:10.1108/02610150810904300

Scott, K. A., & Brown, D. J. (2006). Female first, leader second? Gender bias in the encoding of leadership behavior. *Organizational Behavior and Human Decision Processes, 101*(2), 230-242. doi: 10.1016/j.obhdp.2006.06.002

Sczesny, S., Bosak, J., Neff, D., & Schyns, B. (2004). Gender stereotypes and the attribution of leadership traits: A cross-cultural comparison. *Sex Roles, 51*(11-12), 631-645. doi: 10.1007/s11199-004-0715-0

Shaughnessy, B. A., Mislin, A. A., & Hentschel, T. (2015). Should he chitchat? The benefits of small talk for male versus female negotiators. *Basic and Applied Social Psychology, 37*(2), 105-117. doi: 10.1080/01973533.2014.999074

Shaw, M. E. (1955). A comparison of two types of leadership in various communication nets. *The Journal of Abnormal and Social Psychology, 50*(1), 127-134. doi: 10.1037/h0041129

Shemla, M., Meyer, B., Greer, L., & Jehn, K. A. (2016). A review of perceived diversity in teams: Does how members perceive their team's composition affect team processes and outcomes? *Journal of Organizational Behavior, 37*, S89-S106. doi: 10.1002/job.1957

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York, NY US: Cambridge University Press.

Sieverding, M. (2003). Frauen unterschätzen sich: Selbstbeurteilungs-Biases in einer simulierten Bewerbungssituation. *Zeitschrift für Sozialpsychologie, 34*(3), 147-161

Sijtsma, K. (2008). On the use, the misuse, and the very limited usefulness of cronbach's alpha. *Psychometrika, 74*(1), 107-120. doi: 10.1007/s11336-008-9101-0

Simpson, R., Sturges, J., Woods, A., & Altman, Y. (2004). Career progress and career barriers: Women MBA graduates in Canada and the UK. *Career Development International, 9*(5), 459-477. doi: 10.1108/13620430410550736

Smith, C., & Bryant, A. (2009). *No Doubts: Women Are Better Managers*. Retrieved from http://www.nytimes.com/2009/07/26/business/26corner.html?_r=0

Spence, J. T., & Buckner, C. E. (2000). Instrumental and expressive traits, trait stereotypes, and sexist attitudes: What do they signify? *Psychology of Women Quarterly, 24*(1), 44-62. doi: 10.1111/j.1471-6402.2000.tb01021.x

Spence, J. T., & Helmreich, R. L. (1978). *Masculinity & femininity: Their psychological dimensions, correlates, and antecedents*. Austin, TX: University of Texas Press.

Stahlberg, D., Sczesny, S., & Braun, F. (2001). Name your favorite musician: Effects of masculine generics and of their alternatives in German. *Journal of Language and Social Psychology, 20*(4), 464-469. doi: 10.1177/0261927x01020004004

Statistisches Bundesamt. (2014). *Auf dem Weg zur Gleichstellung? Bildung, Arbeit und Soziales – Unterschiede zwischen Frauen und Männern*. Retrieved from http://www.destatis.de/DE/Publikationen/WirtschaftStatistik/Arbeitsmarkt/WegZurGleichstellung_82014.pdf?__blob=publicationFile

Statistisches Bundesamt. (2015a). *Frauen in Führungspositionen*. Retrieved from

http://www.destatis.de/DE/ZahlenFakten/Indikatoren/QualitaetArbeit/Dimension1/1_4_Frau
enFuehrungspositionen.html

Statistisches Bundesamt. (2015b). *Rund 80 % der Vä-ter in Eltern-zeit be-ziehen Eltern-geld für 2
Mo-nate*. Retrieved from

http://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2015/03/PD15_109_22
922.html

Steffens, M. C., Schult, J. C., & Ebert, I. D. (2009). Feminization of management leads to backlash
against agentic applicants: Lack of social skills, not gender, determines low hireability
judgments in a student sample. *Psychology Science Quarterly, 51*(1), 16-46

Stempel, C. R., Rigotti, T., & Mohr, G. (2015). Think transformational leadership – Think female?
Leadership, 11(3), 259-280. doi: 10.1177/1742715015590468

Stout, J. G., & Dasgupta, N. (2011). When *He* doesn't mean *You*: Gender-exclusive language as
ostracism. *Personality and Social Psychology Bulletin, 37*(6), 757-769. doi:
10.1177/0146167211406434

Swann, W. B. (1990). To be adored or to be known? The interplay of self-enhancement and self-
verification. In E. T. Higgins & R. M. Sorrentino (Eds.), *Handbook of motivation and
cognition* (pp. 408 - 448). New York: Guilford Press.

Tabachnik, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5 ed.). Boston, MA:
Pearson/Allyn & Bacon.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel
& W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson-
Hall.

Tannen, D. (1990). *You just don't understand: women and men in conversation*. New York:
Morrow.

Taris, T. W., & Bok, I. A. (1998). On gender specificity of person characteristics in personnel advertisements: A study among future applicants. *Journal of Psychology: Interdisciplinary and Applied, 132*(6), 593-610. doi: 10.1080/00223989809599292

Taylor, M. S., & Bergmann, T. J. (1987). Organizational recruitment activities and applicants' reactions at different stages of the recruitment process. *Personnel Psychology, 40*(2), 261-285. doi: 10.1111/j.1744-6570.1987.tb00604.x

Thacker, R. A., & Wayne, S. J. (1995). An examination of the relationship between upward influence tactics and assessments of promotability. *Journal of Management, 21*(4), 739-756. doi: 10.1016/0149-2063(95)90008-X

Thaler-Carter, R. E. (2001). Diversify your recruitment advertising - More companies are adding a diversity element to their recruitment ads. *HR MAGAZINE, 46*(6), 92-101

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440-463. doi: 10.1037/a0018963

Twenge, J. M. (1997). Changes in masculine and feminine traits over time: A meta-analysis. *Sex Roles, 36*(5), 305-325. doi: 10.1007/bf02766650

U.S. Department of Labor. (2014). *Most common occupations for women*. Retrieved from http://www.dol.gov/wb/stats/most_common_occupations_for_women.htm

Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology, 65*(3), 597-660. doi: 10.1111/j.1744-6570.2012.01254.x

Uhlmann, E. L., & Cohen, G. L. (2005). Constructed criteria: Redefining merit to justify discrimination. *Psychological Science, 16*(6), 474-480. doi: 10.1111/j.0956-7976.2005.01559.x

United States Census Bureau. (2015). *Women now at the head of the class, lead men in college attainment*. Retrieved from http://blogs.census.gov/2015/10/07/women-now-at-the-head-of-the-class-lead-men-in-college-attainment/?cid=RS23

van den Brink, M., & Benschop, Y. (2012). Slaying the seven-headed dragon: The quest for gender change in academia. *Gender, Work & Organization, 19*(1), 71-92. doi: 10.1111/j.1468-0432.2011.00566.x

van Dierendonck, D. (2011). Servant leadership: A review and synthesis. *Journal of Management, 37*(4), 1228-1261. doi: 10.1177/0149206310380462

van Quaquebeke, N., & Brodbeck, F. C. (2008). Entwicklung und erste Validierung zweier Instrumente zur Erfassung von Führungskräfte-Kategorisierung im deutschsprachigen Raum [Development and first validation of two scales to measure leader categorization in German-speaking countries]. *Zeitschrift für Arbeits- und Organisationspsychologie A&O, 52*(2), 70-80. doi: 10.1026/0932-4089.52.2.70

Van Vianen, A. E. M., & Fischer, A. H. (2002). Illuminating the glass ceiling: The role of organizational culture preferences. *Journal of Occupational and Organizational Psychology, 75*(3), 315-337. doi: 10.1348/096317902320369730

Vecchio, R. P. (2002). Leadership and gender advantage. *The Leadership Quarterly, 13*(6), 643-671. doi: 10.1016/S1048-9843(02)00156-X

Vecchio, R. P. (2003). In search of gender advantage. *The Leadership Quarterly, 14*(6), 835-850. doi: 10.1016/j.leaqua.2003.09.005

Vinkenburg, C. J., van Engen, M. L., Eagly, A. H., & Johannesen-Schmidt, M. C. (2011). An exploration of stereotypical beliefs about leadership styles: Is transformational leadership a route to women's promotion? *The Leadership Quarterly, 22*(1), 10-21. doi: 10.1016/j.leaqua.2010.12.003

Walker, H. J., & Hinojosa, A. S. (2013). Recruitment: The role of job advertisements. In K. Y. T. Yu & D. M. Cable (Eds.), *The Oxford Handbook of Recruitment*. New York: Oxford University Press.

Wang, X.-H., & Howell, J. M. (2010). Exploring the dual-level effects of transformational

    leadership on followers. *Journal of Applied Psychology, 95*(6), 1134-1144. doi:

    10.1037/a0020754

Welbourne, T. M., Cycyota, C. S., & Ferrante, C. J. (2007). Wall street reaction to women in IPOs:

    An examination of gender diversity in top management teams. *Group & Organization*

    Management, 32(5), 524-547. doi: 10.1177/1059601106291071

Wellington, S., Kropf, M. B., & Gerkovich, P. R. (2003). What's holding women back? *Harvard*

    Business Review, 81(6), 18-19

White, R. K., & Lippitt, R. (1960). *Autocracy and democracy. An experimental inquiry*. New York:

    Harper.

Whorf, B. L. (1956). *Language, thought, and reality*. New York: Wiley.

Willer, R., Rogalin, C. L., Conlon, B., & Wojnowicz, M. T. (2013). Overdoing gender: A test of the

    masculine overcompensation thesis. *American Journal of Sociology, 118*(4), 980-1022. doi:

    10.1086/668417

Williams, J. E., & Best, D. L. (1990). *Measuring sex stereotypes: A multination study*. Thousand

    Oaks, CA: Sage.

Williams, M. J., & Tiedens, L. Z. (2016). The subtle suspension of backlash: A meta-analysis of

    penalties for women's implicit and explicit dominance behavior. *Psychological Bulletin,*

    142(2), 165-197. doi: 10.1037/bul0000039

Williams, M. L., & Bauer, T. N. (1994). The effect of a managing diversity policy on organizational

    attractiveness. *Group & Organization Management, 19*(3), 295-308. doi:

    10.1177/1059601194193005

Williams, R. (2012). *Why women may be better leaders than men - Women's leadership style more*

    suited to modern organizations? Retrieved from

    http://www.psychologytoday.com/blog/wired-success/201212/why-women-may-be-better-

    leaders-men

Wilson VanVoorhis, C. R., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology, 3*(2), 43-50

Wolfram, H.-J., & Gratton, L. (2014). Gender role self-concept, categorical gender, and transactional-transformational leadership: Implications for perceived workgroup performance. *Journal of Leadership & Organizational Studies, 21*(4), 338-353. doi: 10.1177/1548051813498421

Wolfram, H.-J., & Mohr, G. (2010). Gender-typicality of economic sectors and gender-composition of working groups as moderating variables in leadership research. *Gender in Management: An International Journal, 25*(4), 320-339. doi: 10.1108/17542411011048182

Woodall, J., Edwards, C., & Welchman, R. (1997). Organizational restructuring and the achievement of an equal opportunity culture. *Gender, Work & Organization, 4*(1), 2-12. doi: 10.1111/1468-0432.t01-1-00019

Wu, J. B., Tsui, A. S., & Kinicki, A. J. (2010). Consequences of differentiated leadership in groups. *Academy of Management Journal, 53*(1), 90-106. doi: 10.5465/amj.2010.48037079

Yoder, J. D. (2001). Making leadership work more effectively for women. *Journal of Social Issues, 57*(4), 815-828. doi: 10.1111/0022-4537.00243

Young, I. P., Place, A. W., Rinehart, J. S., Jury, J. C., & Baits, D. F. (1997). Teacher recruitment: A test of the Similarity-Attraction hypothesis for race and sex. *Educational Administration Quarterly, 33*(1), 86-106. doi: 10.1177/0013161x97033001005

Appendix

Table A

List of Agentic Attributes measured in Chapter 1

Agenctic Attributes	
Able To Separate Feelings From Ideas	Independent
Achievement-Oriented	Intelligent
Active	Leadership Ability
Ambitious	Logical
Analytical	Objective
Assertive	Organized
Authoritative	Persistent
Bold	Productive
Competent	Relaxed
Competitive	Reliable
Conscientious	Risk-Taking
Consistent	Self-Confident
Decisive	Self-Controlled
Desires Responsibility	Self-Reliant
Direct	Skilled In Business Matters
Dominant	Sophisticated
Effective	Speedy Recovery From Emotional Disturbance
Emotionally Stable	Stands Up Under Pressure
Feelings Not Easily Hurt	Steady
Firm	Strong
Forceful	Task-Oriented
High Need For Power	Vigorous
High Self-Regard	Well-Informed

Table B

List of Communal Attributes measured in Chapter 1

Communal Attributes	
Affectionate	Likeable
Aware Of Others Feelings	Modest
Cheerful	Neat
Collaborative	People-Oriented
Communicative	Relationship-Oriented
Compassionate	Sensitive
Emotional	Sentimental
Generous	Sincere
Gentle	Sociable
Good Natured	Sympathetic
Helpful	Talkative
Humanitarian Values	Tender
Intuitive	Understanding
Kind	Warm

Table C

List of Agentic Characteristics used in Chapter 3 (Pretest)

Agentic Characteristics (and German Translations)

Achievement* (Erfolg*, Leistung*); Adventurous* (Abenteuer*; Risiko*); Activ* (Aktiv*); Aggress* (Aggress*) Ambitio* (Ehrgeiz*; Ambition*); Analy* (Analy*); Assert* (Durchsetz*, Offensiv*); Authorit* (Autoritä*); Athlet* (Athlet*, Sportlich*); Autonom* (Autonom*); Bargainer* (Verhandl*); Boast (Stolz*); Career * (Karriere*) Challeng* (Herausforder*, Anspruch*); To Champion (Einsetz*); Competen* (Fachkompet*, Effektiv*); Competiti* (Konkurren*; Wettbewerb*); Conceptual* (konzept*); Confiden* (Zuversicht*); Control* (Steuerung*; Kontroll*; Überwach*); Courage* (Mutig*); Dare (Trauen); Decisi* (Entscheid*); Demand* (Ausschlaggebend*, Erforder*, Forder*, Maßgeblich*, Voraussetz*); Demonstrate* (Beweis*, Bewies*); Determin* (Entschlossen*; Entschluss*; Zielstreb*; Entschieden*, Resolut*); Direct* (Direkt*); Discipline* (Disziplin*); Domina* (Domin*, Beherrsch*, Bestimm*); Dynamic* (Dynami*); Elite* (Elite*); Enforce* (Durchführ*); Entrepreneur* (Unternehmer*); Exclusive* (Exklusiv*); Firm* (Standhaft*); Force* (Energisch*, Konsequent*, Einfluss*); Hands-on (Hands-on); Hard-working (Einsatz*); Headstrong (Eigensinn*); Hierarch* (Hierarch*, Status*); Impulsiv* (Impuls*); Independen* (Unabhängig*); Individual* (Individuell*); Intellect* (Intell*); Innovat* (Innovat*; Erfind*); Lead* (Führ*, Leit*, Lead*); Logic* (Logik, logisch*); Market-orient* (Marktorientier*); Masculin* (Maskulin*, Männlich*); Objectiv* (Objectiv*, Sachlich*); Opinion* (Meinung*); Outspoken (geradeheraus); Outstand* (Hervorragen*, Herausragen*, Exzellen*, Überdurchschnitt*); Performance-orient* (Ergebnisorientier*, Performance*); Persist* (Beharr*, Hartnäckig*); Persuasive* (Überzeug*); Professional* (Professionell*, Fachmännisch*), Power (Macht*, mächtig*); Rational* (Rational*); Self-Confiden* (Selbstbewusst*, Souverän*, Sicher*; Selbstsicher*); Self-Controll* (kontroll*); Self-Relian* (Eigenständig*; Selbstständig*); Self-sufficien* (Autark*); Skilled in Business Matters (Kaufm*); Solution-orient* (Lösungsorient*); Steady* (Stabil*); Strateg* (Strateg*, Gesamtstrateg*); Task-orient* (Aufgabenorientier*); Superior* (Überdurchschnitt*, besonder*); Work under pressure (Belastbar*); Versed (Versiert*); Vigorous* (Stark*, Stärk*, Verstärk*, Intensiv*)

Table D

List of Communal Characteristics used in Chapter 3 (Pretest)

Communal Characteristics (and German Translations)
Accompany (Begleit*); Acquaint* (kennenlern*); Administrati* (Administra*); Affectionate (Lieb*; Herzlich*); Affiliat* (Zugehörig*; Anschließ*; Anschluss*); Agreeable (Angenehm*); Appreciat* (Wertschätz*; Dank*); Authentic* (Authenti*); Care for (Betreu*; Pflege*, Sorg*); Cheer* (Freud*, Froh*, Fröhl*, Spaß*, Gern*); Child* (Kind*); Collaborat* (Kollab*, Beteilig*, Mitwirk*); Collective* (Kollektiv*); Commit* (Engag*; Verpflicht*); Commun* (Kommun*); Compassion* (Mitfühl*; Mitgefühl*); Connect* (Verbind*, Verbund*); Considerat* (Fürsorg*; Rücksicht*, Aufmerksam*, Umsicht*); Cooperati* (Kooper*; Kollegi)*); Creativ* (Kreativ*); Customer-orient* (Kundenorien*); Depend* (Abhängig*; Zuverlässig*; Verläss*); Empath* (Einfühl*, Empath*); Emotiona* (Emotion*); Encourag* (Ermutig*); Family (Familie*, Familiär*); Feel* (Fühl*, Empfind*; Spür*; Gespür*; Gefühl*); Feminin* (Weiblich*, Feminin*); Gentle (Sanft*); Good Contactual Skills (Kontaktfreu*); Harmon* (Harmoni*); Helpful* (Hilf*, Behilf*, Helfen*, Beistehen*); Honest* (Ehrlich*, Aufrichtig*); Interdependen* (Interdependen*); Interpersona* (Zwischenmenschlich*; Interpersona*); Intuitiv* (Intuiti*); Fair* (Gerecht*; Fair*; Ethi*); Kind* (Nett*, Freund*); Loyal* (Loyal*, Treu*); Modest* (Anständig*; Bescheiden*); Motivational (Motivieren*); Nurtur* (Förder*); Passion* (Leidenschaft*); Person-orient* (Personenorient*); Pleasant* (Ansprechend*); Polite* (Höflich*); Quiet (Ruhe, Ruhig*); Relationship-oriented (Beziehungsorient*); Reliable* (Gewissenh*, strukturier*); Responsib* (Verantwort*, Eigenverantwort*); Responsibility for employees (Mitarbeiterverantwortung); Sensitiv* (Sensi*); Service mentality (Servicementalität*; Dienstleistungsmentalität*); Service-oriented (Serviceorient*; Dienstleistungsorient*); Social* (Sozial*); Submissi* (Unterordn*, Untergeordn*); Support* (Unterstütz*); Sustainab* (Nachhaltig*); Sympath* (Sympath*); Talent* (Begabung*, Talent*); Team* (Team*); Tender* (Empfind*); Together (Gemeinsam*; Zusammen*, Miteinander); Toleran* (Toler*); Trust (Vertrau*); Understand* (Verständ*, Versteh*, Einsicht*, Einseh*; Nachempfind*); Warm* (Warm*); Yield* (Einbringen)

Table E

ANCOVA main and interaction effects for TFL dimensions individualized consideration and intellectual stimulation (Chapter 4, Study 3)

	Main Effects		Interaction Effect
	Individualized consideration	*Target Gender*	*Individualized consideration x Target Gender*
Communality	$F(1, 69) = 37.54, p < .001, \eta_p^2 = .35$	$F(1, 69) = 2.40, p = .126, \eta_p^2 = .03$	$F(1, 69) = 1.24, p = .269, \eta_p^2 = .02$
Agency	$F(1, 69) = 18.20, p < .001, \eta_p^2 = .21$	$F(1, 69) = 3.86, p = .054, \eta_p^2 = .05$	$F(1, 69) = 1.30, p = .259, \eta_p^2 = .02$
Leadership Effectiveness	$F(1, 69) = 21.71, p < .001, \eta_p^2 = .24$	$F(1, 69) = 5.97, p = .017, \eta_p^2 = .08$	$F(1, 69) = .31, p = .577, \eta_p^2 = .01$
Promotability	$F(1, 69) = 16.67, p < .001, \eta_p^2 = .20$	$F(1, 69) = 11.07, p = .001, \eta_p^2 = .14$	$F(1, 69) = .11, p = .747, \eta_p^2 = .00$
	Intellectual Stimulation	*Target Gender*	*Intellectual Stimulation x Target Gender*
Communality	$F(1, 69) = 15.46, p < .001, \eta_p^2 = .18$	$F(1, 69) = 1.01, p = .319, \eta_p^2 = .01$	$F(1, 69) = .03, p = .862, \eta_p^2 = .00$
Agency	$F(1, 69) = 15.43, p < .001, \eta_p^2 = .18$	$F(1, 69) = 2.32, p = .132, \eta_p^2 = .03$	$F(1, 69) = .31, p = .579, \eta_p^2 = .00$
Leadership Effectiveness	$F(1, 69) = 15.61, p < .001, \eta_p^2 = .18$	$F(1, 69) = 3.82, p = .055, \eta_p^2 = .05$	$F(1, 69) = .09, p = .762, \eta_p^2 = .00$
Promotability	$F(1, 69) = 9.32, p = .003, \eta_p^2 = .12$	$F(1, 69) = 8.38, p = .005, \eta_p^2 = .11$	$F(1, 69) = 1.33, p = .253, \eta_p^2 = .02$

Table F

ANCOVA main and interaction effects for TFL dimensions inspirational motivation and idealized influence (Chapter 4, Study 3)

	Main Effects		Interaction Effect
	Inspirational Motivation	*Target Gender*	*Inspirational Motivation x Target Gender*
Communality	$F(1, 69) = 18.39, p < .001, \eta_p^2 = .21$	$F(1, 69) = .35, p = .558, \eta_p^2 = .01$	$F(1, 69) = .42, p = .520, \eta_p^2 = .01$
Agency	$F(1, 69) = 15.39, p < .001, \eta_p^2 = .18$	$F(1, 69) = 1.34, p = .252, \eta_p^2 = .02$	$F(1, 69) = .69, p = .410, \eta_p^2 = .01$
Leadership Effectiveness	$F(1, 69) = 11.63, p = .001, \eta_p^2 = .14$	$F(1, 69) = 2.55, p = .115, \eta_p^2 = .04$	$F(1, 69) = .68, p = .412, \eta_p^2 = .01$
Promotability	$F(1, 69) = 6.35, p = .014, \eta_p^2 = .08$	$F(1, 69) = 6.65, p = .012, \eta_p^2 = .09$	$F(1, 69) = .50, p = .484, \eta_p^2 = .01$
	Idealized Influence	*Target Gender*	*Idealized Influence x Target Gender*
Communality	$F(1, 69) = 20.63, p < .001, \eta_p^2 = .23$	$F(1, 69) = .22, p = .638, \eta_p^2 = .00$	$F(1, 69) = .46, p = .501, \eta_p^2 = .01$
Agency	$F(1, 69) = 14.70, p < .001, \eta_p^2 = .18$	$F(1, 69) = 1.17, p = .283, \eta_p^2 = .02$	$F(1, 69) = .34, p = .560, \eta_p^2 = .01$
Leadership Effectiveness	$F(1, 69) = 37.05, p < .001, \eta_p^2 = .35$	$F(1, 69) = 1.78, p = .186, \eta_p^2 = .03$	$F(1, 69) = .15, p = .698, \eta_p^2 = .00$
Promotability	$F(1, 69) = 22.19, p < .001, \eta_p^2 = .24$	$F(1, 69) = 5.82, p = .018, \eta_p^2 = .08$	$F(1, 69) = .00, p = .972, \eta_p^2 = .00$

Table G

Means (and standard errors) for individualized consideration (Chapter 4, Study 3)

| | Individualized Consideration | | | |
| | Low | | High | |
	Men	Women	Men	Women
Communality	4.56$_a$ (.27)	3.86$_a$ (.26)	5.87$_b$ (.26)	5.75$_b$ (.27)
Agency	5.09$_a$ (.28)	4.25$_b$ (.27)	5.94$_c$ (.27)	5.72$_{a,c}$ (.28)
Leadership Effectiveness	3.75$_a$ (.38)	2.72$_a$ (.37)	5.37$_b$ (.37)	4.58$_b$ (.38)
Promotability	4.16$_a$ (.37)	2.93$_b$ (.36)	5.62$_c$ (.36)	4.43$_a$ (.37)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher communality, agency, leadership effectiveness and higher evaluations of promotability of target team members. Means are adjusted for the covariate evaluator age. Means in a row with different subscripts differ significantly at $p < .05$ as indicated by pairwise comparisons.

Table H

Means (and standard errors) for intellectual stimulation (Chapter 4, Study 3)

| | Intellectual Stimulation | | | |
| | Low | | High | |
	Men	Women	Men	Women
Communality	4.51_a (.32)	4.26_a (.29)	5.76_b (.28)	5.41_b (.32)
Agency	4.97_a (.30)	4.38_a (.27)	5.94_b (.26)	5.67_b (.31)
Leadership Effectiveness	3.60_a (.41)	2.97_a (.38)	5.31_b (.36)	4.42_b (.42)
Promotability	3.97_a (.40)	3.33_a (.37)	5.61_b (.35)	4.06_a (.41)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher communality, agency, leadership effectiveness and higher evaluations of promotability of target team members. Means are adjusted for the covariate evaluator age. Means in a row with different subscripts differ significantly at $p < .05$ as indicated by pairwise comparisons.

Table I

Means (and standard errors) for inspirational motivation (Chapter 4, Study 3)

| | Inspirational Motivation | | | |
| | Low | | High | |
	Men	Women	Men	Women
Communality	4.56$_a$ (.33)	4.19$_a$ (.27)	5.64$_b$ (.26)	5.65$_b$ (.32)
Agency	4.98$_a$ (.32)	4.42$_a$ (.25)	5.86$_b$ (.25)	5.77$_b$ (.31)
Leadership Effectiveness	3.52$_a$ (.45)	3.21$_a$ (.36)	5.23$_b$ (.35)	4.25$_{a,b}$ (.44)
Promotability	4.11$_a$ (.44)	3.37$_a$ (.35)	5.39$_b$ (.35)	4.09$_a$ (.43)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher communality, agency, leadership effectiveness and higher evaluations of promotability of target team members. Means are adjusted for the covariate evaluator age. Means in a row with different subscripts differ significantly at $p < .05$ as indicated by pairwise comparisons.

Table J

Means (and standard errors) for idealized influence (Chapter 4, Study 3)

| | Idealized Influence | | | |
| | Low | | High | |
	Men	Women	Men	Women
Communality	4.58$_a$ (.31)	4.24$_a$ (.25)	5.72$_b$ (.27)	5.78$_b$ (.34)
Agency	5.00$_a$ (.30)	4.52$_a$ (.24)	5.93$_b$ (.26)	5.79$_b$ (.33)
Leadership Effectiveness	3.44$_a$ (.37)	2.82$_a$ (.30)	5.45$_b$ (.32)	5.12$_b$ (.41)
Promotability	3.95$_a$ (.38)	3.06$_a$ (.31)	5.64$_b$ (.33)	4.78$_b$ (.42)

Note. Ratings were given on a 7-point scale in which higher scores indicate higher communality, agency, leadership effectiveness and higher evaluations of promotability of target team members. Means are adjusted for the covariate evaluator age. Means in a row with different subscripts differ significantly at $p < .05$ as indicated by pairwise comparisons