

Recruiting Diverse Talents: Empirical Findings on Gender Bias and Practical Advice for Increasing Diversity in Leadership and the STEM Fields

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Vollständiger Abdruck der von der TUM School of Management der Technischen Universität München zur Erlangung einer

Doktorin der Wirtschafts- und Sozialwissenschaften (Dr. rer. pol.) genehmigten Dissertation.

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Die Dissertation wurde am 21.07.2022 bei der Technischen Universität München eingereicht und durch die TUM School of Management am 15.09.2022 angenommen.

ACKNOWLEDGEMENTS

"If I have seen further it is by standing on the shoulders of giants." – Isaac Newton

Thank you, **Prof. Dr. Claudia Peus**, for supervising my dissertation and your continuing support and guidance, helping me advance both professionally and personally.

"A mentor is someone who allows you to know that no matter how dark the night, in the morning joy will come." – Oprah Winfrey

Thank you, **Dr. Sylvia Hubner**, for being my dissertation mentor. You are the best mentor I could have wished for – and a friend.

I also want to thank you, **Prof. Dr. Alwine Mohnen**, for chairing my dissertation committee and your personal and career support during the Research Excellence Program and **Prof. Dr. Susanne Braun** for sparking my interest in research and your help during my journey.

I was very lucky working with such amazing and brilliant colleagues at the Chair of Research and Science Management, who mentored and encouraged me:

"We are what our great mentors have taught us." - Lailah Gifty Akita

Thank you, **Dr. Franziska Emmerling**, for always lifting me up and being right there with help and advice.

Thank you, **Dr. Tanja Hentschel**, for encouraging me to pursue a doctorate, inspiring my research, and your invaluable inputs.

Also many thanks to **Dr. Lisa Horvath** and **Dr. Armin Pircher Verdorfer** for your very helpful inputs, feedback, and advice.

"Teamwork makes the team work." – Gareth Bell, an Interview with Meredith Belbin

Thank you, Anna Brzykcy, Jakub Cichor, Leidy Cubillos-Pinilla, Enikö D'Errigo, Maxim Egorov, Martin Fladerer, Alina Gales, Eleni Georganta, Jamie Gloor, Elke Graf, Sylvia Hubner, Kristin Knipfer, Hannah Kunde, Kerstin Löwe, Stephanie Rehbock, Biljana Rudic, Ellen Schmid, Ulf Steinberg, Selina Stracke, Mojtaba Salem, and Clarissa Zwarg.

"The best thing to hold onto in life is each other." – Audrey Hepburn

Thank you, **Tobias Hagl**, for always supporting and encouraging me, your honest feedback and invaluable thoughts on my research. Whenever I did not believe in myself – you did!

Last but not least, many thanks to my family and friends for always being there for me.

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ABSTRACT

To increase diversity in leadership and STEM (science, technology, engineering, and mathematics), organizations need to *attract* and *select* talents in all their diversity, who need to find fair organizational environments, in order to *develop* their full potential (Hentschel, Braun, et al., 2019; Peus, Braun, Hentschel, et al., 2015; Peus, Welpe, et al., 2015). Women are underrepresented in leadership, and particularly in top positions in STEM (for overviews see Catalyst, 2020a, 2020b, 2020c; Scott et al., 2018). Gender stereotypes and related biases influence their attraction to such positions (e.g., Gaucher et al., 2011; Hentschel et al., 2021), selection decisions (e.g., Heilman, 2012; Moss-Racusin et al., 2012), and the subjective perception of leadership skills and behavior (e.g., Eagly & Karau, 2002; Hentschel, Braun, et al., 2018). As the biases are hindrances to diversity efforts and women's career progress, it is crucial to gain comprehensive knowledge about their nature and influence, to take effective measures on system, organizational, and individual level (Peus & Welpe, 2011).

Hence, this dissertation aims to extend our knowledge on stereotype influences and gender biases in the context of leadership and the STEM fields. I examined the mechanisms and boundary conditions of signaling family friendliness in attracting diverse talents (chapter 2). Furthermore, I investigated the role of stereotypes, stereotypical recruitment material, work context, and applicant gender in evaluating diverse talents for selection (chapter 3). Finally, as to providing fair organizational environments for diverse talents, I tested for gender biases in the perception and evaluation of their leadership shortcomings (chapter 4).

The findings of this dissertation offer novel insights into the influence of gender stereotypes in recruitment and leadership evaluation, presenting quantitative empirical evidence, mainly from controlled experimental studies. First, they indicate that gender stereotypes influence potential applicants' perceptions due to family friendliness signals in recruitment, specifically their perception of potential (future) coworkers. Signaling family friendliness showed positive effects in applicant attraction but also the potential downside of

low anticipated coworker achievement orientation, which organizations can counter by additionally emphasizing career prospects. Second, my findings suggest that perceived agentic, stereotypically male qualities are relevant specifically for perceived applicant fit to leadership jobs in male-dominated fields, and stereotypical patterns of evaluation are strengthened by stereotype-congruent recruitment material. They also indicate that women even have a higher need to be perceived as agentic than men, as they were otherwise ascribed a lack of fit for such jobs perceived as high in status (Heilman, 1983, 2012). Third, my findings provide support for gender biases in the perception and evaluation of destructive leadership for male versus female leaders; specifically, indications for different standards of evaluating their leader behavior and harsher evaluations for female leaders.

The practical implications of my findings, which I illustrate in chapters 2-4 and the final conclusion (chapter 5), overall support the notion that barriers to women's progress into leadership and the STEM fields need to be addressed at different levels (Peus & Welpe, 2011), in order to ensure that women apply, are selected, and receive fair treatment in those work contexts (Hentschel, Braun, et al., 2019; Peus, Braun, Hentschel, et al., 2015).

ABSTRACT (GERMAN)

Um die Diversität in Führungspositionen und in MINT (Mathematik, Informatik, Naturwissenschaften und Technik) zu erhöhen, müssen Organisationen Talente in ihrer ganzen Vielfalt *ansprechen* und *auswählen*, sowie ein faires Umfeld schaffen, damit diese ihr volles Potential *entwickeln* können (Hentschel, Braun, et al., 2019; Peus, Braun, Hentschel, et al., 2015; Peus, Welpe, et al., 2015). Frauen sind unterrepräsentiert in Führungspositionen und insbesondere in Spitzenpositionen in MINT (s. Catalyst, 2020a, 2020b, 2020c; Scott et al., 2018 für Überblicke). Geschlechterstereotype und damit verbundene Wahrnehmungs- und Beurteilungsverzerrungen (Biases) beeinflussen, inwiefern sich Frauen angesprochen fühlen (e.g., Gaucher et al., 2011; Hentschel et al., 2021), Auswahlentscheidungen (e.g., Heilman, 2012; Moss-Racusin et al., 2012) und die subjektive Wahrnehmung von Führungsfähigkeiten und -verhalten (e.g., Eagly & Karau, 2002; Hentschel, Braun, et al., 2018). Da die Biases Hindernisse für Bemühungen um mehr Diversität und das berufliche Vorankommen von Frauen darstellen, ist es von entscheidender Bedeutung, umfassende Kenntnisse über deren Natur und Einfluss zu erlangen, um wirksame Maßnahmen auf den Ebenen des Systems, der Organisation und des Individuums zu ergreifen (Peus & Welpe, 2011).

Ziel dieser Dissertation ist daher, unser Wissen über stereotype Einflüsse und Gender Biases im Kontext Führung und MINT zu erweitern. Dazu wurden die Mechanismen und Rahmenbedingungen der Signalisierung von Familienfreundlichkeit bei der Gewinnung diverser Talente untersucht (Kapitel 2). Außerdem habe ich die Rolle von Stereotypen, stereotypem Rekrutierungsmaterial, dem Kontext und dem Bewerber*innen-Geschlecht bei der Bewertung diverser Talente für deren Auswahl untersucht (Kapitel 3). Schließlich wurden, im Hinblick auf die Schaffung eines fairen Umfelds für diverse Talente, Gender Biases in der Wahrnehmung und Bewertung von Führungsdefiziten untersucht (Kapitel 4).

Die Ergebnisse dieser Dissertation liefern neue Erkenntnisse zum Einfluss von Geschlechterstereotypen bei der Rekrutierung und Bewertung von Führungskräften und präsentieren quantitative empirische Befunde, überwiegend aus experimentellen Studien. Erstens weisen meine Ergebnisse darauf hin, dass Geschlechterstereotype die Wahrnehmung potentieller Bewerber*innen aufgrund von Familienfreundlichkeitssignalen in der Rekrutierung beeinflussen, insbesondere ihre Wahrnehmung von potentiellen Kolleg*innen. Die Signalisierung von Familienfreundlichkeit zeigte positive Auswirkungen in Bezug auf die Attraktivität für Bewerber*innen; es zeigte sich auch ein potentiell nachteiliger Nebeneffekt einer geringer antizipierten Leistungsorientierung von Kolleg*innen, dem durch eine zusätzliche Betonung der Karriereaussichten in der Organisation entgegengewirkt werden kann. Zweitens deuten meine Ergebnisse darauf hin, dass wahrgenommene agentische, stereotyp männliche Eigenschaften besonders relevant sind für die wahrgenommene Eignung von Bewerber*innen für Führungspositionen in männlich dominierten Feldern und stereotype Bewertungsmuster durch stereotyp-kongruentes Einstellungsmaterial verstärkt werden. Auch scheint es für Frauen sogar wichtiger als für Männer als agentisch wahrgenommen zu werden, da Frauen ansonsten eine mangelnde Passung für Positionen mit (wahrgenommenem) hohen Status zugeschrieben wurde (Heilman, 1983, 2012). Drittens liefern die Ergebnisse Befunde zu geschlechtsspezifischen Verzerrungen in der Wahrnehmung und Bewertung destruktiver Führung, insbesondere zeigen sie Hinweise auf unterschiedliche Maßstäbe bei der Bewertung des Führungsverhaltens von männlichen und weiblichen Führungskräften und strengere Bewertungen für weibliche Führungskräfte.

Die praktischen Implikationen der Ergebnisse, die ich in den Kapiteln 2-4 und im abschließenden Kapitel 5 darlege, unterstützen insgesamt, dass Hindernisse für den Aufstieg von Frauen in Führungspositionen und in den MINT-Feldern auf verschiedenen Ebenen adressiert werden müssen (Peus & Welpe, 2011), um sicherzustellen, dass sich Frauen in diesen Arbeitskontexten bewerben, ausgewählt werden und eine faire Behandlung erfahren (Hentschel, Braun, et al., 2019; Peus, Braun, Hentschel, et al., 2015).

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1. INTRODUCTION

"Human communities depend upon a diversity of talent not a singular conception of ability."

— Sir Ken Robinson

"Science is not a boy's game, it's not a girl's game. It's everyone's game."

— Nichelle Nichols

The "leaky pipeline" phenomenon describes a dropout of women across career levels (van Anders, 2004), evident in non-academic and academic careers (for overviews of global numbers see Catalyst, 2020a, 2020b), and in the STEM fields of science, technology, engineering, and mathematics, specifically (also "leaky tech pipeline", Scott et al., 2018). Overall, fewer women than men are pursuing STEM careers; additionally, despite gains, women's representation strongly varies depending on the position and field (e.g., Anger et al., 2021; GWK, 2020; Leslie et al., 2015). For instance, almost equally represented in college students, women still make up for more than one third of PhDs in STEM fields (with higher shares in fields such as biology and neuroscience, and lower shares in more male stereotyped fields such as mathematics and physics, though; GWK, 2020; Leslie et al., 2015). However, many of the qualified women do not advance to leadership positions, leaving them vastly underrepresented in top academic positions in STEM fields (where women's share usually is under one third; Dubois-Shaik & Fusulier, 2015; GWK, 2020; McCullough, 2020).

Failing to rely upon a diversity of talent, especially in innovation-driven domains, means not leveraging the potential of diverse (management) teams, which are likely to have higher creative and innovative capacity (Peus & Traut-Mattausch, 2007; Tadmor et al., 2012; Welbourne et al., 2007). More so, "gender blindness" in innovative teams can pose a serious problem, such as when overlooking safety issues for women due to applying a gender-specific, and hence biased, assessment and approach in product design and medical care (e.g.,

nursing robots, voice control, and safety belts tailored to the male gender, and lower detection rates of heart attack symptoms in women; Criado Perez, 2019; Harris & Douglas, 2000). Additionally, benefits of female representation in management teams include financial performance gains (Arnaboldi et al., 2021; Post & Byron, 2015); however, not disregarding the overall value of women and general diversity in leadership positions, above and beyond a rewarding "business case," enabling equal participation (Hoobler et al., 2018; Siegel, 2005).

Despite efforts and growing awareness for (gender) diversity gains, driven by further substantial research (e.g., Byron & Post, 2016; Eagly & Carli, 2003; Wayne & Casper, 2012), gender stereotypes and related bias to women's advancement in STEM and their representation in leadership positions persist (Begeny et al., 2020; Heilman, 2012; Koch et al., 2015). Gender stereotypes, generalized beliefs about men and women (Heilman, 2012), are still found to account for ascribing different characteristics to men and women (Eagly et al., 2019), including how they see themselves (Hentschel, Heilman, et al., 2019; Hsu et al., 2021). Women in general are ascribed more communal attributes (such as understanding, sensitive, and caring; Bakan, 1966; Eagly et al., 2019; Heilman, 2001), associated with a primary caregiver role (Eagly & Steffen, 1984; Eagly & Wood, 2012; see also Gloor et al., 2018). The male stereotype implies more agentic attributes (such as dominant, ambitious, and assertive; Bakan, 1966; Eagly et al., 2019; Heilman, 2001), better aligning with stereotypical notions of leaders (Koenig et al., 2011; Schein, 2001) and STEM professionals or scientists (Carli et al., 2016; Cejka & Eagly, 1999; Male et al., 2009). That way, gender stereotypes potentially induce a perceived "lack of fit" for women in male-dominated and male stereotyped work contexts (Heilman, 1983, 2012). Also, they function as prescriptive gender norms (Bem, 1974; Heilman, 2001; Prentice & Carranza, 2002). Therefore, the display of agentic behaviors and qualities (seen as incongruent with the female gender role but thought to be essential in leader roles) may be evaluated less favorable and result in social backlash for women (Eagly & Karau, 2002; Rudman & Glick, 2001; Rudman & Phelan, 2008).

Having said that, there are multiple strategies to limit gender bias, and to increase and sustain gender diversity in leadership and STEM (see e.g., Greider et al., 2019). These include measures of *attracting* and *selecting* talents in all their diversity, and providing fair organizational environments, allowing them to *develop* their full potential (Hentschel, Braun, et al., 2019; Peus, Braun, Hentschel, et al., 2015; Peus, Welpe, et al., 2015). Along these lines, gender bias can intervene and impede women's career progression. Therefore, the aim of this dissertation was to generate new evidence on gender bias in attracting, selecting, and developing gender-diverse talents that will yield practical implications for increasing diversity in leadership and the STEM fields, as guided by the research questions explained in the next section.

Research Questions

Strategies to limit gender bias in the *attraction* of new talent include gender-fair wording of job advertisements. Those avoid manifestations of male stereotypes which decrease women's self-ascribed fit and intent to apply (Gaucher et al., 2011; Hentschel et al., 2021). Additionally, research revealed recruitment cues such as emphasizing diversity values (Brown et al., 2006; Wayne & Casper, 2012) or the supportive nature of the organization's culture (Catanzaro et al., 2010; Wayne & Casper, 2016) to reach more diverse and ultimately larger applicant pools (see also Hentschel & Horvath, 2015). One particularly effective tool may be recruitment cues on family friendliness, as family friendliness is considered to foster women's participation in leadership and STEM, where qualified women may anticipate a lack of stereotypically female, communal values and other-orientation (Diekman et al., 2015; Weisgram & Diekman, 2015; see also Greider, 2019; Peus & Welpe, 2011). Indeed, family friendliness signals, often in regards to specific human resources (HR) policies, are found to foster the attraction of applicants (e.g., Casper & Buffardi, 2004; Wayne & Casper, 2012), and potentially attract women in particular (Wayne & Casper, 2016).

Despite, in attracting talent, research also suggests that the deep-level attributes of recruitment targets (such as their family values) may have a greater effect on the recruitment value of family-friendly HR policies than their surface-level attributes (such as their gender; Casper et al., 2013). Therefore, the deep-level attributes of (female and male) potential applicants may be boundary conditions of the effects of signaling the organization's family friendliness in applicant attraction, specifically of their underlying mechanisms (such as effects via anticipated support; Wayne & Casper, 2012). However, the underlying mechanisms of the effects of family friendliness signals in recruitment, potential downsides that may limit the positive effects of the signals, and boundary conditions that accentuate or attenuate the effects need further investigation (Casper et al., 2013; Perrigino et al., 2018; Wayne & Casper, 2012, 2016). Deeper knowledge about these aspects, and of how effects of a family friendliness signal are influenced by its communal stereotype (Pietraszkiewicz et al., 2019; Rudman & Mescher, 2013), can support (family-friendly) organizations in leveraging the benefits of the signal while counterbalancing the potential downsides. Hence, I set out to investigate the following research question (RQ):

RQ 1: What are the mechanisms and boundary conditions that contribute to or counteract the positive effects of family friendliness signals in recruitment?

Turning to the *selection* of gender-diverse talents, empirical evidence demonstrates that the qualities and behaviors valued and necessary in leadership are multifaceted, also including communal ones (such as social skills and person-orientation; Cann & Siegfried, 1990; Eagly & Carli, 2003; Rehbock, Knipfer, et al., 2021). Additionally, research suggests a "leadership advantage" for women, pertaining to their effective leadership style, albeit facing prejudice due to their gender for engaging in a male stereotyped domain (Eagly & Carli, 2003; Eagly et al., 2003). Indeed, the male stereotype of leadership seems to be quite persistent, and the perceived requirements likely also depend on the (stereotyped) context within leadership takes place, on male, agentic stereotypes in STEM (Carli et al., 2016; Cejka

& Eagly, 1999; Gaucher et al., 2011; Glick, 1991; Heilman, 2012; Koenig et al., 2011; Schein, 2001). This lies at the core of ascribing (thought to be communal) women a lack of fit (Heilman, 1983, 2012).

Moreover, stereotype-congruent recruitment material may reinforce presumptions of stereotypically male, agentic requirements and thus influence evaluators' fit perceptions (similar to its influence on potential applicants' perceptions; Gaucher et al., 2011; Hentschel et al., 2021). Nevertheless, gender stereotypes evolve (e.g., closing a perceived gender gap in competence; Eagly et al., 2019; Hentschel, Heilman, et al., 2019) and likely also depend on the (occupational) context and social categorizations that add to a person's gender (Eagly & Karau, 2002; Eagly & Steffen, 1984; Eckes, 2002; Heilman et al., 1989). Thus, context is likely an important consideration shaping evaluators' (stereotyped) perceptions of the requirements of a work context, the applicants, and, hence, applicant fit (Kristof-Brown, 2000). Therefore, I set out to expand our knowledge on the following research question:

RQ 2: How does stereotype-congruent recruitment material influence evaluators' perceptions of applicant fit to STEM leadership jobs, and how does context (field and leadership vs. non-leadership job) play a role for perceptions of applicants and their fit?

Moving forward, allowing the recruited talents in all their diversity to *develop* their full potential is key (see e.g., De Pater et al., 2010; Hentschel, Braun, et al., 2019; Ryan & Haslam, 2007), as an integral part of diversity management and inclusion (Harvey, 1999; Mor Barak, 2015; Roberson, 2006). This entails living up to the diversity values advertised, and providing a culture that serves diversity and inclusion needs (Shore et al., 2011; see also Brown et al., 2006), as well as fair treatment and parameters in performance evaluations, incorporated in the organizational system (Heilman, 2012; Mor Barak, 2015; Roberson, 2006). Gender biases in evaluations of leader behavior are a hindrance to these efforts, and to women's further career progression (Eagly & Karau, 2002; Greider et al., 2019; Heilman,

2012). Due to stereotype-based assumptions and gender norms, female leaders need to manage a paradoxical tension of agentic and communal expectations to their behavior (serving the (stereotypical) leader role and their gender role; Zheng et al., 2018; see also Eagly & Karau, 2002). For instance, women who display agentic behaviors are found to be perceived as insufficiently nice and less socially skilled than their male counterparts, specifically when engaging in dominant behaviors and not showing communality (Rudman & Glick, 1999, 2001). In addition, research suggests "double standards" in evaluating women's competence, implying higher performance standards for women than men (Foschi, 2000; see also Biernat & Kobrynowicz, 1997; Eagly & Carli, 2003). This aligns with recommendations to take the narrative of diversity as a "business case" with a grain of salt, bearing the risk of placing higher expectations to female than male leaders as to promoting the organization's economic success (Hoobler et al., 2018; Siegel, 2005).

Taken together, female leaders are likely to be held to different standards than male leaders when evaluating their leadership skills and behavior (Biernat et al., 2010; Eagly & Carli, 2003; Eagly & Karau, 2002; Heilman, 2012). Accordingly, they may also be held to different standards when evaluating their leadership shortcomings (Kim et al., 2021; see also Abbott, 2021; Judge, 2020; McGann, 2019). For instance, previous research suggests that women are generally more likely than men to be ascribed interpersonal hostility or experience other forms of negative evaluation, when they do not meet communal norms (such as when they are not responsive to others' needs; Heilman & Chen, 2005; Heilman & Okimoto, 2007). However, while there is research on the influence of gender stereotypes in evaluating positive leader behavior (such as authentic or transformational leadership; Braun et al., 2018; Hentschel, Braun, et al., 2018), little is known on their influence in the perception and evaluation of negative, destructive leader behavior (Kim et al., 2021). Thus, it is important to gain further insights, especially in light of recent publicized allegations of destructive leadership in academic STEM fields with seemingly overrepresented female perpetrators

(Abbott, 2021; von Bredow, 2021) – a striking mismatch with their significant underrepresentation as leaders in these contexts (GWK, 2020; see 500WomenScientists, 2021). Therefore, I investigated the following research question with a focus on leadership in STEM academia:

RQ 3: Are male and female science leaders perceived and evaluated differently when they are (perceived as) showing destructive leadership?

Overview of the Studies

I examined the research questions conducting nine experimental studies (and additional pre-tests) and analyzing the data of a field survey, described in the following chapters (chapter 2 on signaling effects of family friendliness, chapter 3 on perceived fit to leadership jobs in STEM, and chapter 4 on perceptions and evaluations of destructive leadership). In each of the chapters, summarized in the following paragraphs, I present the individual research works and studies in detail, including their theoretical background, hypotheses, findings, implications, and limitations.

In **chapter 2**, I present an experimental study with young adults (N = 382), which I designed to investigate how a signal of family friendliness in recruitment material shapes potential applicants' perceptions of the organization and coworkers, and whether perceptions are gendered. To do so, I varied signals of employee benefits (family friendliness compared to no signal, and to career prospects as a reference signal) in job advertisements, and then measured participants' perceptions of the organization and coworkers. Additionally, I investigated the role of individual family and career role commitment, and gender, respectively, to examine boundary conditions of the signaling effects of family friendliness. The research context was an entry-level position in a STEM (non-academic) organization.

In **chapter 3**, I present a series of seven experimental studies on stereotype biases in perceived fit for leadership jobs in STEM fields, in academic and non-academic contexts. In the studies with students, scientists, and leaders ($N_{\text{total}} = 2461$, including pre-tests), I

investigated the relevance of perceived applicant agency for perceived applicant fit; thereby, I examined the influence of stereotype-congruent (vs. -incongruent) recruitment material, and the role of applicant gender. I manipulated the (gendered) wording in job advertisements and applicant gender in hypothetical applicant CVs. Also, I contrasted different work contexts (high- vs. low-status jobs, and a male-dominated vs. a gender-balanced and female-dominated field), investigating the role of perceived job status and the expected share of men across work contexts in perceived applicant fit.

Chapter 4 presents quantitative field survey data from STEM scientists (N = 500) and experimental data from employees in academic and non-academic contexts (N = 1191, including pre-test), to investigate potential gender biases in the perception and evaluation of leaders in science, of their leadership shortcomings specifically. In the survey I analyzed, juniors rated their leaders in STEM in terms of constructive versus destructive behaviors and indicated the causal motives they attribute to those behaviors. In the experiment, I tested for gender biases in a controlled setting of identical leader behavior, comparing destructive leadership styles and a constructive one. The study investigated the role of gender in the sensemaking process of destructive leadership, focusing on evaluations of it and attributed motives behind it, as a function of leader and follower sex.

The last chapter of this dissertation, **chapter 5**, contains a general conclusion that summarizes the key findings of the studies and practical implications for increasing diversity in leadership and the STEM fields.

2. SIGNALS OF FAMILY FRIENDLINESS IN APPLICANT ATTRACTION: ANTICIPATED ORGANIZATION AND COWORKER ATTRIBUTES¹

Competing with other employers for the most promising talent, organizations constantly face the challenge of "learning how to attract the best applicants" (Chapman et al., 2005, p. 928; Michaels et al., 2001). One way to attract talent is to signal family friendliness because today's job starters appear to increasingly demand work-family balance in organizations (Chung & Van der Lippe, 2020; Deloitte, 2018, 2022). Indeed, signals of family friendliness in recruitment are found to increase job pursuit intentions and perceived organizational attractiveness (e.g., Bretz & Judge, 1994; Casper & Buffardi, 2004; Onken-Menke et al., 2018; Wayne & Casper, 2016). However, the underlying mechanisms why signaling family friendliness attracts applicants, and whether there are downsides and boundary conditions of family friendliness signals in applicant attraction, have received less scholarly attention (Perrigino et al., 2018; Wayne & Casper, 2012, 2016). Therefore, aiming to gain knowledge that helps family-friendly organizations design their recruitment material effectively, leverage the benefits, and counterbalance the potential downsides of family friendliness signals, I set out to provide a better understanding of their effects in recruitment.

I use signaling theory as a framework (Connelly et al., 2011; Ehrhart & Ziegert, 2005; Rynes, 1991; referring to Spence, 1973), and build on prior research on the signaling effects of family-friendly policies and culture in recruitment (e.g., Casper & Buffardi, 2004; Grandey, 2001; Wayne & Casper, 2012, 2016) and the influences of stereotypes (e.g., Heilman, 2012; Pietraszkiewicz et al., 2019). While most prior research focused on the effects of family-friendly policies (e.g., flexible scheduling and childcare assistance; Casper & Buffardi, 2004; Foster Thompson & Aspinwall, 2009; see also Wayne & Casper, 2016), I investigate the effects of *general* family friendliness signals, namely the organization's self-

¹ Chapter 2 is based on a working paper by Dutz, Hubner, and Peus (2022), currently being prepared for submission.

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description as a family-friendly workplace. Not only is a general signal of family friendliness common in practice (see e.g., Doyle, 2019), it is also likely that a general signal attracts applicants beyond offering policies, allowing inferences on the organization's orientation toward family friendliness in a broad sense and providing cues on how the organization operates at different levels (Wayne & Casper, 2016).

Potential applicants observing a general signal of family friendliness in organizations' recruitment material likely infer additional organization attributes from the signal, which in turn influence their job pursuit intentions (Ehrhart & Ziegert, 2005; Turban, 2001; Wayne & Casper, 2012). With regard to the perceptions of the organization, I test for inferences of organizational support (Casper & Buffardi, 2004; Wayne & Casper, 2012) and anticipated organizational justice (e.g., based on Grover, 1991). Moreover, due to stereotypical perceptions of family friendliness, potential applicants may infer from the signal what kind of employees are working in the organization (see e.g., Gaucher et al., 2011; Shaughnessy et al., 2016), which is, to the best of my knowledge, a consideration that was so far neglected in the literature. It is a relevant consideration, though, because the perceptions of potential (future) coworkers and their qualities may be gendered due to the signal (Eagly & Steffen, 1984; Heilman, 2012; Pietraszkiewicz et al., 2019). Accordingly, I investigate effects of signaling family friendliness on job pursuit intentions via anticipated coworker cooperativeness and achievement orientation, and explore effects via anticipated coworker competence and women's share in the organization.

Furthermore, I argue that the effects of general family friendliness signals on job pursuit intentions are contingent on individual differences in applicants and their particular situation (e.g., related to caregiving responsibilities and work/family conflict; Beauregard & Henry, 2009; Wayne & Casper, 2016; see also Casper et al., 2013). I investigate the influence of individual family and career role commitment, referring to individuals' expected involvement in the family domain and their career-related ambitions (Amatea et al., 1986;

Ellemers et al., 1998). By considering such individual differences as boundary conditions of the effects of family friendliness signals in applicant attraction, my research can show in how far signaling family friendliness also triggers applicant self-selection or attracts also applicants who are less likely to use or profit from specific policies or initiatives right away (i.e., young adults not yet having concrete family plans; Beauregard & Henry, 2009; Wayne & Casper, 2012, 2016).

I tested my hypotheses in an experimental study with young adults (analyzing the data of N = 382 university students, graduates, and young professionals). The experimental study compared reactions to job advertisements with or without a family friendliness signal, and with or without a career prospects signal as an additional reference condition entailing a different work-related benefit. To do so, in the study, job advertisements were manipulated in relation to the information on the prospective employer, and subsequently, participants' perceptions of both the organization and potential coworkers were assessed using quantitative measures.

The study makes several theoretical and practical contributions. First, it elucidates that family friendliness signals in recruitment may influence job pursuit intentions via the perceptions of both the organization and coworkers. By considering effects on perceptions of coworkers, specifically negative effects on anticipated coworker achievement orientation, I shed light on a potential downside of the signals due to stereotype bias, which organizations can counter with additional signals of career prospects. Second, in investigating the effects of a general family friendliness signal that is not restricted to specific family-friendly policies, my study offers broader and highly practically-relevant conclusions on how signaling family friendliness shapes perceptions (see e.g., Wayne & Casper, 2016), extending previous knowledge. Third, by examining the role of individual family and career role commitment, I consider applicant variables that were thus far neglected in the literature but are likely relevant in young adults' career considerations and job pursuit intentions (see e.g., Casper et

al., 2013; Wayne & Casper, 2016). Last, addressing the discussion of whether competence is a male-stereotyped or gender-neutral characteristic, my explorative findings corroborate that the anticipated competence of coworkers is perceived "gender-neutral" (Eagly et al., 2019; Hentschel, Heilman, et al., 2019), because they show differential effects via anticipated coworker achievement orientation versus competence.

Theory and Hypotheses

Signaling in Recruitment

When potential applicants screen job advertisements or other recruitment material, they usually are "outsiders who lack information about the organization" (Connelly et al., 2011, p. 45). Indeed, they typically do not have perfect information about the hiring organization, in the same way that organizations do not have perfect information about the candidates applying (Rynes, 1991; Spence, 1973). Signaling theory (Connelly et al., 2011; Ehrhart & Ziegert, 2005; Rynes, 1991; referring to Spence, 1973) suggests that, in recruitment, both parties interpret signals from the other to infer their characteristics or abilities that are not initially observable. For instance, potential applicants might use information they receive about the policies and procedures in an organization to infer the organizational culture (Connelly et al., 2011; Highhouse et al., 2007; Ryan et al., 2000). In turn, their inferences on the organizational culture and characteristics may influence whether they are attracted to the organization (Ehrhart & Ziegert, 2005; Highhouse et al., 2007; Turban, 2001).

Vice versa, both parties send signals or information which the other party processes, such as through application documents sent by the applicant, and job advertisements provided by the employer (Connelly et al., 2011; Rynes, 1991; Spence, 1973). Organizations may send signals to potential applicants with the intention of increasing organizational attraction, for instance providing cues on the organizational culture in recruitment material (Connelly et al., 2011; Highhouse et al., 2007; see also Rynes, 1991). However, to increase organizational

attraction of diverse target groups, organizations need to understand what attracts applicants, which may depend on their individual attributes (Casper et al., 2013), and how potential applicants interpret certain signals or information in the recruitment material (Connelly et al., 2011; Highhouse et al., 2007).

Family Friendliness and Applicant Attraction

Signaling family friendliness may be one way to attract applicants (Bretz & Judge, 1994; Casper & Buffardi, 2004; Wayne & Casper, 2012, 2016). Prior research lends support to the positive effects of family friendliness signals in applicant attraction, mainly concerning the presence of family-friendly policies, either general (e.g., Bretz & Judge, 1994; Wayne & Casper, 2012), or specific (e.g., Carless & Wintle, 2007; Casper & Buffardi, 2004; Foster Thompson & Aspinwall, 2009; Onken-Menke et al., 2018). Family-friendly policies (also family-supportive policies or work-life balance practices; Beauregard & Henry, 2009) include a wide variety of policies and programs related to care responsibilities (e.g., childcare or leave programs), flexible work (e.g., flextime or telework), or work-life balance (e.g., sabbaticals or stress management programs; Beauregard & Henry, 2009; Estes & Michael, 2005; von Hippel et al., 2017). For instance, according to prior research, opportunities for flexible work increase organizational attraction (Onken-Menke et al., 2018), and advertising dependent care assistance in a job advertisement positively affects potential applicants' job pursuit intentions (Casper & Buffardi, 2004). In addition, a flexible career path involving family-friendly policies was found to be more appealing to students and MBA alumni than a traditional one (i.e., putting career first and rewarding long working hours; Honeycutt & Rosen, 1997).

However, less clear is whether family-friendly policies comprehensively capture the effects of a general signal of family friendliness, which organizations often state in their recruitment material (see e.g., Doyle, 2019; Wayne & Casper, 2016). In the current study, signaling family friendliness refers to an organization's self-description as a family-friendly workplace, enabling employees to equally meet their family and work obligations. Such

signals, promoting the organization's family friendliness in a broad sense rather than specific policies, inform potential applicants about what is important in the organization, and the values underlying the organizational culture (Thompson et al., 1999; Wayne & Casper, 2016). Those may attract applicants even more than (specific) family-friendly policies because policies alone do not guarantee that using them is accepted and manifested in the organizational culture (Wayne & Casper, 2016; see also Galinsky & Stein, 1990). Instead, general family friendliness indicates that the organization is willing to actively support workfamily balance (see e.g., Thompson et al., 1999), an increasingly important issue, especially for younger workers (Chung & Van der Lippe, 2020; Deloitte, 2018, 2022; Twenge, 2010). Therefore, I expect that a general family friendliness signal in recruitment material increases potential applicants' job pursuit intentions compared to the absence of such signal, and exceptional career prospects as a different and seemingly contradictory signal (unless both can be inferred from the information). Hence:

Hypothesis 1: Signaling family friendliness in recruitment material, overall, has a positive effect on potential applicants' job pursuit intentions.

Starting from here, I aimed to further investigate the psychological mechanisms that explain the effect of signaling family friendliness on job pursuit intentions. In receiving and interpreting a signal of (general) family friendliness, potential applicants likely infer additional attributes of the organization and of its members from the signal (Casper & Buffardi, 2004; Connelly et al., 2011; Gaucher et al., 2011; Shaughnessy et al., 2016). Both organizational characteristics and coworker relationships are important factors for employee well-being (Grant et al., 2007; Simon et al., 2010) and perceived fit (Kristof-Brown et al., 2005). Therefore, both perceptions of the organization (see e.g., Casper & Buffardi, 2004; Onken-Menke et al., 2018; Wayne & Casper, 2012) and of coworkers in the organization, due to the signal, are likely to influence potential applicants' job pursuit intentions.

Family Friendliness and Anticipated Organization Attributes

The information received via recruitment material influence the impression of an organization and its culture (Cable & Graham, 2000). Based on a family friendliness signal, potential applicants may anticipate certain organization attributes which they associate with family friendliness more broadly, besides the organization's family friendliness (Casper & Buffardi, 2004; Onken-Menke et al., 2018; Wayne & Casper, 2012).

Anticipated organizational support. Previous research indicates that potential applicants use cues on family friendliness to infer organizational support, i.e., whether they "would be valued and cared about by the organization if they became employees" (Casper & Buffardi, 2004, p. 394; see also Foster Thompson & Aspinwall, 2009; Onken-Menke et al., 2018; Wayne & Casper, 2012). That way, organizational support not only plays a role when perceived by current employees (Eisenberger et al., 1990), but also when anticipated by potential applicants that decide for (or against) an organization (Casper & Buffardi, 2004). According to prior studies, announcing flexible work practices (Onken-Menke et al., 2018) and dependent care assistance in recruitment material (Casper & Buffardi, 2004) increases anticipated organizational support. In addition, an organization's reputation for work-family policies leads college students to infer organizational support (Wayne & Casper, 2012). These recruitment cues on family friendliness seem to convey that the organization considers its employees' needs, goals, and values, providing support in challenging times instead of letting them down or taking advantage (Casper & Buffardi, 2004; Eisenberger et al., 1990). Thus, when observing an organization's family friendliness in general terms, potential applicants may draw similar conclusions on organizational support.

In turn, anticipated organizational support increased organizational attraction (Onken-Menke et al., 2018) and job pursuit intentions (Casper & Buffardi, 2004; Wayne & Casper, 2012) in prior research, suggesting that potential applicants assessing which organization they want to work for value a supportive organization (see also Catanzaro et al., 2010; Rhoades &

Eisenberger, 2002; Wayne & Casper, 2016). Therefore, I hypothesize that anticipated organizational support, inferred from a general signal of family friendliness, mediates the proposed positive effect of signaling family friendliness on job pursuit intentions:

Hypothesis 2a: Signaling family friendliness in recruitment material has a positive effect on potential applicants' job pursuit intentions via *anticipated organizational support*.

Anticipated organizational justice. Justice perceptions may also play a role in the effects of family friendliness signals in recruitment (Beauregard & Henry, 2009; Casper & Buffardi, 2004; Grandey, 2001). Potential applicants are likely to look for cues of whether a recruiting organization would treat them fairly (Lind, 2001; Shaughnessy et al., 2016), which I refer to as anticipated organizational justice (based on Ambrose & Schminke, 2009; parallel to anticipated organizational support, Casper & Buffardi, 2004). A general signal of family friendliness in recruitment may be interpreted as a cue of an organization treating its employees fairly, since family friendliness infers responding to individual differences and needs (Grandey, 2001; Grover, 1991; Rothausen et al., 1998), and minimizing conflicting demands (such as with regard to work and childcare responsibilities; Andrews & Kacmar, 2001; Shore & Shore, 1995). For organizations signaling family friendliness, potential applicants might expect these values to also apply in other areas (Casper & Buffardi, 2004). For instance, they may expect to be treated fairly as in responding to individual differences and needs when offering training, or helping minimize conflicting demands over and above childcare or family responsibilities, in the work and private domain more generally (e.g., responding to flexibility demands or offering sabbaticals).

However, anticipated organizational justice inferred from a signal of family friendliness may strongly depend on the type of signal sent (Grandey, 2001). From a general family friendliness signal, I expect that potential applicants will draw conclusions on fair employee treatment in a broad sense (like they infer general support; Casper & Buffardi,

2004). Indeed, the effects of advertising specific family-friendly policies likely require a differentiated analysis, as some policies suggest an allocation towards specific recipients (e.g., childcare assistance for parents), while others do not (e.g., flexible work practices; Grandey, 2001; Grover, 1991; Rothausen et al., 1998).

Prior research has repeatedly shown the positive effects of justice perceptions in employees, such as their increased commitment and reduced turnover intentions (Simons & Roberson, 2003; McFarlin & Sweeney, 1992; Bakhshi, Kumar, & Rani, 2009), and also in recruitment, enhancing job and organizational attraction (Chapman et al., 2005). Thus, I hypothesize that also anticipated organizational justice, inferred from a general signal of family friendliness, mediates a positive effect on job pursuit intentions:

Hypothesis 2b: Signaling family friendliness in recruitment material has a positive effect on potential applicants' job pursuit intentions via *anticipated organizational justice*.

The moderating role of family role commitment. There are mixed findings in studies that investigated whether family-friendly policies have a "universal appeal" or primarily speak to individuals in need of family-related support currently or anticipated in the near future (Beauregard & Henry, 2009; see also Rothausen et al., 1998). Several studies indicate that the attitude toward family friendliness or specific policies depends on individual differences and circumstances, such as childcare responsibilities, or work and family role conflict (e.g., Frone & Yardley, 1996; Rau & Hyland, 2002; Rothausen et al., 1998; Rothbard et al., 2005). In hypothesis 2, I have argued for inferences on organizational support and justice from general family friendliness signals, which can be of universal appeal (Casper & Buffardi, 2004; Grandey, 2001). Nevertheless, applicants' family role commitment, or the extent to which they expect to be involved in family obligations in the future (Amatea et al., 1986), may still influence the perception of, and attitude toward, family friendliness. For example, when screening recruitment material, cues of family-related support may be

particularly salient for individuals with high family role commitment (Eagly & Chaiken, 1984, 1993; Ehrhart & Ziegert, 2005; see also Casper et al., 2013; Wayne & Casper, 2016). Hence, inferences on organizational support and justice may be stronger or weaker depending on family role commitment.

Specifically, with regard to anticipated organizational support, I argue that individuals with high family role commitment strongly appreciate family friendliness as a type of support the organization provides its employees (despite inferences of general support for all employees; see also Wayne & Casper, 2016). Thus, I expect that potential applicants with high (vs. low) family role commitment anticipate higher organizational support from a general family friendliness signal, such that individual family role commitment enhances the positive effect of signaling family friendliness on job pursuit intentions via anticipated organizational support:

Hypothesis 3a: Potential applicants' *family role commitment enhances* the positive effect of signaling family friendliness on job pursuit intentions via anticipated organizational support.

Similarly, individuals with high family role commitment might expect to enjoy more benefits within a family-friendly organization than those with low family role commitment (see e.g., Wayne & Casper, 2016), potentially accentuating anticipated organizational justice (Grandey, 2001; Grover, 1991; see also Rothausen et al., 1998). Earlier, I suggested that signaling general family friendliness increases anticipated organizational justice, and as there are no specific policies advertised, the signal does not give potential applicants much room to evaluate the fairness of specific policies and their presumed allocation (see e.g., Shaughnessy et al., 2016). Still, family-friendly policies (nonetheless associated with family friendliness) are typically allocated by need, and are therefore likely to be perceived as fairer by individuals who have or anticipate a need for that particular policy, or identify with others who do (Grandey, 2001; Grover, 1991). For instance, parental leave opportunities are found to

be perceived as fairer among raters who have children or plan to have children and take parental leave in the future than by those how do not (Grover, 1991). Moreover, in Grover's study (1991), fairness perceptions explained a positive effect of raters' identification with parental leave-takers on their attitude toward parental leave-takers. Thus, I propose that potential applicants with high (vs. low) family role commitment also anticipate higher organizational justice in response to a general signal of family friendliness, enhancing the positive effect of signaling family friendliness on job pursuit intentions via anticipated organizational justice. Therefore:

Hypothesis 3b: Potential applicants' *family role commitment enhances* the positive effect of signaling family friendliness on job pursuit intentions via anticipated organizational justice.

Figure 1 depicts the hypotheses on anticipated organization attributes to explain the proposed positive effect of signaling family friendliness on job pursuit intentions.

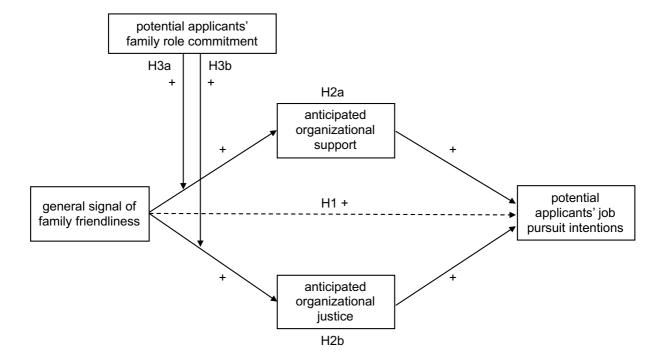


Figure 1. Conceptual Model on Perceptions of the Organization

Family Friendliness and Anticipated Coworker Attributes

In addition to inferring organizational characteristics from a signal of family friendliness, potential applicants may assume that coworkers in the organization share the values and qualities associated with family friendliness (Heilman, 2012; Kristof-Brown et al., 2005; see also Shaughnessy et al., 2016). Based on traditional gender roles and related stereotypes that link to family responsibility (Eagly & Steffen, 1984), and "femininity stigma" applied to male family leave takers (Rudman & Mescher, 2013), inferences from family friendliness signals are potentially gendered.

Anticipated coworker cooperativeness and achievement orientation. Family-related support is still likely to be cognitively linked to the female gender (Eagly & Steffen, 1984; Rudman & Mescher, 2013), such that related gender stereotypes may shape potential applicants' visualization of the characteristics working at a family-friendly organization (see e.g., Gaucher et al., 2011; Heilman, 2012). Based on their past traditional roles as respectively "homemakers" and "breadwinners", to some extent even today (Catalyst, 2020e), women and men are stereotyped as having different qualities and characteristics (Eagly & Steffen, 1984; Eagly & Wood, 2012; see also Eagly et al., 2019; Hentschel, Heilman, et al., 2019). Supposedly primary providers and "hard workers", men are stereotyped as possessing agentic qualities, such as achievement orientation, ambition, and assertiveness (Eagly & Steffen, 1984; Heilman, 2001, 2012). As the primary caregiver for children, respectively faced with this normative expectation (Gloor et al., 2018), women are attributed more communal qualities, such as caring and considerate, also referred to as "other-oriented" qualities (Abele & Wojciszke, 2019; Eagly & Steffen, 1984; Heilman, 2001, 2012).

Family friendliness, as associated with stereotypically female qualities and otherorientation, is typically linked to communality (such as organizational support and responsiveness to others' needs; Abele & Wojciszke, 2019; Pietraszkiewicz et al., 2019; Rudman & Mescher, 2013). Besides being caring and considerate, communality includes interpersonal skills in more general terms, and, particularly with regard to coworker behavior, cooperativeness and collaboration (Gaucher et al., 2011; Heilman, 2012). In organizations considered family-friendly, coworkers – who chose and benefit from a family-friendly organization – may be similarly stereotyped as being supportive of others (see e.g., Heilman, 2012; Kristof-Brown et al., 2005; Rudman & Mescher, 2013). This stereotyping of women and men, as prior research shows, may depend more on the context than on gender (Eagly & Steffen, 1984; Rudman & Mescher, 2013; see also chapter 3 of this dissertation). Potential applicants might presuppose that those with a high need for family-related support or identifying with the related values of communality are likely to self-select in such organizations (based on high perceived fit; Heilman, 2012; Kristof-Brown et al., 2005). Thus, I propose that potential coworkers in an organization that signals family friendliness are ascribed rather *high cooperativeness and collegiality*.

At the same time, family friendliness is unlikely to be associated with agency, in a way signifying "self-orientation" (Abele & Wojciszke, 2019), and focused on professional goals and competing with others (Heilman, 2012; Hentschel, Heilman, et al., 2019; see also Rudman & Mescher, 2013). In terms of the actual qualities of coworkers, communality and agency are certainly not either/or categories (Abele & Wojciszke, 2014, 2019). Nevertheless, stereotypically female and male qualities, and their ascriptions to individuals (Rudman & Glick, 2001; Rudman & Mescher, 2013), are somewhat reversed and have a cooperative (communality) versus competitive (agency) character (Gaucher et al., 2011; Heilman, 2012). Additionally, stereotypical perceptions are generally likely to lead to a one-sided view, such as with regard to "gendered" organizational cultures and the perceptions of organizational members (Catanzaro et al., 2010; Gaucher et al., 2011; Heilman, 2001, 2012). Therefore, I propose that potential coworkers in an organization that signals family friendliness are perceived as cooperative and collegial but ascribed rather *low achievement orientation and ambition*.

Potential applicants likely value cooperativeness as well as achievement orientation in their future coworkers; essentially, these are both favorable employee qualities, like communality and agency are crucial for professional success (e.g., Cann & Siegfried, 1990; Eagly & Carli, 2003; Male et al., 2009; Rehbock, Knipfer, et al., 2021). Accordingly, I expect that both anticipated cooperativeness and achievement orientation of potential (future) coworkers positively relate to potential applicants' job pursuit intentions. Assuming that signaling family friendliness positively affects anticipated coworker cooperativeness and negatively affects anticipated coworker achievement orientation, I suggest that signaling family friendliness has a positive effect on job pursuit intentions via anticipated coworker cooperativeness, but a negative effect on job pursuit intentions via anticipated coworker achievement orientation. Thus:

Hypothesis 4a: Signaling family friendliness in recruitment material has a positive effect on potential applicants' job pursuit intentions via *anticipated* coworker cooperativeness.

Hypothesis 4b: Signaling family friendliness in recruitment material has a *negative* effect on potential applicants' job pursuit intentions via *anticipated* coworker achievement orientation.

The moderating role of career role commitment. Although potential applicants may value cooperativeness as well as achievement orientation in coworkers, they might still prefer coworker qualities, behaviors, and values that fit their own (Kristof-Brown & Stevens, 2001; Kristof-Brown et al., 2005). Some are more cooperative than others and might therefore highly appreciate cooperative coworkers, whereas others are more achievement-oriented and might identify more strongly with coworkers assumed to have similar ambitions (see also Heilman, 1983, 2012). Here, I suggest that potential applicants' career role commitment, as to their career-related ambitions (Ellemers et al., 1998), comes into play. I assume that potential applicants with high (vs. low) career role commitment prefer achievement-oriented coworkers

with high career aspirations who ambitiously follow their (individual) goals. Conversely, they may have difficulties identifying with overly cooperative coworkers who focus on mutual support and avoid competing. Therefore, I suggest that individual career role commitment reduces the positive effect of signaling family friendliness on job pursuit intentions via anticipated coworker cooperativeness, and enhances the negative effect of signaling family friendliness on job pursuit intentions via anticipated coworker achievement orientation:

Hypothesis 5a: Potential applicants' *career role commitment reduces* the positive effect of signaling family friendliness on job pursuit intentions via anticipated coworker cooperativeness.

Hypothesis 5b: Potential applicants' *career role commitment enhances* the negative effect of signaling family friendliness on job pursuit intentions via anticipated coworker achievement orientation.

Figure 2 depicts the hypotheses on anticipated coworker attributes to explain the proposed positive effect of signaling family friendliness on job pursuit intentions.

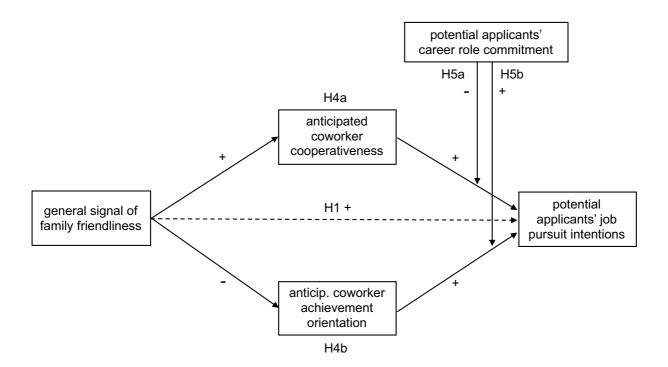


Figure 2. Conceptual Model on Perceptions of Potential Coworkers

Method

I tested the hypotheses in an experimental study, investigating the signaling effects of family friendliness by manipulating job advertisements with regard to the information given; specifically, by varying the signals the organization sends through its recruitment material.

Participants

Participants (N = 382; 62% female, 87% German nationality²) were young adults, mostly in their mid-twenties (9% 18-21, 55% 22-25, 25% 26-29, 6% 30-33, and 5% > 34 years old).³ Of the sample, consisting of students (83%) and young professionals (17%), 53% had graduated with a bachelor's degree and 12% with a master's degree. 33% of participants reported they would complete their studies in the same year, and 34% in the upcoming year. In young adults' job decisions both family and career role commitment can play a significant role, although most of them do not yet have an advanced career or concrete family plans (see also Honeycutt & Rosen, 1997; Wayne & Casper, 2012, 2016). Thus, the inferences and anticipations that are at the core of my theorizing are practically most relevant in this sample and are likely to be particularly salient in this sample (Casper et al., 2013; Eagly & Chaiken, 1984, 1993; Ehrhart & Ziegert, 2005). Furthermore, graduates and young professionals are a popular target group for companies' recruitment efforts, as they are considered as driving innovative progress (Luscombe et al., 2013; McDermott et al., 2006).

52% of the sample specified business sciences as their former or current study subject, 21% STEM (science, technology, engineering, or mathematics), and 14% social sciences. 8% of participants had more than five years of work experience, 12% two to five years, 15% one to two years, 19% up to one year, and 44% of participants had no work experience. Assessing participants' family and career role commitment revealed that 67% of participants indicated

² 6% indicated their nationality as Austrian and 7% another nationality in or outside Europe.

³ In total, 409 participants completed the experimental survey but 27 were excluded as they either indicated that they did not answer the survey in a genuine manner, or they did not match the sample characteristics pre-defined for the study.

"rather strong" to "very strong" family role commitment, and 76% "rather strong" to "very strong" career role commitment.⁴ Neither family role commitment, F(1, 372) = .42, p = n.s., nor career role commitment, F(1, 372) = 2.44, p = n.s., did depend on participant gender in the sample. 5% of participants had children.

Research Design and Procedure

The experiment compared the presence and absence of a signal of an organization's family friendliness, as well as the signal of career prospects in the organization as a reference condition signaling a different employee benefit. Accordingly, the study adopted a 2 (family friendliness: yes vs. no) x 2 (career prospects: yes vs. no) between-subject design, including a control ("no signal") and mixed ("both signals") condition.

The study participants were recruited online, mainly through social networks such as LinkedIn and Xing, and completed an online questionnaire. In the questionnaire, they were asked to imagine they were currently looking for a job in project management (fitting a variety of educational backgrounds), and were randomly assigned a job advertisement that was manipulated in the information given on family friendliness and career prospects. They provided their perception of the organization, assessed potential coworkers, indicated their job pursuit intentions, and answered items on their family and career role commitment. Also, they completed a manipulation check, provided demographic information, and answered a behavioral measure of interest in the depicted organization. Finally, they were debriefed.

Experimental Manipulation and Manipulation Check

Signals of family friendliness and career prospects were operationalized as follows.

Different job advertisements created for the same job included information on either family

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⁴ Participants' family role commitment and their career role commitment were measured on ascending 7-point Likert scales; "rather strong to very strong" summarizes means from 4.2 to 7. For more details, see the measures section.

friendliness or career prospects, both family friendliness and career prospects (in a different order, resulting in two conditions)⁵, or neither of the two.

Job advertisements signaling the organization's family friendliness included the following description (in German and here translated):

"In our company, you benefit from a very family-friendly personnel policy. We provide you with family-oriented work models and family-friendly employment conditions. With us, you'll find a perfect work environment to equally meet your family and work obligations!"

This description was supported with an image showing a family icon and the slogan "We care about your family!".

Job advertisements signaling career prospects within the organization included the following description (in German and here translated):

"In our company, you benefit from excellent career opportunities. We support you in making the most of your professional and personal skills, and offer you fast career opportunities. With us, you'll find promising prospects for your future career development!"

An image showing a career icon with the slogan "We promote your career!" supported this description. Appendix A.1 includes the original German versions of the manipulation.

The job advertisements presenting the mixed condition included both descriptions and images, but in different order. Participants in the control condition only received general information about the job and the organization, which was included identically across all experimental conditions. The organization was described as an established IT company that creates innovative solutions at the interface of organization and technology to manage organizational change in the age of digitalization. The advertised job was a junior project

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⁵ The mixed condition, signaling both family friendliness and career prospects, was designed as two distinct conditions to check on the effect of the order of the signaled benefits.

manager position. For this job, the company was searching for a candidate with a university degree in business sciences, business informatics, industrial engineering, or comparable education. Among others, the following job requirements were specified: basic technological knowledge, interpersonal and communication skills, confident demeanor, a self-reliant and well-structured way of working. In the description of the job specification and the required candidate qualifications and qualities, I balanced female and male stereotyped wording to not provoke a gender connotation of the candidate profile the organization was seeking (Gaucher et al., 2011; Hentschel et al., 2021; Pietraszkiewicz et al., 2019). This was also the case in the applied experimental manipulation of the organizational descriptions.⁶

The experimental survey included a manipulation check asking participants to assess the job advertisement's information content with regard to family friendliness and career prospects. The manipulation check consisted of two items ("The job advertisement contained information on (1.) family friendliness and a family-oriented personnel policy, (2.) career prospects and opportunities for advancement"), which participants answered on 7-point Likert scales from "strongly disagree" to "strongly agree". The manipulation check was successful, such that participants' perceptions of the job advertisement content significantly differed across the experimental conditions. This was the case for the job advertisements signaling family friendliness (p = .000 compared to "no signal" and "career prospects only" as to the perceived amount of information on family friendliness) and for those signaling career prospects (p = .000 compared to "no signal" and "family friendliness only" as to the perceived amount of information on career prospects). Perceptions of the job advertisements' content did not significantly differ across the two separate conditions determining the mixed condition combining them into one.

⁶ In addition, in all job advertisements, potentially confounding information (e.g., company name and location, and contact person) were blackened.

Measurements

Unless stated otherwise, the survey items were assessed on 7-point Likert scales ("strongly disagree" to "strongly agree" or "not at all" to "very much"). Table 1 shows the correlations among the variables.

Job pursuit intentions. Job pursuit intentions (at the described organization) were measured with five items adapted from Highhouse et al. (2003; "intentions to pursue"). Sample items are "I would accept a job offer from this company" and "If this company invited me for a job interview, I would go" ($\alpha = .89$).

Anticipated organizational support. Anticipated organizational support was assessed with an eight-item measure adapted from Casper and Buffardi (2004) referring to Eisenberger et al.'s (1997) employee perceptions of organizational support. Items included "This organization would care about my opinion," "This organization would really care about my well-being," and "This organization would strongly consider my goals and values" ($\alpha = .89$).

Anticipated organizational justice. The measure used to assess anticipated organizational justice is based on Ambrose and Schminke (2009; "perceived overall justice"). Analogous to anticipated organizational support (Casper & Buffardi, 2004), Ambrose and Schminke's (2009) items were adapted for the study to measure how (potential) applicants imagine an organization as a prospective employer and *anticipate* organizational justice. As I was particularly interested in whether individuals think they would be treated fairly within the organization (rather than whether the organization would be fair in general), I used Ambrose and Schminke's subscale on "individuals' personal justice experiences" (α = .94; three items, such as "Overall, I would be treated fairly by this organization").

Anticipated coworker cooperativeness and achievement orientation. In order to assess the anticipated coworker qualities, the participants were asked to imagine a potential

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⁷ Items used in the study were translated into German by means of a back-and-forth translation.

coworker within the organization and indicate how they would attribute specific qualities to the coworker (based on Gaucher et al., 2011; Hentschel, Heilman, et al., 2019; Horvath & Sczesny, 2016). I assessed anticipated coworker cooperativeness with the items "cooperative" and "collegial" (α = .80; communal qualities), and anticipated coworker achievement orientation with the items "achievement-oriented" and "ambitious" (α = .81; agentic qualities) (Gaucher et al., 2011; Heilman, 2012).

Family and career role commitment. To assess participants' family role commitment, I used five items adapted from Amatea et al. (1986; "parental role commitment"). Pertaining to *expected* role commitment, the items constitute a valid measurement surveying young adults. Sample items are "I expect to devote a significant amount of my time and energy to the rearing of children of my own" and "I do not expect to be very involved in childrearing" (reverse coded); $\alpha = .83$. Participants' career role commitment was assessed with five items adapted from Ellemers et al. (1998; "career-oriented commitment"), such that they also apply to expected role commitment (e.g., "My [future] career plays a central role in my life" and "The ambitions in my life mainly have to do with my [future] career"; $\alpha = .91$).

Additional measures. In capturing perceptions of (potential) coworkers, I also assessed *anticipated coworker competence* ("competent," "effective," and "productive"; α = .87), adapted from Heilman et al. (2004), and *anticipated share of women*, adapted from Gaucher et al. (2011; "index of gender diversity"). Anticipating the gender distribution among coworkers (1.) in the organization and (2.) in the advertised job, participants assessed two items on a scale from "0% women" to "100% women" (α = .79; Gaucher et al., 2011). Moreover, at the end of the questionnaire, I included a behavioral measure of whether participants actually show interest in the depicted organization (based on Highhouse et al., 2003; Schwoerer & Rosen, 1989), consisting of two items: participants indicated whether they

2. FAMILY FRIENDLINESS IN APPLICANT ATTRACTION

were interested in receiving regular updates on internships, (student) programs, and job offers from the company; and whether they want to receive information on career fairs the company was attending (α = .73; two options each: yes vs. no).⁸ Additionally, the experimental survey assessed the participants' demographics where I used participant gender and age as controls in my analyses, as these might influence evaluations of a family-friendly work culture or policy (see e.g., Chapman et al., 2005; Wayne & Casper, 2012; Wayne & Casper, 2016).

Table 1 *Means, Standard Deviations, and Correlations of Variables*

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Participant gender ^a	1.64	.48											
2. Participant age ^b	3.45	.99	.02										
3. Participant family role commitment ^c	4.64	1.22	.03	02									
4. Participant career role commitment ^c	4.87	1.17	08	01	22**								
5. Anticipated organizational support ^c	4.62	0.87	.05	-10*	.12*	.07							
6. Anticipated organizational justice ^c	5.00	1.00	.09	12*	.09	.08	.74**						
7. Anticipated coworker cooperativeness ^c	5.33	1.20	.10	03	.07	.01	.59**	.49**					
8. Anticipated coworker achievement orientation ^c	4.90	1.35	.13*	01	.08	04	.03	.10	.18**				
9. Anticipated coworker competence ^c	5.02	1.17	.17**	01	03	.01	.27**	.28**	.45**	.73**			
10. Anticipated share of women ^d	84.5	39.9	.12*	.08	.10*	05	.34**	.26**	.29**	16**	04		
11. Job pursuit intentions ^c	4.39	1.20	.20**	.03	.17**	.04	.48**	.43**	.37**	.28**	.40**	.26**	
12. Behavioral measure ^e	.21	.36	08	.01	.09	.07	.12*	.12*	.09	.03	.07	.06	.29**

Note. N = 382. ^a1 = male, 2 = female. ^bAge categories (1 = < 18, 2 = 18-21, 3 = 22-25, 4 = 26-29, 5 = 30-33, 6 = 34-37, 7 = 38-41, 8 = > 41). ^cMeasured on 7-point Likert scales (1 = "not at all" or "strongly disagree"; 7 = "very much" or "strongly agree"). ^dMeasured on a continuous scale from 0% women to 100% women. ^eBinary measure/dummy variable (0 = no, 1 = yes).

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^{*}p < .05, **p < .01 (two-tailed).

⁸ Due to the results of the corresponding reliability analysis, a third item was removed from the measure.

Results

Effects of Signaling Family Friendliness on Job Pursuit Intentions

I performed a linear regression analysis to test the direct effect of signaling family friendliness on job pursuit intentions, which was significantly positive. Supporting H1, the family friendliness signal increased participants' job pursuit intentions, F(3, 373) = 14.38, p = .000, $R^2 = .10$; b = .62, p = .000. Consistent with the applied manipulation check on job advertisements' content, the independent variable *signaling family friendliness* was dummy-coded (job advertisement included family friendliness signal (1) vs. did not include family friendliness signal (0)) in the analyses of the effects on job pursuit intentions.

In a mediation analysis using PROCESS (Hayes, 2013), I tested whether signaling family friendliness had positive effects on job pursuit intentions via *anticipated* organizational support and anticipated organizational justice (see Table 2). Indeed, anticipated organizational support mediated the direct effect of signaling family friendliness on job pursuit intentions (indirect effect via anticipated support: .27, 95% CI = [.14, .41]), supporting H2a. Specifically, signaling family friendliness increased anticipated organizational support (b = .61, p = .000), which was in turn positively related to job pursuit intentions (b = .44, p = .000). Furthermore, along with anticipated organizational support, anticipated organizational justice mediated the positive effect of signaling family friendliness on job pursuit intentions (indirect effect via anticipated justice: .10, 95% CI = [.02, .18]), supporting H2b. Indeed, signaling family friendliness increased anticipated organizational justice (b = .43, p = .000), again positively related to job pursuit intentions (b = .21, p = .009). The effects via anticipated support and justice partially explained the direct effect on job pursuit intentions, which remained significant in the tested model (b = .26, p = .028, 95% CI = [.03, .49]).

 $^{^{9}}$ Controlling for participant gender and age in the analyses, those participants that did not indicate their gender or age were excluded listwise, resulting in N = 374.

Table 2Mediation Analysis – Organizational Level Mediators

	Outcome: Anticipated organizational supp						
	(mediator 1)						
Predictors	$\overline{}$	SE	95% CI [LL, UL]				
Signaling family friendliness	.61***	.08	[.45, .78]				
R^2	.14						
F	20.03***						
	Outcome: Anticipated organizational justice						
	(mediator 2)						
Predictors	$\overline{}$	SE	95% CI [LL, UL]				
Signaling family friendliness	.43***	.10	[.24, .63]				
R^2	.07						
F	9.55***						
	Outcome: Job pursuit intentions						
Predictors	b	SE	95% CI [LL, UL]				
Anticipated organizational support	.44***	.09	[.25, .62]				
Anticipated organizational justice	.21**	.08	[.05, .36]				
Signaling family friendliness	.26*	.12	[.03, .49]				
R^2	.28						
F	28.51***						
Indirect effect via anticipated organizational	.27, <i>95% CI</i> = [.14, .41]						
support							
Indirect effect via anticipated organizational	.10, 95% CI = [.02, .18]						
justice							
<i>Note.</i> $N = 374$, coefficients are unstandardized. CI	= confidence interval, LL = le	ower lim	it, UP = upper limit.				

Note. N = 374, coefficients are unstandardized. CI = confidence interval, LL = lower limit, UP = upper limit. Number of bootstrap samples = 10000. Analysis includes covariates: Participant gender, participant age. *p < .05, **p < .01, ***p < .001.

In a moderated mediation analysis, again using PROCESS (Hayes, 2013), I tested the influence of *family role commitment* on the effects via anticipated organizational support and justice (see Table 3).¹⁰ Supporting H3a, the effect of signaling family friendliness on anticipated organizational support was qualified by a significant interaction with participants' family role commitment (b = .14, p = .040), resulting in a significant moderated mediation (index = .06, 95% CI = [.01, .13]). Specifically, the higher the participants' family role commitment, the higher they anticipated organizational support due to the family friendliness signal, enhancing the positive effect on job pursuit intentions via anticipated organizational support. The analysis did not yield support for H3b, in that the effect of signaling family

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¹⁰ In this analysis, the effects of *signaling family friendliness* (IV) on the mediators represent conditional effects.

friendliness on anticipated justice was not moderated by participants' family role commitment (b = .12, p = n.s.). Hence, their family role commitment did not enhance the positive effect on job pursuit intentions via anticipated organizational justice (*index*: .02, 95% CI = [-.01, .07]).

Table 3Moderated Mediation Analysis – Organizational Level Mediators

Outcome: Anticipated organizational support (mediator 1)					
b	SE	95% CI [LL, UL]			
06	.33				
02	.06	[13, .10]			
.14*	.07	[.01, .28]			
.16					
14.28***					
Outcome: Anticipated organizational justice (mediator 2)					
b	SE	95% CI [LL, UL]			
11	.40	[89, .67]			
00	.07	[13, .13]			
.12	.08	[05, .28]			
.09					
6.87***					
Outcome: Job pu	Outcome: Job pursuit inten				
b	SE	95% CI [LL, UL]			
.44***	.09	[.25, .62]			
.21**	.08	[.05, .36]			
.26*	.12	[.03, .49]			
.28					
28.51***					
.06, <i>95% CI</i> = [.01, .13]					
.02, <i>95% CI</i> = [01, .07]					
	(media b0602 .14* .16 14.28*** Outcome: Anticipated (media b1100 .12 .09 6.87*** Outcome: Job put b .44*** .21** .26* .28 28.51*** .06, 95% CI = [.01, .13] .02, 95% CI = [01, .07]	$\begin{array}{c c} b & SE \\ \hline06 & .33 \\02 & .06 \\ .14* & .07 \\ \hline \\ .16 \\ 14.28*** \\ \hline Outcome: Anticipated organi \\ (mediator 2) \\ \hline \\ b & SE \\ \hline \\11 & .40 \\00 & .07 \\ .12 & .08 \\ \hline \\ .09 \\ 6.87*** \\ \hline \\ Outcome: Job pursuit in \\ \hline \\ b & SE \\ \hline \\ .44*** & .09 \\ .21** & .08 \\ .26* & .12 \\ \hline .28 \\ 28.51*** \\ \hline \\ .06, 95\% CI = [.01, .13] \\ .02, 95\% CI = [01, .07] \\ \hline \end{array}$			

Note. N = 374, coefficients are unstandardized. CI = confidence interval, LL = lower limit, UP = Upper limit. Number of bootstrap samples = 10000. Analysis includes covariates: Participant gender, participant age. *p < .05, **p < .01, ***p < .001.

In another mediation analysis (see Table 4), I tested my proposed model on the perceptions of coworkers, specifically whether signaling family friendliness had a positive effect on job pursuit intentions via *anticipated coworker cooperativeness*, but a negative

Table 4Mediation Analysis – Coworker Level Mediators

	Outcome: Anticipated coworker cooperativeness						
-	(mediator 1)						
Predictors	b	SE	95% CI [LL, UL]				
Signaling family friendliness	.85***	.12	[.62, 1.08]				
$\overline{R^2}$.13						
F	18.59***						
	Outcome: Anticipated coworker achievement						
	orientation (mediator 2)						
Predictors	b	SE	95% CI [LL, UL]				
Signaling family friendliness	54***	.14	[82,27]				
R^2	.06		-				
F	7.27***						
	Outcome: Job pursuit intentions						
Predictors	b	SE	95% CI [LL, UL]				
Anticipated coworker cooperativeness	.21***	.05	[.11, .31]				
Anticipated coworker achievement orientation	.24***	.04	[.15, .32]				
Signaling family friendliness	.57***	.12	[.32, .81]				
R^2	.24						
F	22.95***						
Indirect effect via anticipated coworker	19 050/ CI = [07 22]						
cooperativeness	.18, 95% CI = [.07, .32]						
Indirect effect via anticipated coworker	13, <i>95% CI</i> = [22,06]						
achievement orientation							

Note. N = 374, coefficients are unstandardized. CI = confidence interval, LL = lower limit, UP = upper limit. Number of bootstrap samples = 10000. Analysis includes covariates: Participant gender, participant age. *p < .05, **p < .01, ***p < .001.

effect on job pursuit intentions via anticipated coworker achievement orientation. Supporting H4a, anticipated coworker cooperativeness mediated the direct effect of signaling family friendliness on job pursuit intentions (indirect effect via anticipated cooperativeness: .18, 95% CI = [.07, .32]). Indeed, signaling family friendliness increased anticipated coworker cooperativeness (b = .85, p = .000), positively related to job pursuit intentions (b = .21, p = .000). Supporting H4b, along with the *positive* effect via anticipated coworker cooperativeness, signaling family friendliness also had a *negative* effect on job pursuit intentions via anticipated coworker achievement orientation (indirect effect via anticipated achievement orientation: -.13, 95% CI = [-.22, -.06]). Namely, signaling family friendliness decreased anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000), and anticipated coworker achievement orientation (b = -.54, b = .000).

.000). In this model on the effects via the perceptions of coworkers, the direct effect of signaling family friendliness on job pursuit intentions also remained significant (b = .57, p =.000, 95% CI = [.32, .81]).

Subsequently, in another moderated mediation analysis (see Table 5), I tested the influence of participants' career role commitment on the positive effect via anticipated coworker cooperativeness and the negative effect via anticipated coworker achievement orientation. 11 Supporting H5a, the positive relationship between anticipated coworker cooperativeness and job pursuit intentions was qualified by a significant negative interaction with participants' career role commitment (b = -.11, p = .008), resulting in a significant moderated mediation (*index*: -.09, 95% CI = [-.18, -.02]). Participants' career role commitment reduced the positive relationship between anticipated coworker cooperativeness and job pursuit intentions, and thus the positive effect of signaling family friendliness on job pursuit intentions via anticipated coworker cooperativeness. Further, conditional indirect effects showed that signaling family friendliness had no positive effect on job pursuit intentions via anticipated coworker cooperativeness for participants with very high career role commitment (84th percentile; 95% CI = [-.06, 0.22]). Further, supporting H5b, the relationship between anticipated coworker achievement orientation and job pursuit intentions was also qualified by a significant but positive interaction with participants' career role commitment (b) = .10, p = .006), again resulting in a significant moderated mediation (index: -.05, 95% CI = [-.10, -.01]). Participants' career role commitment strengthened the positive relationship between anticipated coworker achievement orientation and job pursuit intentions, thus enhancing the negative effect of signaling family friendliness on job pursuit intentions via anticipated coworker achievement orientation.

¹¹ Within this analysis, effects of signaling family friendliness (IV) on the mediators represent conditional effects.

Table 5Moderated Mediation Analysis – Coworker Level Mediators

	Outcome: Anticipated coworker cooperativeness (mediator 1)					
Predictors	b (mediai	SE	95% CI [LL, UL]			
	.85***					
Signaling family friendliness R^2		.12	[.62, 1.08]			
R ²	.13					
<u>F</u>	18.59***					
	Outcome: Anticipated coworker achievement					
		ntation (mediator 2)				
Predictors	b	SE	95% CI [LL, UL]			
Signaling family friendliness	54***	.14	[82,27]			
R^2	.06					
F	7.27***					
	Outcome: Job pursuit intentions					
Predictors	b	SE	95% CI [LL, UL]			
Anticipated coworker cooperativeness	.73***	.21	[.33, 1.14]			
Anticipated coworker achievement orientation	20	.17				
Career role commitment	.21	.27	[32, .75]			
Anticipated coworker cooperativeness x career role commitment	11**	.04	[19,03]			
Anticipated coworker achievement orientation x career role commitment	.10**	.03	[.03, .15]			
Signaling family friendliness	.57***	.12	[.32, .81]			
$\frac{\mathcal{E}}{R^2}$.27		<u> </u>			
F	16.89***					
Index of moderated mediation via anticipated	09, 95% CI = [18,02]					
organizational support	, , , , ,					
Index of moderated mediation via anticipated	05, 95% CI = [10,01]					
organizational justice (n.s.)	,					
Note N = 274 coefficients are unstandardized CI = confic	lanca interval II = larvar limit III		" limit Number of			

Note. N = 374, coefficients are unstandardized. CI = confidence interval, LL = lower limit, UP = upper limit. Number of bootstrap samples = 10000. Analysis includes covariates: Participant gender, participant age. *p < .05, **p < .01, ***p < .001.

Robustness Checks and Post Hoc Analyses

I conducted several robustness checks and post hoc analyses.

Participant gender. Interestingly, although prior findings suggests that women may be more attracted to family-friendly organizations than men, due to anticipating more benefits (Wayne & Casper, 2016), participant gender did not influence the hypothesized effects via anticipated organizational support and justice, and anticipated coworker cooperativeness and achievement orientation.

Testing the hypothesized mediators in one model. To check the robustness of the identified mediators and consider the interrelations between perceptions of the organization

and coworkers, I combined and analyzed all mediators in one mediation model. In this model, signaling family friendliness had a positive effect on job pursuit intentions via anticipated organizational support (95% CI = [.14, .43]) and justice (95% CI = [.00, .16]), and a negative effect on job pursuit intentions via anticipated coworker achievement orientation (95% CI = [.22, -.06]). Along with anticipated organizational support and justice, and anticipated coworker achievement orientation, anticipated coworker cooperativeness was no longer a significant mediator (95% CI = [-.09, .11]). Although signaling family friendliness showed effects on anticipated organizational support and justice as well as on anticipated coworker cooperativeness, the perception of the organization, especially anticipated organizational support, seems to be the stronger predictor of job pursuit intentions.

The role of anticipated coworker competence. Whereas the literature has considered competence as a facet of agency (i.e., stereotypically male qualities), just like achievement orientation (Abele & Wojciszke, 2014; Heilman, 2012), more recent investigations suggest that (perceived) competence is a construct in its own right, perceived as gender-neutral (Eagly et al., 2019; Hentschel, Heilman, et al., 2019). As perceptions of competence might still be related to perceptions of achievement orientation, I explored whether signaling family friendliness also had a negative effect on job pursuit intentions via anticipated coworker competence. Anticipated competence positively correlated with anticipated achievement orientation, but also with anticipated cooperativeness (see Table 1). The analysis revealed a positive relationship between anticipated coworker competence and job pursuit intentions (b =.41, p = .000), strengthened by career role commitment (b = .11, p = .000), but no significant effect of signaling family friendliness on anticipated competence (b = -.13, p = n.s.). Integrating anticipated competence in the mediation model on perceptions of coworkers, anticipated competence was again significantly related to job pursuit intentions (b = .26, p =.001), especially when career role commitment was high (b = .15, p = .013), while anticipated achievement orientation was no longer positively related to job pursuit intentions (b = .08, p =

n.s.). The effect via anticipated coworker cooperativeness remained stable. Thus, anticipated achievement orientation was the only component negatively affected by signaling family friendliness, but anticipated competence and cooperativeness of coworkers appeared to be stronger predictors of job pursuit intentions.

The role of the anticipated share of women. Given that communal qualities (such as cooperativeness) are stereotypically attributed more to women, and agentic qualities (such as achievement orientation) to men (Heilman, 2012; Hentschel, Heilman, et al., 2019), signaling family friendliness might also influence perceptions of coworker gender distribution (see also Gaucher et al., 2011). In addition, women are still the primary gender to be associated with family responsibilities (see e.g., Gloor et al., 2018), and likely with related benefits or policies (Rudman & Mescher, 2013). The anticipated share of women was positively correlated with anticipated cooperativeness, negatively with anticipated achievement orientation, and unrelated to anticipated competence of coworkers (see Table 1). The explorative mediation analysis showed signaling family friendliness to have a positive effect on job pursuit intentions via the anticipated share of women (b = .18, 95% CI = [.06, .30]), irrespective of participants' family and career role commitment. Integrating the anticipated share of women in the model on the perceptions of coworkers did not influence the robustness of the effects via anticipated coworker cooperativeness and achievement orientation.

Testing the effects of signaling both family friendliness and career prospects. The applied experimental design included a condition whereby family friendliness (tending to be associated with communality and women) was signaled along with career prospects (tending to be associated with agency and men) (see e.g., Gaucher et al., 2011; Heilman, 2012; Pietraszkiewicz et al., 2019; Rudman & Mescher, 2013). Although these signals may seem contradictory, both indicate that employees are supported by their employer in different ways. However, interesting to explore is whether the effects of the family friendliness signal on the identified mediators were weaker (or stronger) due to signaling family friendliness along with

career prospects. The explorative analyses revealed that signaling family friendliness – whether alone or with career prospects – had a positive effect on anticipated organizational support, organizational justice, and coworker cooperativeness (mean differences significant at p < .05 as compared to "no signal" and "signaling career prospects only"). Yet, with regard to anticipated organizational support, signaling family friendliness alone (vs. alongside career prospects) showed a stronger positive effect (p = .041). Nevertheless, the negative effect of signaling family friendliness on anticipated coworker achievement (and thereby job pursuit intentions) also depended on whether family friendliness was signaled alone or alongside career prospects (mean difference significant at p = .004). Signaling family friendliness and career prospects did not decrease anticipated coworker achievement orientation (as compared to "no signal" and "signaling career prospects only"), but signaling family friendliness without signaling career prospects did (mean differences significant at p = .000).

The relation of job pursuit intentions and behavioral indicators. Although intentions are a suitable predictor of behavior (Ajzen, 1991), and job pursuit intentions being widely used as outcome variable in recruitment research (Chapman et al., 2005), I wanted to test their relevance for potential applicants' actual behavior (see also Highhouse et al., 2003). Therefore, I tested the correlation of participants' job pursuit intentions with a behavioral measure of whether they actually show interest in the depicted organization and its job offers. Indeed, the correlation was significantly positive (r = .25, p = .000), indicating the relevance of job pursuit intentions for potential applicants' actual behavior.

Discussion

Prior research lends support for the positive effects of family friendliness signals in recruitment material (see e.g., Beauregard & Henry, 2009). However, knowledge about the nature of these effects, and the potential downsides of family friendliness signals in attracting applicants, is limited (Perrigino et al., 2018; Wayne & Casper, 2012, 2016). Therefore, I examined why signaling family friendliness attracts applicants, and under which boundary

conditions (see also Casper et al., 2013). I investigated explaining mechanisms via the perceptions of the organization and the potential coworkers, and applicants' family and career role commitment as boundary conditions in those mechanisms. In the following, I summarize the findings of the conducted study and discuss their implications, specifically aimed at avoiding stereotype-based pitfalls in communicating family friendliness as an added value.

Findings Summary

Overall, effects of a *general signal of family friendliness* in recruitment material (i.e., in job advertising) increased potential applicants' job pursuit intentions. I found both effects via anticipated organization and coworker attributes. Their job pursuit intentions were positively related to their expression of interest to learn more about the hiring organization.

Effects of the signal via *anticipated organization attributes* revealed positive effects on job pursuit intentions via anticipated support and justice. Individual family role commitment enhanced the positive effect of the signal via anticipated organizational support, while it did not influence the positive effect via anticipated organizational justice.

Effects of the signal via anticipated coworker attributes revealed a positive effect on job pursuit intentions via anticipated coworker cooperativeness; importantly however, also a negative effect on job pursuit intentions via anticipated coworker achievement orientation.

The anticipated achievement orientation of coworkers was negatively affected by the family friendliness signal in job advertising, while it was positively related to job pursuit intentions.

More so, individuals' higher career role commitment attenuated the positive effect on job pursuit intentions via the anticipated coworker cooperativeness, and it accentuated the negative effect on job pursuit intention via the anticipated coworker achievement orientation.

Explorative analyses additionally revealed a positive effect of the family friendliness signal on job pursuit intentions via the anticipated share of women among the potential coworkers. Instead, the anticipated competence of coworkers was not affected by the signal.

Comparing the effects on job pursuit intentions via anticipated organization and coworker attributes due to the family friendliness signal, the positive effects via anticipated organizational support and justice were more dominant than the positive effect via anticipated coworker cooperativeness. The positive effects were interrelated and perceptions of the organization prevailing. Additionally, while anticipated coworker achievement orientation was negatively affected by the family friendliness signal and anticipated coworker competence was not affected by the signal, the latter appeared as the more dominant driver of job pursuit intentions when comparing the anticipated coworker attributes.

Lastly, signaling family friendliness alongside career prospects evened out the negative effect that the family friendliness signal had on anticipated coworker achievement orientation when family friendliness was signaled alone.

Theoretical Implications

Signaling general family friendliness attracts applicants. My research provides evidence of a positive impact of a *general* family friendliness signal in job advertisements in regards to attracting young adults. It thereby complements research finding beneficial effects of more specific indicators such as a reputation for work-family policies (e.g., Bretz & Judge, 1994; Wayne & Casper, 2012), announcing specific family-friendly policies (e.g., Casper & Buffardi, 2004; Foster Thompson & Aspinwall, 2009), and advertising a family-supportive organizational culture (Wayne & Casper, 2016).

General family friendliness as signal for organizational support. Prior research showed that information on work-family/life policies in recruitment material can increase anticipated organizational support (e.g., Casper & Buffardi, 2004; Onken-Menke et al., 2018; Wayne & Casper, 2012). My findings suggest that general signals of family friendliness unleash similar perceptions. Even compared to signaling career prospects signaling family friendliness seems to be the stronger predictor of anticipating organizational support, in turn increasing job pursuit intentions. Prior findings suggest that parental status and work-family

conflict do not play a role for anticipated organizational support from family-friendly policies (Casper & Buffardi, 2004). In contrast, my findings suggest that inferences of organizational support from a *general* family friendliness signal were especially made by individuals with high family role commitment. Thus, I call for more research on the triggers of anticipated organizational support as an important variable in recruitment paying more attention to the role of individual differences (see also Casper et al., 2013; Wayne & Casper, 2016).

General family friendliness as signal for organizational justice. My findings also provide evidence for inferences of organizational justice from general signals of family friendliness. Thereby, they suggest an additional explanation for increased job pursuit intentions due to family friendliness signals receiving less attention in prior research than inferences of organizational support. Interestingly, individuals' (higher) family role commitment did not influence the inferences of organizational justice in the data. This is interesting because prior research showed that family-friendly policies tend to be perceived as fairer by individuals who have or anticipate a need for the specific policy, or identify with others who do (Grandey, 2001; Grover, 1991). My findings suggest that, from a general signal of family friendliness, young adults still infer fair treatment of employees overall, including themselves, whether or not they think they will benefit from the family friendliness.

General family friendliness as signal for coworker attributes. Another relevant and, to the best of my knowledge, novel consideration in the current research is the role of anticipated coworker attributes in explaining effects of family friendliness signals on job pursuit intentions. My findings on anticipated coworker attributes suggest that there are mechanisms that contribute to, and mechanisms that counteract, the positive effects of signaling family friendliness in applicant attraction. Thereby, my findings contribute to a more comprehensive understanding of the effect of family friendliness signals in recruitment and present a fruitful basis for future research. While generally attracting applicants, I also find that family friendliness signals in job advertising may create a one-sided, communal (i.e.,

stereotypically female) picture of the organization's workforce when there is no "contrary" agentic (i.e., stereotypically male) signal. My findings suggest that potential applicants are likely to assume that coworkers in organizations signaling family friendliness are cooperative but lack achievement orientation, and this may discourage suitable candidates from applying, especially those with high career role commitment. Interestingly, anticipated coworker competence remained unaffected by the family friendliness signal. Showing that gendered (i.e., agentic and communal; Heilman, 2001, 2012) characteristics are influenced by family friendliness and (perceived) competence is not, my findings underpin that competence is perceived as having a more gender-neutral character (Eagly et al., 2019; Hentschel, Heilman, et al., 2019) and the argument of perceptions of coworker attributes or qualities being shaped by gender stereotypes (Heilman, 1983, 2001, 2012).

Individual differences shaping the effects of general family friendliness signals.

My findings reveal family and career role commitment as boundary conditions of the identified mechanisms (for organizational support and coworker attributes, not for organizational justice) and thus explain under which conditions individuals may be particularly or less attracted to family-friendly organizations. A better understanding of such influences is needed because prior results on the influence of individual differences are contradictory (Beauregard & Henry, 2009). First, despite inferences of general support for all employees (Casper & Buffardi, 2004), those with high family role commitment still seem to anticipate more support from general family friendliness, emphasizing the role of potential applicants' deep-level attributes (e.g., values; Casper et al., 2013) and anticipated personal "benefits" (Wayne & Casper, 2016). However, although some anticipated more (personal) benefits and support than others depending on family role commitment, this was no boundary condition for anticipated organizational justice, which may indicate that needs-based allocations are accepted in case of family friendliness (at least to some extent; Rothausen et al., 1998). Second, the study findings support the notion that potential applicants prefer

coworkers assumed to exhibit qualities, behaviors, and values that fit their own (Kristof-Brown & Stevens, 2001; Kristof-Brown et al., 2005), while perceptions of those qualities, behaviors, and values are often stereotyped (Heilman, 1983, 2012). In the data, family and career role commitment were independent of gender and age, and also the effects on job pursuit intentions. Therefore, my findings suggest that individual role commitment shapes the effect, not the demographics. Thus, in contrast to research suggesting a (more) relevant role of potential applicants' surface level attributes such as demographics (e.g., gender, Wayne & Casper, 2016), my findings align with research emphasizing the crucial role of deep-level attributes of potential applicants such as their attitudes and values (Casper et al., 2013).

Limitations and Future Research

In this section, I discuss the limitations of the conducted study, highlighting future research avenues. First, the study used hypothetical job advertisements, which potentially limit external validity; nevertheless, a randomized experimental design (see e.g., Charness et al., 2012) provides a controlled setting and high internal validity, thereby reducing confounds. Furthermore, it enables investigating causal relationships (Charness et al., 2012). In future research, a focus group study with job seekers and newly hired employees discussing different organizational descriptions might provide additional insights which further increase our understanding of their perceptions due to organizational signals.

Second, the sample of young adults might limit the generalizability of my findings. Individuals in this age range, largely under 30, are very likely an interesting and relevant target group for organizations, including family-friendly organizations (Wayne & Casper, 2012; 2016; see also Luscombe et al., 2013; McDermott et al., 2006). However, further research is needed to determine whether the findings of my study generalize to other age groups or recruitment targets (e.g., "empty nesters" with grown-up children), who might have different preferences. Still, I identified family and career role commitment as boundary conditions of the effects of general family friendliness signals, which likely also vary in more

experienced professionals (Amatea et al., 1986; Ellemers et al., 1998), thus constituting another avenue for future research.

In addition, the operationalization applied in the study, presenting the respondents with a job advertisement for a junior project manager position in an IT company, may limit generalizability to other jobs or industries. Nevertheless, with project management, I chose a job that fits candidates with a wide range of educational backgrounds. Furthermore, as an outcome variable, I focused on intentions to pursue a job at the hiring organization, rather than intentions to apply for the specific job.

Conclusion and Practical Implications

Overall, the study findings suggest that family friendliness and its signaling in early-stage recruitment pays off in attracting young talent seeming to perceive an organization signaling family friendliness as supportive and just, and coworkers as cooperative. I tested this for an organization in a (male-stereotyped) STEM field, the findings suggesting that signaling family friendliness indeed creates a more communal, stereotypically female picture of the organization and potential coworkers (see Diekman et al., 2015; Gaucher et al., 2011; Weisgram & Diekman, 2015). The effects were independent of potential applicants' gender. Thus, the findings suggest that (STEM) organizations attract both male and female applicants when they signal their family friendliness in recruitment material (e.g., similar to a cooperative organizational culture as well attracting both male and female applicants; Catanzaro et al., 2010; see also Casper & Buffardi, 2004; Wayne & Casper, 2012).

Despite a general recruitment advantage of family-friendly organizations, my findings also suggest that not all applicants may be equally attracted to organizations signaling family friendliness. My findings indicate that a negative effect of family friendliness signals on job pursuit intentions via (lower) anticipated achievement orientation in coworkers, that is based on stereotyped inferences, is accentuated in highly career-oriented individuals. Following and reproducing these stereotypical patterns, they may self-select in other organizations, and

thereby potentially limit diversity among applicants and employees. For organizations, both attributes relating to communal values (such as cooperativeness and valuing family friendliness) and agentic values (such as achievement orientation and valuing good career prospects) are valuable (which are not mutually exclusive; see e.g., Abele & Wojciszke, 2014; Beauregard & Henry, 2009; Eagly & Carli, 2003; Eagly et al., 2003; Rehbock, Knipfer, et al., 2021). Therefore, especially when advertising entry-level positions, emphasizing that family friendliness and career prospects are present in an organization may be important to attract a large and diverse applicant pool. Thereby, organizations can also show that family- and career-related benefits present in the organization are not seen as mutually exclusive.

Lastly, one has to consider that, while organizations signaling family friendliness signal communality, most organizations may rather lack communal signals in recruitment, especially in STEM fields and when advertising high-status jobs (e.g., Diekman et al., 2015; Gaucher et al., 2011; Weisgram & Diekman, 2015). For instance, job advertisements for male stereotyped jobs (high-status jobs and jobs in male-dominated fields; e.g., Cejka & Eagly, 1999; Koenig et al., 2011) usually tend to signaling agency and agentic requirements only (Gaucher et al., 2011; Hentschel et al., 2021; see also chapter 3). Stimulating perceptions of overly agentic job requirements (which could result from salient career prospect signals that can be interpreted as "career over family") may discourage women from applying, while not influencing men's intent to apply (Gaucher et al., 2011; Hentschel et al., 2021). Furthermore, in general, employees seem to value a cooperative over a competitive organization (Catanzaro et al., 2010). Therefore, signaling communality more than agency may be less detrimental for attracting (diverse) applicants, as compared to signaling more agency than communality.

3. WHEN AGENCY "FITS" REGARDLESS OF GENDER: PERCEPTIONS OF APPLICANT FIT WHEN JOB AND ORGANIZATION SIGNAL MALE STEREOTYPES¹²

Organizations strive to hire the most qualified employees who best fit the specific job and organization (Kristof-Brown, 2000). This is not always an easy or straightforward task because stereotypes can bias evaluators' fit perceptions (Heilman, 1983, 2012), and fit perceptions are often an even more proximate predictor for recruitment decisions than actual fit (Cable & DeRue, 2002; Cable & Judge, 1997; Kristof, 1996). Stereotypes constitute "socially shared beliefs" (Hoyt & Johnson, 2011, p. 207) and can refer to groups of individuals as well as to jobs and organizations (Cejka & Eagly, 1999; Glick, 1991; see also Heilman, 2012). Particularly when jobs and organizations are dominated by one social group (e.g., men), stereotype biases may prevent organizations from selecting employees who are the best fit and disadvantage whole groups of individuals (Eagly & Karau, 2002). I investigate perceptions in and across *gendered work contexts* and focus on strictly male stereotyped work contexts: high-status jobs in male-dominated fields.

High-status jobs in organizations within male-dominated fields are often stereotyped as highly agentic (Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011). These jobs include for example jobs as professors in male-dominated academic disciplines (e.g., math-intensive discipline) or managing directors in male-dominated industries (e.g., automotive industry; see also Carli et al., 2016; Gaucher et al., 2011). *Agency* refers to stereotypically male qualities such as achievement orientation, assertiveness, competitiveness, and rationality; and is typically contrasted with *communality*, which refers to stereotypically female qualities such as cooperativeness, caring, and interpersonal skills (Heilman, 2001; 2012; see also Bakan, 1966).

¹² Chapter 3 is based on a paper by Dutz, Hubner, and Peus (2022), published at *Personnel Psychology*.

Requirements of high-status jobs usually are diverse, including agentic and communal qualities (Cann & Siegfried, 1990; Eagly & Carli, 2003; Rehbock, Knipfer, et al., 2021).

However, *perceptions* of requirements usually are highly agentic because high-status jobs are associated with men and agency (Koenig et al., 2011; see also Eagly & Karau, 2002). When high-status jobs are occupied in a male-dominated field, this context possesses a *unidimensional* agentic stereotype (Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011). Building on theories of stereotyping (Eagly & Karau, 2002; Heilman, 1983, 2012) and fit perceptions (Kristof, 1996; Kristof-Brown, 2000; Kristof-Brown et al., 2005), I develop and test a model of evaluators' perceptions of applicant fit in such unidimensional male stereotyped work contexts. I suggest that perceived applicant agency is a key driver of perceived applicant person-job (P-J) and person-organization (P-O) fit.

Stereotype-congruent recruitment material can reinforce stereotype-based beliefs; as previous research indicates, it can influence potential applicants' perceptions and their self-ascribed fit (Gaucher et al., 2011; Hentschel et al., 2021; Hentschel, Horvath, et al., 2018). Knowledge on influences on *evaluators*' perceptions, however, is lacking. Evaluators' perspectives are crucial as they are gatekeepers deciding who gets a position (Cole et al., 2004; see also van den Brink & Benschop, 2014). Evaluators' perceptions likely are different from applicants' because assessing others seems to follow different mental processes (Gales & Hubner, 2020; Hentschel, Heilman, et al., 2019) and often involves a lot of ambiguity and inferences which give way to stereotyping (Nieva & Gutek, 1980; see also Heilman & Haynes, 2005; Heilman, 2012). For evaluators, the agentic stereotype of strictly male stereotyped work contexts becomes particularly salient and an explicit assessment criterion when recruitment material reflects the agentic stereotype – which is common in practice (Gaucher et al., 2011). I examine how stereotype-congruent (vs. -incongruent) descriptions of jobs and organizations shape evaluators' perceptions of applicant P-J and P-O fit in the context of high-status jobs in male-dominated fields.

I propose perceived agency as a key driver of fit perceptions specifically in the context of high-status jobs in male-dominated fields. I argue that, due to stereotypical perceptions (e.g., Eagly & Karau, 2002; Heilman, 1983, 2012; Koenig et al., 2011), the relevance of agency for fit perceptions increases with perceived job status, and the relevance of communality is particularly low when the expected share of men in a work context is high; communality likely becomes more influential for fit perceptions when the expected share of women in the work context increases (Cejka & Eagly, 1999; Glick, 1991). Therefore, I suggest that the unidimensional focus on agency is context-specific. I examine the interplay of a job's status and the field of the organization, and analyze the relationship between agency, communality, and fit perceptions across different work contexts.

How evaluators perceive *female* applicants for high-status jobs in male-dominated fields remains a puzzling question. Evaluators could perceive female applicants as low in agency, due to the female gender stereotype (Heilman, 2001). On the contrary, they could perceive female applicants as high in agency, due to their (successful) engagement in a male stereotyped career (Biernat, 2012; Heilman et al., 1989; Kunda & Thagard, 1996). Considering these competing arguments, I analyze evaluators' perceptions of female and male applicants across different work contexts, and specifically in the context of high-status jobs in male-dominated fields. I compare perceptions of applicants' agency, communality, and fit, and explore attributions of competence, likeability, and "non-desirable" traits to applicants who deviate from prescribed gender norms (Rudman & Glick, 1999, 2001; see also Rudman et al., 2012).

In the course of seven experimental studies (and additional pre-tests), I tested my conceptual model on evaluators' fit perceptions in strictly male stereotyped work contexts, the context dependency of its assumptions, and perceptions of applicants across contexts. I tested in studies 1-4 how stereotype-congruent (vs. -incongruent) job and organization descriptions shape evaluators' fit perceptions in the context of high-status jobs in male-dominated fields,

and analyzed in studies 5-7 contextual differences contrasting high- and low-status jobs in a male-dominated, female-dominated, and gender-balanced field.

My studies contribute to research on stereotyping, recruitment, and fit perceptions in several ways. First, I bridge perspectives from recruitment and stereotype research, and thereby provide a nuanced understanding of evaluators' perceptions of applicant fit in strictly male stereotyped work contexts. In doing so, I present empirical evidence to support Heilman's lack of fit theory (1983, 2012) by showing stereotype biases in fit assessments, and integrate established fit constructs from the recruitment literature. I also show the importance of contextual differences and disentangle influences of perceived job status and expected gender ratios on fit perceptions. Second, I elucidate the influence of stereotype-congruent job and organization descriptions on evaluators' fit perceptions, and thereby highlight the important role of recruitment material design in acquiring diverse talents. I focus on evaluators' perspectives, who are crucial due to their gatekeeper role, but are underinvestigated as previous research on recruitment material largely focused on applicants' perspectives. Third, I provide an empirical investigation of evaluators' perceptions of female and male applicants' qualities across contexts, shedding light on a previously neglected but crucial stage in women's careers in gender-atypical work contexts.

Theory and Hypotheses

My theoretical framework outlines the role of stereotypes, perceived applicant agency, and stereotype-congruent recruitment material for fit perceptions in strictly male stereotyped work contexts (Figure 3). I also detail contextual differences and perceptions of applicants across contexts (Figure 4), along with the role of applicant gender (Figures 3 and 4).

The Role of Stereotypes for Fit Perceptions in Strictly Male Stereotyped Work Contexts

Fit perceptions are important predictors for decisions and behavior in recruitment processes (Kristof-Brown, 2000; Uggerslev et al., 2012). Empirical evidence suggests that subjective fit perceptions are often an even more proximate predictor than the objective

compatibility between a person's and a work environment's characteristics (Cable & DeRue, 2002; Cable & Judge, 1997; Kristof, 1996). Evaluators' perceptions of applicant fit have been shown to influence their hiring decisions (Cable & Judge, 1997; Kristof-Brown, 2000), and are particularly crucial due to their role as organizational gatekeepers (Cole et al., 2004; see also van den Brink & Benschop, 2014). However, their fit perceptions can be biased by stereotypes (Eagly & Karau, 2002; Heilman, 1983, 2012). Stereotypes are "socially shared beliefs" (Hoyt & Johnson, 2011, p. 207). They can refer to groups of individuals as well as to jobs and organizations, such as a particular job someone holds or applies for, or an organization in a particular field in which the job is offered (Cejka & Eagly, 1999; Glick, 1991; see also Heilman, 2012). With stereotyped perceptions, evaluators' hiring decisions may undermine an organization's diversity efforts, notably in highly stereotyped, *gendered* work contexts (see also Gaucher et al., 2011).

Stereotypes about individuals reflect "group-trait associations" (Greenwald et al., 2009, p. 19). People tend to transfer traits that they ascribe to a specific social group (e.g., women) to individual group members (e.g., Heilman, 2012). Stereotypes are "regardless of the actual variation in qualities among the group members" (Hoyt & Johnson, 2011, p. 207) and can bias people's perceptions of others. Gender stereotypes stem from observations of men's and women's behavior in their traditional social roles as "breadwinner" and "homemaker" (Eagly & Steffen, 1984; Eagly & Wood, 2012). Men in general are associated with *agency* or *agentic qualities* linked to achievement orientation, inclination to take charge, autonomy, and rationality; women are associated with *communality* or *communal qualities* linked to concern for others, affiliative tendencies, deference, and emotional sensitivity (Heilman, 2012; see also Hentschel, Heilman, et al., 2019). Gender stereotypes are not only descriptive, but they also prescribe how men and women should or should not be (Eagly, 1987; Heilman, 2001).

Stereotypes also shape perceptions of characteristics and requirements of jobs and organizations. For instance, our society seems to have a stereotyped image that high-status jobs require agency (Koenig et al., 2011). Moreover, organizations in female-dominated fields (e.g., education and care) are stereotyped as more communal than organizations in other fields (male-dominated or gender-balanced fields) such that they are likely perceived to require communality (Cejka & Eagly, 1999; Glick, 1991).

According to the *lack of fit theory* (Heilman, 1983, 2012), stereotypes potentially induce a perceived "lack of fit" of applicants with job requirements when evaluators' stereotype-based beliefs about applicants do not match with their stereotype-based beliefs about the job. Evaluators who assess applicants' fit compare their beliefs about applicants with their beliefs of what a job requires. As both sides are subject to stereotypes, stereotypes can bias their fit perceptions. Stereotype biases in fit perceptions are likely to be particularly evident in contexts where jobs, organizations, and/or requirements are highly stereotyped (see also Eagly & Karau, 2002), such as when job *and* organization signal male stereotypes.

In this research, I focus on such strictly male stereotyped work contexts and investigate recruitment for high-status jobs in male-dominated fields. In these contexts, stereotypes of jobs and organizations form a unidimensional male stereotyped, agentic pattern (Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011), which influences perceptions of one's own or others' fit to the work context (Heilman, 2012). The assessment of oneself or others seems to follow different mental processes (Gales & Hubner, 2020; Hentschel, Heilman, et al., 2019), such that fit perceptions from applicants' and evaluators' perspectives likely differ. I focus on evaluators' perceptions who are important due to their roles as gatekeepers and whose assessments usually involve a lot of ambiguity and inferences giving way to stereotype influences (Nieva & Gutek, 1980; see also Heilman & Haynes, 2005; Heilman, 2012).

Perceptions of Agency and Applicant Fit in Strictly Male Stereotyped Work Contexts

High-status jobs in male-dominated fields are strictly *male stereotyped* work contexts such that job and organizational characteristics most likely signal *agency*. High-status jobs, referring to high-level leadership jobs (e.g., a job as a professor or managing director), have always been and still are mainly filled with men (for overviews of numbers see Catalyst, 2020a, 2020b). Although our understanding of effective leadership is dynamic (see e.g., Eagly & Carli, 2003), since Schein's (1973, 1975) earliest work on the *think-manager-think-male* paradigm, research has repeatedly shown that the male, agentic stereotype of leadership is quite stable (Koenig et al., 2011; Schein, 2001). Thus, high-status jobs are cognitively linked to the male gender and stereotypically male, agentic requirements.

When a high-status job is occupied in an organization in a *male-dominated* field (e.g., a math-intensive discipline or the automotive industry; Catalyst, 2020d; National Science Foundation, 2018), the field likely furthers the focus on agency (Koenig et al., 2011). In contrast, when a high-status job is occupied in an organization in a *female-dominated* field, the field likely signals communal, stereotypically female aspects (Cejka & Eagly, 1999; Glick, 1991). The work context would then signal agency *and* communality. Therefore, high-status jobs in male-dominated fields represent work contexts with a unidimensional agentic stereotype pattern.

Previous research suggests that an agentic stereotype of a work context creates beliefs that applicants only fit to jobs when they possess agentic qualities, neglecting communal qualities such as "interpersonal skills and the ability to develop new talent" (Heilman, 2012, p. 116; see also Gaucher et al., 2011). Communality usually is also needed in high-status jobs and male-dominated fields (Cann & Siegfried, 1990; Eagly & Carli, 2003; Rehbock, Knipfer, et al., 2021), but evaluators seem to infer that agency is the main requirement. Thus, I consider perceived applicant agency to be a key driver of evaluators' perceptions of applicants' fit specifically in the context of high-status jobs in male-dominated fields.

Integrating conceptualizations of *P-J fit* and *P-O fit*, I suggest that the unidimensional agentic stereotype of these work contexts shapes both, perceptions of applicants' fit to the job and to the organization. Perceived P-J and P-O fit are related, yet distinct fit concepts that "offer unique prediction of hiring recommendations" (Kristof-Brown, 2000, p. 643). Not only is it crucial whether an applicant is considered to fit a job and its requirements, but also whether he or she is considered to fit the organization offering the job. When assessing P-J and P-O fit, evaluators rely on different facets of applicants' characteristics (Kristof-Brown, 2000).

To assess P-J fit, evaluators estimate whether an applicant's knowledge, skills, and abilities match a job's requirements and whether an applicant's personality fits the job (Edwards, 1991; Kristof-Brown, 2000). A job and presumed job requirements may be subject to stereotypes because of the job's status. As explained earlier, high-status jobs are stereotyped as highly agentic. Therefore, applicants' perceived P-J fit, in the context of high-status jobs in male-dominated fields, is likely to increase with their perceived agency.

To assess P-O fit, evaluators estimate whether applicants' characteristics match the organization's, especially whether an applicant's personality, attitudes, goals, and values match the organization's "culture, climate, values, goals, and norms" (Kristof, 1996, p. 3; Kristof-Brown et al., 2005; Tom, 1971). The field of the organization can shape the perception of the organization and its requirements depending on whether one expects the predominant gender to be men or women (Cejka & Eagly, 1999). In an organization in a male-dominated field, an *agentic* stereotype may evoke perceptions of an organizational culture focused on competition, success, and outstanding achievements more than mutual support and cooperativeness (Catanzaro et al., 2010; see also Gaucher et al., 2011).

Applicants may thus be perceived as a particularly good fit to the organization when they have a personality, attitudes, goals, and values that match this organizational culture.

Therefore, applicants' perceived P-O fit, in the context of high-status jobs in male-dominated fields, is also likely to increase with their perceived agency.

Hypothesis 1: In the context of high-status jobs in male-dominated fields, evaluators' perceptions of applicants' agency positively relate to their perceptions of applicants' *P-J fit* (1a) and *P-O fit* (1b).

The Influence of Recruitment Material in Strictly Male Stereotyped Work Contexts

In job advertisements, organizations describe, and thus signal *explicitly*, what they are like and what jobs they offer (Walker & Hinojosa, 2014). I refer to descriptions of jobs, including tasks and job requirements, as *job profiles*, and to descriptions of the organization, including the organization's culture, values, goals, and practices, as *organizational profiles*.

Job and organizational profiles can not only influence how applicants see jobs and organizations (Gaucher et al., 2011; Walker & Hinojosa, 2014) but likely also influence evaluators' perceptions. They explicitly signal criteria that recruiters should consider when evaluating applicants (Hentschel & Horvath, 2015). Thereby, these profiles can influence decision-making heuristics and help justify hiring decisions. In addition, they portray job and organizational characteristics and might subconsciously affect evaluators' perceptions of applicant fit by enhancing the salience of specific assessment criteria (see Kristof-Brown, 2000; Rice & Barth, 2016). Therefore, it is likely that explicitly mentioned criteria and characteristics in job and organizational profiles increase the likelihood of evaluators' processing of information about those criteria and characteristics (above others).

It is problematic, though, that job and organizational profiles tend to reflect stereotypes of work contexts (Gaucher et al., 2011). Stereotype-congruent *job* profiles for high-status jobs in male-dominated fields emphasize agency by using agentic wording in the descriptions of jobs, tasks, and requirements. Stereotype-congruent *organizational* profiles emphasize values, goals, and practices in the organizational culture that reflect agentic qualities and behaviors (Gaucher et al., 2011; Hentschel et al., 2021).

So far, research has mainly been concerned with the influence of male stereotyped recruitment material on *applicants*' perceptions (e.g., Gaucher et al., 2011; Hentschel et al., 2021; Hentschel, Horvath, et al., 2018). Gaucher et al. (2011) found that, with highly agentic wording in job advertisements, potential applicants expected more men in jobs and organizations, and female potential applicants were less attracted due to reduced perceptions of belongingness. Hentschel et al. (2018) found that a male stereotyped announcement design reduced women's interest and self-ascribed fit to an entrepreneurship program. I investigate whether and how stereotype-congruent job and organizational profiles in job advertisements affect *evaluators*' perceptions of applicants' P-J and P-O fit. To increase diversity, organizations need diverse applicant pools, but also have to reduce stereotyped assessment patterns of evaluators (e.g., Heilman, 1983, 2012).

I argue that, in the context of high-status jobs in male-dominated fields, agentic job and organizational profiles reinforce evaluators' stereotype-based beliefs (Figure 3). As these profiles make agency particularly salient and an explicit assessment criterion, they likely emphasize the perceptions of agentic requirements of jobs and organizations. Hence, an agentic job profile (vs. communal or neutral) may strengthen the relationship between evaluators' perceptions of applicants' agency and applicants' P-J fit. In parallel, an agentic organizational profile (vs. communal or neutral) may strengthen the relationship between evaluators' perceptions of applicants' agency and applicants' P-O fit.

Comparing the same job across different organizations, the *organizational profile* likely also influences expectations of *the job*, inferred from organizational culture perceptions (see Catanzaro et al., 2010). Accordingly, I assume that with a non-agentic job profile, an agentic organizational profile can still strengthen perceptions of agentic job requirements. Conversely, *job profiles* likely influence how *an organization* is perceived as they mirror work processes and practices within the organization (see Gaucher et al., 2011). Hence, I expect that with a non-agentic organizational profile, an agentic job profile can still strengthen

perceptions of agentic organizational requirements. When considering a situation where job and organizational profile signal different requirements (e.g., one is agentic and one is communal), I expect that one of them being agentic is sufficient to create the salience of agency in job and organizational requirements. Therefore, I propose that the relationship between evaluators' perceptions of applicants' agency and P-J fit is stronger when a non-agentic job profile is combined with an agentic rather than a non-agentic organizational profile. Furthermore, I propose that the relationship between evaluators' perceptions of applicants' agency and P-O fit is stronger when a non-agentic organizational profile is combined with an agentic rather than a non-agentic job profile.

Hypothesis 2: In the context of high-status jobs in male-dominated fields, the relationship between evaluators' perceptions of applicants' agency and applicants' fit is strengthened by an *agentic job profile* for P-J fit (2a) and by an *agentic organizational profile* for P-O fit (2b) as compared to non-agentic profiles.

Hypothesis 3: In the context of high-status jobs in male-dominated fields, the relationship between evaluators' perceptions of applicants' agency and applicants' fit is stronger when a non-agentic job profile is combined with an *agentic organizational profile* for P-J fit (3a) and when a non-agentic organizational profile is combined with an *agentic job profile* for P-O fit (3b) as compared to non-agentic profiles of both.

The Context Dependency of Fit Perceptions: The Role of Status and the Gender Ratio

Focusing on *high-status* jobs in *male-dominated* fields, I assumed that status and male domination interact in creating a unidimensional focus on agency in fit perceptions. I propose that agency is more relevant for perceived fit when the job is perceived to have high status, and communality to be less relevant when the expected share of men is high (Figure 4).

The *perceived status* of a job is most likely predicted by the actual status of a job. For instance, the perceived status is likely higher for a high-level leadership job as a professor or managing director, compared to a non-leadership job as an individual contributor to an organization's core activities (e.g., as a mechanical worker or care worker). Additionally, the perceived status of a job may depend on the field. As status and female stereotypes seem incongruent (Eagly & Karau, 2002), evaluators may perceive a high-status job as higher in status when the job is offered in an organization in a male-dominated field than in a gender-balanced (e.g., a business administration faculty or food trading company) or female-dominated field (e.g., a social sciences faculty or care-oriented company). Consequently, I assume that evaluators' perceptions of the status of a particular job increase with the actual job status (high-level-leadership vs. non-leadership), and additionally with the male domination of the field (male-dominated vs. gender-balanced or female-dominated).

The higher the perceived status of a job, the more likely the job will be associated with agentic requirements (Eagly & Karau, 2002; Koenig et al., 2011). Thus, I propose that the relationship between evaluators' perceptions of applicants' agency and applicants' P-J fit increases with the perceived job status.

Hypothesis 4: Evaluators perceive the status of a job as higher for *high-status jobs* than low-status jobs (high-level-leadership vs. non-leadership), and this effect is stronger in *male-dominated fields* (vs. gender-balanced or female-dominated fields).

Hypothesis 5: The relationship between evaluators' perceptions of applicants' agency and applicants' P-J fit increases with the *perceived status* of the job.

While perceived job status may induce perceptions of agentic requirements, the *expected share of men* within a work context may reduce perceptions of communal

¹³ For more information on the jobs and fields compared, see methods sections of studies 6 and 7.

requirements. Evaluators are likely to expect a higher share of men in fields where, in general, more men than women are working; for instance, more men in jobs in the automotive than in the nursing industry (e.g., Catalyst, 2020d; OECD, 2019 for overviews). Additionally, due to the general male dominance in leadership positions (e.g., Catalyst, 2020a, 2020b; DeSilver, 2018 for overviews), evaluators are likely to expect a higher share of men in high-status than in low-status jobs. Accordingly, I assume that the difference in the expected share of men is most evident when comparing *low-status* jobs across different fields: The expected share of men is high in a male-dominated field (e.g., among mechanical workers), and low in a female-dominated field (e.g., among care workers). When comparing *high-status* jobs across different fields the picture is less clear. In high-status jobs (e.g., among managing directors), in general, more men than women will be expected such that the expected share of men may be only slightly lower in female-dominated than in male-dominated fields. Thus, I propose that evaluators expect a higher share of men in jobs in a male-dominated vs. a gender-balanced or female-dominated field, but this effect is weaker for high-status jobs.

A work context is likely to be perceived to entail more stereotypically female, communal requirements when the expected share of women is high, than when the expected share of men is high (Cejka & Eagly, 1999). Therefore, I assume that, when the expected share of men in a work context is high, evaluators' perceptions of applicants' communality are unlikely to relate to their perceptions of applicants' fit. More specifically, a low-status job is more likely to be perceived to require communality in a female-dominated than in a male-dominated field. A high-status job may be perceived to incorporate communality, *in addition to agency*, in a female-dominated field, whereas a high-status job is unlikely to be perceived to require communality in a male-dominated field (see also Koenig et al., 2011). Thus, I propose that the relationship between evaluators' perceptions of applicants' communality and applicants' P-J fit decreases with the expected share of men. Furthermore, in work contexts where the expected share of men is high, perceived communality is also less likely to be

relevant for perceived P-O fit as there is no signal for a communal organizational culture (see e.g., Catanzaro et al., 2010; Gaucher et al., 2011). Accordingly, I propose that also the relationship between evaluators' perceptions of applicants' communality and applicants' P-O fit decreases with the expected share of men.

Hypothesis 6: Evaluators expect a higher share of men in jobs in *male-dominated*fields (vs. gender-balanced or female-dominated), and this effect is

weaker for high-status jobs than for low-status jobs.

Hypothesis 7: The relationships between evaluators' perceptions of applicants' communality and applicants' P-J fit (7a) and P-O fit (7b) decrease with the *expected share of men*.

Perceptions of Applicants Across Contexts and the Role of Applicant Gender

I have proposed that it is relevant for applicants to be perceived as agentic in strictly male stereotyped work contexts. Indeed, I expect that perceived agency plays an important role for male *and* female applicants in these contexts. Still, *female* applicants are, in general, likely to be perceived as lower in agency (and higher in communality) because the male stereotype incorporates agency, and the female stereotype does not (Heilman, 2001, 2012). Gender stereotyping is still prevalent (Hentschel, Heilman, et al., 2019), and also women's and men's traditional social roles, as the basis of gender stereotyping (Eagly, 1987; Eagly & Wood, 2012), are still present in today's modern society (Sczesny et al., 2019): Women continue to be the dominant sex to care for children and perform unpaid household labor (see Catalyst, 2020e for an overview of statistics), and to engage in occupations connected to social skills (Lippa et al., 2014), whereas men are still the dominant sex in holding high-status jobs (Levanon & Grusky, 2016).

However, also the work context may shape perceptions of male and female applicants (Eagly & Steffen, 1984; Heilman et al., 1989). Agency is thought to be essential for moving up the career ladder and for being successful in a high-status job (e.g., Eagly & Karau, 2002;

Koenig et al., 2011). Therefore, when someone applies to a high-status job, and has already climbed the ladder, that person may be associated with agency, whether male or female. For instance, in Heilman et al.'s study (1989) women were perceived as more agentic when described as "women managers," and even more agentic when described as "successful women managers". In addition, Eckes (2002) found similar stereotypical patterns for perceptions of "career men" and "career women" in terms of competence and warmth.

Making parallels to the agency-communality framework, his findings would suggest high agency and rather low communality perceptions for "career men" as well as "career women" (Fiske, 2019). Therefore, applicants, whether male or female, may be perceived as more agentic when they apply to high-status jobs than to low-status jobs.

In addition, for perceptions of applicants' communality it may play a role whether they pursue a job in a male-dominated or a female-dominated field. While female-dominated fields are thought to explicitly require communal qualities, as explained earlier, communal requirements are unlikely to be salient in male-dominated fields. Thus, applicants who have experience in and apply to jobs in male-dominated fields, whether high-status or low-status, are less likely to be associated with communality than applicants in female-dominated fields.

Hypothesis 8: Applicants are perceived as more agentic when they pursue *high-status jobs* than when they pursue low-status jobs, regardless of gender.

Hypothesis 9: Applicants are perceived as less communal when they pursue jobs in *male-dominated fields* than when they pursue jobs in female-dominated fields, regardless of gender.

In high-status jobs in male-dominated fields, women are an exception (e.g., GWK, 2020; McCullough, 2020). *Shifting standards* (Biernat, 2012; Biernat et al., 1991) suggest that women who successfully engage in a field where they are by default underrepresented (and considered unsuccessful) may be evaluated in reference to lower expectations on "women in general". Therefore, when women are yet deemed successful in such contexts, they may be

perceived differently as compared to "women in general". The characteristic that is considered essential for their success but atypical for women (agency) is then likely to be particularly salient (see Heilman et al., 1995; Heilman et al., 1989). Exceptional agency may actually be considered a prerequisite for success of women in such contexts and for overcoming the challenges that only women face in such contexts (Rosette & Tost, 2010). Once women have "proven" they can cope with the requirements of a strictly male stereotyped work context, they might be perceived as exceptionally agentic (Eagly & Karau, 2002; Koch et al., 2015; Kunda & Thagard, 1996).

Therefore, I suggest that, due to their career, former achievements, and proven success in the gender-atypical context, evaluators may even perceive female applicants for high-status jobs in male-dominated fields as more agentic than male applicants. Evaluators might assume that female applicants, who made it this far in a work context where men are the default, are extremely agentic because agency might have been a necessity to withstand resistance and outperform male (and female) colleagues. Thus, I propose that female applicants are perceived as more agentic than male applicants in such contexts.

Hypothesis 10: In the context of high-status jobs in male-dominated fields, female applicants are perceived as more agentic than male applicants.

Being perceived as agentic might be one mechanism that helps women to overcome stereotype biases. When women are perceived as agentic, they may be perceived as a good fit for jobs that are perceived as high in status, despite the incongruity between stereotypes of women and status (Eagly & Karau, 2002) and the "think-manager-think-male" findings (Koenig et al., 2011; Schein, 1973, 1975, 2001). That means their perceived agency can compensate for their perceived lack of fit with such jobs (see Heilman, 1983, 2012). However, being perceived as agentic is only likely for women when there is a clear and unquestionable signal for their success in a male stereotyped work context (other than for men who are more likely to be perceived as agentic per se, due to their gender stereotype;

Heilman, 2012; Heilman et al., 1989). When women are not perceived as agentic, they are unlikely to be perceived as a good fit for jobs that are perceived as high in status. Therefore, specifically when the perceived status of a job is high, women's perceived fit to a job may be stronger dependent on their perceived agency than men's. Thus, I assume that in these contexts perceived agency is more relevant for women than for men to be perceived as a good fit for the job. Taken together, I predict that evaluators' perceptions of applicants' agency positively relate to their perceptions of applicants' P-J fit specifically when the perceived status of the job is high (hypothesis 5), and this effect is stronger for women than for men.

Hypothesis 11: The relationship between evaluators' perceptions of applicants' agency and applicants' P-J fit increases with the perceived status of the job, *for women more than for men*.

Thus, I suggest that perceived agency drives male *and* female applicants' perceived fit with high-status jobs, especially in male-dominated fields, and can help women to overcome a perceived lack of fit with jobs that are perceived as high in status. Still, and importantly, there might be other aspects besides agency perceptions that could positively or negatively relate to predictors of hiring decisions, and which may be different for men and women. Women who are perceived as highly agentic might face social backlash (such as being less liked or being ascribed traits that are considered non-desirable especially for women, e.g., "dominant" and "self-centered") because agentic women deviate from prescribed gender norms (Rudman & Glick, 1999; 2001; see also Moss-Racusin et al., 2010). I investigate this aspect exploratively in the data, as this could be an additional mechanism depicting influences of agency perceptions on predictors of hiring decisions, especially for female applicants.

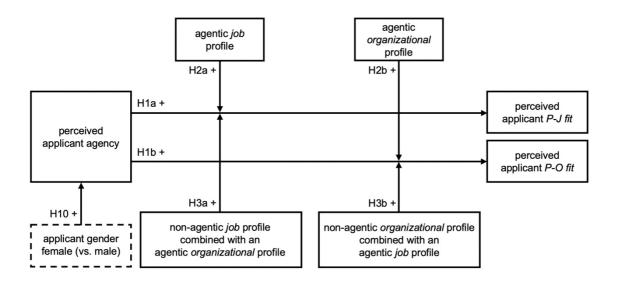


Figure 3. Perceptions of Applicants' Agency and Fit and the Influence of Stereotype-congruent (vs. -incongruent) Recruitment Material in the Context of High-status Jobs in Male-dominated Fields

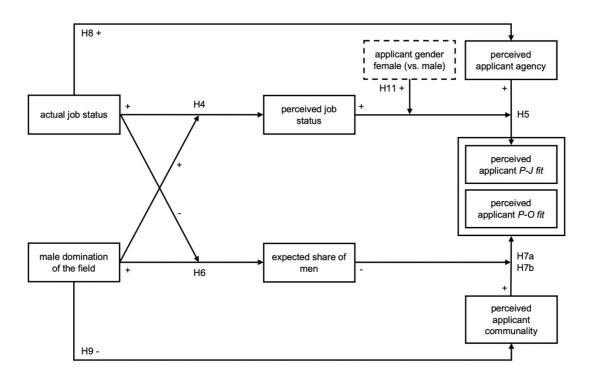


Figure 4. Context Dependency of Fit Perceptions, Perceptions of Applicants Across Contexts, and the Role of Applicant Gender. (Actual) job status = high-status vs. low-status (i.e., high-level-leadership vs. non-leadership). Male-dominated field vs. female-dominated and gender-balanced for H4 and H6, vs. female-dominated for H9.

Studies 1-4: Perceptions of Fit in Strictly Male Stereotyped Work Contexts

In studies 1-4, I examined how evaluators' perceptions of applicants' agency relate to their perceptions of applicants' P-J and P-O fit in the context of high-status jobs in male-dominated fields, and the influence of stereotype-congruent job and organizational profiles in recruitment material. Additionally, I investigated perceptions of applicants' agency by applicant gender in these contexts. In these studies, I operationalized high-status jobs in male-dominated fields in academia and investigated the job as a professor in a mathematics faculty. The job as a full professor usually entails high status (Carli et al., 2016; van den Brink & Benschop, 2014), and comes, at least in Germany (where the studies were conducted), with leadership responsibility for an entire chair (see Braun et al., 2013). STEM research disciplines (science, technology, engineering, and mathematics), like STEM industries, are mostly male-dominated (with few exceptions such as biology; for statistics (overviews) see Catalyst, 2020c; National Science Foundation, 2018). Women account for about one third of doctoral degrees and less than 15% of full professorships in these disciplines in Germany (GWK, 2018).

In Germany, scientists as well as students assess professorial candidates, and students have gained considerable power in appointment committees in recent years (student representatives can speak out against applicants, for instance; Frey et al., 2015). I expect stereotypes to be prevalent in students' and scientists' perceptions (see Carli et al., 2016; Leslie et al., 2015), and to influence their fit perceptions in a similar way. I tested my hypotheses for perceptions in strictly male stereotyped work contexts with students in a laboratory setting in studies 1 and 2, and replicated the test in studies 3 and 4 within online experiments with scientists in math-intensive disciplines (indeed, studies 1-4 show similar assessment patterns in students and scientists, and students had externally valid assessment

criteria in mind, see appendix B.1). ¹⁴ Study 1 focused on P-J fit and the job profile, study 2 on P-O fit and the organizational profile. In studies 3 and 4 I combined both aspects. In study 4, I additionally examined the influence of job and organizational profiles when they are "crossed" (one is stereotype-congruent and the other stereotype-incongruent).

All four studies were experimental studies with a between-subjects design, reducing influences of confounding variables and demand effects (Charness et al., 2012). Participants answered a web-based questionnaire and were asked to put themselves in the shoes of a member of an appointment committee for a full professor job in a mathematics faculty. They were randomly assigned a job advertisement, which manipulated the job and/or organizational profile, and a male or a female applicant's CV, and assessed the applicant regarding perceived applicant qualities and fit to the job and/or organization. They also completed manipulation checks, provided demographic and context-related information, and finally they were debriefed. In preparation for the studies, I conducted two experimental pre-tests to evaluate the experimental material and manipulations (see appendix B.2 and appendix B.3).

Method Study 1

Study 1 tested the relationship between perceptions of applicants' agency and P-J fit in the context of high-status jobs in male-dominated fields, whether an agentic job profile strengthened the relationship, and perceptions of male vs. female applicants' agency. I varied applicant gender (male vs. female) and the job profile (agentic vs. communal vs. neutral) in a 2 x 3 between-subjects design. The sample were 261 students at a German technical university (61% male; $M_{age} = 23.07$, $SD_{age} = 3.47$; 75% German nationality). 44% already held a university degree. 15

¹⁴ To estimate appropriate sample sizes, I performed power analyses using G*Power (Faul et al., 2009).

¹⁵ Ca. 2240 members of the experimental laboratory's participant pool (experimental laboratory of the Technical University of Munich, TUM School of Management) were invited for participation. 314 participated (ca. 14%) but I excluded 53 participants, as they either failed the manipulation check on applicant gender or a control question, indicated that they didn't answer the questionnaire genuinely or had language problems, or didn't fit the predefined sample characteristics.

Material and manipulations. To manipulate the *job profile*, I created three versions of a job advertisement representing either an agentic, a communal, or a neutral job profile. I altered the wording in the description of the job and its tasks and requirements, based on the research by Gaucher et al. (2011), Heilman (2012), Hentschel et al. (2021), and Hentschel, Heilman, et al. (2019) (examples in Table 6). The neutral job profile avoided agentic and communal wording. To manipulate *applicant gender*, I used one-page excerpts of curricula vitae (CVs), which presented either a male (1) or a female (2) applicant, indicating applicant gender by the applicant's name. Both CVs showed the same qualifications and stages in education and professional career. They included information on current affiliation and position, education, and professional background, and showed a list of selected publications. ¹⁷

 Table 6

 Examples for Manipulations in Job and Organizational Profiles

Agentic	Communal	Neutral (Control)	Green (Control)
 Job profile: Leading an international research group Ambitious advancement of the research discipline Goal-orientation in research and teaching 	 Job profile: Responsible for an international research group Committed to the advancement of the research discipline Reliability in research and teaching 	 Job profile: Professor of an international research group Advancement of the research discipline Research and teaching 	
Organizational profile: • Competitive and achievement-oriented culture • We value outstanding achievements • Compete with the best!	Organizational profile: • Cooperative and supportive culture • We value team spirit • Cooperate in thinking!	Organizational profile: (no information)	Organizational profile: • Eco-friendly and resource-efficient culture • We value ecological sustainability • Thinking green!

Note. This table shows translations, the original experimental material was in German. The job profile was manipulated in studies 1, 3, and 4; the organizational profile was manipulated in studies 2, 3, and 4. The "green" condition was added as an additional reference condition in study 2.

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¹⁶ The agentic profile contained as many agentic expressions as the communal profile contained communal expressions.

¹⁷ I chose applicants' first names ("Thomas" vs. "Sabine") based on empirical research (Rudolph et al., 2017), to ensure that they do not differ in perceived attractiveness. The CV excerpt was reviewed by math scientists, to ensure external validity. Potentially confounding information (e.g., university names/locations) were blackened.

For *manipulation checks*, participants had to recall applicant gender and indicated their perception of the job requirements.¹⁸ Perceptions of job requirements significantly differed across the experimental conditions, F(4, 514) = 23.83, p = .000, $\eta^2 = .16$. Participants who received an agentic job profile perceived the requirements as significantly more agentic than participants with a communal (p = .002) or neutral (p = .000) job profile. Vice versa, participants who received a communal job profile perceived the requirements as significantly more communal than participants with an agentic (p = .000) or a neutral (p = .000) job profile.

Measures. In all studies, items on perceptions of applicants' qualities were answered on 7-point Likert scales ranging from "not at all" (1) to "very much" (7), and items on perceptions of applicants' fit on 7-point Likert scales ranging from "strongly disagree" (1) to "strongly agree" (7). To measure *perceptions of applicants' agency*, I asked the participants to assess how they would attribute five agentic traits and behaviors such as "ambitious" and "rational" ($\alpha = .69$; Gaucher et al., 2011; Heilman, 2012; Hentschel, Heilman, et al., 2019) to the applicant, based on their first impression (Horvath & Sczesny, 2016). *Perceptions of applicants' P-J fit* were assessed with three items referring to a skills dimension and two items to a personality dimension of fit which I adapted from Lauver and Kristof-Brown (2001). Sample items are "I think the candidate's abilities fit the demands of this job" and "I think the candidate's personality is a good match for this job" ($\alpha = .83$).

I controlled for participant gender and age because previous research showed that perceptions may differ by participants' gender and age (e.g., Koenig et al., 2011; Rice & Barth, 2016). Analyzing hypotheses 1-3, I also controlled for applicant gender and perceptions of applicants' communality and likeability, in order to assess whether applicants' perceived agency was indeed a key driver of applicants' perceived fit (as compared to

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¹⁸ Participants who could not correctly remember applicant gender were excluded from the analysis in all studies.

communality and likeability).¹⁹ I measured *perceptions of applicants' communality* presenting five communal qualities such as "reliable" and "caring" (α = .71; Gaucher et al., 2011; Heilman, 2012; Hentschel, Heilman, et al., 2019), and *perceptions of applicants' likeability* with three items adapted from Heilman et al. (2004) (e.g., "likeable"; α = .63). Table 7 presents correlations for study 1.

Table 7

Means, Standard Deviations, and Correlations of Variables in Study 1

Variable	M	SD	1	2	3	4	5	6
1. Applicant gender ^a	1.55	.50						
2. Participant gender ^b	1.39	.49	02					
3. Participant age ^c	23.07	3.47	12	10				
4. Perceived applicant agency ^d	5.59	.70	.04	.10	05			
5. Perceived applicant communality ^d	4.77	.69	.15*	.09	10	.48**		
6. Perceived applicant likeability ^d	4.42	.73	.06	.03	13*	.26**	.61**	
7. Perceived applicant P-J fit ^d	5.05	.83	.02	.03	18**	.39**	.34**	.34**

Note. N = 261. ^a1 = "male applicant", 2 = "female applicant". ^b1 = "male participant", 2 = "female participant". ^cAge in years (1-99). ^dMeasured on 7-point Likert scales (1 = "not at all" or "strongly disagree", 7 = "very much" or "strongly agree").

Results Study 1

A linear regression analysis to test whether evaluators' perceptions of applicants' agency positively related to their perceptions of applicants' P-J fit revealed a significant positive relationship (b = .35, p = .000) between perceived agency and P-J fit (Table 9, Study 1), supporting H1a. Then, I analyzed whether an agentic job profile (vs. non-agentic, i.e., communal or neutral) strengthened the relationship between evaluators' perceptions of

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^{*}p < .05, **p < .01 (two-tailed).

¹⁹ For studies 1 and 2, I also performed all analyses controlling for whether the student participants had prior knowledge on appointment committees (60% in study 1, 55% in study 2). This control was non-significant and did not change the results.

applicants' agency and P-J fit. Supporting H2a, as visualized in Figure 5, I found a significant interaction that explained additional variance, $\Delta R^2 = .02$, F(1, 252) = 7.21, b = .36, p = .008 (Table 9, Study 1), showing that the positive relationship between perceptions of applicants' agency and P-J fit was stronger when the job profile was agentic (b = .57, p = .000) vs. non-agentic (b = .21, p = .020). Finally, I tested whether the female applicant was perceived as more agentic than the male applicant within a univariate analysis of variance (ANOVA). The analysis showed no significant main effect of applicant gender on perceptions of applicants' agency, F(1, 257) = 0.35, p = n.s. (means in Table 14), and thus did not provide support for H10.

Method Study 2

Study 2 tested the relationship between perceptions of applicants' agency and P-O fit in the context of high-status jobs in male-dominated fields, whether an agentic organizational profile strengthened the relationship, and again perceptions of applicants' agency by gender. I varied applicant gender (male vs. female) and the organizational profile (agentic vs. communal vs. two control conditions) in a 2 x 4 between-subjects design. The sample were 366 students at a German technical university (58% male; $M_{\rm age}$ = 21.70, $SD_{\rm age}$ = 3.53; 81% German nationality; no overlap with study 1's sample). 37% already held a university degree.²⁰

Material and manipulations. Job advertisements manipulated the *organizational profile* in terms of the hiring organization's culture, related values, and practices. Job advertisements either represented an agentic organizational profile, a communal organizational profile, or one of two control conditions (examples in Table 6). The agentic organizational profile portrayed a culture in which competition, success, and outstanding achievements are emphasized; the communal organizational profile a culture in which

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²⁰ Invitations for participation were sent out to ca. 1980 members of the experimental laboratory's participant pool that had not participated in study 1. 395 (ca. 20%) participated but 29 participants were excluded for the same reasons as in study 1.

cooperation, interpersonal relationships, and a sense of community are emphasized (Catanzaro et al., 2010; Gaucher et al., 2011). Control conditions included a neutral condition, giving no information on the organization's culture, and a "green" culture as an additional reference. A "green" culture is not directly linked to agency or communality but likely perceived as rather stereotypically female (Brough et al., 2016), and has become relevant in recent years, as more and more universities are emphasizing their green values and sustainability efforts (Times Higher Education, 2015). Inspired by Brough et al. (2016), the green culture portrayed a culture with the core values of ecological awareness and sustainability. To manipulate *applicant gender*, I used the same CVs as in study 1 but added icons to make applicant gender more visible. The icons showed gray outlines of a male or a female face, without revealing what the person looks like (see appendix B.3 for a pre-test on the icons).

For *manipulation checks*, participants had to recall applicant gender and indicated their perception of the organization's cultural orientation. Perceptions of the cultural orientation significantly differed across the experimental conditions, F(9, 876) = 160.95, p = .000, $\eta^2 = .55$, and were higher for the described core values (of a competitive, cooperative, or green culture) as compared to the other conditions at p = .000 for each mean difference.

Measures. *Perceptions of applicants' agency* were assessed analogously to study 1, presenting four agentic qualities such as "assertive" and "achievement-oriented" (α = .75), which correspond with a competitive organizational culture (Catanzaro et al., 2010). *Perceptions of applicants' P-O fit* were assessed with four items adapted from Kristof-Brown (2000). Sample items were "I think the candidate fits with the hiring organization" and "I think the candidate is similar to other employees of the hiring organization" (α = .90). I used the same controls as in study 1, unless stated otherwise. *Perceptions of applicants' communality* were assessed with five communal qualities such as "cooperative" and "supportive" (α = .82), which correspond with a cooperative organizational culture (Catanzaro

et al., 2010). To assess *perceptions of applicants' likeability*, I again used the measure adapted from Heilman et al. (2004) (see study 1; α = .71). I additionally controlled for *perceptions of applicants' green qualities*, as specific values and practices are associated with a green culture. I used four items such as "eco-friendly" and "eco-conscious" (α = .88), inspired by Brough et al. (2016). Table 8 presents correlations for study 2.

Results Study 2

A linear regression analysis to test whether evaluators' perceptions of applicants' agency positively related to their perceptions of applicants' P-O fit revealed a significant positive relationship (b = .20, p = .002) between applicants' perceived agency and P-O fit (Table 9, Study 2), supporting H1b. A moderation analysis whether an agentic organizational profile (vs. non-agentic, i.e., communal or control conditions) strengthened the relationship showed a significant interaction explaining additional variance, $\Delta R^2 = .02$, F(1, 355) = 9.57, b = .42, p = .002 (see Table 9, Study 2), supporting H2b (see Figure 6). There was a significant positive relationship between perceptions of applicants' agency and P-O fit with an agentic (b = .50, p = .000) but not with a non-agentic (b = .08, p = n.s.) organizational profile.

Additionally, in study 2, the ANOVA to test whether the female applicant was perceived as more agentic than the male applicant revealed a significant main effect of applicant gender on perceptions of applicants' agency when excluding non-significant controls, F(1, 364) = 4.12, p = .043, $\eta^2 = .01$. The female applicant (M = 5.55, SD = .86) was perceived as significantly more agentic than the male applicant (M = 5.38, SD = .78), providing support for H10.

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²¹ I did not control for participant gender and age in this analysis. The controls were non-significant but reduced the sample size (due to listwise exclusion of missing values).

Table 8

Means, Standard Deviations, and Correlations of Variables in Study 2

Variable	M	SD	1	2	3	4	5	6	7
1. Applicant gender ^a	1.50	.50							
2. Participant gender ^b	1.42	.49	.08						
3. Participant age ^c	21.70	3.53	02	.01					
4. Perceived applicant agency ^d	5.46	.83	.11*	.07	.00				
5. Perceived applicant communality ^d	4.88	.78	.10	04	.04	.11*			
6. Perceived applicant "green" qualities ^d	3.76	.87	.09	06	.03	.03	.41**		
7. Perceived applicant likeability ^d	4.41	.87	.03	02	.05	.04	.51**	.37**	
8. Perceived applicant P-O fit ^d	5.02	1.04	05	.01	.06	.16**	.23**	.29**	.21**

Note. N = 366 (for participant gender 365). ^a1 = "male applicant", 2 = "female applicant". ^b1 = "male participant", 2 = "female participant". ^cAge in years (1-99). ^d Measured on 7-point Likert scales (1 = "not at all" or "strongly disagree", 7 = "very much" or "strongly agree"). *p < .05, **p < .01 (two-tailed).

Method Study 3 and Study 4

Studies 3 and 4 replicated the tests of studies 1 and 2. Study 4 additionally investigated the effects of stereotype-congruent (vs. -incongruent) job and organizational profiles when the profiles are "crossed" such that the job profile is agentic and the organizational profile non-agentic or vice versa. Study 3 applied a 2 (applicant gender: male vs. female) x 3 (job advertisement: agentic vs. communal vs. neutral) between-subjects design, manipulating job and organizational profile in the same direction in a job advertisement. Study 4 applied a 2 (applicant gender: male vs. female) x 3 (job profile: agentic vs. communal vs. neutral) x 3 (organizational profile: agentic vs. communal vs. neutral) between-subjects design, manipulating the two profiles independently in one job advertisement.

Study 3's sample (N = 251) consisted of scientific staff in the discipline mathematics at German universities (PhD candidates, assistant professors, and tenured professors; 95% German nationality), recruited via email.²² Corresponding to the male domination within the

²² From 268 participants in total (response rate ca. 11%), I excluded 17 for the same reasons as in study 1.

discipline, the study had 69% male participants. 44% indicated that they intend to pursue (or have already established) a scientific career, 17% were indecisive in this respect. Most of the participants were between 25 and 28 (41%), 29 and 32 (32%), and 33 and 36 (10%) years old. Study 4's sample (N = 633) consisted of scientific staff in math-intensive disciplines at German universities (70% male; 89% German nationality; no overlap with study 3's sample), again recruited via email.²³ Of these, 39% indicated that they intend to pursue (or have already established) a scientific career, 24% were indecisive in this respect. Most of the participants were between 25 and 28 (36%), 29 and 32 (37%), and 33 and 36 (13%) years old.

Table 9
Summary of Linear Regression Analyses, Study 1 and Study 2

	-		V = Perceivent P-J fit)	ed	•	,	V = Perceive t P-O fit)	d
	Model	A	Model	l B	Mode		Model	В
	(H1a)	(H2a	1)	(H11)	(H2b))
Variable	b	SE	b	SE	b	SE	b	SE
Constant	2.57***	.58	3.43***	.66	1.70**	.58	2.30***	.61
Controls								
Applicant gender	06	.09	07	.09	19	.10	18	.10
Participant gender	06	.09	06	.09	.03	.11	.05	.10
Participant age	03*	.01	03*	.01	.02	.02	.02	.01
Perceived applicant likeability	.25**	.08	.26**	.08	.09	.07	.06	.07
Perceived applicant communality	.08	.09	.07	.09	.12	.08	.14	.08
Perceived applicant "green" qualities					.27***	.07	.30***	.07
Perceived applicant agency	.35***	.07	.21*	.09	.20**	.06	.08	.07
Agentic profile (dummy)	17	.10	-2.15**	.74	.28*	.12	-2.02**	.75
Perceived applicant agency x agentic profile			.36**	.13			.42**	.14
$\overline{R^2}$.24		.26		.15		.17	
F	11.52*	**	11.23*	***	7.95*	**	8.30**	*
ΔR^2			.02				.02	
ΔF			7.21*	**			9.57**	*

Note. $N_{\text{Study 1}} = 261$, $N_{\text{Study 2}} = 365$. Main effects of perceived applicant agency in Models A, interactions of perceived applicant agency x agentic profile (job profile in study 1, organizational profile in study 2) in Models B. Participants that did not indicate gender or age were excluded listwise. *p < .05, **p < .01, ***p < .001.

 23 From 678 participants in total (response rate ca. 15%), I excluded 45 for the same reasons as in study 1.

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Material and Manipulations. Like in studies 1 and 2, I created different versions of a *job advertisement*. In study 3, the wording in the entire job advertisement was either agentic or non-agentic (agentic, communal, or neutral job *and* organizational profile; see studies 1 and 2, and Table 6).²⁴ In study 4, I used the same materials, but due to additionally "crossing" job and organizational profile in a job advertisement, advertisements could also represent, for instance, an agentic job profile and a communal organizational profile or vice versa, resulting in nine different profile combinations. To manipulate *applicant gender* in studies 3 and 4, I used the same CVs as in study 2, including icons, I only updated the CV dates.

For *manipulation checks*, participants indicated applicant gender, their perception of job requirements (see study 1), and of the organization's cultural orientation (see study 2). In study 3, perceptions of job requirements (agentic vs. communal), F(4, 494) = 41.05, p = .000, $\eta^2 = .25$, and of the organization's cultural orientation (competitive vs. cooperative), F(4, 494) = 84.67, p = .000, $\eta^2 = .41$, significantly differed across the experimental conditions. This was also the case in study 4, for perceptions of job requirements, F(4, 1256) = 14.92, p = .000, $\eta^2 = .05$, and of the organization's cultural orientation, F(4, 1256) = 130.44, p = .000, $\eta^2 = .29$.

Measures. To measure *perceptions of applicants' agency*, participants were presented with a combination of the agentic qualities rated in studies 1 and 2 (seven items; $\alpha = .93$ in study 3 and in study 4). I used the same measures of *perceptions of applicants' P-J fit* ($\alpha = .89$ in study 3 and in study 4) and *perceptions of applicants' P-O fit* ($\alpha = .89$ in study 3, .90 in study 4) as in studies 1 and 2. Also, I used the same controls as in studies 1 and 2, unless stated otherwise. *Perceptions of applicants' communality* were assessed with a combination of the communal qualities rated in studies 1 and 2 (eight items, $\alpha = .91$ in study 3, .92 in study 4). *Perceptions of applicants' likeability* were assessed with the item "likeable" (Heilman et

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²⁴ Like in study 2, organizational profiles described the hiring organization's culture as either competitive (agentic profile) or cooperative (communal profile), or gave no information on the hiring organization's culture (neutral profile). Study 3 did not include a "green" organizational culture as an additional reference.

al., 2004) in study 3, and in study 4 I included an extended measure of perceived likeability, also based on Heilman et al. (2004) and on Moss-Racusin et al. (2010) (four items, $\alpha = .85$).

In study 4, I included additional measures to explore perceptions of applicants and the work context in more detail, beyond the analysis of my hypotheses. I included a measure for *perceptions of applicants' competence*, adapted from Heilman et al. (2004), with the items "competent", "productive", and "effective", rated on 7-point Likert scales (α = .87). Additionally, I measured *perceptions of the work context* with 1-item semantic differentials to check whether the investigated work context was perceived as intended (perception as high-status vs. low-status, and male-dominated vs. female-dominated) and validate my assumptions. Indeed, participants perceived the job as a professor as high in status (M = 6.06, SD = .94 on an ascending 7-point Likert scale), and the research discipline mathematics to be male-dominated (M = 5.42, SD = 1.01; female-dominated (1), male-dominated (7)).

Results Study 3

Table 10 shows correlations for study 3. In study 3, I replicated the tests of H1 and H2. Perceptions of applicants' agency again positively related to perceptions of applicants' P-J fit, b = .53, p = .000, and P-O fit, b = .44, p = .000, supporting H1a and H1b (Table 11). Furthermore, I again found significant interactions for the influence of recruitment material that explained additional variance and support H2a and H2b (on P-J fit: $\Delta R^2 = .02$, F(1, 229) = 5.49, b = .28, p = .020; on P-O fit: $\Delta R^2 = .02$, F(1, 229) = 5.13, b = .28, p = .024; Table 11). The positive relationships between perceptions of applicants' agency and P-J fit, respectively P-O fit, were stronger when the job advertisement was agentic (P-J fit: b = .73, p = .000; P-O fit: b = .64, p = .000) vs. non-agentic (P-J fit: b = .44, p = .000; P-O fit: b = .36, p = .000). Interactions are visualized in Figures 5 (P-J fit) and 6 (P-O fit). Thus, overall, the findings in study 3 confirm study 1 and study 2's findings on hypotheses 1 and 2.

Table 10

Means, Standard Deviations, and Correlations of Variables in Study 3

Variable	M	SD	1	2	3	4	5	6	7
1. Applicant gender ^a	1.51	.50							
2. Participant gender ^b	1.27	.45	03						
3. Participant age ^c	3.92	1.40	.09	13					
4. Perceived applicant agency ^d	4.61	.93	.10	.10	20**				
5. Perceived applicant communality ^d	4.77	.66	.18**	05	08	.41**			
6. Perceived applicant likeability ^d	4.82	.81	.04	.01	10	.27**	.56**		
7. Perceived applicant P-J fit ^d	4.47	.95	.04	.01	16**	.56**	.29**	.22**	
8. Perceived applicant P-O fit ^d	4.66	.95	.10	.09	18**	.47**	.24**	.25**	.71**

Note. N = 251 (for participant gender 240, for participant age 248). $^{a}1 = \text{``male applicant''}$, $^{b}1 = \text{``male participant''}$, $^{c}2 = \text{``female participant''}$. ^{c}Age categories (1 = <21, 2 = 21-24, 3 = 25-28, 4 = 29-32, 5 = 33-36, 6 = 37-40, 7 = 41-44, 8 = 45-48, 9 = >48). d Measured on 7-point Likert scales (1 = ``not at all'' or "strongly disagree", 7 = ``very much'' or "strongly agree"). $^{*}p < .05$, $^{**}p < .01$ (two-tailed).

Table 11
Summary of Linear Regression Analyses, Study 3

	-	,	/ = Perceivent P-J fit)	ed	-		(DV = Perceived licant P-O fit)			
	Model (H1a		Model (H2a		Model (H1b		Model B (H2b)			
Variable	b	SE	b	SE	b	SE	b	SE		
Constant	1.73**	.49	2.30***	.55	2.01***	.51	2.58***	.56		
Controls										
Applicant gender	06	.11	04	.11	.11	.11	.13	.11		
Participant gender	08	.12	14	.12	.07	.12	.01	.12		
Participant age	02	.04	03	.04	04	.04	05	.04		
Perceived applicant likeability	.04	.08	.06	.08	.15	.08	.17*	.08		
Perceived applicant communality	.10	.10	.05	.10	01	.10	06	.11		
Perceived applicant agency	.53***	.06	.44***	.07	.44***	.06	.36***	.07		
Agentic profiles (dummy)	17	.11	-1.49**	.57	40***	.11	-1.71**	.59		
Perceived applicant agency x agentic profiles			.28*	.12			.28*	.12		
R^2	.32		.34		.29		.30			
F	15.69***		14.68*	14.68***		***	12.50*	**		
ΔR^2			.02				.02			
ΔF			5.49	*			5.13	<		

Note. N = 238. Main effects of perceived applicant agency in Models A, interactions of perceived applicant agency x agentic profiles (agentic job and organizational profile in study 3) in Models B. Participants that did not indicate gender or age were excluded listwise. *p < .05, **p < .01, ***p < .001.

The ANOVA to test whether the female applicant was perceived as more agentic than the male applicant in study 3 revealed a marginal, though not significant, difference in evaluators' perceptions of applicants' agency by applicant gender, F(1, 234) = 3.18, p = .076, $\eta^2 = .01$ (means in Table 14). Thus, study 3 does not provide support for H10.

Results Study 4

Table 12 shows correlations for study 4. In study 4, I also replicated the tests of H1 and H2. Again, perceptions of applicants' agency were significantly positive related to perceptions of applicants' P-J fit, b = .52, p = .000, and P-O fit, b = .55, p = .000, supporting both H1a and H1b (Table 13). Also, replicating the support for H2a and H2b, an agentic (vs. non-agentic, i.e., communal or neutral) job profile strengthened the relationship between perceived agency and P-J fit, $\Delta R^2 = .01$, F(1, 625) = 4.67, b = .16, p = .031, and an agentic (vs. non-agentic) organizational profile the relationship between perceived agency and P-O fit, $\Delta R^2 = .01$, F(1, 625) = 7.31, b = .20, p = .007 (Table 13; Figures 5 and 6). The positive

Table 12

Means, Standard Deviations, and Correlations of Variables in Study 4

Variable	M	SD	1	2	3	4	5	6	7	8
1. Applicant gender ^a	1.51	.50								
2. Participant gender ^b	1.28	.45	.03							
3. Participant age ^c	3.94	1.23	.09*	04						
4. Perceived applicant agency ^d	5.02	.93	.15**	.13**	05					
5. Perceived applicant communality ^d	4.88	.78	.19**	.06	04	.43**				
6. Perceived applicant likeability ^d	4.57	.80	.22**	.05	.00	.32**	.64**			
7. Perceived applicant competence ^d	5.17	.87	.15**	.07	10*	.76**	.50**	.44**		
8. Perceived applicant P-J fit ^d	4.77	1.02	.08*	.07	09*	.57**	.39**	.32**	.54**	
9. Perceived applicant P-O fit ^d	4.96	1.06	.05	.04	09*	.55**	.33**	.24**	.46**	.74**

Note. N = 633 (for participant gender 618, for participant age 631). $^{a}1 = ^{a}$ male applicant", $^{2}2 = ^{6}$ female applicant". $^{b}1 = ^{6}$ male participant", $^{2}2 = ^{6}$ female participant". ^{2}A ge categories (1 = < 21, 2 = 21-24, 3 = 25-28, 4 = 29-32, 5 = 33-36, 6 = 37-40, 7 = 41-44, 8 = 45-48, 9 = > 48). ^{3}A Measured on 7-point Likert scales ($1 = ^{6}$ not at all" or "strongly disagree", $7 = ^{6}$ "very much" or "strongly agree").

^{*}p < .05, **p < .01 (two-tailed).

relationships between perceptions of applicants' agency and P-J fit, respectively P-O fit, were stronger when the job profile, respectively the organizational profile, was agentic (P-J fit: b = .62, p = .000; P-O fit: b = .66, p = .000) vs. non-agentic (P-J fit: b = .46, p = .000; P-O fit: b = .46, p = .000). In these analyses, I controlled for the effect of the other manipulated profile (the organizational profile or the job profile) but excluded non-significant controls.²⁵

Table 13
Summary of Linear Regression Analyses, Study 4

	-		y = Perceiv nt P-J fit)	ed	•		V = Perceived ant P-O fit)			
	Model	1	Model	В	Model	_	Model	В		
	(H1a	ı)	(H2a	.)	(H1b)	(H2b))		
Variable	b	SE	b	SE	b	SE	b	SE		
Constant	.91***	.24	1.19***	.28	1.55***	.25	1.92***	.29		
Controls										
Applicant gender	08	.07	07	.07	11	.07	11	.07		
Perceived applicant likeability	.11*	.05	.11*	.05	.01	.06	.01	.06		
Perceived applicant communality	.19** .06 .19*** .06 .20** .06					.22***	.06			
Perceived applicant agency	.52***	.04	.46***	.05	.55***	.04	.46***	.05		
Agentic organizational profile (dummy)	17*	.07	17*	.07	43***	.07	-1.44***	.38		
Agentic job profile (dummy)	13	.07	91*	.37	18*	.07	17*	.07		
Perceived applicant agency x agentic job profile			.16*	.07						
Perceived applicant agency x agentic organizational profile							.20**	.07		
$\overline{R^2}$.37		.37		.36		.36			
F	59.86*	***	52.28***		57.77***		51.06***			
ΔR^2			.01				.01			
ΔF			4.67	*			7.31**			

Note. N = 238. Main effects of perceived applicant agency in Models A, interactions of perceived applicant agency x agentic profile (agentic job and organizational profile manipulated separately in study 4) in Models B. Participants that did not indicate gender or age were excluded listwise.

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^{*}p < .05, **p < .01, ***p < .001.

²⁵ I did not control for participant gender and age in these analyses. The controls were non-significant but reduced the sample size (due to listwise exclusion of missing values). When controlling for participant gender and age, the effects remained stable except for the interaction on perceived P-J fit which became marginally significant.

In study 4, I also tested whether an agentic organizational profile can still strengthen the relationship between perceived agency and P-J fit *when the job profile is non-agentic*, and an agentic job profile the relationship between perceived agency and P-O fit *when the organizational profile is non-agentic*. In the group with a non-agentic job profile, the interaction effect of perceived agency and an agentic organizational profile on perceived P-J fit was significantly positive, $\Delta R^2 = .01$, F(1, 382) = 7.97, b = .25, p = .005, supporting H3a. In the group with a non-agentic organizational profile, the interaction effect of perceived agency and an agentic job profile on perceived P-O fit was significantly positive, $\Delta R^2 = .02$, F(1, 383) = 8.75, b = .28, p = .003, supporting H3b. Additionally, I explored effects of one vs. two agentic profiles in the same job advertisement. The effect size for the relationship between perceived agency and fit with two agentic profiles was higher than with one agentic profile for P-J and P-O fit but did not significantly increase from one to two profiles.

The ANOVA to test whether the female applicant was perceived as more agentic than the male applicant in study 4 revealed a significant main effect of applicant gender on perceived agency, F(1, 612) = 15.07, p = .000, $\eta^2 = .02$. The female applicant (M = 5.17, SD = .90) was perceived as more agentic than the male applicant (M = 4.89, SD = .92), supporting H10, like study 2. Interestingly, in study 4, the female applicant was also perceived as a better fit to the job, F(1, 612) = 4.56, p = .033, $\eta^2 = .01$, and this effect was fully mediated by perceived agency (index = .09, 95% CI = [.02, .17]). There was no such an effect on perceptions of applicants' P-O fit, which did not significantly differ by applicant gender.

Results on Perceptions of Communality, Likeability, and Competence Across Studies 1-4

To investigate whether perceived applicant agency is indeed a key driver of perceived applicant fit in the context of high-status jobs in male-dominated fields, I also explored influences of perceived communality, likability, and competence as a comparison, and their differences by applicant gender. In studies 1, 3 and 4, the female applicant was perceived as significantly more communal than the male applicant (in study 2 marginally). Still, both the

male and the female applicant were perceived as *more agentic than communal* in studies 1, 2 and 4 (not in study 3, in study 4 only a tendency). In study 4, the female applicant was also perceived as significantly more likeable and competent than the male applicant (next to being perceived as more agentic and a better fit to the job). Perceived applicant likeability or fit (P-J or P-O fit) did not significantly differ by applicant gender in studies 1-3 (means in Table 14).

In study 1, perceived likeability (but not communality) was significantly related to perceived P-J fit (b = .25, p = .002) (Table 9). In studies 2 and 3, neither perceived communality nor likeability were significantly related to perceived P-J fit (measured in study 3) or P-O fit (measured in studies 2 and 3) (Table 9 and Table 11). In study 4, perceived communality was significantly positively related to both perceived P-J fit (b = .19, p = .002) and P-O fit (b = .20, p = .001), and perceived likeability to perceived P-J fit (b = .11, p =.034), but with a smaller beta value than perceived agency (Table 13). In study 4, I also explored the influence of perceived competence on perceived applicant fit. Perceived competence showed a significant influence on perceived P-J fit (b = .22, p = .000) but not on perceived P-O fit (b = .10, p = n.s.). Controlling for competence perceptions, the hypothesized effects of agency perceptions on P-J fit perceptions remained stable, although the beta value reduced to .39 (from .52); and for effects of communality perceptions to .17 (from .19). The hypothesized effects of agency perceptions on P-O fit perceptions also remained stable and again the beta value reduced to .49 (from .55); and for communality perceptions to .19 (from .20). In sum, there was a clear pattern of perceived applicant agency influencing perceived applicant P-J and P-O fit, the influence of perceived applicant communality and likability was less clear. Perceived applicant competence had a related but additional effect on perceived applicant fit. I also explored potential interaction effects of applicant gender with perceived agency on perceived fit in studies 1-4, but those effects were non-significant.

Table 14Means and Standard Deviations by Applicant Gender, Studies 1-4: Perceived Applicant Agency, Communality, Likeability, Competence, P-J fit, and P-O fit

		Stu	ıdy 1			Stu	ıdy 2			Stu	ıdy 3			Stu	dy 4	
	Ma appli		Fen appli		Ma appli		Fen appl	nale icant	Ma appli		Fen appli			ale icant	Fen appli	
	(<i>n</i> =	117)	(<i>n</i> =	144)	(n =	184)	(<i>n</i> =	182)	(<i>n</i> =	124)	(<i>n</i> =	127)	(n =	313)	(<i>n</i> =	320)
Variables	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Perceived applicant agency	5.56 _a	.78	5.61 _a	.62	5.38 _a	.78	5.55 _b	.86	4.52 _a	.90	4.70 _a	.94	4.88 _a	.94	5.16 _b	.90
Perceived applicant communality	4.66 _a	.69	4.85 _b	.68	4.81 _a	.72	4.96 _a	.83	4.66 _a	.57	4.89 _b	.72	4.73 _a	.75	5.03 _b	.79
Perceived applicant likeability	4.37 _a	.72	4.46 _a	.73	4.39 _a	.78	4.43 _a	.95	4.79 _a	.75	4.85 _a	.86	4.40_a	.78	4.74 _b	.77
Perceived applicant competence													5.04 _a	.86	5.30 _b	.86
Perceived applicant P-J fit	5.04 _a	.86	5.07 _a	.80					4.44 _a	.93	4.51 _a	.97	4.68 _a	1.02	4.85 _b	1.01
Perceived applicant P-O fit					5.07 _a	.92	4.96 _a	1.16	4.57 _a	.97	4.75 _a	.92	4.91 _a	1.05	5.01 _a	1.07

Note. $N_{\text{Study 1}} = 261$, $N_{\text{Study 2}} = 366$, $N_{\text{Study 3}} = 251$, $N_{\text{Study 4}} = 633$. Means with different subscripts (a/b) are significantly different from one another at p < .05, comparing perceptions of male vs. female applicants for each variable in each study.

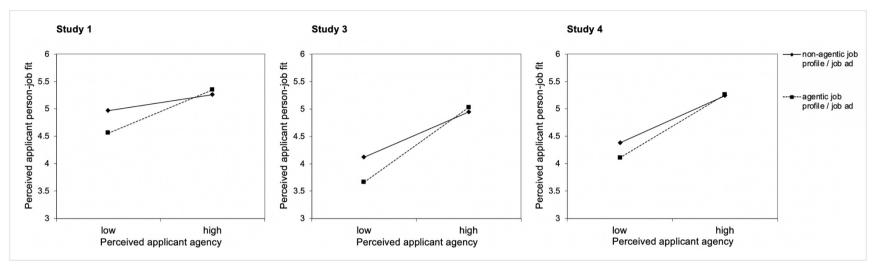


Figure 5. Effects of Evaluators' Perceptions of Applicants' Agency (mean +/- 1 SD) x the Type of Profile on Perceptions of Applicants' P-J Fit

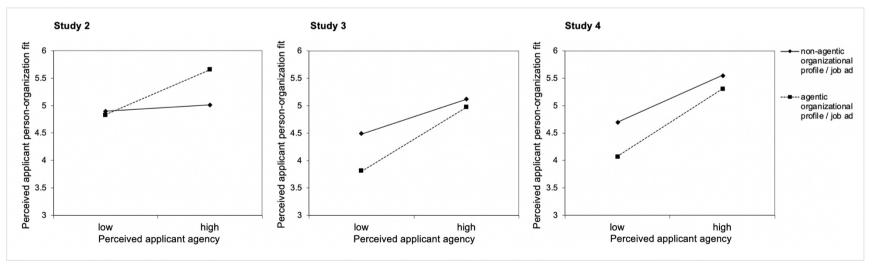


Figure 6. Effects of Evaluators' Perceptions of Applicants' Agency (mean +/- 1 SD) x the Type of Profile on Perceptions of Applicants' P-O Fit

Studies 5-7: The Context Dependency of Fit Perceptions

Study 5 was conducted as an additional robustness check to studies 1-4 (no main study). In the study, I investigated perceptions of male and female applicants' qualities in the context of applying for a high-status job in a male-dominated field, and tested perception differences in an academic vs. a business context. I had the participants (N = 129, students and employees) rate either an academic or a management CV, meaning that they rated a male or a female applicant for a high-status job in either an academic organization or a business organization in a male-dominated field (a job as a professor in a math faculty or a mathrelated leadership job in an insurance company). They rated the applicant with regard to agentic and communal qualities (see prior studies). There were no significant mean differences in perceptions of applicants' agency and communality depending on whether the context was academia or business (see appendix B.4 for details). Furthermore, applying for a job as a professor in a math faculty (investigated in studies 1-4), and also in the equivalent business context, perceptions of applicants' agency did not significantly differ for the male and the female applicant, not supporting H10. The female applicant for the job as a professor in a math faculty was perceived as significantly more communal and more likeable than the male applicant in study 5.

Study 7 was another main study, and study 6 a pre-test to study 7. In study 7, I tested how job status and the field of the organization shaped the perceived job status and the expected share of men in a work context, and how perceived agency and communality related to perceived fit across contexts. Furthermore, I explored perceived requirements across contexts, and investigated perceptions of applicants and how applicant gender related to perceived fit across contexts. To do so, in study 7, I applied a 2 (applicant gender: male vs. female) x 2 (job status: high vs. low, i.e., high-level-leadership vs. non-leadership) x 3 (field: male-dominated vs. female-dominated vs. gender-balanced) between-subjects design. I operationalized the status differences within different fields in the business context, because

in business contexts high-status and low-status jobs in the same organization (in a particular field) are likely to be related to the same core business. For instance, in an organization in a male-dominated field (e.g., automotive), a low-status job, as an *individual contributor* to the organization's core business, would be a "blue collar" job in production or maintenance. A high-status job related to the same core business would be the job as a managing director, *managing* the core business. I assume that the field of an organization influences perceptions in a similar way for high-status and low-status jobs in the organization, when they are both related to its core business. This is, however, most often not the case in academia (which was the context of studies 1-4).²⁶ Therefore, in study 7, high-status jobs in different fields were operationalized as jobs as a managing director in either an automotive (male-dominated), a care-oriented (female-dominated), or a food trading (fairly gender-balanced) company. Low-status jobs in the respective core business were jobs as a mechanical, childcare, or retail worker.²⁷ Prior to study 7, I conducted study 6 as a pre-test, to test perception differences across these work contexts.

Study 6: Pre-test

Study 6 was an experimental pre-test, applying a between-subjects design. I pre-tested the chosen work contexts for study 7, and tested perceptions in the work context for studies 1-4 (a job as a professor in a math faculty) against perceptions in the work contexts for study 7, as to perceived status and the expected men/women ratio. Participants (N = 110, students and employees) randomly received a *job preview* indicating a job title, the organization (automotive vs. care-oriented vs. food trading company with > 100.000 employees) and that the successful candidate is required to have prior experience in the work context. They first

²⁶ Perception differences related to the organization's field are likely more ambiguous in academia. Low-status jobs in universities (e.g., in the administration, secretarial or janitor services) often involve similar tasks across disciplines, such that whether the faculty is math vs. education is unlikely to matter.

²⁷ I did an extensive research on statistics in these fields and compared gender ratios for different jobs in organizations in these fields. For instance, I looked at data from the German and international statistical offices and other web sources (e.g., Catalyst, 2020d, 2020e; De Silver, 2018; OECD, 2019).

rated the work context they received (a high- or low-status job in either a male-dominated, female-dominated, or gender-balanced field) and subsequently, when they had finished the ratings for their work context, they saw all the different work contexts and ranked them as to perceived status and expected gender ratio. I found higher status perceptions for high- vs. low-status jobs (for the job as a professor and the jobs as managing director significantly higher than for all low-status jobs), and the expected gender ratio to be influenced by whether the field of the organization's activities is male-dominated vs. female-dominated and gender-balanced (significantly higher expected share of men in the math faculty and the automotive company compared to all other work contexts). Additionally, the pre-test showed that participants' perceptions of status and male domination for the academic vs. business context were very similar. The results for the different work contexts were reflected in the participants' rankings of the different work contexts by status and gender ratio. Therefore, the results of the pre-test backed up my choice of work contexts for study 7. Results of study 6, and additional information on how I prepared the materials for study 7, are presented in appendix B.5.

Method Study 7

Sample and procedure. The sample of study 7 were 507 leaders (e.g., CEOs, senior, and middle managers; 59% male; 97% German nationality), who had experience in personnel selection, which was a pre-requisite for their participation. The participants were recruited through a professional survey panel.²⁸ Most of the participants were between 49 and 60 years old (44%), 11% were more than 60 years old, and the remaining participants were younger than 49. Of the participants, 82% had more than 10 years of work experience, 11% more than 5 years. Further, 50% of the participants had more than 10 years of leadership experience,

²⁸ Via respondi; response rate ca. 35%. Participants were compensated for their participation. From 571 participants in total, 64 participants were excluded as they either failed the manipulation check on applicant gender or control questions, indicated that they did not answer the questionnaire genuinely, or did not fit my predefined sample characteristics.

21% more than five years, and 17% more than two years. Finally, 50% had "very much" or "much" experience in personnel selection, 40% had "moderate" experience, and 10% "little" experience. The leaders were employed in different industries, for instance in the health and social care (13%), trading and consumer goods (9%), automotive, transport, and logistics (9%), or service industry (9%). Similar to the procedure of studies 1-4, in study 7 participants randomly received a job preview and the CV excerpt of a male or a female applicant within a web-based questionnaire, and answered questions on their perceptions of the applicant's qualities and fit.

Material and manipulations. Participants received a *job preview* that indicated the job title, the organization (automotive vs. care-oriented vs. food trading company with > 100.000 employees), and that the successful candidate is required to have prior experience in the work context. To manipulate *applicant gender*, I created one-page excerpts of CVs for a male (1) and a female (2) applicant, for each work context. The CVs outlined the applicant's prior work experience and included the icons I used in studies 2-4. All applicants had the same amount of work experience, either in jobs at the same career level (remaining in low-status, non-leadership jobs) or moving up the career ladder (now applying to a high-level leadership job) (see appendix B.5 for more information on how I created the CVs). As in my previous studies, participants recalled the applicant's gender as a *manipulation check*. Furthermore, I measured relevant contextual parameters to investigate perceptions of requirements, the perceived job status, and the expected share of men across work contexts.

Measures. I measured *perceptions of applicants' P-J fit* (α = .92) and *P-O fit* (α = .92) and *perceptions of applicants' agency* and *communality* like in the previous studies. Participants rated the applicant on 12 agentic (α = .95) and 15 communal (α = .96) qualities, which included those rated in studies 1-4. I assessed *perceptions of applicants' likeability* (α = .89) and *competence* (α = .86) like in study 4. Additionally, I measured attributions of *women's proscriptive traits* (e.g., dominant, arrogant, and self-centered; six items, α = .95)

and of *men's proscriptive traits* (e.g., weak, insecure, indecisive; five items, α = .96) based on Moss-Racusin et al. (2010). Women's proscriptive traits or "should nots" can give hints on social backlash towards women, whereas men's proscriptive traits or "should nots" can give hints on social backlash towards men (see also Rudman et al., 2012). Moreover, I measured the *perceived job status* and the *expected share of men* in a work context (see study 4), and assessed the *perceived requirements* in a work context by asking participants to rate the relevance of 12 agentic (α = .95) and 15 communal (α = .94) qualities for a particular work context (see e.g., Gaucher et al., 2011). Finally, I also assessed perceptions of the organization's cultural orientation by presenting core values of a competitive (two items, α = .86) vs. cooperative (two items, α = .87) organizational culture (see study 2). I used the same controls as in studies 1-4, unless stated otherwise. Table 15 shows correlations for study 7.

Table 15

Means, Standard Deviations, and Correlations of Variables in Study 7

Variable	M	SD	1	2	3	4	5	6	7	8
1. Applicant gender ^a	1.49	.50								
2. Participant gender ^b	1.39	.49	.01							
3. Participant age ^c	8.29	2.73	.07	21**						
4. Perceived applicant agency ^d	5.36	.86	.02	.09*	.07					
5. Perceived applicant communality ^d	5.30	.83	.09*	.07	.04	.61**				
6. Perceived applicant likeability ^d	4.93	.88	.09*	.10*	08	.44**	.66**			
7. Perceived applicant competence ^d	5.55	.81	.06	.11*	.01	.71**	.60**	.54**		
8. Perceived applicant P-J fit ^d	5.53	1.00	03	.10*	03	.42**	.45**	.41**	.52**	
9. Perceived applicant P-O fit ^d	5.20	1.10	01	.10*	06	.46**	.49**	.43**	.49**	.74**

Note. N = 507 (for participant gender 497, for participant age 506). $^a1 = ^a$ male applicant", $^22 = ^a$ female applicant". $^b1 = ^a$ male participant", $^22 = ^a$ female participant". $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^32 = ^33 - 36$, $^33 = ^33$, $^33 = ^33$, 3

Results Study 7

Before testing my hypotheses, I investigated perception differences across the work contexts (means in Table 16). Figure 7 depicts the perceived job status and expected share of men across work contexts. In line with my reasoning, the perceived job status was particularly high for a high-status job in a male-dominated field, M = 5.49, SD = 1.13, and the expected share of men was particularly high for a high-status job in a male-dominated field, M = 5.80, SD = 1.08. The SD = 1.32, as well as for a low-status job in a male-dominated field, M = 5.80, SD = 1.08. The perceived requirements in a work context were more agentic for high-status than for low-status jobs, F(1, 492) = 285.50, p = .000, $\eta^2 = .37$, and more communal for jobs in a female-dominated field as compared to in a male-dominated or gender-balanced field at p = .000, F(2, 491) = 54.97, p = .000, $\eta^2 = .18$ (see also Figure 7). Furthermore, in the male-dominated field, the organization's cultural orientation was perceived as more competitive (stereotypically male), b = .50, p = .000, F(4, 491) = 45.31, p = .000, and as less cooperative (stereotypically female), b = -.15, p = .034, F(4, 491) = 4.92, p = .001, as compared to the gender-balanced and female-dominated field.

To test H4, I analyzed whether the perceived status of a job was higher for a high-status (1) vs. a low-status job (0), particularly when offered in an organization in a male-dominated (3) vs. a gender-balanced (2) or female-dominated field (1). The analysis revealed a significant main effect for whether the job was high-status or low-status, b = 1.60, p = .000, and a significant interaction effect of job status and field on the *perceived* job status, explaining additional variance, $\Delta R^2 = .01$, F(1, 489) = 9.28, b = .42, p = .002 (Table 17). Supporting H4, both the actual job status and the field contributed to the perceived job status. Subsequently, I tested whether the perceived job status strengthened the relationship between evaluators' perceptions of applicants' agency and applicants' P-J fit across the different work contexts. Supporting H5, as visualized in Figure 8, the analysis revealed a significant

relationship between perceived agency and P-J fit, b = .33, p = .000, strengthened by perceived job status, $\Delta R^2 = .02$, F(1, 500) = 11.17, b = .09, p = .000 (Table 18).²⁹

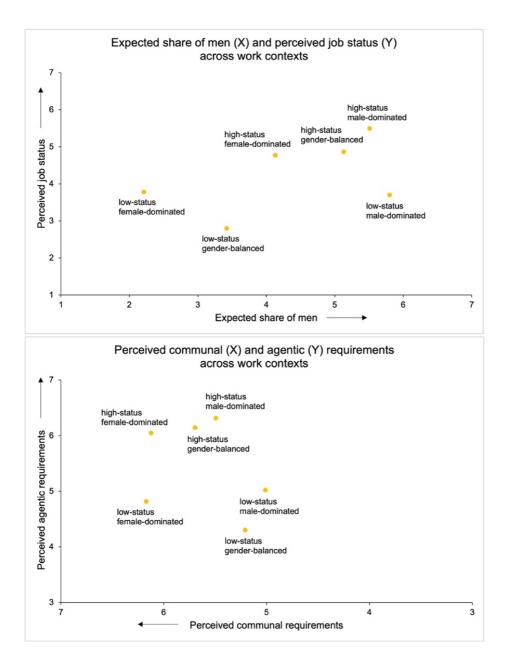


Figure 7. The Expected Share of Men and Perceived Job Status Across Work Contexts; and the Perceived Agentic vs. Communal Requirements Across Work Contexts (high- vs. low-status jobs in a male-dominated vs. female-dominated and gender-balanced field)

²⁹ I did not control for participant gender and age in this analysis to ensure alignment with other analyses in study 7. Participant gender and age were non-significant controls and did not change the results in regard to H5.

Table 16

Means and Standard Deviations Study 7: Perceptions of the Work Context and Perceptions of Applicants Across Contexts

	Low-s fema domir (n =	ale- nated	Low-s gend balan (n =	ler- ced	- male- d dominated		High-status female- dominated (n = 92)		High-status gender-balanced (n = 77)		High-s mal domin (n =	le- nated
Variable	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Perceptions of the context												
Perceived job status	3.78 _a	1.38	2.8 _b	1.08	3.70_{a}	1.21	4.77 _c	1.19	4.86c	1.27	5.49 _d	1.13
Expected share of men	2.21_a	1.27	3.42 _b	1.23	$5.80_{\rm c}$	1.08	4.13_d	1.29	$5.13_{\rm e}$	1.21	5.51 _{c, e}	1.32
Perceived agentic requirements	4.82_a	1.00	4.30_{b}	1.18	5.02_a	.98	$6.05_{\rm c}$.73	6.14_{c}	.87	$6.32_{\rm c}$.67
Perceived communal requirements	6.17 _a	.77	5.21 _b	.96	5.01 _b	.88	6.12 _a	.73	5.70 _c	.81	5.50 _c	.86
Perceptions of applicants												
Perceived applicant agency	5.16a	.87	4.98a	.85	5.03 _a	.83	5.57 _b	.69	5.76 _b	.79	5.70 _b	.77
Perceived applicant communality	5.65 _a	.74	5.10 _b	.81	5.00_{b}	.75	5.64a	.75	5.17 _b	.96	5.15 _b	.71
Perceived applicant likeability	$5.22_{a,c}$.82	4.80_{b}	.80	$4.89_{b,d}$.76	$5.06_{c,d}$.75	4.66_b	1.10	$4.86_{b,d}$.93
Perceived applicant competence	$5.50_{a,b}$.83	$5.45_{a,b}$.76	5.37_a	.80	$5.63_{b,c}$.76	$5.59_{a,c}$.93	$5.76_{\rm c}$.78
Perceived applicant P-J fit	5.70_a	.99	5.56_a	1.12	$5.52_{a,b}$	1.00	5.58_a	.95	$5.54_{a,b}$.93	5.23_{b}	.95
Perceived applicant P-O fit	5.32_{a}	1.07	5.07_a	1.19	5.13_a	1.10	5.23_a	1.12	5.24_a	1.03	5.17_a	1.06

Note. N = 507. Means with different subscripts (a-d) are significantly different from one another at p < .05 (per row). For perceptions of applicants, there were no significant differences by applicant gender in any of the different work contexts.

To test H6, I analyzed whether the expected share of men in a work context was higher for jobs in a male-dominated vs. a gender-balanced or female-dominated field, and whether this effect was weaker for high-status than low-status jobs. Supporting H6, the analysis showed a significant main effect of the field, b = 1.24, p = .000, and a significant interaction effect of field and job status on the expected share of men, explaining additional variance, $\Delta R^2 = .06$, F(1, 489) = 62.52, b = -1.07, p = .000 (Table 17). Subsequently, I tested whether the relationships between evaluators' perceptions of applicants' communality and P-J fit, and applicants' communality and P-O fit, were weaker with a higher expected share of men. Supporting H7a, as visualized in Figure 9, the analysis revealed a significant relationship between perceived communality and P-J fit, b = .19, p = .012, which was negatively moderated by the expected share of men, $\Delta R^2 = .02$, F(1, 500) = 10.38, b = -.09, p = .001 (Table 18). Supporting H7b, as well visualized in Figure 9, I also found a significant relationship between perceived communality and P-O fit, b = .28, p = .000, which was negatively moderated by the expected share of men when excluding non-significant controls, $\Delta R^2 = .01$, F(1, 500) = 5.82, b = -.07, p = .016 (Table 18).

³⁰ I did not control for participant gender and age, which were non-significant controls but reduced the sample size (due to listwise exclusion of missing values). When controlling for those variables, the analysis revealed a marginal interaction effect for H7b. For the analysis of H7a, I also show the effects when not controlling for participant gender and age, for better alignment of the hypothesis tests in study 7 (Table 18). These controls did not change the results in regard to H7a.

Table 17
Summary of Linear Regression Analyses to test H4 and H6 in Study 7

	Study 7	(DV =	- Perceived	job	Study 7 (DV = I	V = Expected share of			
		sta	tus)			m	en)			
	Model	Α	Model	В	Mode	l A	Model	В		
			(H4))			(H6)			
Variable	b	SE	b	SE	b	SE	b	SE		
Constant	3.30***	.34	3.75***	.37	2.17***	.35	1.01**	.36		
Controls										
Applicant gender	04	.11	04	.11	41**	.12	41***	.11		
Participant gender	.06	.12	.04	.12	.07	.12	.11	.12		
Participant age	02	.02	02	.02	04	.02	03	.02		
Job status (high vs. low)	1.60***	.11	.78**	.29	1.18***	.12	3.25***	.28		
Field of the organization	.15*	.07	06	.10	1.24***	.07	1.77***	.10		
Job status x field of the organization			.42**	.14			-1.07***	.14		
R^2	.29		.30		.46		.52			
F	40.14*	**	35.56***		83.35***		88.60***			
ΔR^2			.01		.06					
ΔF			9.28*	*		62.52***				

Note. N = 496. Main effects of actual job status and the field of the organization (male-dominated vs. gender-balanced and female-dominated) in Models A, interactions of job status and the field of the organization in Models B. Participants that did not indicate gender or age were excluded listwise. *p < .05, **p < .01, ***p < .001.

Table 18
Summary of Linear Regression Analyses to test H5, H7a, and H7b in Study 7

	Study 7 (DV = Perceived applicant P-J fit)				Study 7 (DV = Perceived applicant P-J fit)			Study 7 (DV = Perceived applicant P-O fit)				
	Model A		Model B (H5)		Model A		Model B (H7a)		Model A		Model B (H7b)	
Variable	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Constant	2.10***	.30	4.10***	.67	2.30***	.32	.15	.74	1.04**	.34	69	.79
Controls												
Applicant gender	14	.08	14	.08	15	.08	16*	.08	12	.08	13	.08
Perceived applicant likeability	.22***	.06	.21***	.06	.22**	.06	.24***	.06	.24***	.06	.26***	.06
Perceived applicant agency	.33***	.06	05	.13	.30***	.06	.29***	.06	.33***	.06	.32***	.06
Perceived applicant communality	.21**	.07	.22**	.07	.19*	.07	.57***	.14	.28***	.08	.58***	.15
Perceived job status	08**	.03	59***	.16								
Expected share of men					05*	.02	.43**	.15	01	.03	.38*	.16
Perceived applicant agency x perceived job status			.09***	.03								
Perceived applicant communality x expected share of men							09**	.03			07*	.03
R^2	.27		.29		.27		.28		.30		.31	
F	37.13***		33.43***		36.21***		32.47***		43.36***		37.45***	
ΔR^2	.02					.02				.01		
ΔF	11.17***				10.38**					5.82*		

Note. N = 507. Main effects of perceived applicant agency and communality, and perceived job status and the expected share of men in Models A, interactions of perceived agency x perceived job status, and perceived communality x expected share of men in Models B. *p < .05, **p < .01, ***p < .001.

3. PERCEPTIONS OF APPLICANT FIT

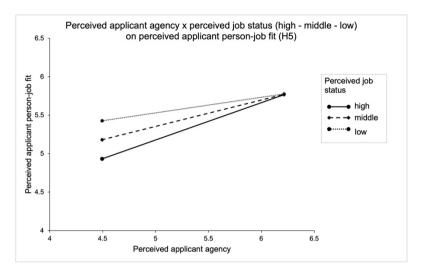


Figure 8. Effects of Evaluators' Perceptions of Applicants' Agency x Perceived Job Status on Perceptions of Applicants' P-J fit. Perceived job status "high", "middle", "low" = mean +/- 1 SD. Perceived applicant agency = mean +/- 1 SD.

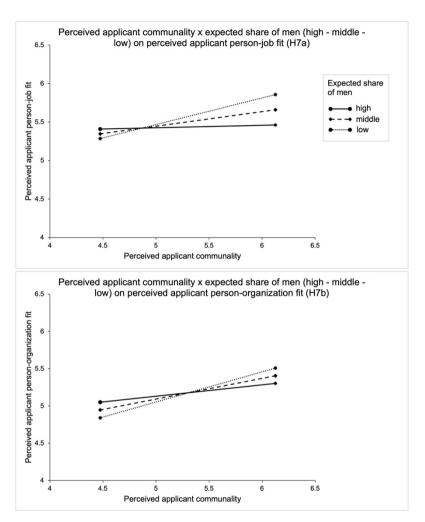


Figure 9. Effects of Evaluators' Perceptions of Applicants' Communality x the Expected Share of Men on Perceptions of Applicants' P-J fit and P-O fit. Expected share of men "high", "middle", "low" = mean +/- 1 SD. Perceived applicant communality = mean +/- 1 SD.

To determine whether applicants were perceived as more agentic when they pursued high-status vs. low-status jobs and as less communal when they pursued jobs in a male-dominated vs. a female-dominated field, I conducted ANOVAs. The analysis showed that applicants for high-status jobs were indeed perceived as more agentic than applicants for low-status jobs, F(1, 491) = 66.12, p = .000, $\eta^2 = .12$, supporting H8. Also, the analysis showed a significant main effect of the field on perceived communality, F(2, 490) = 26.33, p = .000, $\eta^2 = .10$, and a significant mean difference for applicants in a female-dominated vs. a male-dominated field (p = .000) that supports H9 (see Figure 10, Table 16). There were no significant differences in perceived applicant agency and communality by applicant gender in any of the work contexts, also not for the high-status job in a male-dominated field in regard to perceived agency (N = 77; F(1, 73) = 2.23, p = n.s.), thus not supporting H10.

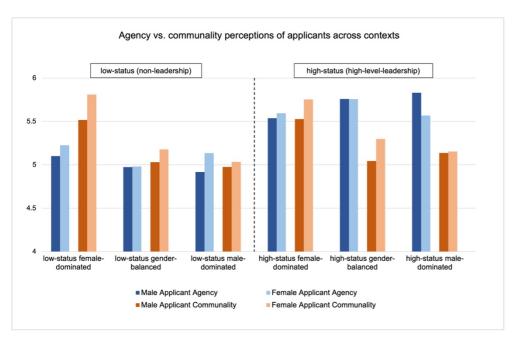


Figure 10. Perceptions of Applicants Across Work Contexts (H8 and H9)

Then, I tested H11, which states that the relationship between perceptions of applicants' agency and P-J fit increases with perceived job status, for women more than for men. To test this hypothesis, I analyzed the three-way interaction of perceived applicant agency, perceived job status, and applicant gender on perceived applicant P-J fit. This

interaction effect was significant and explained additional variance when comparing the extremes (high- vs. low-status jobs in a male-dominated vs. a female-dominated field) and excluding non-significant controls, $\Delta R^2 = .01$, F(1, 334) = 5.12, b = .17, p = .024 (Table 19).³¹ I visualize the interaction, which supports H11, in Figure 11. Simple slope tests showed significant slope differences in support of H11, for "high perceived job status, female applicant" vs. "high perceived job status, male applicant" (.53, p = .001), and "high perceived job status, female applicant" vs. "low perceived job status, female applicant" (.65, p = .000).

Table 19
Summary of Linear Regression Analyses to test H11 in Study 7

	Study		V = Perceived applicant P-J fit)			
	Mode	el A	Model B			
			(H1	11)		
Variable	b	SE	b	SE		
Constant	1.88***	.37	.81	2.77		
Controls						
Perceived applicant likeability	.26**	.07	.25***	.07		
Perceived applicant communality	.23**	.09	.20*	.08		
Perceived applicant agency (x)	.31***	.08	.40	.53		
Perceived job status (w)	10**	.04	.66	.62		
Applicant gender (z)	07	.09	2.79	1.77		
Perceived applicant agency x perceived job status (x*w)			11	.11		
Perceived applicant agency x applicant gender $(x*z)$			45	.34		
Perceived job status x applicant gender (w*z)			-1.02*	.40		
Perceived applicant agency x perceived job status x applicant gender (x*w*z)			.17*	.07		
R^2	.29		.34			
F	27.85***		19.05***			
$\Delta R^2 (x^*w^*z)$.0	1		
ΔF	5.12		2*			

Note. N= 344. Main effects of perceived applicant agency, perceived job status, and applicant gender in Model A, three-way-interaction in Model B.

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

³¹ I did not control for participant gender and age, which were non-significant controls but reduced the sample size (due to listwise exclusion of missing values). When controlling for both variables, the analysis revealed a marginal interaction effect for H11.

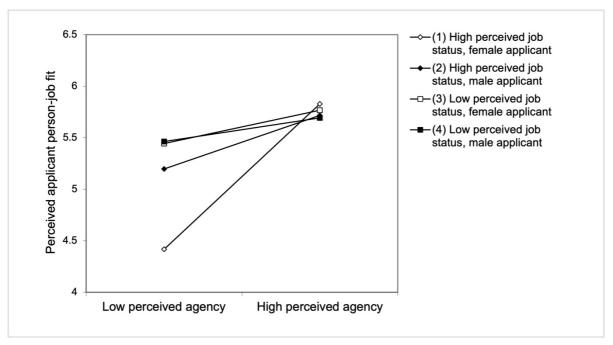


Figure 11. Three-way Interaction Perceived Applicant Agency x Perceived Job Status x Applicant Gender on Perceived Applicant P-J Fit (H11). Across high- vs. low-status jobs in a male-dominated vs. a female-dominated field.

I additionally measured perceptions of applicants' competence and likeability for the different work contexts in study 7 (means in Table 16). Applicants for high-status jobs were rated as more competent than applicants for low-status jobs, across fields. Applicants in a female-dominated field were rated as more likable than applicants in a male-dominated or gender-balanced field, regardless of the job. There were no significant differences in competence and likeability perceptions by applicant gender in any of the investigated work contexts. Perceived competence correlated with perceived agency and communality, depending on the work context. For the low-status job in a female-dominated field, perceived competence showed a particularly high correlation with perceived communality (r = .74, p < .01; and also correlated with perceived agency: r = .69, p < .01). For the high-status job in a male-dominated field, perceived competence showed a particularly high correlation with perceived agency (r = .85, p < .01; correlation of perceived competence and communality: r = .56, p < .01). Exploring attributions of proscriptive traits, considered as "should nots" for either women (e.g., "dominant") or men (e.g., "weak"; Moss-Racusin et al., 2010), revealed

that applicants for high-status jobs were attributed more of women's proscriptive traits than applicants for low-status jobs (and more when they apply to a high-status job in a male-dominated or gender-balanced field than in a female-dominated field). Conversely, applicants for low-status jobs were ascribed marginally more of men's proscriptive traits. There were no significant differences by applicant gender in attributions of proscriptive traits for any of the investigated work contexts.

Discussion

Stereotype biases in evaluators' fit perceptions may prevent organizations from selecting applicants who are the best fit and present challenges for those who do not fit the stereotype (Eagly & Karau, 2002; Heilman, 1983, 2012). Due to the unidimensional agentic stereotype of strictly male stereotyped work contexts (e.g., Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011), I set out to provide a better understanding of evaluators' perceptions of applicant fit in such *gendered* work contexts. My studies indicate that, in these contexts, perceived agency is a key driver of perceived P-J fit and P-O fit, for both male and female applicants. Moreover, my research elucidates the role of stereotype-congruent recruitment material in strengthening the relationship between applicants' perceived agency and fit. Additionally, my findings illuminate the relevance of contextual differences for perceptions of applicants and applicant fit. Contrasting different contexts revealed that the relevance of agency for fit perceptions increases with perceived job status, and the relevance of communality decreases with the expected share of men. Perceptions of applicants across contexts reflected context stereotypes. In strictly male stereotyped work contexts, not only men but also women were perceived as agentic, despite the incongruity of agency with the female gender stereotype (Eagly & Karau, 2002; Heilman, 2012). However, I found that women's perceived fit with jobs that were perceived as high in status also depended on perceived agency more than men's; women may need to compensate for a perceived lack of fit (Heilman, 1983, 2012). Overall, the findings indicate that perceived agency is a key driver

of P-J and P-O fit perceptions specifically in recruitment for high-status jobs in maledominated fields, particularly with agentic recruitment material, and especially for women.

Theoretical Implications

Agency as a driver of fit. In empirically testing Heilman's lack of fit theory (1983, 2012) in a strictly male stereotyped work context, I revealed perceived agency as a key driver of evaluators' fit perceptions for *male and female* applicants. My findings illuminate evaluators' perspectives as gatekeepers and shed light on a previously neglected but crucial stage in women's careers in a gender-atypical field: applying to a high-status job. Focusing on gendered work contexts, my findings contribute to a more comprehensive perspective on fit perceptions in recruitment and stereotype research. Future research should consider that in strictly male stereotyped work contexts perceived agency seems to be a driver of perceived fit, regardless of applicants' gender, despite the incongruity between agency and the female gender stereotype (Eagly & Karau, 2002; Heilman, 2012).

Stereotyped recruitment material. My research further shows an influence of stereotyped recruitment material on evaluators' fit perceptions, of both job and organizational profiles that explicitly signal the agentic stereotype of the work context. Uncovering an influence of recruitment material on evaluators' fit perceptions illuminates an additional pathway that contributes to the continuity of stereotyped assessment patterns in strictly male stereotyped work contexts. Evaluators' fit assessments may not only be influenced by their own stereotype-based beliefs but also by stereotypes that are prevalent in the organization due to an effect of recruitment material. One profile signaling the agentic stereotype (the job or the organization description) seems to be enough to strengthen the relevance of agency for perceived P-J as well as P-O fit. These findings extend previous literature, which suggests effects of recruitment material on *applicants*' perceptions (Gaucher et al., 2011; Hentschel et al., 2021; Hentschel, Horvath, et al., 2018). I demonstrated that the design of recruitment material can also influence *evaluators*' perceptions. My findings imply that to understand

what maintains stereotyped assessment patterns in recruitment it is necessary to consider evaluators' fit perceptions, and how organizations impact their fit perceptions.

Considering P-J and P-O fit. By considering stereotypes related to P-J and P-O fit, my research bridges theories of gender biases in fit assessments (Heilman, 1983, 2012) with research on P-J and P-O fit, as unique fit concepts grounded in the recruitment literature (Kristof, 1996; Kristof-Brown, 2000). I found that the agentic stereotype is prevalent in both, P-J and P-O fit perceptions, and revealed effects of job as well as organizational profiles in recruitment material. Accordingly, my findings are in line with the argument that stereotype-based beliefs influence the salience of certain characteristics of jobs as well as organizations (e.g., based on Eagly & Karau, 2002; Heilman, 2012; Rice & Barth, 2016). While previous research on stereotypes in recruitment mainly focused on P-J fit or general indicators of belongingness (e.g., Bosak & Sczesny, 2008; Gaucher et al., 2011; Horvath & Sczesny, 2016), my research provides a more comprehensive understanding of effects on perceived fit and suggests that P-O fit may not be neglected. I encourage future research to consider different fit types and emphasize the relevance of P-J as well as P-O fit.

The relevance of context. My findings suggest that perceptions are stereotyped, and gendered, depending on the work context. Previous research suggested a perceived connection of status with agency and masculinity, and of female-dominated fields with communality (Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011). In line with this research, I found perceived agency to be a driver of perceived P-J fit especially for jobs that were perceived as high in status, which were high-level leadership jobs, particularly when in a male-dominated field. The relevance of perceived communality for perceived P-J and P-O fit was particularly low when the expected share of men in a work context was high. Similarly, perceptions of job requirements were more agentic in high-status than low-status jobs and more communal in a female-dominated than a male-dominated or gender-balanced field. Moreover, the perceptions of the organization's cultural orientation were more agentic and less communal when the field

was male-dominated. These findings provide a more comprehensive and specific perspective on contextual differences than previously found. My findings suggest that, while perceived status may account for furthering the influence of agency on fit perceptions, the expected share of men seems to account for reducing the influence of communality perceptions. My research emphasizes the importance of contextual differences and reveals gender-stereotyped patterns in a multi-faceted interplay of a job's status and the field of an organization, which systematically shape perceptions of *fit*, *requirements*, and *applicants*.

Perceptions of applicants across contexts. I found that, across contexts, male and female applicants were perceived as more agentic when they pursued high-status than low-status jobs, and as more communal when they pursued jobs in a female-dominated than in a male-dominated (or gender-balanced) field. When comparing contexts, perceptions of applicants did not differ by applicant gender in any of the different work contexts, neither for agency nor for communality. These findings indicate that perceptions of agency and communality of (experienced) applicants in different work contexts, whether male or female, are also influenced by stereotypes pertaining to the job's status and the field of the organization. Thus, my findings suggest that the stereotype of the work context could be more influential for perceptions of applicants' agency and communality than their gender (see also Eagly & Steffen, 1984; Heilman et al., 1989).

Exploring perceptions of applicants' competence and likeability revealed a similar pattern. Applicants for high-status (vs. low-status) jobs were rated as more competent, and applicants in a female-dominated field (vs. male-dominated or gender-balanced) as more likeable. Importantly, although perceived competence is related to perceived agency, it has been shown to be a construct of its own (Eagly et al., 2019; Hentschel, Heilman, et al., 2019). In line with this notion, I found perceived agency and competence can influence perceived fit simultaneously, and competence perceptions had a particularly strong relationship with

agency perceptions in high-status jobs, and with communality perceptions for a low-status job in a female-dominated field.

I did not find that women or men who were perceived as counter-stereotypical (women in strictly male stereotyped or men in strictly female stereotyped contexts) suffer from reduced fit, competence, or likeability ratings. This is in line with previous research which suggests that clearly identifying a counter-stereotypical trait may lead to extremely high perceptions on this trait, but does not necessarily come with backlash (Koch et al., 2015; Kunda & Thagard, 1996). Nevertheless, I found that applicants for high-status jobs were attributed more traits that are considered as non-desirable for women (e.g., dominant and selfcentered), particularly when they apply in a male-dominated or a gender-balanced field. As stereotypes "proscribe" these traits for women in particular, this points to social backlash towards women (Moss-Racusin et al., 2010; see also Rudman et al., 2012). In reverse, applicants for low-status jobs were attributed more of men's "proscriptive" traits (e.g., weak and insecure), but this difference was only marginal. Still, in these contexts social backlash towards men may be more prevalent (Moss-Racusin et al., 2010). Stereotyped perceptions are very complex, and social backlash can manifest in various ways (see e.g., Rudman & Phelan, 2008). I call for more research on fit perceptions and gender differences that pays particular attention to contextual differences and influences, specifically in gender effects.

The role of applicants' gender in the context of high-status jobs in male-dominated fields. Throughout my studies in the context of high-status jobs in male-dominated fields, female applicants were either perceived as equally or as even more agentic than male applicants, although the female gender stereotype would suggest low agency perceptions for women (Heilman, 2001). These findings indicate that the unidimensional agentic stereotype of the work context strongly influences perceptions of women who engage in this work context, evoking counter-stereotypical perceptions. In previous research, it was not clear whether women who apply to high-status jobs in male-dominated fields are

perceived as highly agentic, because of the stereotype of the work context, or not agentic, because of the female gender stereotype. My findings suggest that women who apply to these jobs are indeed perceived as agentic. These findings are in line with research that suggested that perceptions of women differ when they are presented as "career women" (Eckes, 2002) or "successful managers" (Heilman et al., 1989), and lend support for the notion that evaluators derive perceptions of female applicants rather from their (successful) engagement in the male stereotyped work context than from their gender stereotype (Eagly & Karau, 2002; see also Eagly & Steffen, 1984). Therefore, in future research, a more nuanced perspective on women in male stereotyped work contexts is needed.

My argument that women are perceived as agentic, due to their career and achievements in these contexts, is in line with research on the prevalence of gender stereotyping (Eckes, 2002; Heilman et al., 1989), shifting standards theory (Biernat, 2012; Biernat et al., 1991), and contrast effects (Koch et al., 2015; Kunda & Thagard, 1996). In male stereotyped work contexts, women are an exception. More so, when they are deemed successful, they are likely to be perceived as exceptional and different than "women in general" (Biernat, 2012; Biernat et al., 1991). The agentic qualities, which are seen as atypical for women but considered as prerequisites for their success and for climbing the ladder to high-status jobs, are then particularly salient (see also Heilman et al., 1989). I found that, when women are perceived as agentic, they can be perceived as an equally good or even as a better fit to high-status jobs in male-dominated fields than men. With an increasing agency level, women seem to be able to catch up to men in terms of perceived fit. Nevertheless, I also found that women's perceived fit with such jobs is more strongly dependent on their perceived agency. Thus, while my findings suggest an impact of agency on fit perceptions for applicants regardless of gender, they also suggest that the need for being perceived as agentic is higher for women than for men in strictly male stereotyped work contexts. Importantly, shifting standards theory also implies that "being agentic" is evaluated based on different

standards for women and men, such that gender stereotypes could still be influencing perceptions (Biernat, 2012). Thus, to understand perceptions of female applicants, future research needs to pay attention to the specific context and framing. Specifically, additional research is needed to evaluate which exact signals lead to the high agency perceptions for women.

Practical Implications

Many organizations strive for diversity (Podsiadlowski et al., 2013; Timmers et al., 2010) and extensive research highlights the benefits of diverse teams (e.g., more innovative potential; Peus & Traut-Mattausch, 2007; Welbourne et al., 2007). Due to stereotype biases in fit perceptions, evaluators may counter an organization's diversity efforts. The stereotyped assessment patterns from my studies may lead to hiring decisions according to *perceived* rather than *actual* requirements (Eagly & Carli, 2003; Gaucher et al., 2011; Heilman, 2012). Clearly defined assessment criteria can help to reduce ambiguity, and in turn to counteract stereotype biases in evaluators' fit perceptions (Heilman, 2012).

My research specifically indicates that organizations need to ensure that evaluators' stereotype-based beliefs are not unconsciously strengthened by gendered recruitment material which manifests stereotypes. Reflecting on the *actual* requirements and deliberately crafting job advertisements can help to reduce stereotype biases in recruitment material (see also Gaucher et al., 2011; Hentschel et al., 2021). Actual requirements, even in strictly male stereotyped work contexts, usually include communal, stereotypically female qualities (Cann & Siegfried, 1990; Gaucher et al., 2011). If the job requirements and/or organizational culture are stereotyped agentic but, in practice, contain communal aspects, recruiters should consider including these communal aspects in job advertisements to reduce the focus on the stereotype (or describe the job requirements and the organizational culture in a rather neutral way). Importantly, my research indicates that the description of the organization should not be neglected. Agentic job and organizational profiles strengthen the focus on agency in fit

perceptions, and one profile is enough to create this effect. Communal and neutral job profiles instead reduce the focus on agency, create a more diverse understanding of requirements, and counter stereotypical perceptions (and can also attain a more diverse applicant pool and specifically attract female applicants; Gaucher et al., 2011; Hentschel et al., 2021).

Concerning implications for women in strictly male stereotyped work contexts, my findings, in conjunction with previous research (Heilman et al., 1995; Heilman et al., 1989; Koch et al., 2015), indicate that female applicants need clear and unquestionable evidence for their success in the work context. When evaluators consider agency as essential for success and assume that men and *successful* women in these contexts are agentic, this mechanism might still harm women who are not perceived as such. My results suggest that women cannot benefit from being attributed communal, stereotypically female qualities, when applying to high-status jobs in male-dominated fields. To catch up to men in terms of perceived fit, women likely need a strong signal that indicates that they can cope with the (perceived) agentic requirements of the context (Eagly & Karau, 2002). When women can signal that they are already successful in the "gender-atypical" work context, they are likely to be perceived as agentic, and in turn to overcome a perceived lack of fit with these jobs.

My findings emphasize the importance of stereotype awareness in evaluators who serve as organizational gatekeepers (Cole et al., 2004; van den Brink & Benschop, 2014).

Previous research suggests that stereotype biases are indeed less prevalent in more experienced and trained evaluators, and that fostering evaluators' motivation to reflect on stereotype biases in decisions on applicants, and on actual requirements for effective and good leadership behavior, can help to prevent these biases (Heilman, 2012; Koch et al., 2015).

Thus, organizations can also raise stereotype awareness by training their evaluators.

Limitations

In this research, I focused on recruitment for high-level leadership jobs in maledominated fields and show results within an academic context and across different business contexts. However, I did not capture differences by leadership level. More research is needed to illuminate at which level agency becomes particularly salient, in different fields. Perceptions of women's agency are likely to be different at earlier career stages (where many qualified women already drop out; Clark Blickenstaff, 2005) or among more "average" applicants (Ceci & Williams, 2015; Steinpreis et al., 1999; see also Eagly & Karau, 2002; Heilman et al., 1989). Which exact signals lead to high agency perceptions for women needs further investigation. Additionally, I contrasted a male-dominated with a female-dominated and gender-balanced field but did not capture within-field differences such as across different male-dominated disciplines or industries, which require further research. Also, I call for future research to provide a better understanding of effects in strictly female stereotyped work contexts, most likely low-status jobs in female-dominated fields, and their implications for men's careers (e.g., based on Cejka & Eagly, 1999; Glick, 1991; Moss-Racusin et al., 2010). My findings lend initial support that, in these contexts, men likely cannot benefit from being ascribed qualities that are congruent with their gender stereotype but need to be ascribed communal, stereotypically female qualities, to be perceived as a good fit. Lastly, although perceptions did not differ for the academia vs. business context investigated (see study 6, and also study 5), future research could analyze potential differences. Still, I assume that my findings generalize to other contexts depending on the perceived job status and the expected gender ratio in a work context.

As the data for the studies were gathered in Germany, it is questionable whether the findings would be different in other countries. While Germany is considered a rather "masculine" society valuing performance and managers' assertive- and decisiveness, other countries (e.g., Nordic countries) are considered more "feminine" societies valuing consensus and managers' supportiveness (Hofstede et al., 2010; Hofstede Insights, n.d.). It remains unclear whether perceived requirements for high-status jobs, especially in male-dominated fields, are also highly agentic in more "feminine" societies. Further research is needed to

investigate potential cross-cultural differences in perceptions of applicants and applicant fit, in specific contexts. Although cultures seem to vary in what characteristics are deemed as *important* for leaders (Sczesny et al., 2004), male stereotyping patterns in leader *attributions* seem to be widespread across cultures (Koenig et al., 2011; Sczesny et al., 2004). Similar leader stereotyping patterns could imply that my findings generalize to other countries, and more "feminine" societies.

To compare effects of agency with effects of other (perceived) applicant qualities, I investigated communality, as the stereotypically female part of the "big two" personality trait dimensions (Abele & Wojciszke, 2019), and explored likeability and competence perceptions. However, future research is needed to dig deeper into effects around perceived competence, and specifically it's differential relationships with perceived agency, communality, and fit. Moreover, although my studies showed significant moderation effects, some were rather small, such as the effect of job or organizational profile when controlling for the effect of the other profile in study 4. More research is needed to replicate the findings, and to investigate under which conditions the influence of recruitment material design is stronger or weaker.

All studies conducted were between-subjects experiments, which have many strengths but may limit external validity (see e.g., Charness et al., 2012). Whether female applicants for high-status jobs in male-dominated fields are perceived as more agentic than male applicants when directly comparing applicants needs further investigation (Biernat, 2003; Biernat, 2012). Although a meta-analysis of experiments on gender biases in applicant decisions did not find a difference between comparative and individual ratings (Koch et al., 2015), I call for more research on effects that are specific in competitive assessment procedures. Additionally, in my first two studies, I had university students evaluating applicants. As this sample is a potential threat to validity, the test was replicated with practitioners in studies 3 and 4. Nevertheless, I encourage future research to test whether my findings replicate in studies with other methodological approaches such as in field studies or observational studies.

Conclusion

In light of my findings, I conclude that perceived agency plays a crucial role in evaluators' assessments of applicant fit for high-status jobs, particularly in male-dominated fields. My research revealed that (1) agency perceptions drive fit perceptions for male and female applicants, (2) stereotype-congruent, gendered recruitment material can strengthen the focus on agency, and (3) the particular context shapes perceptions of applicants and applicant fit. Although I find that women must compensate for a perceived lack of fit with jobs that are perceived as high in status, they can be perceived as an equally good or even better fit than men, when they are perceived as agentic. However, we must consider that women likely need a strong signal that they can cope with the perceived agentic requirements of the work context for this effect to occur.

4. DESTRUCTIVE LEADERSHIP IN ACADEMIA: GENDER BIAS IN LEADER EVALUATIONS AND ATTRIBUTED MOTIVES³²

Women remain underrepresented in STEM departments in academia, specifically in fields that are believed to require male stereotyped "brilliance" (Leslie et al., 2015). This disparity increases when looking at the number of women in academic leadership positions in STEM fields; for instance, at German universities, women's share in leadership positions usually is below 20% (GWK, 2020; see also Dubois-Shaik & Fusulier, 2015; McCullough, 2020). At the same time, however, female leaders appear to be overrepresented as perpetrators of academic bullying and power abuse in the news media and public perceptions (Abbott, 2021, as citing 500WomenScientists, 2021). This mismatch is striking and has sparked a debate over the role of gender and gender stereotypes in the public perception, interpretation, and evaluation of leader mistreatment (e.g., Abbott, 2021; von Bredow, 2021; see also Judge, 2020; Kim et al., 2021). Empirical evidence also does not support any actual gender differences in the display of destructive leadership (Moss & Mahmoudi, 2021; Stempel & Rigotti, 2018; Tepper et al., 2017). Therefore, I set out to uncover potential gender bias in the perception and evaluation of destructive leadership in academia.

Destructive leadership describes a process in which a leader acts harmful, which can manifest in harmful influence methods with followers to promote goal attainment (Krasikova et al., 2013). Harmful leader behaviors include high-intensity behaviors like intimidation or putting excessive pressure on employees as well as more subtle behaviors like exploitation or lack of care (Almeida et al., 2021). Those behaviors typify destructive leadership styles such as abusive supervision (leaders showing sustained hostile behaviors; Tepper, 2000), a high-intensity form of destructive leadership, and exploitative leadership (leaders showing highly self-interested behaviors; Schmid et al., 2019), a rather low-intensity form (Almeida et al.,

³² Chapter 4 is based on a working paper by Dutz, Pircher Verdorfer, Rehbock, and Peus (2022), currently being prepared for submission.

2021). Additionally, a lack of leadership and guidance (rather than active display of harmful leader behaviors; Almeida et al., 2021), i.e., a laissez-faire leadership style (Bass & Avolio, 1990a), can also be characterized (passive and indirect) destructive leadership, the leader "not meeting the legitimate expectations of the subordinates," and the leadership style positively related to workplace stressors (Skogstad et al., 2007; p. 81: see also Aasland et al., 2010).

The negative and costly consequences of destructive leadership for individuals and organizations are well documented in the broader management literature (Schyns & Schilling, 2013). Furthermore, recent data indicates that destructive leadership is far from being an anomaly in academia as well (Moss & Mahmoudi, 2021; see also Aasland et al., 2010). At the same time, it is important to note that the experience of destructive leadership depends on the subjective perception of the follower and the same behavior of a leader might be perceived as destructive by one follower but not by another in the same team or unit (Schyns & Schilling, 2013; Tepper, 2000; Tepper et al., 2017). With that said, it is plausible to assume that the perception and appraisal of destructive leadership may be influenced by gender stereotypes (i.e., "generalizations about the attributes of men and women"; Heilman, 2012, p. 114) and related gender bias (Eagly & Karau, 2002; Kim et al., 2021; see also Tepper, 2007). While there is broad evidence to show how gender-stereotypical and, hence, biased perceptions undermine women's advancement in the workplace (see e.g., Eagly & Karau, 2002; Heilman, 2012; cf. chapter 3), so far, we know little about how gender bias may play into the equation of destructive leadership (Kim et al., 2021), specifically for female leaders in academia.

In an effort to fill this void, I empirically investigated whether female leaders in academia are evaluated more negatively when they are (perceived as) showing destructive leadership, as opposed to male leaders. I analyzed quantitative field survey data of 500 junior STEM scientists evaluating their leaders, to test for preliminary, correlative evidence of gender biases in evaluations of academic leaders. Additionally, I conducted an experimental

study with 972 employees, to eventually test for gender biases in a controlled setting of a male versus a female leader showing the same destructive leader behavior.

My theoretical framework outlines role congruity theory (Eagly & Karau, 2002), which suggests that perceived incongruity of leadership roles and the female gender role promotes stereotype-based prejudice towards female leaders. Substantiated by my findings presented in chapter 3, success in leader roles is still stereotyped as mainly requiring stereotypically male, agentic characteristics and behavior (e.g., assertive and dominant; Koenig et al., 2011; Schein, 2001), incongruent with the female gender role (Eagly & Karau, 2002; Heilman, 1983, 2001, 2012). For women, agentic behavior, and not demonstrating "desired" stereotypically female, communal behavior (e.g., "feminine niceness" and altruistic citizenship behavior; Heilman & Chen, 2005; Rudman & Glick, 1999, 2001), is found to cause backlash, reflected in less favorable evaluations of women versus men (Eagly & Karau, 2002; Rudman & Phelan, 2008). This likely extends to perceptions of (non-communal) destructive behavior, as suggested by recent research (Kim et al., 2021; Mai et al., 2020; Motro et al., 2021; see also Bowles & Gelfand, 2010; Heilman, 2012).

Initial evidence for gender biases in the assessments of destructive leadership stems from research on abusive supervision, leaders' (perceived) "sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (e.g., ridicule or putting followers down verbally; Tepper, 2000, p. 178). It has been found that such intense harmful leader behaviors (Almeida et al., 2021) are generally perceived as "less typical" for female than male leaders, resulting in more unfavorable evaluations of *female* leaders' effectiveness when showing those behaviors (Kim et al., 2021). It will be important to see whether this pattern holds in the context of academia as well and, moreover, whether other forms of destructive leadership, including less intense and more passive behaviors, will produce similar biases or not.

An important lens that can help shed light into the puzzle of gender and destructive leadership refers to attribution theory (Martinko et al., 2007). Previous research suggests that

subordinates may interpret and respond to leader behaviors differently depending on the attributed motives for leaders' destructive behaviors, most notably the intention to cause harm versus the desire to improve performance (Liu et al., 2012; Tepper, 2007; Yu & Duffy, 2021). On this basis, I investigate whether and to what degree these differential attributions, potentially biased by gender stereotypes (e.g., Heilman, 2001, 2012; Heilman & Okimoto, 2007; Prentice & Carranza, 2002), may result in harsher evaluations for female (vs. male) destructive leaders in academia.

Taken together, the current research advances our knowledge on gender biases in evaluations of leaders in several ways. First, I examine whether there are systematic differences in evaluations of female and male science leaders, considering different destructive leader behaviors. Second, I unravel whether attributed motives behind destructive leader behaviors, injury-initiation versus performance-promotion motives (Liu et al., 2012; Tepper, 2007), are gendered and may account for more negative evaluations of female (vs. male) leaders, which would likely have implications on penalties for destructive leadership and women's career progress (Kim et al., 2021). While cases of destructive leadership must, of course, be thoroughly investigated, recognizing and interrupting gender biases is pivotal for ensuring fair treatment of accused leaders, and to not downplay those cases where stereotypes may create a more lenient view (see also McGann, 2019). Finally, I consider effects of follower gender in the sensemaking process of destructive leadership, specifically from observer perspective, to explore peculiarities and boundary conditions of gender bias.

Theory and Hypotheses

Destructive Leadership in Academia

The literature generally differentiates between high-intensity and low-intensity forms of harmful leader behaviors, ranging from intimidation and excessive pressure for goal attainment to a lack of care and leaders' high self-centeredness (Almeida et al., 2021). The behaviors characterize different forms of destructive leadership, respectively (Almeida et al.,

2021; see also Aasland et al., 2010; Krasikova et al., 2013; Schmid et al., 2018; Tepper, 2000). The phenomenon of destructive leadership in (STEM) academia is often referred to as academic bullying, and recently receives considerable scholarly attention (e.g., Keashly, 2021; Mahmoudi & Keashly, 2021; Moss & Mahmoudi, 2021; Prevost & Hunt, 2018). Indeed, current global data on academic bullying in the STEM fields suggest relatively high incidents rates of destructive leadership in academia, with 84% of the respondents indicating to have experienced respective incidents (Moss & Mahmoudi, 2021).

Based on recent field reports (Keashly, 2021; Moss & Mahmoudi, 2021) and highly publicized cases of alleged leader misconduct in (STEM) academia (e.g., Abbott, 2021), certain forms of perceived destructive leadership may be particularly qualified to describe the phenomenon in academia. First, abusive supervision, high-intensity destructive leadership (Almeida et al., 2021), typified by the "sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000, p. 178). For instance, a leader threatening to take away research funding without legitimate reason (Moss & Mahmoudi, 2021). Second, exploitative leadership, a low-intensity and more subtle variant (Almeida et al., 2021), characterized by a leader's high self-interest, which manifests in "genuine egoistic behaviors, taking credit, exerting pressure, undermining development, and manipulating" (Schmid et al., 2019, p. 26). For instance, claiming or appropriating illegitimate authorship or intellectual property rights (Abbott, 2021; Moss & Mahmoudi, 2021; see also Anderson et al., 2007). Exploitative leadership may record higher incidents rates than abusive supervision, as suggested for lower intensity in comparison to higher intensity forms of harmful leader behaviors (Almeida et al., 2021; see also Aasland et al., 2010; Schmid, 2020). Third, laissezfaire leadership, that is "the absence of leadership, the avoidance of intervention, or both" (Bass & Avolio, 1990a, p. 20), which is another though passive and indirect form of destructive leadership (Skogstad et al., 2007; see also Aasland et al., 2010; Buch et al., 2015), has been observed in academia (Schmidt & Richter, 2009; see also Rehbock et al., 2022). For

instance, academic leaders may engage in laissez-faire leadership when they do not acknowledge their leader role (Rehbock et al., 2022), lack leadership training (e.g., reflected in neglected support for their subordinates; Smith, 2020), or fail to manage autonomy (Braun et al., 2016). Although not comprising "active" harmful leader behaviors (Almeida et al., 2021), a laissez-faire leadership style entails that leaders do not meet the needs and expectations of followers (Bass & Avolio, 1990a; Skogstad et al., 2007) and was found to be related to bullying and workplace stressors (Skogstad et al., 2007; see also Aasland, 2010).

Previous research on academic bullying (specifically on abusive supervision in the academic STEM fields) found that perpetrators are most often principal investigators, while not disproportionally more often men or women (Moss & Mahmoudi, 2021). Research in nonacademic contexts also does not lend support for significant gender differences in the prevalence of abusive supervisory behavior (Stempel & Rigotti, 2018; Tepper et al., 2017). Despite, studies on workplace aggression and unethical behavior suggest that men may be more likely to be perpetrators (Gigol, 2021; Rutter & Hine, 2005; Samnani & Singh, 2012). Additionally, a meta-analysis of leadership styles exhibited by men and women suggests that men are more likely to exhibit laissez-faire leadership than women (Eagly et al., 2003). In turn, women were found to be more likely to exhibit leader behaviors associated with leader effectiveness (such as transformational leader behaviors, including individual consideration and intellectual stimulation of followers; Eagly et al., 2003; see also Bass & Avolio, 1990a; Hoch et al., 2018). Thus, empirical evidence does not explain the impression that female leaders are (disproportionately) overrepresented as perpetrators of academic bullying and power abuse in the news and public perception (Abbott, 2021, as citing 500WomenScientists, 2021; see also von Bredow, 2021). However, gender stereotypes and related biases may potentially explain why leadership "shortcomings" in general, and destructive leadership specifically (Kim et al., 2021), might be perceived, interpreted, and evaluated differently, or on different standards, for women versus men (Eagly & Karau, 2002; Heilman, 1983, 2012).

Stereotype Influences: Is Destructive Leadership Perceived and Evaluated Differently for Male and Female Science Leaders?

As elaborated on in detail in chapter 3, the stereotypical notions of successful leaders and scientists, particularly in STEM fields, conform to the male stereotype (e.g., Carli et al., 2016; Cejka & Eagly, 1999; Koenig et al., 2011; Leslie et al., 2015; Schein, 2001). Men in general, leaders, and scientists are associated more with agentic behavior (e.g., assertive, dominant, and task-focused), whereas women in general are associated more with communal behavior (e.g., supportive, empathetic, and kind; Carli et al., 2016; Gaucher et al., 2011; Heilman, 2001, 2012; Hentschel, Heilman, et al., 2019; Koenig et al., 2011; Schein, 2001). Gender and leader stereotypes underlie the assumptions of role congruity theory (Eagly & Karau, 2002), which posits that female leaders face two forms of prejudice due to perceived incongruity of their gender role with leadership roles. First, women in general are likely to be perceived less favorable than men to take up leadership positions (Eagly & Karau, 2002). Perceived to lack agentic qualities, they may be ascribed a worse fit than men (Heilman, 1983; 2012; see also chapter 3). Second, agentic leadership behavior of women to fulfill male stereotyped prescriptions of successful leaders is likely to be evaluated less favorable in women than men (e.g., in regards to leader effectiveness), due to perceived incongruity with the female gender role (Eagly & Karau, 2002). Agentic women that are perceived to lack communal qualities are found to face backlash, specifically for dominance behavior (see also Williams & Tiedens, 2016), for instance in that they are judged to lack "feminine niceness" and negatively stereotyped as arrogant and self-centered (Rudman & Glick, 1999, 2001; Rudman et al., 2012). The perceived incongruity of the female gender role with leadership roles is likely to be specifically pronounced in work contexts with a unidimensional agentic stereotype of perceived requirements such as leadership in STEM (see chapter 3; Eagly & Karau, 2002; Koenig et al., 2011).

Additionally, previous research suggests that higher performance and competence standards are applied to women than men, and likely to female leaders, especially in genderatypical fields (Biernat & Kobrynowicz, 1997; Foschi, 2000; see also Eagly & Carli, 2003). Furthermore, as indicated by the findings of chapter 3, there also seem to be higher standards for female than male leaders' agency to be perceived a good fit (see also Heilman, 1983, 2012; Heilman et al., 1995; Heilman et al., 1989), specifically in male-dominated fields, and research lends support for double standards in communication applied to women in STEM (e.g., reflected in negative stereotyping; McKinnon & O'Connell, 2020). In summary, stereotype-based gender biases can influence the perception and evaluation of leader behavior and women's success in leader roles (Eagly & Carli, 2003; Eagly & Karau, 2002). Therefore, they may also play into the equation of the perception, interpretation, and evaluation of negative, destructive leader behavior (Kim et al., 2021), implying the violation of communal, stereotypically female gender norms in behavior that adds to perceived incongruity with the leader role (Eagly & Karau, 2002; Heilman, 1983, 2001, 2012; Prentice & Carranza, 2002).

In regards to the violation of communal gender norms, prior research for instance shows that women (vs. men) are more penalized for non-altruistic citizenship behavior (Heilman & Chen, 2005) and premediated unethical behavior (Mai et al., 2020). Additionally, delivering feedback in an unfriendly manner, as a form of incivility (i.e., deviant behaviors that violate mutual respect; Andersson & Pearson, 1999), is found to arouse more negative feelings when displayed by a female than a male team member (Motro et al., 2021). Initial evidence to the questions of whether and to what degree destructive leadership is perceived and evaluated differently for women versus men refers to abusive supervision, indeed seen as less typical in female leaders, and therefore resulting in more severe devaluation of effectiveness for female than male leaders (Kim et al., 2021). Extending on these findings, I suggest that evaluations of (perceived) destructive leadership may escalate more quickly for

female than male leaders, arguing for a gender bias in the perceived severity or intensity of negative leader behavior.

Laissez-faire leadership equals to neglected support for followers' development and not recognizing or responding to their needs (Bass & Avolio, 1990a; Buch et al., 2015; Skogstad et al., 2007). Thereby, violating followers' reciprocity beliefs and expectations (Rousseau, 1989; Tosunoglu & Ekmekci, 2016), followers' perceptions of laissez-faire leadership are likely to positively relate to perceptions of the leader undermining their development, leader high self-interest, and exploitation (i.e., exploitative leadership; Schmid et al., 2019). At the same time, not recognizing or responding to others' needs is likely to be perceived as less typical in *female* leaders (Eagly et al., 2003; Stempel et al., 2015). That is, implying shortcomings in communality, laissez-faire leadership may potentially be evaluated even more self-interested leader behavior when displayed by women (see e.g., Heilman & Chen, 2005; Heilman & Okimoto, 2007; Rudman et al., 2012). Hence, perceptions of laissez-faire leadership are likely to positively relate to perceptions of exploitative leadership, while this relationship may be stronger for female leaders.

Hypothesis 1a: Perceptions of laissez-faire leadership are positively related to perceptions of exploitative leadership, while this relationship is stronger for female than male leaders.

As explained earlier, exploitative leadership (including self-interested and manipulative behaviors of leaders; Schmid et al., 2019) is a low-intensity and rather subtle form of destructive leadership (Almeida et al., 2021; Schmid et al., 2018). Low-intensity harmful leader behaviors are likely positively correlated with high-intensity behaviors such as abusive supervision (Almeida et al., 2021; Tepper, 2007), and the boundaries of *perceived* low to high hostility of destructive leadership are fluid and depend on subjective assessments (Schmid et al., 2018; Schyns & Schilling, 2013; Tepper, 2000; Tepper et al., 2017). Thus, followers' perceptions of exploitative leadership are likely to positively relate to perceptions

of abusive supervision (see also Schmid et al., 2019). However, while highly self-centered behavior, as with exploitative leadership, explicitly violates female gender role prescriptions (Heilman, 2001; Heilman & Chen, 2005; Prentice & Carranza, 2002; Rudman et al., 2012), it better fits the male, agentic stereotype of self- rather than other-oriented behavior (Abele & Wojciszke, 2019; Eagly & Steffen, 1984). Therefore, perceived exploitative leadership may be accompanied by higher ascriptions of interpersonal hostility for female than male leaders (see e.g., Brosi et al., 2016; Heilman & Okimoto, 2007; Motro et al., 2021). This may be reflected in higher scores on perceived abusive supervision (i.e., *hostile* behaviors; Tepper, 2000) due to high scores on perceived exploitative leadership, for female than male leaders. Hence, perceptions of exploitative leadership are likely to positively relate to perceptions of abusive supervision, while this relationship may be again stronger for female leaders.

Hypothesis 1b: Perceptions of exploitative leadership are positively related to perceptions of abusive supervision, while this relationship is stronger for female than male leaders.

Thus, I expect that negative evaluations escalate more quickly for female than male leaders, from (perceived) passive and indirect to low-intensity, and finally to high-intensity destructive leadership (Almeida et al., 2021; Skogstad et al., 2007). To test the predictions, I analyzed field survey data (see study 1).

Additionally, I also expect harsher evaluations for female than male leaders when they show the same low-intensity or high-intensity destructive leader behavior. In prior research, abusive supervision, reasoned to contradict female gender norms while the male stereotype includes behaviors such as "aggressive" and "dominant" (e.g., based on Eagly, 1987; Eagly & Karau, 2002; Heilman & Chen, 2005; Motro et al., 2021), was indeed found to be seen as less typical for female than male leaders, in turn resulting in lower effectiveness ratings for female leaders exhibiting abusive supervision (Kim et al., 2021). Thus, given that the self-interested behaviors of exploitative leadership also contradict female gender norms (e.g., Heilman,

2001; Heilman & Chen, 2005; Prentice & Carranza, 2002), exploitative leadership is also likely to be seen as less typical for female leaders. As behaviors that are "should nots" for women in particular (see also Rudman et al., 2012) are likely to be accompanied by higher ascribed interpersonal hostility for women than men (e.g., Brosi et al., 2016; Heilman & Okimoto, 2007; Motro et al., 2021), both abusive supervision and exploitative leadership may be perceived as more problematic when displayed by female than male leaders. Moreover, female leaders showing gender-atypical abusive supervisory or exploitative leader behavior are also likely to be rated lower on perceived leader effectiveness, as compared to male leaders (Kim et al., 2021; see also Eagly & Karau, 2002).

Hypothesis 2: Abusive supervisory behavior is perceived as more problematic when displayed by female than male leaders (2a) and results in lower ratings of perceived leader effectiveness for female than male leaders (2b).

Hypothesis 3: Exploitative leader behavior is perceived as more problematic when displayed by female than male leaders (3a) and results in lower ratings of perceived leader effectiveness for female than male leaders (3b).

To test for these gender biases in perceptions and evaluations of (identical) destructive leader behavior of men and women, I designed an experimental study (see study 2), which also investigated the role of attributed motives to destructive leader behavior.

Attributed Causal Motives Behind Destructive Leadership: Do they Explain More Negative Evaluations of Female Leaders?

Following from attribution theory (Martinko et al., 2007), attributions to individuals' behavior, such as attributed causal motives to leaders' destructive behavior (Liu et al., 2012), may influence reactions to it, including its cognitive processing and subsequent evaluation.

Indeed, prior research lends support that followers interpret and respond to destructive leadership differently depending on attributed causal motives, namely the desire to improve performance versus the intention to cause harm (i.e., performance-promotion vs. injury-

initiation motives; Liu et al., 2012; Tepper, 2007; Yu & Duffy, 2021). This prior research focused on abusive supervision, investigating how attributed motives explain differential consequences and reactions to it (e.g., Liu et al., 2012; Yu & Duffy, 2021). Performancepromotion motives imply positive intent, relevant to followers' (performance) development, whereas injury-initiation motives imply a negative purpose of the behavior (Liu et al., 2012; see also Tepper, 2007). The attributed motives are found to influence the extent of negative effects team leader abusive supervision has on team member creativity, which seem to be weaker by attributed performance-promotion and stronger by attributed injury-initiation motives to the leader (Liu et al., 2012). Additionally, attributed performance-promotion motives to abusive supervision seem to evoke guilt in followers, negatively related to follower deviant behaviors and positively to their organizational citizenship behaviors, whereas attributed injury-initiation motives seem to evoke anger, showing opposite relationships to the follower behaviors (Yu & Duffy, 2021). Thus, attributed injury-initiation motives likely result in more negative evaluations of abusive supervision, whereas attributed performancepromotion motives likely result in more positive evaluations. Influencing the sensemaking process of destructive leadership (Liu et al., 2012; Yu & Duffy, 2021), and given the interrelations between abusive supervision and exploitative leadership (Schmid et al., 2018, 2019), the motive attributions may show similar effects for exploitative leadership.

However, due to descriptive and prescriptive gender stereotypes (Eagly, 1987; Heilman, 2001; Prentice & Carranza, 2002), leader gender may have an influence on whether performance-promotion or injury-initiation motives are attributed to destructive leadership. Due to descriptive gender stereotypes, women are generally less likely than men to be ascribed achievement and performance orientation (including being ambitious and challenging others; Gaucher et al., 2011; Heilman, 2012; Hentschel, Heilman, et al., 2019). Therefore, engaging in abusive supervision or exploitative leadership, women may be attributed lower performance-promotion motives than men.

Furthermore, as explained earlier, women who show behavior that violates communal norms prescribed for the female gender – which holds true for abusive supervision and also exploitative leadership – are prone to being ascribed (high levels of) interpersonal hostility (e.g., Brosi et al., 2016; Heilman & Okimoto, 2007; Motro et al., 2021). Similarly, prior research shows that premediated unethical behavior is seen as less typical for women than men, and that women are therefore punished more than men when they are perpetrators, unless there is a communal reason for their behavior (such as acting unethically to care for someone; Mai et al., 2020). That is, not adhering to communal norms is less socially accepted for women than men (Heilman, 2001, 2012; Prentice & Carranza, 2002; Rudman et al., 2012), potentially attributing women a more hostile motive and negative purpose. Thus, engaging in abusive supervision or exploitative leadership, women may be attributed higher injury-initiation motives than men.

Taken together, attributed motives to destructive leadership may be gendered; specifically, I propose that, engaging in abusive supervision or exploitative leadership, lower performance-promotion and higher injury-initiation motives may be attributed to female than male leaders. Attributed performance-promotion motives are likely negatively related to a negative evaluation of the behaviors and the leader (i.e., resulting in a more positive evaluation); and attributed injury-initiation motives are likely positively related to a negative evaluation of the behaviors and the leader (i.e., resulting in a more negative evaluation; Liu et al., 2012; Yu & Duffy, 2021). Therefore, I test the predictions that women (vs. men) showing abusive supervision or exploitative leadership are evaluated more negatively (as proposed in hypotheses 2 and 3) due to different attributed motives to women's and men's abusive supervisory and exploitative leader behavior (see Figure 12).

Hypothesis 4: When showing abusive supervisory behavior, female leaders are attributed lower performance-promotion motives (4a) and higher injury-initiation motives (4b) than male leaders. Different motives attributed to their behavior explain a more negative evaluation of female leaders' behavior (4c) and effectiveness (4d; see hypothesis 2).

Hypothesis 5: When showing exploitative leader behavior, female leaders are attributed lower performance-promotion motives (5a) and higher injury-initiation motives (5b) than male leaders. Different motives attributed to their behavior explain a more negative evaluation of female leaders' behavior (5c) and effectiveness (5d; see hypothesis 3).

In regards to hypotheses 2-5, I also tested for an influence of follower gender (male or female victim of destructive leadership) in observers' evaluations. Follower gender may influence the perception and evaluation of destructive leadership because women are stereotyped as being more sensitive while men are stereotyped as being more assertive (e.g., Gaucher et al., 2011; Heilman, 2001).

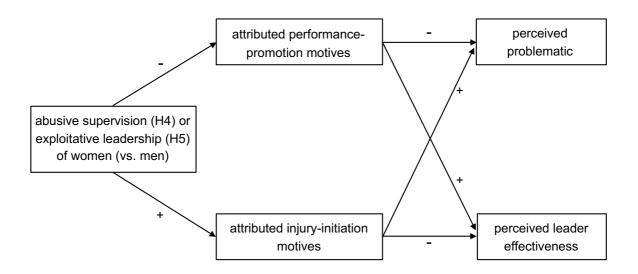


Figure 12. Conceptual Model Hypotheses 4 and 5

Method

The quantitative data of a field survey with junior STEM scientists (study 1) and an experimental study with employees across different work contexts (study 2) served as basis to test whether female leaders in academia may be evaluated more negatively, as compared to male leaders, when they are (perceived as) showing destructive leadership. Thereby, I also tested whether attributed motives to destructive leadership are different for female versus male leaders who exhibit identical destructive leader behavior (study 2).

Study 1

Research design and participants. To test for preliminary evidence of gender biases in leader evaluations and attributed motives to destructive leadership, I analyzed field survey data. The field survey was conducted at the Chair of Research and Science Management of the Technical University of Munich within a larger research project. The sample were 500 doctoral students and recent postdocs in STEM, across different STEM disciplines and universities in Germany ($M_{age} = 29.20$ years, $SD_{age} = 4.52$; 59% male, corresponding to men's overrepresentation in respective pre- and postdoctoral positions in Germany; GWK, 2020). In the survey, the participants rated their leader on constructive versus destructive behaviors, and indicated the causal motives they attribute to their leader's behavior. Additionally, the survey included items to explore a potential influence of followers' instrumentality beliefs, respectively of whether they believe working with and getting along well with their leader will be having positive career consequences (e.g., due to their leader's reputation and influence; Haworth & Levy, 2001; see also Vroom, 1964). High instrumentality beliefs could potentially result in a more positive evaluation of a leader's destructive behavior, specifically when associated with performance-promotion motives (Liu et al., 2012; Tepper, 2007).

Procedure and measures. Participants assessed their leader (86% male and 14% female) on quantitative scales for constructive leadership, laissez-faire leadership, exploitative leadership, and abusive supervision. Thereafter, they indicated the causal motives they

attribute to their leader's behavior in terms of injury-initiation versus performance-promotion motives, and answered items on instrumentality beliefs concerning their leader. They also provided demographic data.

Perceptions of *constructive leadership* were measured with six items based on Ekvall and Arvonen (1991) as used in Aasland et al. (2010). Sample items are "[My leader] gives recognition for good performance" and "[My leader] encourages innovative thinking" ($\alpha =$.87). Perceptions of *laissez-faire leadership* were assessed with four items based on Bass and Avolio (1990b) as used in Aasland et al. (2010), in a German version using reverse-coded items such as "[My leader] is always there when needed" ($\alpha = .67$). Perceptions of exploitative leadership were measured with six items developed by Schmid et al. (2019) correlating at r = .97 with the total scale, as used in Pircher Verdorfer et al. (2019). Sample items are "[My leader] puts me under pressure to reach his/her goals" and "[My leader] uses my work to get him-/herself noticed ($\alpha = .90$). Finally, perceptions of abusive supervision were assessed with five items adapted from Mitchell and Ambrose (2007; "active-aggressive abusive supervision") as used in Vogel et al. (2016; German version), based on the original scale of Tepper (2000). Sample items are "[My leader] tells me my thoughts or feelings are stupid" and "[My leader] puts me down in front of others" ($\alpha = .88$). Participants also assessed the *injury-initiation motives* (e.g., "Desire to cause injury on me" and "Desire to sabotage me at work"; $\alpha = .95$, five items) and *performance-promotion motives* (e.g., "Desire to elicit high performance from me" and "Desire to push me to work harder"; $\alpha = .70$, five items) of their leaders, based on the measures of Liu et al. (2012). Additionally, they answered four items on their instrumentality beliefs working with their leader adapted from Haworth and Levy (2001), such as "In general, following my leader can be of great value to me later" ($\alpha = .82$). In the field survey, all items were answered on 5-point Likert scales (1 = "never" or "not true at all", 5 = "almost always" or "absolutely true").

Study 2

Research design. Study 2 was a controlled experimental study to allow for causal inferences (Charness et al., 2012). In study 2, I tested whether abusive supervision and exploitative leadership are evaluated more negatively for female (vs. male) science leaders, explained by lower attributions of performance-promotion motives and higher attributions of injury-initiation motives. To determine whether evaluations of the destructive leader behaviors differ as a function of leader gender, I randomly assigned the study participants a leadership scenario for the academic context which depicted the identical behavior of either a male or a female leader, which the participants evaluated. I created scenarios for abusive supervision and exploitative leadership, and, additionally, a scenario for constructive leader behavior as a reference condition. I chose transformational leadership as a reference condition, due to its well-documented positive effects (Hoch et al., 2018) and well-established definition in the broader management literature. Essentially, transformational leadership is typified by supportive leadership, intellectual stimulation of followers, personal recognition, and inspirational/visionary communication (Bass, 1985; Bass & Avolio, 1990a; Krause & Kobald, 2013; Rafferty & Griffin, 2004). Additionally, in the leadership scenarios, I varied follower gender, considering different configurations of leader and follower gender. Thus, the experimental study adopted a 3 (leader behavior: abusive vs. exploitative vs. transformational) x 2 (leader gender: male vs. female) x 2 (follower gender: male vs. female) between-subjects design, operationalized in 12 different leadership scenarios, randomly assigned to the study participants (observer gender: male vs. female).

Participants. Study 2 investigated perceptions and evaluations of destructive leadership from an observer perspective. Followers' perception of destructive leadership may not necessarily coincide with observers' perception of destructive leadership (see also Tepper, 2000; Tepper et al., 2017). Furthermore, typically, it will not be the followers of (perceived) destructive leaders who make a final assessment and examination of a leader's behavior, or

decide on disciplinary consequences; rather, it will be impartial observers with a formal (leader) role who investigate accusations of destructive leadership (who may or may not be scientists, or acquainted with the exact working context; see e.g., Abbott, 2021). Therefore, participants in study 2 were 972 employees across different industries and disciplines in nonacademic and academic contexts ($M_{\rm age} = 43.87$ years, $SD_{\rm age} = 10.86$; 50% male³³; 96% German nationality).³⁴ Requirements for participation included having a university degree and a direct supervisor at the workplace, to make sure that the participants can relate to the situation described in the academic context scenario. 54% of participants were leaders themselves (while still reporting to a direct supervisor) and 71% had leadership experience.

Leadership scenarios. All leadership scenarios were composed of four typical leaderfollower situations for the academic context (e.g., presentation in front of supervisor and team, and challenges in a research project), identical in the scenarios. However, leader reactions within the described situations were manipulated, depicting the different leader behaviors. I developed the leader-follower situations and different leader reactions based on a validated situational judgement test for leadership style assessments (Peus, Braun, & Frey, 2015) and key definitions of abusive supervision (active-aggressive abusive supervision; Mitchell & Ambrose, 2007; Tepper, 2000), exploitative leadership (Schmid et al., 2019), and transformational leadership (Bass, 1985; Krause & Kobald, 2013). The leadership scenarios (see appendix C.1) were pre-tested in eight qualitative interviews, as to whether they are perceived as realistic and externally valid, and in a separate experimental pre-study with N=219 participants, as to whether they accurately display the manipulated leader behavior.

In the main study, I included three *manipulation checks*. The participants assessed the depicted leader behavior on respective leadership style assessment scales (see procedure and *measures*). The means on the three different leadership scales significantly differed depending

³³ 12 participants did not indicate gender.

³⁴ Participants were recruited by means of a professional survey panel (via respondi).

on the depicted leader behavior in the scenario, F(6, 1934) = 685.84, p = .000, and in the intended direction of the experimental manipulation.³⁵ Furthermore, the participants recalled leader gender and follower gender as manipulation checks. Participants that could not correctly remember leader or follower gender were excluded from the sample.³⁶

Procedure and measures. Participants completed an online questionnaire. They randomly received one leadership scenario, as a configuration of leader behavior, leader gender, and follower gender, as specified in the experimental design. Then, they were asked questions about the scenario, focusing on assessments of the leader's behavior and attributed motives behind it. They also provided demographic information and information relevant to the study context, completed the manipulation checks, and, finally, were debriefed in regards to the content of the experimental study.

The leadership style assessment scales for the respective manipulation check in study 2 included the *abusive supervision* scale of study 1 (Mitchell & Ambrose, 2007; Vogel et al., 2016; five items, $\alpha = .97$) and Schmid et al.'s (2019) full scale for the assessment of *exploitative leadership* (15 items, $\alpha = .98$), adapted to the scenario assessment (pertaining to the depicted leader's behavior towards a specific follower). Additionally, they included a *transformational leadership* assessment scale adapted from Krause and Kobald (2013), consisting of 15 items such as "[The leader] pays attention to [the follower's] interests" and "[The leader] gives personal recognition when [the follower] does an excellent job" ($\alpha = .97$). As dependent variables, I included attributions of *injury-initiation motives* (five items, $\alpha = .97$) and *performance-promotion motives* (five items, $\alpha = .71$), again using the same measures as used in study 1 (Liu et al., 2012), adapted to the scenario assessment.

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³⁵ Wilks-Lambda. ANOVA abusive: F(2, 969) = 1252.52, p < .001, ANOVA exploitative: F(2, 969) = 784.72, p < .001, ANOVA transformational: F(2, 969) = 1047.46, p < .001.

³⁶ This is also true for participants that failed pre-defined quality criteria.

behaviors were perceived for female versus male leaders (non-problematic–problematic, assessed on an ascending 7-point Likert scale). To assess perceived *leader effectiveness*, I included two items adapted from Sharbrough et al. (2006), as based on an earlier edition of Nahavandi (2009; 1991, respectively), that pertain to whether the leader is thought to be effective in (1.) achieving the organization's goals and (2.) supporting subordinates in achieving their (individual) goals; and, additionally, I included a third item pertaining to whether the leader is thought to be effective in (3.) leading a group ($\alpha = .70$) (adapted from Bass & Avolio, 1990b). All items were measured on ascending 7-point Likert scales. In the analyses, I included observer (i.e., participant) gender and age as control variables, as stereotyped perceptions may vary by these participant variables (see e.g., Koenig et al., 2011; Rice & Barth, 2016).

Results

Study 1: Preliminary, Correlative Evidence of Gender Biases in Leader Evaluations

Analyzing the data of study 1, I tested my first set of predictions (specifically H1), using linear regression analyses. For moderation analyses, I used PROCESS (Hayes, 2013).

First, I tested whether followers' perceptions of leaders' laissez-faire leadership positively related to followers' perceptions of leaders' exploitative leadership, and whether this relationship was stronger for female than male leaders. The results showed that scores on laissez-faire leadership positively related to scores on exploitative leadership (b = .56, p = .000); and, indeed, leader gender moderated this relationship, $\Delta R^2 = .01$, F(1, 496) = 6.28, b = .40, p = .013. That is, the higher leaders' ratings on laissez-faire leadership, the higher were their ratings on exploitative leadership, and this effect was stronger for female (b = .92, p < .001) than male leaders (b = .52, p < .001). Thus, the results lend support for H1a.

Second, I tested whether followers' perceptions of leaders' exploitative leadership positively related to followers' perceptions of leaders' abusive supervision, and whether this relationship was again stronger for female than male leaders. The results revealed that scores

on exploitative leadership positively related to scores on abusive supervision (b = .44, p < .001); and this relationship was also moderated by leader gender, $\Delta R^2 = .02$, F(1, 496) = 18.91, b = .25, p < .001. Meaning, the higher leaders' ratings on exploitative leadership, the higher were their ratings on abusive supervision, and this effect was stronger for female (b = .64, p < .001) than male leaders (b = .39, p < .001). Thus, the results also support H1b.

Based on the theoretical considerations of H1a and H1b, I also explored in the data whether *low scores on constructive leadership* (i.e., minimal ratings on constructive leader behaviors such as giving recognition and encouraging development; Aasland et al., 2010; Ekvall & Arvonen, 1991) predict *higher scores on high-intensity destructive leadership* for female leaders in particular. Therefore, I tested whether followers' perceptions of leaders' constructive leadership *negatively* related to followers' perceptions of leaders' abusive supervision, and again for a moderation with leader gender. Indeed, scores on constructive leadership negatively related to scores on abusive supervision (b = -.38, p < .001); and this relationship was moderated by leader gender, $\Delta R^2 = .01$, F(1, 496) = 8.76, b = -.21, p = .003. That is, when leaders scored low on constructive leadership, ratings on abusive supervision increased, while this effect was stronger for female (b = -.54, p < .001) than for male leaders (b = -.33, p < .001). Figure 13 shows the graphs for the moderation analyses.

Overall, the participants' quantitative ratings of their leaders' constructive versus destructive behaviors revealed the highest mean for constructive leadership (M = 3.26, SD = .93), followed by laissez-faire leadership (M = 2.68, SD = .86), exploitative leadership (M = 2.20, SD = 1.08), and abusive supervision (M = 1.42, SD = .71).

Additionally, analyzing the field survey data, I explored whether they provide initial support for gender biases in attributed motives to destructive leadership. I tested whether female leaders were more frequently seen to have injury-initiation motives and less

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³⁷ Rated on 5-point Likert scales.

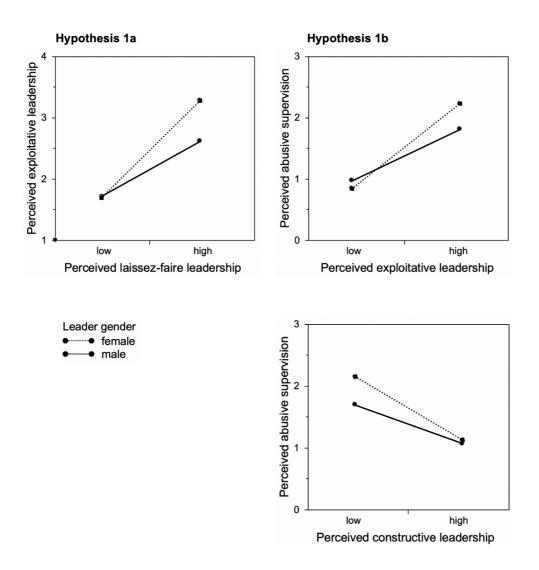


Figure 13. Results of Moderation Analyses. Mean +/- 1 SD. $M_{\text{laissez-faire}} = 2.68$, $M_{\text{exploitative}} = 2.20$, $M_{\text{constructive}} = 3.26$.

frequently seen to have performance-promotion motives than male leaders, when they are perceived to exhibit laissez-faire leadership, exploitative leadership, or abusive supervision.

Perceptions of laissez-faire leadership were positively related to attributions of injury initiation motives (b = .37, p < .001). Leader gender moderated this relationship, $\Delta R^2 = .01$, F(1, 496) = 8.54, b = .34, p = .004, such that female leaders who were perceived to exhibit laissez-faire leadership were more frequently seen to have injury-initiation motives (b = .67, p < .001), as opposed to male leaders (b = .33, p < .001). Perceptions of laissez-faire leadership

were negatively related to attributions of performance-promotion motives (b = -.11, p = .009), while this relationship was not moderated by leader gender.

Perceptions of exploitative leadership also were positively related to attributions of injury-initiation motives (b = .48, p < .001). Leader gender moderated the relationship, $\Delta R^2 = .01$, F(1, 496) = 6.72, b = .17, p = .010, such that female leaders who were perceived to exhibit exploitative leadership also were more frequently seen to have injury-initiation motives (b = .61, p < .001), as compared to male leaders (b = .45, p < .001). Perceptions of exploitative leadership positively related to attributions of performance-promotion motives (b = .18, p < .001), while this relationship was not moderated by leader gender.

Perceptions of abusive supervision were positively related to attributions of injury-initiation motives (b = .78, p < .001) and attributions of performance-promotion motives (b = .27, p < .001). However, in both relationships, leader gender was not a significant moderator. Further explorative analyses revealed a significant interaction effect of attributions of injury-initiation motives and leader gender on perceptions of abusive supervision, $\Delta R^2 = .01$, F(1, 496) = 13.38, b = .25, p < .000. Thus, the data rather suggest that, in turn, leaders' attributed injury initiation motives (higher for female (perceived) laissez-faire and exploitative leaders) predicted (higher) ratings on abusive supervision, while this effect was stronger for female leaders (b = .86, p < .000) than for male leaders (b = .61, p < .000).

Hence, the results showed some initial support for gender biases in attributed motives to destructive leadership with regard to attributed injury-initiation motives, specifically to laissez-faire leadership and exploitative leadership; while the survey data do not allow to control for the specific destructive leader behavior.

Additionally, my explorative analyses on instrumentality beliefs revealed that these beliefs were significantly higher for male (M = 3.80, SD = .85) than for female leaders (M = 3.56, SD = 1.01; p = .41), positively related to attributions of performance-promotion motives (b = .19, p < .001), and negatively related to attributions of injury-initiation motives (b = -.32,

p < .001). Also, instrumentality beliefs were negatively related to perceptions of abusive supervision (b = -.26, p < .001), independent of leader gender (b = -.16, p = .059).

Study 2: Experimental Evidence of Gender Biases among Observers of Destructive Leadership

In study 2, I tested the remaining hypotheses (H2-H5), performing analyses of variance, and regression analyses in PROCESS for mediation analyses (Hayes, 2013). Testing the proposed effects, I considered a potential influence of follower gender in evaluations of destructive leadership by a male versus a female leader. Table 20 shows correlations.

Table 20

Means, Standard Deviations, and Correlations of Variables in Study 2

Variable	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Participant gender ^a	1.50	.50										
2. Participant age ^b	43.72	11.78	15**									
3. Leader gender ^a	1.50	.50	02	.01								
4. Follower gender ^a	1.51	.50	04	11**	.04							
5. Perceived abusive supervision ^c (MC)	4.01	2.22	.00	.01	.00	.04						
6. Perceived exploitative leadership ^c (MC)	4.37	1.92	02	.01	.03	.02	.52**					
7. Perceived transformational leadership ^c (MC)	3.61	1.68	03	.02	.00	03	79**	64**				
8. Attributed performance-promotion motives ^c	4.19	1.25	02	.01	.01	.00	34**	07*	.42**			
9. Attributed injury-initiation motives ^c	3.64	1.93	.00	01	.02	.06	.82**	.59**	75**	32**		
10. Perceived problematic behavior ^c	5.08	2.25	02	.04	.02	.01	.69**	.72**	82**	26**	.68**	
11. Perceived leader effectiveness ^c	3.82	1.72	01	02	03	02	74**	67**	.87**	.40**	76**	82**

Note. N = 972 (N = 960 for participant gender). ^a1 = male, 2 = female. ^bAge in years. ^cMeasured on 7-point Likert scales (1 = "not at all" or "strongly disagree"; 7 = "very much" or "strongly agree"). *p < .05, **p < .01 (two-tailed). First, I tested whether female (vs. male) leaders were evaluated more negatively when showing destructive leadership, in that their behavior – abusive or exploitative – was perceived as more problematic, and they were perceived less effective leaders.

Within the abusive supervision condition (N = 331), the results did not support a significant main effect of leader gender (F(1, 325) = .64, p = n.s.) on how problematic the destructive leader behavior was perceived. However, the results revealed a significant interaction effect of leader gender and follower gender, F(1, 325) = 5.14, p = .024, $\eta^2 = .016$. Post hoc analyses showed that the (identical) abusive supervisory behavior was perceived as significantly more problematic when displayed by a female (M = 6.56, SD = .83) versus a male leader $(M = 6.17, SD = 1.36), F(1, 155) = 5.38, p = .022, \eta^2 = .034$, when follower gender was male (N = 159; abusive supervision, male follower). There was no such effect when follower gender was female. Thus, the results only partially support H2a, revealing follower gender as a boundary condition for the proposed effect. As for perceived *leader* effectiveness due to the abusive supervisory behavior, the results did not show a significant main effect of leader gender either (F(1, 325) = .74, p = n.s.), and an interaction effect of leader gender and follower gender on perceived leader effectiveness was non-significant but marginal $(F(1, 325) = 3.30, p = .070, \eta^2 = .10)$. Post-hoc analyses also showed a nonsignificant but marginal mean difference at p = .053 (F(1, 155) = 3.81, $\eta^2 = .024$) with a lower mean tendency for the female leader (M = 2.48, SD = 1.13) versus the male leader (M = 2.48, SD = 1.13) versus the male leader (M = 2.48, SD = 1.13) versus the male leader (M = 2.48). 2.77, SD = 1.15) on perceived leader effectiveness, when follower gender was male (N = 159; abusive supervision, male follower). Hence, the results do not support H2b.

Within the *exploitative leadership* condition (N = 322), the results did not support a significant main effect of leader gender (F(1, 316) = .34, p = n.s.) but again a significant interaction effect of leader gender and follower gender on how *problematic* the destructive leader behavior was perceived, $F(1, 316) = 6.23, p = .013, \eta^2 = .019$. Post hoc analyses showed that the (identical) exploitative leader behavior was perceived as significantly more

problematic when displayed by a female (M = 6.34, SD = 1.17) versus a male leader (M = 5.87, SD = 1.63), F(1, 158) = 4.39, p = .038, $\eta^2 = .027$, when follower gender was male (N = 162; exploitative leadership, male follower). Again, there was no such effect when follower gender was female; thus, partially supporting H3a, uncovering follower gender as a boundary condition for the proposed effect. In regards to perceived leader *effectiveness* due to the exploitative leader behavior, the results did not reveal a significant main effect of leader gender (F(1, 316) = .21, p = n.s.); nor a significant interaction effect of leader gender and follower gender on perceived leader effectiveness (F(1, 316) = .73, p = n.s.). Hence, there was no support for H3b in the data.

Second, I analyzed for both conditions, abusive supervision and exploitative leadership, whether female and male leaders were attributed different causal motives behind their destructive leader behavior; and whether the attributed motives explained a more negative evaluation of female leaders showing the same behavior than male leaders.

Within the *abusive supervision* condition (N = 331), the results did not support a significant main effect of leader gender (F(1, 325) = .20, p = n.s.) but a significant interaction effect of leader gender and follower gender on attributed *performance-promotion motives* to abusive supervisory behavior, F(1, 325) = 6.94, p = .009, $\eta^2 = .021$. Post hoc analyses confirmed lower attributions of performance-promotion motives to abusive supervisory behavior for the female (M = 3.29, SD = 1.46) than the male leader (M = 3.75, SD = 1.52), F(1, 155) = 4.36, p = .039, $\eta^2 = .027$, when follower gender was male. Replicating the pattern of the prior analyses, this was not the case when follower gender was female, partially supporting H4a with the boundary condition of a male follower. The analyses showed that, for the female abusive leader, attributions of performance-promotion motives were significantly higher when follower gender was female (M = 3.91, SD = 1.31) than male (M = 3.29, SD = 1.46), F(1, 162) = 8.45, P = .004, $\eta^2 = .050$. The male abusive leader was attributed slightly

higher performance-promotion motives when follower gender was male than female; however, not qualified by a significant mean difference.

For attributed *injury-initiation* motives, the results again revealed no significant main effect of leader gender (F(1, 325) = 1.20, p = n.s.) but a significant interaction effect of leader gender and follower gender on attributed injury-initiation motives, F(1, 325) = 7.14, p = .008, $\eta^2 = .022$. There was a significant mean difference by leader gender for attributed injuryinitiation motives to abusive supervision, F(1, 155) = 6.94, p = .009, $\eta^2 = .043$, higher for the female (M = 5.29, SD = 1.34) than the male leader (M = 4.75, SD = 1.50), when follower gender was male (N = 159; abusive supervision, male follower). Again, there was no significant difference by leader gender, when follower gender was female. Thus, the results also partially support H4b with the boundary condition of a male follower. The analyses showed that attributions of injury-initiation motives to abusive supervision were generally higher in case of a female than a male follower, as indicated by a significant main effect of follower gender on attributed injury-initiation motives, F(1, 325) = 5.47, p = .02, $\eta^2 = .017$. However, this effect was mainly driven by lower attributions of injury-initiation motives to the male leader when follower gender was male (M = 4.75, SD = 1.50) versus when follower gender was female $(M = 5.47, SD = 1.35), F(1, 161) = 10.19, p = .002, \eta^2 = .060$; attributions of injury-initiation motives did not significantly differ for the female leader depending on whether follower gender was male or female.

Thus, same as for a more negative evaluation of the female than the male leader's abusive supervisory behavior as to how *problematic* the behavior was perceived, attributed causal motives to the behavior only differed when follower gender was male. Following from these results, I tested in a mediation analysis whether different attributed motives to the female versus the male leader showing abusive supervision explained a more negative evaluation of the female leader, *when follower gender was male* (N = 159; abusive supervision, male follower). The analysis revealed that attributions of performance-promotion

motives, lower for the female leader (b = -.49, p = .039), were negatively related to evaluations of the leader behavior as problematic (b = -.15, p = .013), thus resulting in a more positive evaluation of the behavior. In turn, attributions of injury-initiation motives, higher for the female leader (b = .59, p = .009), were positively related to evaluations of the leader behavior as problematic (b = .25, p = .000), thus resulting in a more negative evaluation of the behavior. Taken together, when follower gender was male, abusive supervisory behavior was perceived as more problematic when displayed by a female versus a male leader, due to lower attributed performance-promotion and higher attributed injury-initiation motives, fully mediating the direct effect (total indirect effect: b = .22, 95% CI [.08, .39]). Furthermore, although the direct effect on perceived leader effectiveness was non-significant but marginal at p = .053, there was a significant indirect effect of leader gender on perceived leader effectiveness (detrimental to the female leader) via attributed motives to the female and the male abusive leader. Attributed performance-promotion motives were positively related to perceived leader effectiveness (b = .23, p = .000), while attributed injury-initiation motives were negatively related to perceived leader effectiveness (b = -.34, p = .000), resulting in a significant mediation effect (total indirect effect: b = -.31, 95% CI [-.54, -.10]). There were no significant mediation effects independent of follower gender, thus partially supporting H4c and 4d, again with a boundary condition.

Within the *exploitative leadership* condition (N = 322), the results did not reveal a significant main effect of leader gender (F(1, 316) = 1.12, p = n.s.) nor a significant interaction effect of leader gender and follower gender (F(1, 316) = .95, p = n.s.) on attributed *performance promotion motives*. Also, the analysis did not reveal a significant main effect of leader gender (F(1, 316) = .92, p = n.s.) or a significant interaction effect of leader gender and follower gender (F(1, 316) = 2.10, p = n.s.) on attributed *injury-initiation motives* to exploitative leader behavior. Despite, follower gender had a main effect on attributed injury-initiation motives to exploitative leaders, higher when follower gender was female than male,

F(1, 316) = 5.96, p = .015, $\eta^2 = .019$. This effect was mainly driven by lower attributions of injury-initiation motives to the male leader when follower gender was male (M = 3.72, SD = 1.43) versus female (M = 4.30, SD = 1.27), F(1, 154) = 7.27, p = .008, $\eta^2 = .045$, while there was no significant difference in attributions of injury-initiation motives to the female leader by follower gender. Consequently, the data did not support any significant (mediation) effects in support of hypothesis 5; and attributed motives did not explain that (identical) exploitative leader behavior was perceived as significantly more problematic when displayed by a female versus a male leader towards a male follower.

As robustness checks, I compared the significant effects within the abusive supervision condition and the exploitative leadership condition to transformational leadership as a reference condition. Within the transformational leadership condition, there were no significant effects of leader gender on how problematic the leader behavior was perceived, on perceived leader effectiveness, or on attributed motives.

Discussion

This research investigated potential gender bias in the perception, interpretation, and evaluation of destructive leadership in academia. I used role congruity theory as a framework and argued for stereotype influences (Eagly & Karau, 2002; see also Kim et al., 2021).

Testing a set of predictions on whether female science leaders (perceived as) showing destructive leadership are evaluated more negatively, as opposed to male leaders, I indeed found some evidence for gender-biased perceptions and evaluations that disfavor women.

Findings Summary

The findings in the field survey may reflect different standards of evaluating destructive leadership assessing female versus male science leaders (see also Judge, 2020; Kim et al., 2021; McGann, 2019). Although they only present correlative evidence, they present somewhat of a pattern. The higher ratings on *laissez-faire leadership*, the higher were ratings on *exploitative leadership* in the data, while this effect was stronger for female than

male leaders. Further, the higher ratings on *exploitative leadership*, the higher were ratings on *abusive supervision*, while this effect was again stronger for female leaders. Finally, when leaders scored *low on constructive leadership*, ratings on *abusive supervision* increased, and this effect was also stronger for female than male science leaders. Further explorative analyses indicated that female leaders (perceived as) exhibiting a laissez-faire or exploitative leadership style were also more frequently seen to have injury-initiation motives, as opposed to male leaders. This was not the case for an abusive leadership style, but attributed injury-initiation motives positively related to ratings on abusive supervision, and this stronger for female than male leaders. Besides, *instrumentality beliefs* which were higher for *male* leaders were negatively related to perceived abusive supervision and attributions of injury-initiation motives, while positively related to attributions of performance-promotion motives.

The experimental findings substantiate and extend these patterns. Identically described abusive supervisory behavior as well as exploitative leader behavior were perceived as more *problematic* when displayed by a female (vs. male) leader towards a male follower. When displaying abusive supervision towards a male follower, the female leader was also attributed higher injury-initiation and lower performance-promotion motives than the male leader. The *gender differences in attributed motives* explained a more negative evaluation of the female (vs. male) leader displaying abusive supervision towards a male follower, most notably that the same behavior was perceived as more problematic when displayed by a female leader. Via different attributed motives when follower gender was male, the female "abusive" leader was also perceived as less effective than the male "abusive" leader; however, a direct effect of leader gender on perceived leader effectiveness was marginal but non-significant. The gender effects on/via attributed motives were not revealed for exploitative leadership, and there was also not a significant direct effect of leader gender on perceived leader effectiveness for exploitative leadership. The effects for abusive supervision, and the effect for exploitative leadership in regards to how problematic the leader behavior was perceived, depended on

leader *and* follower gender; they did not hold when follower gender was female. A male leader displaying abusive supervision or exploitative leadership was attributed lower injury-initiation motives when follower gender was *male* than female. Conversely, a female leader displaying abusive supervision (not true for exploitative leadership) was attributed higher performance-promotion motives when follower gender was *female* than male. The effects, specifically those supported in the abusive supervision condition, were not revealed in the reference condition of transformational leadership.

Theoretical and Practical Implications

The findings yield important theoretical and practical implications. The field survey data present some indications that perceptions of female (vs. male) leaders' passive and indirect destructive leadership (i.e., laissez-faire; Bass & Avolio, 1990a; Skogstad et al., 2007) escalate more quickly to perceptions of low-intensity (i.e., exploitative; Schmid et al., 2019), and finally high-intensity destructive leadership (i.e., abusive supervision; Tepper, 2007; see also Almeida et al., 2021). Matching this pattern, it seems that, for female leaders, "not being (evaluated) a constructive leader (at all)" means "being (evaluated) a destructive, abusive leader" more often. These results fit the notions of applying shifting standards (Biernat et al., 2010) and double standards (Biernat & Kobrynowicz, 1997; Eagly & Carli, 2003; Foschi, 2000) in evaluating women in gender-atypical roles; specifically in evaluations of women's versus men's destructive or unfavorable (leader) behavior (see also Bowles & Gelfand, 2010; Eagly & Karau, 2002; Kim et al., 2021). Different standards in evaluation may cause biases from a measurement point of view (e.g., Biernat, 2003; Biernat, 2012); and eventually harsher judgements for female than male leaders (perceived as) having leadership shortcomings and showing destructive leadership, respectively (see also Kim et al., 2021).

Further, instrumentality beliefs may also play a role in the perception and evaluation of destructive leadership. Junior scientists with a male (vs. a female) leader generally indicated higher beliefs that working and getting along with their leader will be "rewarding in

the long run," such as considering a positive impact of following their leader on their personal career (as based on Haworth & Levy, 2001). This view, independent of leaders' formal position in the data, is consistent with stereotypical beliefs of "powerful" male leaders (while women are penalized for power-seeking intentions; Okimoto & Brescoll, 2010; see also Sidanius & Pratto, 1999) and could lead to greater acceptance of destructive leader behavior or more positive evaluations of it. This is suggested by a negative relationship between instrumentality beliefs and ratings on abusive supervision as well as attributions of injuryinitiation motives, and a positive relationship between instrumentality beliefs and attributions of performance-promotion motives, in the data (while injury-initiation motives imply negative purpose and performance-promotion motives positive intent; Liu et al., 2012; Tepper, 2000). However, this is correlative evidence and requires an in-depth investigation in future research. I call for more research testing causal relationships with instrumentality beliefs. Followers' high instrumentality beliefs of destructive (but thought to be highly influential and powerful) leaders could also potentially result in greater fear of accusing a leader of mistreatment, due to anticipating more negative (personal) career consequences. These considerations point to another facet of stereotype influences towards a potentially more lenient evaluation of male than female destructive leaders, again presenting starting points for future research into causal effects of leader gender on evaluations of (destructive) leadership.

Study 2 indeed shows causal effects of leader gender on evaluations of destructive leadership, most notably concerning abusive supervision, as occurring in incidents of academic bullying (Moss & Mahmoudi, 2021). The findings complement prior research into gender bias in the perception and evaluation of abusive supervision (Kim et al., 2021) by suggesting that attributed motives of injury-initiation versus performance-promotion (Liu et al., 2012; Tepper, 2000) may be gendered depending on leader and follower gender. The fact that, in my study, a female leader displaying abusive supervisory behavior was attributed more negative motives as opposed to a male leader itself presents a more negative perception

of a female vs. a male leader; and, additionally, explained a harsher evaluation of the female leader's (same) behavior as more problematic (and lower perceived leader effectiveness for the female leader) in mixed-gender tandems with a male follower. Due to harsher judgement, female leaders may face more severe punishment and career consequences than their male counterparts for alleged leadership shortcomings (Kim et al., 2021; see also Abbott, 2021, as citing 500WomenScientists, 2021). The effects in my study abolished when follower gender was female. In configurations with a *female* follower, the female abusive leader was attributed higher performance-promotion motives than with a male follower; and the male abusive leader was attributed higher injury-initiation motives than with a male follower. Thus, the results also illuminate a potential peril of abusive supervision going unnoticed in same-gender tandems, in STEM fields mainly found as tandems of male leader and follower (GWK, 2020).

Exploitative leader behavior was evaluated more problematic when displayed by a female (vs. a male) leader towards a male follower; however, not explained by gender differences in the attributed motives I investigated. Prior research suggested the attributed motives to play a role in the sensemaking process of abusive supervision (Liu et al., 2012; Tepper, 2007). Thus, whether there are other relevant, and potentially gendered, mechanisms or attributed motives in the sensemaking process of exploitative leadership (Schmid et al., 2018, 2019) needs further scholarly attention.

Corresponding to prior arguments on the greater prevalence of passive and low-intensity than high-intensity forms of destructive leadership (Aasland et al., 2010; Almeida et al., 2021), the field survey data suggest the highest incidents rate for laissez-faire leadership, followed by exploitative leadership, and then abusive supervision. This finding also emphasizes a need to look closer into the mechanisms of exploitative leadership as a more recent development in research on destructive leadership (Schmid et al., 2018, 2019). Preventing destructive leadership in academia, lower or higher intensity forms, leadership skills need to be a vital part of scientists' training and considered in the selection of (senior)

scientists (see e.g., Braun et al., 2016; Braun et al., 2013; Peus, Welpe, et al., 2015; Smith, 2020). As they advance in their scientific career, scientists typically acquire leadership responsibility, educating young researchers and serving as role models (e.g., Rehbock et al., 2022; Rehbock, Knipfer, et al., 2021; Rehbock, Pircher Verdorfer, et al., 2021).

Female role models in STEM are an important means of inspiring women for science careers (McKinnon & O'Connell, 2020; Peus & Traut-Mattausch, 2007; Steinke, 2017). Highly publicized cases of leader misconduct that predominantly concern *female* science leaders may counter these efforts (Abbott, 2021, as citing 500WomenScientists, 2021). It has also been observed in other contexts that alleged failures and misconduct of women in gender-atypical roles appear to get particular negative attention in the public and news media (such as for women in top political roles; Judge, 2020; Kim et al., 2021; McGann, 2019). Conversely, female scientists' achievements seem hardly visible in the media, and when they present their achievements in STEM, female scientists often face negative reactions and stereotyping (Amarasekara & Grant, 2019; Kitzinger et al., 2008; McKinnon & O'Connell, 2020; Tsou et al., 2014). This imbalance may not only discourage female talents from pursuing a career in STEM (where they may find a "chilly climate" for women; see Hinsley et al., 2017) but also reproduce stereotypes, emphasizing the crucial role of the media.

Limitations and Future Research

The data illustrated in this chapter present a coherent pattern of gender bias in the perception and evaluation of destructive leadership in academia. Despite, the studies also have limitations, which need to be addressed in future research into this topic. While ecologically valid, the correlative field survey data of study 1 present subjective assessments of leader behavior, not allowing to control for the specific behavior and making inferences on causal relationships. Additionally, due to "real world" conditions in the survey, despite the relatively big sample size of N = 500 juniors who evaluated their leaders in STEM, only a few followers evaluated a *female* leader (14%). Conducting study 2, I addressed some of the limitations,

using an experimental study design (see e.g., Charness et al., 2012). Participants received a hypothetical scenario which increased internal validity (while reducing ecological validity as compared to the field survey) and a balanced number of observers randomly evaluated a male or a female leader, allowing to determine causal relationships with leader and follower gender. Reasonable next steps to further investigate the subject area would be a multi-wave time-lagged field study (reducing the limitations of externally valid field survey data; see Kim et al., 2021) and subsequent additional experiments to confirm and replicate causal effects.

Indeed, research on how leader and follower gender influence perceptions and evaluations of destructive leadership is still in its beginnings. Building on initial research presented in the broader management literature (Kim et al., 2021) and for the academic context in this chapter, more research is needed to uncover gender-biased mechanisms of (perceived) destructive leadership. For instance, research into the above considerations on the role of instrumentality beliefs (e.g., based on Haworth & Levy, 2001; Okimoto & Brescoll, 2010; Vroom, 1964) may lend important insights. Additionally, research into mechanisms such as the perception of psychological contract breach (Chiu & Peng, 2008; Rousseau, 1989), and related gender bias as to how women and men are expected (or not expected) to be like (e.g., Heilman, 2001), could offer new perspectives into the subject area.

The results of my experimental study support peculiarities in the sensemaking process of different shades of destructive leadership (Pircher Verdorfer et al., 2019; Schmid et al., 2018), most notably regarding gendered attributed motives to abusive supervision versus exploitative leadership. Considerations of injury-initiation and performance-promotion motives attributed to destructive leadership originate in abusive supervision research (Liu et al., 2012; Tepper, 2007), though neglecting the role of leader gender which was investigated in the present research. More research is needed to clarify the sensemaking process of exploitative leadership, attributed motives, and their potential gendered nature.

Lastly, other reference conditions than comparing abusive supervision, exploitative, and transformational leadership in future research may be insightful, such as comparing attributed motives to "high" versus "low" abusive supervision or exploitative leadership (see e.g., Pircher Verdorfer et al., 2019). I included transformational leadership as a reference condition in the experiment to ascertain whether the effects are specific to abusive supervision and exploitative leadership, respectively (or also generalize to constructive leadership which I assumed is not the case, verified in the data). However, transformational leadership has a stereotyped connotation of its own, typecasting expectations of *female* leaders (Stempel et al., 2015), like other leadership styles have too (see e.g., Braun et al., 2018). Therefore, the results need to be verified for other constructive leadership styles as a comparison.

Conclusion

The presented data add to the current debate over the role of gender in the public perception, interpretation, and evaluation of leader mistreatment in academia (e.g., Abbott, 2021; von Bredow, 2021). They point to different standards and harsher evaluations for female leaders' (perceived) destructive leadership, most notably concerning the display of abusive supervision (see also Kim et al., 2021) and gendered attributed motives behind it. Investigating cases of destructive leadership, (science) organizations face the pitfall of recognizing and interrupting such gender bias, in order to ensure fair treatment of accused leaders and prevent the downplay of cases in same-gender tandems of leader and follower (e.g., due to lower attributions of injury-initiation motives to male leaders when they display abusive supervision towards a male than a female follower). This also involves a responsible role of the media to minimize potential gender bias in the public portrayal of alleged destructive leaders (e.g., McGann, 2019). Importantly, to develop effective and tailored solutions to destructive leadership in academia, we need a robust understanding of its mechanisms, including their gendered nature. Further research is needed to understand the magnitude of gender bias.

5. GENERAL CONCLUSION

Gender diversity in leadership is crucial far beyond economic reasons (Hoobler et al., 2018; Post & Byron, 2015; Siegel, 2005). Females leaders are likely to exhibit effective leadership styles (Eagly & Carli, 2003; Eagly et al., 2003), uphold organizations' social performance and responsibility (Byron & Post, 2016), and contribute beneficial perspectives counteracting gender-blindness in innovative teams (see e.g., Criado Perez, 2019; Peus & Traut-Mattausch, 2007; Welbourne et al., 2007). Despite, women remain underrepresented in leadership, specifically in the STEM fields (for overviews see e.g., Catalyst, 2020a, 2020b; Scott et al., 2018). STEM careers lack female talents to manage and shape economic and societal change (Scott et al., 2018; Turban et al., 2019), inspire future generations as role models, and erode stereotypical patterns (McKinnon & O'Connell, 2020; Peus & Traut-Mattausch, 2007; Steinke, 2017; Steinke et al., 2012).

Persistent stereotypical patterns in leadership and STEM (e.g., Carli et al., 2016; Koenig et al., 2011) account for a variety of observed gender biases to impede women's advancement (see e.g., Begeny et al., 2020; Eagly & Karau, 2002; Heilman, 2012; Koch et al., 2015). The biasing effects of these patterns need to be uncovered in comprehensive manner, in order to effectively counter their detrimental influence. Prior research offers recommendations such as using gender-fair language in job advertisements to attract diverse talents (Gaucher et al., 2011; Hentschel et al., 2021), trained evaluators to select diverse talents (Koch et al., 2015), and a priori defined criteria to ensure fair evaluations and treatment of diverse talents (Eagly & Karau, 2002; Foschi, 2000; Heilman, 2012). My dissertation contributes to this research, refining and extending our knowledge about gender biases in the *attraction*, *selection*, and *development* of diverse talents (e.g., based on Harvey, 1999; Peus, Braun, & Frey, 2015; Peus, Braun, Hentschel, et al., 2015). Based on my findings, I discussed practical implications for increasing diversity in leadership and the STEM fields, on system, organizational, and individual level (Peus & Welpe, 2011).

First, in chapter 2, I investigated the mechanisms and boundary conditions of family friendliness signals in recruitment material, and how they contribute to or counteract positive effects of the signals in attracting diverse talents. Prior research showed that signaling family friendliness attracts applicants (e.g., Casper & Buffardi, 2004; Wayne & Casper, 2012), potentially women in particular (Wayne & Casper, 2016), and job starters appreciate related benefits (Chung & Van der Lippe, 2020; Deloitte, 2018, 2022). The underlying mechanisms why signaling family friendliness attracts applicants and the potential downsides and boundary conditions of the signals were less clear, specifically when signaling general family friendliness (as compared to family-friendly policies; Perrigino et al., 2018; Wayne & Casper, 2012, 2016). My results support the view that signaling family friendliness attracts female and male applicants, but depending on their deep-level attributes (Casper et al., 2013; Wayne & Casper, 2012). The effects of signaling family friendliness on job pursuit intentions depended on individual family and/or career role commitment (except for perceived organizational justice), independent of applicant gender. Most importantly, my findings suggest that *organizations* should highlight their family friendliness as well as opportunities for career advancement in the organization, to not convey a stereotype-biased picture of low achievement-oriented coworkers to individuals with high career role commitment, maximizing the benefits of family friendliness signals. Also, the gained insights can serve to raise awareness in job seekers (especially those with high career role commitment) to not rely on stereotypical perceptions, thereby potentially missing out on applying to a family-friendly (STEM) organization.

Second, in chapter 3, I examined the influence of stereotypes and stereotype-congruent recruitment material on evaluators' perceptions of applicant fit to leadership jobs in STEM fields (i.e., high-status jobs in male-dominated fields), contextual differences, and the role of applicants' gender. Evaluators' fit assessments are influenced by stereotypes (e.g., Eagly & Karau, 2002; Heilman, 1983, 2012). Stereotypes are particularly agentic for high-status jobs

in male-dominated fields (referring to male stereotyped requirements such as achievement orientation and competitiveness; Cejka & Eagly, 1999; Glick, 1991; Koenig et al., 2011) and manifest in recruitment material, influencing applicants' perceptions (Gaucher et al., 2011; Hentschel et al., 2021). I set out to enhance our knowledge about evaluators' fit perceptions in and across these gendered work contexts, and the role of stereotype-congruent recruitment material. I found that, especially in recruitment for high-status jobs in male-dominated fields (as compared to female-dominated and gender-balanced fields, and to low-status jobs), stereotype-biases in evaluators' fit perceptions may counter an organization's diversity efforts, specifically when unconsciously strengthened by stereotype-congruent recruitment material. My findings emphasize that *organizations* need to raise stereotype awareness in evaluators and recruiters, who serve as organizational gatekeepers (Cole et al., 2004; van den Brink & Benschop, 2014). Moreover, organizations should simultaneously work on their job and organizational profiles in recruitment material to address gender equity in hiring (using communal or neutral job and organizational profiles instead of overly agentic ones). Concerning implications for female versus male applicants in strictly male stereotyped work contexts, my findings, in conjunction with prior research (e.g., Heilman et al., 1995; Heilman et al., 1989; Koch et al., 2015), indicate that for female applicants it is particularly important to provide clear and unquestionable evidence for their success in the work context.

Third, in chapter 4, I investigated the role of gender stereotypes in the perception, interpretation, and evaluation of destructive leadership in academia. While we know that gender stereotypes and related biases influence women's advancement to leadership positions and evaluations of their performance and leader behavior in general (e.g., Eagly & Carli, 2003; Eagly & Karau, 2002; Heilman, 2012), little is known about how gender stereotypes influence the sensemaking process of destructive leadership (Kim et al., 2021). This is especially true for the academic context, where recent accusations of destructive leadership raised concern of a gender bias to the detriment of female leaders (Abbott, 2021; von Bredow,

2021; 500WomenScientists, 2021). Indeed, my findings support gender biases pointing to different standards and harsher evaluations for female than male leaders (especially in regards to the display of abusive supervision, complementing findings of Kim et al., 2021). Creating awareness and recognizing such bias is pivotal to ensure fair treatment of accused leaders and prevent the downplay of cases where stereotypes may create a more lenient view (such as in same-gender tandems of a male leader and a male follower). This involves standardized procedures and measures interrupting gender bias in *investigation committees in (science)* organizations and a responsible role of the media creating highly publicized cases.

Importantly, this dissertation focuses on gender diversity, not conclusive for increasing diversity in leadership and the STEM fields, and is limited in its binary gender classification. To understand the effects more comprehensively, future research should test the effects within a non-binary gender frame, for other diversity dimensions than gender (e.g., age or ethnicity), and apply an intersectionality perspective by considering interaction effects of e.g., gender and ethnicity (Ghavami & Peplau, 2013; Shields, 2008). Besides, cross-country and -cultural comparisons for the effects (mainly tested with German participants) can provide valuable insights on how the results generalize to other contexts, same as comparing different STEM fields across academic and non-academic contexts. In addition, complementing the quantitative data presented in this dissertation with qualitative data can extend our knowledge about the explanations for the gender biases revealed.

Finally, overall, the results highlight how stereotypical patterns operate at different levels. They support the view that increasing gender diversity in leadership and the STEM fields can only be accomplished when taking effective system, organizational, and individual level measures (Peus & Welpe, 2011). Organizations need to work on comprehensive strategies to counter gender biases in the attraction and selection of talent, and provide a fair organizational environment where talent can develop, regardless of gender.

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APPENDIX

A.1 (CHAPTER 2): Experimental Manipulation

Family Friendliness

In unserem Unternehmen profitieren Sie von einer **sehr familienfreundlichen Personalpolitik**. Wir bieten Ihnen familienorientierte Arbeitsmodelle und familiengerechte Arbeitsbedingungen. Bei uns finden Sie ein perfektes Arbeitsumfeld vor, um Ihren **familiären und beruflichen Verpflichtungen** gleichermaßen gerecht zu werden!

Career Prospects

In unserem Unternehmen erwarten Sie hervorragende Karrierechancen. Wir unterstützen Sie darin, Ihre fachlichen und persönlichen Kompetenzen auszuschöpfen und bieten Ihnen schnelle Aufstiegsmöglichkeiten. Es erwarten Sie vielversprechende Perspektiven für Ihre zukünftige Karriereentwicklung!

B.1 (CHAPTER 3): Additional Results Studies 1 and 2

In studies 1 and 2, I additionally assessed whether the student participants had externally valid assessment criteria in mind and grasped the meaning of the recruitment context (evaluating an applicant for the job as a full professor in a math faculty). I asked them which factors they considered in their applicant assessments ("What did you base your assessment of the person's suitability for the advertised position on?"), in the final stage of the questionnaires. Their answers provided qualitative data, which were coded for the two studies (Table 21), showing that the students indeed had criteria in mind that are relevant to get ahead in academia (see e.g., Rehbock, Knipfer, et al., 2021; van den Brink & Benschop, 2012).

Table 21

Coding of Student Answers in Studies 1 and 2 on Applied Assessment Criteria

Code	Examples	Mentions in study 1	Mentions in study 2
Academic career	Academic education, including studies, doctorate and postdoctoral qualification; gap-free CV and straightforward career, showing determination	195	257
Publications	Thematic focus, quantity, and authors list	109	203
Skills and personal assessment	Assessment of match between requirements and information about applicant, e.g., with regard to the presumed ability to work in a team	104	152
Experiences	Experience with scientific work, leadership and teaching experience	90	170
Area of expertise	Field of study and majors, main research, and competence in the advertised research field	28	95
Demographics	Age, gender, origin	33	74
Internationality	Internationality, experience abroad, language	10	49
Other	Successes and achievements in general, perceived interest and motivation, perceived values, layout CV, reputation, non-academic commitment	25	79

Additional reference:

van den Brink, M., & Benschop, Y. (2012). Gender practices in the construction of academic excellence: Sheep with five legs. *Organization*, *19*(4), 507-524. https://doi.org/10.1177/1350508411414293

B.2 (CHAPTER 3): Pre-test of Experimental Manipulation in Job Profiles

In a first experimental pre-test, I pre-tested the manipulation of agentic vs. communal wording in the description of a job and its requirements, which I later used in the studies 1, 3, and 4 (in the main studies I included similar manipulation checks presented in the respective results sections). The pre-test applied a between-subjects design. I showed the participants (*N* = 120, students and employees) a job advertisement with either an agentic job profile or a communal job profile. The participants were asked to give their perception of the job's requirements in terms of required applicant qualities (e.g., "I think the advertised job requires achievement orientation" (agentic) and "I think the advertised job requires cooperativeness" (communal); 33 items in total). Answers were given on 7-point Likert scales ranging from "not at all" (1) to "very much" (7). Ratings for perceived agentic and communal requirements significantly differed by the wording of the job profile (agentic vs. communal; see Table 22).

Table 22

Results of Pre-test 1

		Job				
	Agentic		Comr	nunal		
Dependent variables	M	SD	M	SD	<i>F</i> (1, 118)	p
Perceived agentic requirements	5.67 _a	.84	5.03 _b	1.23	10.90	.001
Perceived communal requirements	4.65 _a	1.26	5.50_{b}	1.30	13.42	.000

Note. N = 120. Means with different subscripts (a/b) are significantly different from one another at p < .05 (per row).

B.3 (CHAPTER 3): Pre-test of Experimental Manipulation in Organizational Profiles

A second experimental pre-test pre-tested the manipulation of an agentic vs. communal vs. "green" description of an organization and its culture, which was then used in the studies 2, 3, and 4 (the "green" description only in study 2). In the main studies 1-4 I included similar manipulation checks which I present in the results section for each study. In

the second pre-test, I additionally pre-tested the icons I used on the applicant CVs in studies 2-7, to ensure that the icons are not perceived differently by gender and may bias perceptions of the male vs. the female applicant in the studies.

Using a between-subjects design, participants (N = 82, students and employees) were presented with a job advertisement with either an agentic organizational profile depicting a competitive organizational culture, a communal organizational profile depicting a cooperative organizational culture, a green organizational profile depicting a green organizational culture, or a neutral organizational profile (no information on organizational culture). Participants were asked to give their perception of the hiring organization's cultural orientation with regard to the core values of the competitive, cooperative, and green organizational culture (e.g., "I think the organization that advertises this job is characterized by strong cooperativeness"; six items in total). Answers were given on 7-point Likert scales from "not at all" (1) to "very much" (7). Ratings for the hiring organization's cultural orientation significantly differed by the wording, respectively the presented organizational culture, in the organizational profile (agentic vs. communal vs. green vs. control/neutral; see Table 23).

Table 23Results of Pre-test 2 – Wording

		Organizational profile								
	Age	entic	Comr	nunal	Green		Control		_	
Dependent variables	M	SD	M	SD	M	SD	M	SD	F(3, 78)	р
Perceived competitive orientation	5.83 _a	1.58	3.78 _b	1.91	4.00_{b}	1.57	4.53 _b	1.75	5.85	.001
Perceived cooperative orientation	3.65 _a	1.79	5.53 _b	2.02	4.32 _a	1.33	4.00 _a	1.87	4.33	.007
Perceived green orientation	2.55 _a	1.41	2.08 _a	1.24	5.98 _b	1.70	2.58 _a	1.31	34.00	.000

Note. N = 82. Means with different subscripts ($_{a/b}$) are significantly different from one another at p < .05 (per row).

In the same pre-test, a male and a female icon were pre-tested for their use on applicant CVs (N = 84, same sample and two more participants that only completed this part of pre-test 2). Participants were asked to rate either a male or a female icon based on their first impression (between-subjects design). I measured perceived attractiveness, likeability, competence, intelligence, and the estimated age for both icons. Estimated age was indicated in years, all other variables were measured on 7-point Likert scales ranging from "not at all" (1) to "very much" (7). As the pre-test revealed no significant differences in perceptions of the male vs. the female icon with regard to the dependent variables (such that I could expect the icons to not bias perceptions of male vs. female applicants in the studies), I used the pre-tested pair of icons in studies 2-7. The pre-test results for the icons are displayed in Table 24.

Table 24

Results of Pre-test 2 – Icons

	Male icon		Female icon			
Dependent variables	M	SD	M	SD	F(1, 83)	р
Perceived attractiveness	3.74	1.40	3.76	1.34	.00	.953
Perceived likeability	4.26	1.48	3.95	1.23	1.05	.308
Perceived competence	4.84	1.27	4.93	1.18	.12	.732
Perceived intelligence	5.12	1.14	5.02	1.16	.14	.711
Estimated age	26.93	5.45	29.12	5.86	3.05	.085

Note. N = 84.

B.4 (CHAPTER 3): Perceptions of Academia vs. Business Context in Study 5

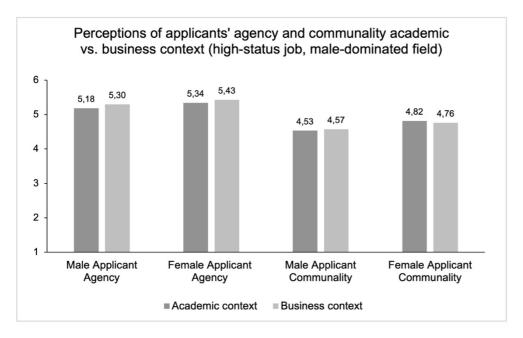


Figure 14. Perceptions of Applicants' Agency and Communality Academic vs. Business Context

B.5 (CHAPTER 3): Additional Information on Studies 6 and 7

Table 25 presents the means for perceived job status and expected men/women ratio across work contexts in study 6 (pre-test to study 7).

Table 25

Means for Perceived Job Status and Expected Men/Women Ratio Across Work Contexts

		High-stat	tus job	Low-status job			
	male- dominated field (academia)	male- dominated field (business)	female- dominated field	gender- balanced field	male- dominated field	female- dominated field	gender- balanced field
Perceived job status	5.94 _a	5.79 _a	4.47 _b	4.63 _b	2.67 _c	2.82 _c	2.59 _c
Expected men/women ratio	5.56 _{a,c}	6.29 _{a,d}	4.60_{b}	5.44 _c	6.47 _d	1.71 _e	$3.53_{\rm f}$

Note. N = 110. Means with different subscripts (a-f) are significantly different from one another at p < .05 (per row). Perceived job status and expected men/women ratio were measured with 1-item semantic differentials (low status (1), high status (7); female-dominated (1), male-dominated (7)). High-status jobs were a job as a professor in a math faculty, and a job as a managing director in either an automotive company, a care-oriented company, or a food trading company. Low-status jobs were a job as a mechanical worker in an automotive company, a job as a childcare worker in a care-oriented company, or a job as a retail worker in a food trading company.

In study 6, I also asked the participants more differentiated questions in regard to the work context they received. For instance, I asked them whether they think the job in general (e.g., the job as a professor or as a managing director) entails high status, and what they think of the expected men/women ratio within an organization in a specific field in general (e.g., a faculty in the discipline math or a company in the automotive industry). The job as a professor (M = 6.37, SD = .62) and the job as a managing director (M = 6.42, SD = .66) in general were perceived to entail the highest status, and significantly higher status than the jobs as a mechanical (M = 3.60, SD = 1.30), childcare (M = 3.29, SD = .85), or retail worker (M = 2.88, SD = .78) at p < .001. Moreover, the expected share of men was particularly high for organizations in male-dominated fields (a math faculty, M = 6.31, SD = .70, or an automotive company, M = 5.80, SD = .98), followed by gender-balanced (a food trading company, M = 3.73, SD = 1.31) and female-dominated fields (a care-oriented company, M = 2.47, SD = 1.32). These findings again validated my choice of contexts for study 7.

The design of study 7 was a 2 (applicant gender: male vs. female) x 2 (job status: high vs. low, i.e., high-level-leadership vs. non-leadership) x 3 (field: male-dominated vs. female-dominated vs. gender-balanced) between-subjects design. Participants first saw a *job preview*, which manipulated the work context. Then, they saw a CV of an applicant, which manipulated *applicant gender*. This CV had to match the respective work context. Therefore, I created 2 (applying to a high-status and low-status job) x 3 (gaining experience in a male-dominated, female-dominated, and gender-balanced field) x 2 (female and male) applicant CVs. Those CVs outlined the applicant's prior work experience and, to make gender more salient, included the icons which were also used in the prior studies. An extensive online search of CVs of people working in the respective contexts was conducted, and typical career paths were discussed with people working in these contexts, in order to create realistic CVs. Based on these insights, the CVs showed the applicants' education and work experience such

that their background either fits the situation that they are now applying to a high-level leadership job, i.e., as a managing director (in an automotive (male-dominated), a careoriented (female-dominated), or a food trading (fairly gender-balanced) company), or the situation that they are now applying to a job on a low hierarchical level, i.e., as an *individual* contributor to an organization's core business (a mechanical (male-dominated, "blue collar"), childcare (female-dominated, "pink collar"), or retail worker (fairly gender-balanced)). The CVs of those who apply to high-status jobs showed a university degree in the respective field (mechanical engineering, business administration, or social pedagogy) and career steps that show that they gained work experience, participated in further training, and took on low-level leadership positions, gradually moving up the career ladder. The CVs of those who apply to low-status jobs showed an apprenticeship in the respective field (same fields as stated above) and work experience in different non-leadership positions remaining on the same hierarchical level, and also further training. Icons were used to illustrate the nature of the work experience. All applicants had the same age and the same number of years of work experience, and the experience was aligned such that those who moved up the career ladder, and also those who gained experience on the same hierarchical level, spent the same number of years on comparable positions. Thus, the applicants gained experience in different fields, and either stayed in low-status or got closer to high-status jobs, but did not differ in other aspect.

C.1 (CHAPTER 4): Experimental Manipulation

Abusive Supervision (Example: Female Leader, Female Follower)

Gekürzte Fassung, Lesezeit: ca. 2 min.

Nach ihrem Studium absolvierte *Sabine* eine Promotion im Fach Informatik an einer deutschen Universität und war wissenschaftliche Mitarbeiterin am Lehrstuhl von *Frau Prof. Dr. M.*, die auch ihre Promotion betreute (Namen von der Redaktion geändert).

Sabine präsentierte ihre Zwischenergebnisse im Rahmen der Promotion in regelmäßigen Abständen vor ihrer Vorgesetzten Frau Prof. M. und dem Lehrstuhlteam. Frau Prof. M. machte während Sabines Präsentationen häufig negative und verletzende Bemerkungen über Sabine, die sehr persönlich waren, und dies vor allen anderen Teammitgliedern. Sie machte Sabine immer wieder vor den anderen Teammitgliedern schlecht und lachte über die Fehler von Sabine.

Neben ihrer Promotion arbeitete Sabine an einem Projekt des Lehrstuhls, das nach zwei Jahren auslief. Daher wies ihr Frau Prof. M. ein neues Projekt zu. Im neuen Projekt waren anfangs viele organisatorische Hürden zu bewältigen, sodass größere Fortschritte zunächst auf sich warten ließen. Frau Prof. M. wies Sabine immer wieder im Teammeeting zurecht und stellte ihre Kompetenz in Anwesenheit der anderen Teammitglieder in Frage. Sie schrie sie häufig vor den anderen Teammitgliedern an. Sie machte wiederholt deutlich, dass der langsame Fortschritt im Projekt ihrer Meinung nach vor allem auf Sabines Inkompetenz zurückzuführen sei.

Im Rahmen des Projekts entwickelte Sabine unter anderem einen Programmcode, den sie auf einer internen Veranstaltung an der Universität vorstellte. Sie erhielt sehr positive Rückmeldungen für ihre Arbeit und den Code und wurde auf ein universitätsweites Talentprogramm hingewiesen. Frau Prof. M. spielte die positiven Rückmeldungen herunter und merkte gegenüber Sabine an, dass es dieses Jahr nicht so viele Interessierte für das Talentprogramm geben könne, wenn man Personen wie Sabine schon darauf anspreche. Sie machte sich darüber lustig, dass Sabine auf das Programm hingewiesen wurde und sich ernsthaft Chancen ausrechne.

Frau Prof. M. legt viel Wert auf sehr gute Leistungen der Teammitglieder. Zur Erreichung ihrer Ziele gerieten diese jedoch öfter miteinander in Konflikt. Da Sabine die Situation belastete, suchte sie das Gespräch mit ihrer Vorgesetzten. Frau Prof. M. wertete Sabines Gefühle und Bedenken in Bezug auf die Situation ab und ließ sie gar nicht erst aussprechen. Sie sagte ihr verärgert, dass Sabine aufhören solle, sich solche dummen Gedanken über die Befindlichkeiten im Team zu machen – diese seien völlig überzogen und ihre Gefühle und Bedenken in der Situation in keiner Weise nachvollziehbar. Sabine solle ihre Zeit sinnvoll nutzen und sich auf ihre Arbeit konzentrieren.

Sie möchten zum Erfahrungsaustausch beitragen? Dann schreiben Sie uns! redaktion@

Exploitative Leadership (Example: Female Leader, Female Follower)

Gekürzte Fassung, Lesezeit: ca. 2 min.

Nach ihrem Studium absolvierte *Sabine* eine Promotion im Fach Informatik an einer deutschen Universität und war wissenschaftliche Mitarbeiterin am Lehrstuhl von *Frau Prof. Dr. M.*, die auch ihre Promotion betreute (Namen von der Redaktion geändert).

Sabine präsentierte ihre Zwischenergebnisse im Rahmen der Promotion in regelmäßigen Abständen vor ihrer Vorgesetzten Frau Prof. M. und dem Lehrstuhlteam. Frau Prof. M. bewertete ihre Präsentationen stets dahingehend, wie sie Sabines Arbeit bestmöglich für sich selbst nutzen kann. Sie wies Sabine an, ihre Präsentationen für sie anzupassen und stellte Sabines Forschung auf Kongressen ganz selbstverständlich als ihre eigene vor, ohne Sabines Namen zu nennen.

Neben ihrer Promotion arbeitete Sabine an einem Projekt des Lehrstuhls, das nach zwei Jahren auslief. Daher wies ihr Frau Prof. M. ein neues Projekt zu. Im neuen Projekt waren anfangs viele organisatorische Hürden zu bewältigen, sodass größere Fortschritte zunächst auf sich warten ließen. Frau Prof. M. forderte von Sabine massive Mehrarbeit ein und setzte sie stark unter Druck, schnell Erfolge zu erzielen. Sie führte mahnend an, dass Sabine drauf und dran sei ihren guten Ruf als Lehrstuhlinhaberin zu schädigen. Zudem betonte sie, wie wichtig es ihr sei schnellstmöglich Ergebnisse zu haben, die sie auf Kongressen vorzeigen kann, um als Professorin noch bekannter zu werden.

Im Rahmen des Projekts entwickelte Sabine unter anderem einen Programmcode, den sie auf einer internen Veranstaltung an der Universität vorstellte. Sie erhielt sehr positive Rückmeldungen für ihre Arbeit und den Code und wurde auf ein universitätsweites Talentprogramm hingewiesen. Frau Prof. M. kommunizierte im Kollegium und im Team, dass zum Großteil sie selbst Sabines Code entwickelt habe. In einem persönlichen Gespräch mit Sabine riet sie ihr ab, sich auf das Talentprogramm zu bewerben, da Sabine noch einige Präsentationen für sie gestalten und formatieren müsse, und es ja klar sei, dass diese Dinge Vorrang haben müssten.

Frau Prof. M. legt viel Wert auf sehr gute Leistungen der Teammitglieder. Zur Erreichung ihrer Ziele gerieten diese jedoch öfter miteinander in Konflikt. Da Sabine die Situation belastete, suchte sie das Gespräch mit ihrer Vorgesetzten. Frau Prof. M. sagte ihr, dass Wettbewerb nichts Schlechtes sein müsse, sie aber die Probleme nachvollziehen könne. In jedem Fall solle Sabine mit neuen Informationen immer erst zu ihr kommen – in der zukünftigen Stellenplanung könne sie möglicherweise nicht alle berücksichtigen, daher sei es für Sabine wichtig, durch besondere Erfolge herauszustechen. Beim Mittagessen stellte Sabine fest, dass dieser Rat auch anderen erteilt worden war.

Sie möchten zum Erfahrungsaustausch beitragen? Dann schreiben Sie uns! redaktion@

Transformational Leadership (Example: Female Leader, Female Follower)

Gekürzte Fassung, Lesezeit: ca. 2 min.

Nach ihrem Studium absolvierte *Sabine* eine Promotion im Fach Informatik an einer deutschen Universität und war wissenschaftliche Mitarbeiterin am Lehrstuhl von *Frau Prof. Dr. M.*, die auch ihre Promotion betreute (Namen von der Redaktion geändert).

Sabine präsentierte ihre Zwischenergebnisse im Rahmen der Promotion in regelmäßigen Abständen vor ihrer Vorgesetzten Frau Prof. M. und dem Lehrstuhlteam. Frau Prof. M. hörte Sabine stets aufmerksam zu und nahm sich Zeit für ein ausführliches Feedback. Sie forderte Sabine auf, die Stärken und Schwächen ihrer Forschung kritisch zu reflektieren, zeigte Sabine neue Blickwinkel auf und machte Vorschläge, wie Sabine ihre Arbeit verbessern kann.

Neben ihrer Promotion arbeitete Sabine an einem Projekt des Lehrstuhls, das nach zwei Jahren auslief. Daher wies ihr Frau Prof. M. ein neues Projekt zu. Im neuen Projekt waren anfangs viele organisatorische Hürden zu bewältigen, sodass größere Fortschritte zunächst auf sich warten ließen. Frau Prof. M. zeigte persönliche Wertschätzung für Sabines Arbeit im Projekt und lobte sie für erreichte Zwischenerfolge. Sie verdeutlichte Sabine, dass sie durch ihren engagierten Einsatz im Projekt einen wichtigen Beitrag zur übergeordneten Vision des Lehrstuhls leisten könne. Dabei erinnerte sie an die gemeinsamen Ziele des Lehrstuhlteams.

Im Rahmen des Projekts entwickelte Sabine unter anderem einen Programmcode, den sie auf einer internen Veranstaltung an der Universität vorstellte. Sie erhielt sehr positive Rückmeldungen für ihre Arbeit und den Code und wurde auf ein universitätsweites Talentprogramm hingewiesen. Frau Prof. M. drückte ihre Anerkennung für Sabines Erfolg aus und sagte ihr, dass sie sich die positiven Rückmeldungen durch ihre harte Arbeit verdient habe und stolz auf sich sein könne. Sie schlug Sabine vor, sich tatsächlich auf das Talentprogramm zu bewerben und erklärte, dass Sabine dafür ihre volle Unterstützung habe.

Frau Prof. M. legt viel Wert auf sehr gute Leistungen der Teammitglieder. Zur Erreichung ihrer Ziele gerieten diese jedoch öfter miteinander in Konflikt. Da Sabine die Situation belastete, suchte sie das Gespräch mit ihrer Vorgesetzten. Frau Prof. M. sagte Sabine, dass sie ihre Gefühle und Bedenken in dieser Situation gut verstehen könne. Sie unterstütze Sabine und alle anderen Teammitglieder in der Erreichung ihrer individuellen Ziele und sei stolz auf ihre Erfolge – stark seien sie aber vor allem als Team und in der Erreichung ihrer gemeinsamen Ziele. Sie wandte sich an die Teammitglieder, um mit Sabine und dem Rest des Teams gemeinsam eine Lösung zu finden.

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