# Gender Bias in the Evaluation of Application Letters: The Interplay of Gender Stereotypicality, Argument Structure, and Linguistic Features

Submitted by

Giulia Buscicchio

Department of Social Psychology, Università Cattolica del Sacro Cuore di Milano

Ph.D Tutors

Gerd Bohner and Patrizia Milesi

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#### Abstract

Starting from the current European situation, the labor market still seems to be characterized by the unbalanced percentage of women and men in different job sectors. Social psychological literature has addressed this gap in terms of several factors, especially gender stereotypes. To examine which factors act together in causing this mismatch, I focused on the effects of the manipulation of the language in which stereotypical or counterstereotypical applicants' traits and weaknesses are presented on the evaluation of female and male target applicants. To this end, I conducted three pilot studies and three studies. The three pilot studies were used to test the effectiveness of the experimental conditions of language and the descriptions in terms of stereotypicality versus counterstereotypicality. Study 1 was aimed at investigating the effect of abstract and concrete terms along the two dimensions of communion and agency on the perceived honesty and evaluation of female and male applicants. The aim of Study 2 was to investigate the effect of disclosing weaknesses along the two dimensions of lack of agency and communion on perceived honesty and evaluation of female and male applicants. Study 3 was built based on the findings from Studies 1 and 2 and was aimed at investigating the effect of abstract and concrete terms, along with agentic traits and weaknesses, on the perceived honesty and evaluation of female and male applicants. These effects were tested while considering also the effect of participants' cognitive processes and internal characteristics (i.e., gender bias, attitudes toward women, self-reported communion, and agency, perception of the ideal applicant in terms of communion and agency, perception of applicant's prototypicality), which were integrated into a new path model that was analyzed in each of the three studies. Literature has not considered as many different internal characteristics all together in one single model before. Results showed that manipulating language in which information on traits and weaknesses was presented helped only female applicants to increase their evaluation: Women described with counterstereotypical (agentic) traits in concrete terms, as well as women described with

stereotypical traits (communal) in abstract terms had more chances than their male competitors of being hired for the same gender-neutral job. In the former case, women showed that they were agentic, but moderately, satisfying in this way the double standards request to be both agentic and communal. In the latter case, they confirmed the participants' gender expectations, not violating in this way their gender prescriptions. The final path model revealed different paths, in which the perceived honesty of applicants plays the mediating role in the relation of some of participants' internal characteristics with the evaluation of applicants. According to my findings, it seems to be confirmed that women are evaluated along with double standards. Therefore women should be agentic but not to the extent in which they gain an advantage over men. Moreover, this research contributes to shedding light on the effects of recruiters' perceived cognitive load and processing fluency (as self-reported measures) when interacting with applicants' prototypical traits on the evaluation of female applicants. Managing female applicants' presentations might represent a possible device for bypassing gender stereotypes, at least in the first steps of a woman's career.

### Dedication

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#### Introduction

Starting from the current European situation, the labor market seems to be characterized by a strong horizontal and vertical gender segregation. Horizontal segregation refers to an unbalanced percentage of women and men in different job sectors, whereas vertical segregation refers to the scarcity of women in upper levels of work organizations. Some 67% of women are employed, in comparison to 79% of men. Europe records a remaining gender gap of 12%, and countries such as Italy, Greece, and Malta have the worst index in terms of women's employment (European Institute for Gender Equality, 2019). In terms of horizontal segregation, most women work in the low-paid sectors of education, health, and social work (30% of women compared to 8% of men), whereas most men work in the high-paid sectors of science, technology, engineering, and mathematics (7% of women compared to 33% of men) (Eurostat, EU LFS, 2017). Finally, in terms of vertical segregation, employed women are underrepresented in political and economic decision-making positions. For instance, women accounted for 6.7% of board chairs and 6.5% of chief executive officers (CEOs) in October 2018 (European Commission source, 2019).

While several studies have explored vertical gender segregation and discrimination of women at the top levels of organizations (e.g., Brescoll, 2016; Bruckmüller et al., 2014; Derks et al., 2016; Eagly & Karau, 2002; Glass & Cook, 2016; Heilman, 2012; Rosette & Tost, 2010; Rudman & Glick, 2001; Ryan et al., 2016, 2010, 2011; Vinkenburg et al., 2011; Wilson & Liu, 2003), not many have focused on horizontal gender segregation. Women are still underrepresented in some job sectors as men are in others. This state of affairs has mainly two negative implications, at both an individual and an economic level: At the individual level, occupational segregation results in an underestimation of women's performance, salary discrimination, and a lack of job competencies and skills. Occupational segregation implies an inefficient allocation of male and female human resources not only in the present but also in the future, strengthening the stereotypical idea that women and men have different skills and

abilities (Bettio & Verashchagina, 2009). For this reason, I consider of outmost importance to carry on research on this issue.

#### **Gender Bias and Horizontal Gender Segregation**

Several studies have highlighted the role of gender bias against women in the labor market (Biernat & Manis, 1994; Cundiff & Vescio, 2016; Eagly & Karau, 2002; Gill, 2004; Heilman, 2012; Heilman & Caleo, 2018; Howell & Ieks, 2017; Lesnick, 2005; Mercadillo et al., 2015; Miller et al., 2015; Wilson & Liu, 2003). Gender biases are systematic errors that occur in individuals because they have expectations of other people pertaining to their gender when people behave contrary to their gender prescriptions. Gender biases are distinguished mainly into two different kinds (Eagly & Karau, 2002; Fiske & Stevens, 1993; Fiske et al., 1991; Heilman, 2001; Rudman, 1998; Rudman & Glick, 2001): descriptive and prescriptive. While descriptive gender bias refers to what women and men are typically like ("women are gentle"), prescriptive gender bias refers to what women and men should or should not do ("women should be gentle") (Eagly & Karau, 2002; Heilman, 2001; Rudman & Glick, 2001). In other words, prescriptive gender bias depicts specific behavioral roles that individuals must uphold to avoid derogation or punishment by others. Descriptive gender bias disappears when objective information is provided to people before they are asked to evaluate someone, whereas prescriptive bias seems to persist and occurs when individuals break with social role norms for the group they belong to (Gill, 2004).

In order to distinguish stereotypically male and female characteristics used by people to classify men and women and their prototypical behaviors, Bem (1974) created the Bem Sex-Role Inventory (BSRI), which treats masculinity and femininity as two independent dimensions of a person's endorsement of masculinity and femininity personality characteristics. Alongside this classification, Abele et al. (2008) created a long list of traits strongly related to Bem's femininity and masculinity dimensions (Trapnell & Paulhus, 2012), called "agentic" and "communal" characteristics: Agentic traits are associated with masculinity and communal traits with femininity. In other words, while agentic traits (being able, active, assertive, creative, independent, intelligent, rational, or self-reliant) depict the male group and concern a competitive, individualistic aim, communal traits (being caring, helpful, loyal, polite, sensitive, sympathetic, trustworthy, or understanding) involve a collective aim and the pursuit of community well-being. In line with the aforementioned studies, people are recognized as referring to these two macrodimensions, and when their behavior is aligned with their gender-group prescriptions (communal or agentic) they are considered prototypical: A women who shows communal traits and a man who shows agentic traits are perceived as prototypical, as they follow the prescription concerning their gender group and, as a result, are judged positively by others (Fiske et al., 1991; Stangor et al., 1992). Of course, this tendency also occurs in the hiring process: Prototypical applicants who are consistent with their gender prescription obtain a positive judgment among recruiters, avoiding the display of gender bias (Cohen & Bunker, 1975; Eagly & Karau, 2002; Rudman & Glick, 1999; Howell & Weeks, 2017; Rudman & Glick, 2001). Therefore, women would be considered more suitable for occupations that fit their stereotypical characteristics, namely helping occupations (Cohn, 1985).

Strictly connected to gender bias literature, we find the Lack-of-Fit Model (Heilman, 1983) and the Role Congruity Theory (Eagly & Karau, 2002). Consistent with the Lack-of-Fit Model, descriptive stereotypes promote negative expectations about women's performance due to the perception of a "lack of fit" between the characteristics women are expected to have and the requirements believed necessary to succeed in a male-dominated job (Heilman, 1983). The Lack-of-Fit Model is related to the role congruity theory, which posits that women are evaluated less favorably than men for leadership positions because of a mismatch between expected female roles and leadership roles (Eagly & Karau, 2002). This lack of fit causes what is known as a "backlash effect," namely the negative evaluation of women for violating prescriptions of feminine niceness and men for violating prescriptions of masculine

assertiveness (Moss-Racusin et al., 2010; Rudman, 1998; Rudman & Glick, 2001). Gender bias in the hiring process may arise from a perceived lack of fit between a woman's (man's) behavior and the attributes assumed to be needed for occupying a male (female)-typical job (Hansen et al., 2016; Horvath & Sczesny, 2016). For this reason, women in particular try to appear agentic to fill the lack of fit, but by violating their prescriptive gender stereotypes they entail the risk of hiring discrimination being punished for their violation. The negative performance expectation that comes from the perception of a lack of fit between what an applicant is like and what is required by a specific job to succeed in it is likely to promote gender bias and gender discrimination with negative consequences in terms of applicants' selection, compensation, promotion, and evaluation (Heilman & Caleo, 2018).

It is quite clear that to understand horizontal gender segregation we need to investigate the hiring process, throughout which applicants are chosen in relation to the extent to which their personal characteristics and competencies fit the job requirements. Results found by Cohen and Bunker (1975) indicated that hiring decisions are influenced by the interaction of applicants' gender and the job's gender typicality; recruiters selected more women for feminine positions and more men for masculine positions, making their hiring choices based on the applicants' gender-job role congruence. Other studies pointed out that recruiters' personal traits affect the extent to which they base their hiring decisions on applicants' gender-job congruence. For instance, Frauendorfer and Mast (2013) showed that the likelihood of hiring a gender-occupation incongruent applicant was higher the more the recruiter was interpersonally sensitive, whereas interpersonal sensitivity did not affect hiring decisions regarding gender-occupation congruent applicants. Along with sensitivity, other recruiters' personal characteristics (e.g., sexism, gender bias and stereotypes, sensitivity) seem to predict female applicants' discrimination (Davison & Burke, 2000; Latu et al., 2015; Rice & Barth, 2017; Ryan et al., 2010). Good and Rudman (2010) revealed how sexism works as a self-fulfilling prophecy in hiring contexts. Recruiters who displayed higher levels

of benevolent sexism, which means they openly exhibited apparently positive attitudes toward women who conform to traditional gender roles (e.g., mothers; Glick et al., 1997), contributed to the maintenance of gender stereotypes and submission of women. Women applicants who were exposed to benevolent sexist recruiters experienced a significant decrease in cognitive performance. Likewise, Rice and Greenlee (2018) showed that recruiters who self-reported higher levels of masculinity (e.g., assertiveness, dominance, etc.) generally tended to prefer male applicants over female ones.

All these findings not only highlight the importance of recruiters' personal characteristics in hiring decisions, but also seem to show that less biased recruiters (low levels of sexism or gender bias and stereotypes) tend less to discriminate against gender-occupation incongruent applicants. Along with sexism and gender bias, attitude toward women, as measured by the Attitudes toward Women Scale (AWS; Spence & Helmreich, 1972), could be of interest in this context to investigate. Although most studies included a measure of ambivalent sexism or subtle gender bias, when investigating women's discrimination in the hiring process, attitudes toward women were never included as a measure of sexist beliefs. The AWS measures different aspects of sexism, based on the expected role that women should have in society. In my opinion it is worth examining whether attitudes toward women were changed or not and whether they would affect the evaluation of female applicants. One study by Parks and Mary Ann (2004) investigated the mediating role of the AWS between individuals' gender and their attitudes toward sexist language, finding out, first, that women and men viewed women's rights differently, as measured throughout a subscale of the AWS. Namely, women were more supportive of women's rights as compared to men, who tended to be ambivalent about, or indifferent to, women's rights. Secondly, the authors showed that women tended to be undecided about more inclusive language (non-sexist), whereas men tended toward not supporting it. I believe that including the AWS in examining applicants' impression would provide literature with interesting insights.

My studies contributed to the current literature with a deep investigation of several recruiters' internal factors which could contribute to discrimination against applicants based on their gender. I aimed to investigate the possible effects of recruiters' gender beliefs on different applicants' representations, and to find a possible strategy to bypass gender bias in the hiring process by making gender-type occupation incongruent applicants, the so-called "counterstereotypical" applicants, more attractive in the job market. To pursue this main goal, I focused on investigating two variables: Language and applicants' weaknesses.

#### The Role of Language in Promoting/Overcoming Gender Bias in Hiring Decisions

The hiring process includes different tools for evaluating applicants: Oral interviews, curricula, and presentation letters are the most popular. Their importance or usage will change according to the type of job, position, and sector. However, oral or written language is a powerful instrument for expressing gender bias (Cuddy et al., 2004; Eagly et al., 2000). Language is not gender-neutral, and it can reflect the asymmetries of status and power between men and women, who are attached to the corresponding social roles (Eagly et al., 2000). By describing men with more agentic-related words and women with more communalrelated words, language contributes to reinforcing stereotypical beliefs and promoting gender discrimination (Gaucher et al., 2011; Madera et al., 2009; Moscatelli et al., 2020). There are different ways to spread gender bias through language. The grammatical structure of most languages lets gender bias and sexism look normative, replicating in this way gender stereotypes (Hamilton, 1988, 1991; Stahlberg et al., 2007). In an experiment, participants read about gender differences in two contexts: the context of leadership and the context of leisure time. The context of leadership was stereotypically tied to masculinity, while the context of leisure time was a status-irrelevant context in which women and men were equally normative. Gender differences were framed in terms of how men differed from women (women were the linguistic norm) or in terms of how women differed from men (men were the linguistic norm). Participants were randomly assigned to the experimental conditions and were asked to read a

text about gender differences in either the leadership or leisure context. Then, participants explained how they perceived women's and men's relative status and power, and the legitimacy of that status/power distribution. Results showed that when there is a comparison between groups in the status-relevant context (the context of leadership), positioning men as the linguistic norm reinforced the perceptions of men's relative status and power, and legitimated the status differences. The reverse effect did not occur when women were made the norm (Bruckmüller et al., 2012).

Likewise, in another experiment (Pratto et al., 2007) participants were instructed to consider a famous person and his or her profession, and then to provide five reasons why the person was an atypical or typical (depending on the condition to which participants were randomly assigned) member of his or her profession. Professions were differentiated in regard to race (e.g., TV journalist) or gender (e.g., fashion model), and famous persons' typicality was previously pretested. Participants were then asked to rate how typical or atypical the person was in his or her profession, from 1 (not very typical) to 7 (very typical). Results revealed that participants rated stimulus persons as more typical when they had been instructed to provide ways in which the person was typical than when they had been instructed to provide ways in which the person was atypical. Moreover, participants listed more features in the typical than in the atypical instruction condition. Overall, the most important result of this study is that when the famous stimulus persons were typical (e.g., for the race distinguishing feature, Dr. Dre as rap artist, and for the gender distinguishing feature, Robert Frost as U.S. poet), participants rarely named gender or race, whereas when the famous stimulus persons were atypical (e.g., for the race distinguishing feature, Eminem as rap artist, and for the gender distinguishing feature, Emily Dickinson as U.S. poet), they often did so. This subtly biased comparison elicits the predominance of the higher-status group (typical individuals) over the lower one (atypical individuals) as normative (Pratto et al., 2007).

Research on the effects of gender-fair language has been conducted by Bem and Bem (1973), Stout and Dasgupta (2011), and Gaucher et al. (2011), who found that female applicants preferred to apply for a male-dominated job when the advertisement used a genderneutral form, whereas a masculine form reduced female applicants' motivation and sense of belongingness. However, it seems that the wording of job advertisements affects not only the applicants' willingness to apply but also recruiters' decisions. Recruiters evaluated female applicants as fitting less well with a high-status position than male applicants when the job was described with masculine wording, even if they perceived both to be equally competent. Conversely, recruiters evaluated male and female applicants as equally well suited for a highstatus position when the job was described with gender-neutral wording (Horvath & Sczesny, 2016). Further confirmation is provided by Hansen et al. (2016), who found that language forms that include both the male and female gender resulted in a more gender-balanced mental representation of the roles described. Referring to "heroines and heroes" instead of "heroes" gave participants the view that there is a higher percentage of women among people performing heroic acts and made participants more familiar with the idea that women could be heroes. In this way, participants were able to depict women in a counterstereotypical way more easily than when descriptions included only the word "heroes."

Another study by Varghese et al. (2018) examined the effect of impression management (IM) style on applicants' hirability and likability. IM tactics in the hiring context convey behaviors and personal characteristics displayed to appear competent and likable. IM tactics are expected to be different for women and men; for instance, women would tend to use impression management tactics that conform with the feminine gender role (e.g., apologies, opinion conformity), whereas men would tend to use IM tactics that conform with the masculine gender role (e.g., assertiveness, engaging in self-promotion). Starting from the assumption that women are required to be both warm and competent to be hired (Rudman & Glick, 1999), the authors Guadagno and Cialdini (2007) hypothesized that female applicants who described their profile by implementing a hybrid IM style, which combines feminine (e.g., modesty, flattery) and masculine (e.g., self-promotion, blasting) communication styles using an equal number of feminine and masculine IM tactics simultaneously, would be perceived as higher in warmth and competence and be more likely hired than applicants who used a purely feminine or masculine style. However, Varghese et al. (2018) found that the hybrid style not only helped female applicants but also male applicants. Thus, gender was not a relevant factor in determining whether applicants' hirability would be influenced by an IM style.

#### The Abstraction/Concreteness of Language Property in Impression Management

Along with grammatical structure, an important feature able to increase or decrease gender bias is the abstraction/concreteness property of language. The level of abstraction in describing someone can strengthen the receivers' stereotypical beliefs (Douglas & Sutton, 2003, 2006; Rubini et al., 2014). With the abstraction property of language, I refer to the increasing level of abstraction of interpersonal terms classified in the Linguistic Category Model (LCM) proposed by Semin and Fiedler (1988). The first verb category is descriptive action verbs (DAVs, e.g., call, catch, find), which refer to highly contextualized actions with a clear beginning and end, and without a positive or negative semantic valence. The second verb category is interpretive action verbs (IAVs, e.g., attack, correct, command), which still refer to contextualized actions, but with not quite clear beginnings and ends, as well as a positive or negative semantic valence. The third verb category is state verbs (SVs, e.g., like, admire, fear), which refer to mental or emotional states; these do not have a beginning or end, and have a positive or negative semantic valence. The last category is adjectives (ADJs, e.g., altruistic, brutal, fair), which refer to completely decontextualized actions or behavior, without a beginning and end, but with a very specific positive or negative semantic valence. The increasing levels of abstraction of these terms provide important information about the enduringness of the quality ascribed to a target person. The more concrete the terms, the less

the likelihood of inferring any stable traits or characteristics about a person. For instance, using sentences with a great number of DAVs or IAVs makes the assumption of the temporal stability hard. Conversely, using sentences with a great number of SVs or ADJs facilitates the possibility of making assumptions about the person's disposition or traits. More abstract terms correspond to adjectives (e.g., honest); on the other hand, more concrete terms correspond to behaviors (e.g., someone pays fees). To sum up: The more abstract a term, the more informative it is about a described person and the more enduring the trait the term refers to; conversely, the more concrete a term, the less informative it is about a described person and the more contextual and less enduring the trait the term refers to (Fiedler, 1991).

One study (Douglas & Sutton, 2006) has shown that describers who used abstract terms to describe other persons' behaviors were perceived by external observers as having more biased attitudes than describers who used concrete terms. In the experiment, participants viewed several cartoons showing a person behaving positively or negatively and read a short statement from a describer who referred to that behavior in abstract or concrete language. Participants were informed that the describer could have been a friend or an enemy of the person shown in the cartoon. When describers depicted the person who performed a positive behavior by using more abstract language, participants perceived the describers more as friends than when they used concrete language; conversely, when describers depicted the person who performed a negative behavior by using abstract language (e.g., "Lisa *is aggressive*"), participants perceived the describers more like enemies than when they used concrete language (e.g., "Lisa *slaps* Ana").

## The Effect of Cognitive Processing Fluency along with the Abstractness/Concreteness Language Property on Individuals' Impression

There is a lack of literature on the effect of language along with self-perceived cognitive processing fluency on stereotypical and counterstereotypical gender target individuals' evaluation. One of the main attempts of my research was to shed light on and

contextualize this effect on the hiring process domain. Cognitive processing fluency pertains to the ease or difficulty with which individuals process new, external information. Processing fluency can be affected by several factors: On the one hand, low-level processes concerned with the identification of a stimulus's physical identity, and form are affected by the speed and accuracy of the stimulus (i.e., how clear and enduring the stimulus is), which results in affecting the perceptual fluency (e.g., Jacoby et al., 1989). On the other hand, high-level processes involve the identification of stimulus meaning and its relation to semantic knowledge structures (i.e., predictability, the consistency between the stimulus and its context, and the availability of appropriate mental concepts for stimulus classification), which results in affecting the influence of conceptual fluency (e.g., Whittlesea, 1993). Both perceptual and conceptual fluency may be subsumed under the term "cognitive processing fluency." Processing fluency can be measured, for instance, by either the processing speed and accuracy or by subjective measures, such as subjective impressions of low (high) effort. Processing fluency has been less investigated with the abstractness/concreteness property of language than cognitive load.

Two more experiments were conducted to investigate the role of the language's property of abstractness-concreteness in social memory and judgments (Doest et al., 2002). Participants were provided with biographic information about a target person (individual target; Experiment 1), a businessman for the male target and housewife for the female target to elicit gender expectancies,<sup>1</sup> and information about a group target (group target; Experiment 2) at high levels of linguistic abstractness (adjectives/traits – nurturant, assertive) versus low levels of linguistic abstractness (verbs/behaviors – brought her/his child's forgotten lunch to

<sup>&</sup>lt;sup>1</sup> The target descriptions were: For the housewife target: "Marion Brown is 47 years old, is married, and has several children. She is primarily a homemaker but does occasional sewing work for a clothing warehouse. She completed three years at a vocational secondary school. Knitting is her hobby." For the businessman target: "Michael Brown is 47 years old, is married, and has several children. He is financial director at an international bank. He has a university degree in economics, with a minor in finance and an MBA from a university in England. His work is his hobby."

school, expressed a controversial opinion). The individual target was used to elicit gender expectancies, whereas the aggregate group target was not. Then, participants' gender expectations regarding the target were measured. To measure how consistent the target impressions were with participants' gender-expectancies, two types of measures were used: A global measure, which assessed the expectancy-consistency of impressions (e.g., "To what extent does Michael [Marion] Brown show traditionally feminine [masculine] characteristics [behaviors]?"; scale anchors: scarcely, a great deal), and a semantic-differential measure of the target's impressions assessed with the Semantic Differential (Kouwer, 1958; Osgood et al., 1957). Scale anchors consisted of pairs of trait antonyms (e.g., weak, strong). Finally, the depth of processing was assessed measuring the time that participants took to view each stimulus item. The attention to each stimulus item was further estimated (for each participant) as the difference between the time spent observing the stimulus item and the time spent reading an item of the same length in the post-experimental test of reading speed.

Finally, memory for the stimulus information was assessed and participants were asked to provide judgments of the target. Language seemed to activate the cognitive process at different levels: When language was abstract (adjectives/traits) in a target description, participants were more influenced by heuristics (namely gender stereotypes) than when language was concrete (verbs/behaviors) (Doest et al., 2002). Superficial cognitive processing, or heuristic processing (Axsom et al., 1987), leads to biased judgements because it requires less effort in processing fluency, whereas systematic processing leads to less biased judgements because it requires more effort in processing fluency.

Different evidence was found by Rubin et al. (2013), who investigated the effects of language abstractness on stereotypical/counterstereotypical people's perceived likability. The authors provided the descriptions of target individuals belonging to two different groups strongly associated with stereotypes: gender (male/female) and sexual orientation (gay/straight). The target individuals were described with stereotypical and counterstereotypical behaviors (concrete language), respectively, for gender targets (e.g., "knitting" and "fishing") and sexual orientation ("in a sexual relationship with a man" and "in a sexual relationship with a woman"), or with stereotypical and counterstereotypical adjectives (abstract language) for gender targets (e.g., "aggressive" and "sensitive") and sexual orientation ("insensitive" and "creative"). Participants were randomly assigned to two conditions that referred to either eight stereotypical individuals or eight counterstereotypical individuals (four based on gender and four based on sexual orientation). For each of the eight targets, participants responded to five items indicating how familiar (very unfamiliar, very familiar), how stereotypical (very counterstereotypical, very stereotypical), and how conventional (very unconventional, very conventional) the target individual was. Two items, the perceived conventionality and prototypicality of the targets entailed the final measure of target individuals' typicality. One item was used to assess processing fluency, asking participants to indicate how easy it was to imagine the target individual (very difficult, very easy). Finally, the dependent variable included one item asking participants to rate how likable the person was (very dislikable, very likable).

The results showed a moderating effect of linguistic description on the likability of stereotypical and counterstereotypical targets. For gender targets, participants liked counterstereotypical individuals described by abstract language more than stereotypical individuals, but this difference did not occur when the targets were described using concrete language. On the other hand, regarding sexuality targets, although participants again liked counterstereotypical individuals described by abstract language more than stereotypical individuals, the contrary could be observed in regard to counterstereotypical individuals described by concrete language. This difference in the pattern of the main effect for gender and sexuality targets was addressed by authors to the stimulus materials they implemented, but also to the effect of processing fluency, which represented the mediator variable between perceived target-prototypicality and their likability: Participants seemed to find it more

difficult to imagine counterstereotypical individuals when they were described using concrete language than abstract language and this difficulty was stronger for the sexuality target than for the gender target. To sum up, abstract language activated a superficial level of processing (processing fluency; the easier it was to imagine the target individual, the more superficial the level of processing) and brought to mind the heuristic that "uniqueness is good" (Kim & Markus, 1999) rather than gender bias. Indeed, participants were less affected by gender bias, and found more likable counterstereotypical target individuals when they were described by abstract terms. This evidence is in contrast to the findings by Doest et al. (2002), who discovered that participants were more affected by gender bias when counterstereotypical target individuals were described by abstract terms. However, the idea that unique stimuli (counterstereotypical individuals described by using adjectives rather than behaviors) would be "appreciated for their uniqueness rather than denigrated for their deviance" (Rubin et al., 2013) is worthy of further investigation. Indeed, the role of language was disregarded by previous studies and this is one of the few to investigate the effect of linguistic abstraction/concreteness on processing fluency and consequentially on targets' likability.

Accordingly, the language property of abstraction/concreteness used to describe individuals shapes the receiver's perception of the individual in terms of typicality. Likewise, it reveals the subtle presence of gender bias in the describer. Menegatti et al. (2012) found that when recruiters provided their feedback, they described their preferred applicants in positive abstract terms and negative concrete terms, and vice versa for rejected applicants. The literature revealed different results for the effect of language abstractness/concreteness on cognitive processing and eventually on eliciting bias and heuristics, and it is clear that whether persons are described with adjectives or verbs may affect how those persons are perceived. The usage of abstract terms (traits) activates, albeit in different ways, heuristics and bias, whereas the usage of concrete terms (behaviors) does so less. In conclusion, the language property of abstractness-concreteness, on the one hand, enhances or reduces gender bias in receivers, and on the other hand, discloses the presence of gender bias in the describer.

In line with Doest et al. (2002), abstract language seems to activate superficial cognitive processing, leading to more biased evaluation of the target individuals; on the other hand, concrete language activates systematic cognitive processing, which leads to a less biased evaluation of the target individuals. Moreover, we know that women and men are judged positively by others when they are stereotypical and harshly when they are counterstereotypical (S. T. Fiske et al., 1991; Stangor et al., 1992). Thus, using abstract language should reinforce the positive judgment on stereotypical women and men, activating the superficial cognitive processing, and using concrete language should reduce the negative judgment on counterstereotypical women and men, activating the systematic cognitive processing. Accordingly, I have reason to believe that applicants who describe their stereotypical traits using adjectives would be evaluated more positively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using adjectives would be evaluated more negatively than applicants who describe their stereotypical traits using behaviors.

Further, in line with Rubin et al. (2013), who also tested the effect of language strictly related to gender targets and their stereotypicality, it turned out that abstract language activated the heuristic that "uniqueness is good" (Kim & Markus, 1999), which is that counterstereotypical individuals are liked more than stereotypical ones. No significant effects of stereotypicality were registered when the language was concrete. Based on these last findings, it is reasonable to believe that applicants who describe their counterstereotypical traits using adjectives would be evaluated more positively than stereotypical applicants. Nevertheless, Rubin et al.'s (2013) study included gender targets and the manipulation not only of language, but also of the stereotypicality of targets. There are two reasons why I decided to make the same predictions of Doest et al.'s (2002) results: The first reason is that

literature on gender bias is quite clear on the negative effects of violating gender expectations and prescriptions, and this tendency seems to occur even when individuals are evaluated in the hiring process; the second reason is that Doest et al. (2002) used a different measure of cognitive processing fluency, which involved participants' attention time in reading the items. Doest et al.'s (2002) measure of cognitive processing fluency was different from the measure used by Rubin et al. (2013), who assessed it throughout a single item asking participants how easy it was to imagine the target individuals. In this regard, I think that the one single item used by Rubion et al. would be enough to detect the effect of participants' self-reported processing fluency on their final perception of targets in terms of stereotypicality. Maybe, along with processing fluency, a self-report measure of cognitive load could be integrated to investigate the effect of perceived cognitive processing on individuals' impression of the target person.

Several experiments confirmed that the less cognitive capacity an individual has, the more the individual activates stereotypes in forming impressions of others (Bodenhausen & Lichtenstein, 1987; Dijksterhuis et al., 2001; Dijksterhuis & van Knippenberg, 1995; Gilbert & Hixon, 1991; Macrae et al., 1993, 1994, 1999; Pratto & Bargh, 1991; Stangor & Duan, 1991). Reber and Greifeneder (2016) suggested an examination of the relationship between cognitive load and fluency processes. Cognitive load researchers are mostly focused on how much effort is required to execute a specific mental process; whereas, fluency researchers are focused on how learners experience the execution of the process. Since cognitive efforts supply the fluency of the cognitive load) would be related. Besides, cognitive load measures (processing fluency and cognitive load) would be related. Besides, cognitive load measures has been disregarded by current literature on applicants' impression in the hiring process. Moreover, the majority of studies that investigated cognitive load in the function of the stereotyping process manipulated the participants' cognitive load in an attempt to deprive them of processing resources. One manipulation of cognitive load largely

implemented is one, which consists in asking participants to memorized an eight-digit number before performing an experimental task, and to write down the number after the end of the task (Gilbert & Hixon, 1991). Only a few studies considered cognitive effort as a direct consequence of the written stimulus material provided to participants, and they were usually in the education research field (e.g., Cerdan et al., 2018; Klepsch et al., 2017; Moreno, 2010; Paas, 1992). My research aimed at extending the implications of the both aforementioned studies (Doest et al., 2002; Rubin at al., 2013) to the hiring domain.

# Applicants' Weaknesses and Language's Effects on the Impression of Stereotypical and Counterstereotypical Applicants

With regard to the usage of mentioning weaknesses to increase applicants' hirability, social-psychological literature seems to be lacking. However, research in marketing and persuasion has studied the effects of two-sided messages, where counterarguments are presented along with the pro-arguments. This approach (e.g., Etgar & Godwin, 1982; Kamins & Assael, 1987; Pechmann, 1992) may be adapted for my purposes. For example, in a study by Bohner et al. (2003), the authors considered advertising credibility, and the advertised product likability by looking at the content-related process (Bohner et al., 2003). In particular, the authors studied how persuasive effects of negative information about a commercial product's attributes could result from the internal relations among message claims. Specifically, the authors argued that two-sided advertisements (referring to both positive and negative product attributes) result in a persuasive advantage over one-sided advertisements (even though these refer only to positive product attributes). Mentioning a product's negative attributes (e.g., the number of calories in ice cream) along with its positive attributes (e.g., its rich and creamy taste) may cause a positive effect in terms of the advertisement's credibility and an increase in the inferred valence of the strengths mentioned, which only occurred when the strengths were related to the weaknesses.

In this study, participants were provided with a targeted ad for an Italian restaurant called "Fresco Francesco," which, depending on the condition, was one-sided, two-sided featuring unrelated attributes, or two-sided featuring related attributes. In the one-sided condition, only positive features were disclosed (e.g., "Fresco Francesco offers many advantages: My home-made pasta and other dishes are prepared by Francesco from fresh ingredients, preserving the food's natural flavor [...]"). In the two-sided unrelated condition, the same positive attributes together with negative attributes unrelated to the positive claims were disclosed ("[...] and only a few disadvantages ... Unfortunately, my restaurant does not feature outdoor seating [...]"). In the two-sided related condition, the same positive attributes together with negative attributes, this time related to the positive claims, were disclosed ("[...] and only a few disadvantages ... Fresco Francesco's menu contains only a small selection of dishes, which varies with the seasonal supply. [...]"). Thus, the positive claim "dishes prepared by Francesco from fresh ingredients" finds its negative correspondent claim in "small selection of dishes." Subsequently, participants were asked to state their attitudes toward the restaurant and to evaluate the restaurant's positive attributes, as well as the ad's credibility. Results showed that in the two-sided condition the ad was perceived as higher in credibility than in the one-sided condition, and that in the two-sided related condition the positive claims were evaluated as more positive than in both the one-sided and the two-sided unrelated conditions.

In line with these findings, in which disclosing a product's negative claims even if unrelated to its positive claims seems to increase the message's credibility (Bohner et al., 2003), I reasoned that the same could have occurred for applicants: Disclosing weaknesses (negative claims), regardless of the fact that they would have been related or unrelated to the applicant's strengths (positive claims), might have increased applicants' perceived honesty (credibility). In fact, honesty is a positive predictor of hirability (Roulin et al., 2014). To date, research has not investigated interviewers' perception of applicants' honesty, even though it is known that recruiters need to know the truth about the applicant they are interviewing (Vrij et al., 2010). The higher the perceived applicants' non-transparency, the more suspicious the interviewers will become, and the less positively they will evaluate applicants' performances (Buller & Burgoon, 1996). Roulin et al. (2014) investigated how applicants used IM in job interviews, and how interviewers' evaluation is affected by the displaying of these tactics. Specifically, this study considered different applicants' IM behaviors (self-promotion, perceived transparency, etc.) and their impact on interviewers' perceptions. A total of 164 real applicants and 36 real interviewers from recruiting agencies were contacted and agreed to participate, and after the interviews, both applicants and interviews were asked to respond to measures of IM behaviors and interview evaluation. Applicants explained the self-report tactics they used during the interview, and interviewers reported their perceptions of applicants' IM tactics. In particular, applicants' perceived transparency was assessed with three items ranging from 1 (completely disagree) to 5 (completely agree) by asking interviewers how easy it was to judge each applicant's honesty after each interview, and how easy it was to differentiate facts from fiction in the applicant's responses ( $\alpha = .83$ ). The evaluation, was assessed with a seven-item scale ranging from 1 (not at all) to 5 (to a great extent) measuring the overall interview evaluation (e.g., "Was the applicant able to convince me that he/she had the required abilities for the position?", "Will I recommend this applicant for the position?";  $\alpha = .91$ ). Results indicated that interviewers' perception of applicants' transparency was positively related to interview evaluation: The more the interviewers believed that it was easy to see who the applicant was, the more positive the applicant's evaluation was.

However, applicants' honesty was investigated neither in the written language (e.g., cover letter, curricula), nor in relation to the act of stating weaknesses, nor in respect of the applicants' gender. To find a connection between studies on the effect of disclosing negative traits, which are the applicants' weaknesses, in an advertisements' studies on IM tactics and

the effect of honesty on recruiters' overall evaluation of applicants, I relied on those studies on the effect of negative personality traits in individuals (e.g., Abele & Bruckmüller, 2011; Abele & Wojciszke, 2014; Bruckmüller & Abele, 2013; Wojciszke, 1994, 1997). As previously mentioned, IM tactics in the hiring context convey behaviors and personal characteristics displayed to appear competent and likable, but these tactics are supposed to differ between male and female applicants. In fact, women should use a hybrid style (mixed feminine and masculine communication styles) (Guadagno & Cialdini, 2007), in order to be perceived as being higher in warmth and competence (Rudman & Glick, 1999) and thus be more likely hired.

Weaknesses commonly refer to those personal traits that are socially undesirable. Much like positive traits, negative traits may be used to define individuals in terms of typicality. Prototypical traits such as communion and agency find their negative counterparts in a lack of communion (e.g., dominant) and agency (e.g., lazy) (Abele & Bruckmüller, 2011; Abele & Wojciszke, 2014; Bruckmüller & Abele, 2013). In accordance with the Big Two Model (Paulhus & Trapnell, 2008; Trapnell & Paulhus, 2012), communion and agency are apparently orthogonal dimensions. Nevertheless, these two dimensions might be seen as opposite dimensions; in fact, they might also correlate negatively: The more agentic (communal) a person is described as being, the less communal (agentic) he or she is perceived to be (Abele & Wojciszke, 2007). In some studies (Wojciszke, 1994, 1997) in which participants were asked to evaluate a person's behavior described in terms of communion (morality) or agency (competence) by positive or negative valence, when the person's behavior was described, for instance, as communal positive or agentic negative, participants tended to infer not only high communion but also low agency, and vice versa, showing a negative correlation of the two dimensions.

When individuals or groups are evaluated in pairs, and one of them is evaluated as being more agentic than the counterpart, then the counterpart is evaluated as being more communal, as the "compensation effect" occurs (Judd et al., 2005). In other words, it seems that the lack of agency in the counterpart is compensated for by the inference of higher communion and vice versa. This phenomenon was also highlighted by Cuddy et al. (2004), who pointed out that in very agentic work contexts, female workers with children were considered to be less agentic than female workers without children or male workers, whereas in the home setting, where communion is more important than agency, female workers with children were considered to be more communal than female workers without children. Important evidence of the compensation effect was highlighted by some studies in which participants had to evaluate in terms of communion and agency a person described providing positive information only on one (e.g., communion) of the two dimensions and omitting information on the second dimension (i.e., agency). Participants tended to negatively evaluate the target person in the omitted dimension, considering the omissions in some personal traits (e.g., agentic or communal) in the same way as negative traits and to negatively judge the person on the omitted traits. This effect is called the "innuendo effect" (Kervyn et al., 2012). Thus, when a target's high (low) agency (communion) was mentioned but not the other content dimension, perceivers inferred the opposite for the other dimension (Gebauer et al., 2013).

In this regard, it is worth pointing out in relation to the indirect stereotype change theory that it derives from the idea that stereotypes are descriptions of how groups differ from each other (Biernat & Crandall, 1996; Campbell, 1967; Ford & Stangor, 1992; Martin, 1987; McCauley & Stitt, 1978; McCauley et al., 1980). According to this conceptualization, people tend to form stereotypes based on perceived differences between groups; consequentially, the information about one group not only affects its group members' impression, but also that of the other group members. Stereotype change could lead to stereotype enhancement (stereotype becoming more extreme) or to stereotype reduction (stereotype becoming less extreme). Most studies have focused on stereotype change in terms of its reduction, implying that its enhancement works along with the same patterns in a symmetrical way. Only a few studies have pointed out that stereotype enhancement and reduction are not necessarily symmetrical. Indeed, it was suggested that stereotype enhancement seems more likely under stereotype-hyperconsistent information conditions (i.e., information that suggests that the stereotype is even more extreme than it already is) than stereotype reduction was under stereotype-inconsistent information conditions (i.e., information that disconfirms the existing stereotype) (Dolderer et al., 2009).

Maris et al. (2016) conducted a study to test whether changes in indirect stereotypes could take the form of either stereotype enhancement or reduction providing either stereotypehyperconsistent or -inconsistent information, and whether the stereotype enhancement and reduction would be symmetrical or asymmetrical. The authors hypothesized that stereotypehyperconsistent information would reinforce the existing gender stereotype, whereas stereotype-inconsistent information would reduce the existing gender stereotype. To this end, participants were previously asked to respond on a scale measuring gender-based leadership stereotypes from the Leadership Questionnaire (Northouse, 2001), including items asking how often male and female leaders showed each of 10 relationship-oriented (e.g., "helping group members to get along") and 10 task-oriented behaviors (e.g., "setting standards of performance for group members") on five-point scales with the alternatives (1) never, (2) seldom, (3) occasionally, (4) often, and (5) always. Subsequently, participants were randomly provided with a fictitious article describing either the stereotype-hyperconsistent information condition (female leaders shown as relation-oriented and male leaders as task-oriented) or the stereotype-inconsistent information condition (female leaders shown as task-oriented and male leaders as relation-oriented). After reading the article, participants were asked to respond to the gender-based leadership stereotype scale again, and to several other items to bolster the cover story. Among these items, the two manipulation check items measured the extent to which the article confirmed participants' beliefs about male and female leaders, and to what

extent it contradicted their beliefs about male and female leaders, using a bipolar seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*).

Results showed that in the stereotype-hyperconsistent information condition, participants tended to evaluate male leaders as being higher in task-oriented skills than they did before they had read the article, but no significant change occurred for the relationoriented skills. On the other hand, female leaders were evaluated as being higher in relationoriented skills but lower in task-oriented skills than they were before participants had read the article. In the stereotype-inconsistent information conditions, participants tended to evaluate male leaders as being higher in relation-oriented skills, but no change occurred for the taskoriented skills; also, participants evaluated female leaders as being higher in task-oriented skills, but no change occurred for relation-oriented skills. It is quite clear that gender-based expectations penalize women in particular in the work settings because they are viewed not only as communal but also as lacking agency, which is the prevalent dimension to consider when judging a job applicant (Glick, 1999). Indeed, according to Heilman (2012) and Moscatelli et al. (2020), women need to be perceived as both communal (and warm) and agentic (and competent) to compensate for the lack of fit between women's traits and job requirements, and to increase their chances of being hired.

To sum up, addressing all of these considerations to the hiring process: According to Bohner et al. (2003), it is reasonable to posit that if applicants show weaknesses (negative traits) along with strengths (positive traits) (i.e., two-sided condition) they will be considered more honest than applicants who show only strengths. The more honest applicants are perceived to be by recruiters, the more likely they are to be positively evaluated (Buller & Burgoon, 1996; Roulin et al., 2014). However, the final evaluation of applicants would depend on the applicants' gender and the type of weaknesses disclosed: IM tactics are different between men and women; for instance, women should implement a hybrid style to be perceived as being high both in competence and warmth and have a greater chance of being hired (Guadagno & Cialdini, 2007). Because IM studies did not involve the investigation of applicants' weaknesses described in terms of applicants' stereotypicality, I referred to literature on the effect of disclosing negative stereotypical traits (Gebauer et al., 2013; Kervyn et al., 2012; Wojciszke, 1994, 1997) and consistent and inconsistent information (Maris et al., 2016). According to these studies, it is reasonable to posit that applicants who show weaknesses in terms of a lack of the stereotypical dimension (agency for men and communion for women) will provide recruiters with stereotype-consistent information, and recruiters will also make inferences about the not mentioned opposite dimension (communion for the counterstereotypical dimension (communion for men and agency for women). Conversely, if applicants show weaknesses in terms of a lack of the stereotype-inconsistent information, and recruiters will provide recruiters with stereotype-inconsistent information, and recruiters about the not mentioned opposite dimension (agency for women) they will provide recruiters with stereotype-inconsistent information, and recruiters will also make inferences about the not mentioned opposite dimension (agency for men and agency for women) they will provide recruiters with stereotype-inconsistent information, and recruiters will also make inferences about the not mentioned opposite dimension (agency for men and communion for women).

#### The Role of Cognitive Process in Evaluation of Applicants

Previous studies did not consider the effect of processing fluency or cognitive load on the evaluation of applicants or other mediating variables, such as applicants' perceived honesty. For the first time, I wanted to investigate whether cognitive load and processing fluency would affect applicants' overall evaluation through the applicants' honesty perception. In one study in the marketing field, Hanks et al. (2016) explored consumers' responses to hotel sustainability information based on the congruence of preexisting cognitive patterns with the newly presented information. Specifically, the researchers studied whether different levels of processing fluency (low vs. high) of a sustainability message would change the consumer attitude (positive vs. negative) and skepticism toward two types of hotel destinations (nature-based tourism vs. urban). For this aim, participants were randomly assigned to two different conditions (urban vs. nature-based tourism hotel destination descriptions) and asked to look at six pictures depending on the conditions of either naturebased hotels or urban hotels along with messages describing the hotels' locations. Afterwards, they replied to several questions. Processing fluency was manipulated by varying the presentation of the sustainability message along with several elements: using font manipulation in which the type of font and the contrast of the font against the background were varied, manipulation of the dimensions of syntactical fluency (for high-fluency using bullet points and short phrases, and for low-fluency using a paragraph with longer sentences), and manipulation of the orthographic dimension (for a high-fluency message, numbers were written out in numerical form, which is easier to process, whereas for a low-fluency message, the numbers were spelled out). Consumers' attitudes, which refers to the extent to which an individual evaluates an object positively or negatively, were assessed with seven items (e.g., "For me, the idea of staying at The Beacon Hotel when visiting the destination in the pictures is: "bad-good," "unfavorable-favorable," and "negative-positive"). Finally, skepticism, which is "a person's tendency to doubt, disbelieve, or question" (Skarmeas & Leonidou, 2013, p. 1832), was assessed with four items (e.g., "It is doubtful that The Beacon Hotel is a socially responsible hotel" and "It is questionable that The Beacon Hotel acts in a socially responsible way").

Results suggested that consumers in conditions of low levels of processing fluency were less skeptical and had more positive attitudes toward nature-based tourism destination hotels as compared to urban hotels; for high levels of fluency nonsignificant differences emerged in regard to skepticism. If we assume that skepticism, by definition, can be considered as the opposite to perceived honesty (the more skeptical people are about someone or something, the less honest they perceive someone or something), and if we considere that the above study examined the causal relations between processing fluency and skepticism, I have reason to hypothesize that processing fluency and cognitive load would be predictors of applicants' perceived honesty. We need to bear in mind that in my own studies, I did not manipulate either of these variables, but only measured participants' subjective impressions of being under cognitive load or processing fluently. It would have been desirable to implement load manipulations, but this was not possible given the already complex internet-based designs. Thus, as a correlational alternative, I wanted at least to get some exploratory data on these variables by asking the participants about them (with all due caveats regarding the validity of self-reports of mental processes, see Nisbett & Wilson, 1977, *Psych. Review*).

#### Toward a New Measure of the Evaluation of Applicants

Most research on IM investigated applicants' impression on participants through the outcome evaluation of applicants (hired or not; Moscatelli et al., 2020). The remaining studies (e.g., Roulin et al., 2014) assessed recruiters' evaluation with similar scales to the one used by Stevens and Kristof (1995). In this scale, which varied from four to seven items rated on fiveor seven-point scales, interviewers provided their assessment of applicants' suitability and probable interview outcomes (e.g., "How qualified is the applicant for the job?", "How attractive is the applicant as a potential employee of your organization?", "How highly do you regard this applicant?", "How well did the applicant do in the interview?"). In addition to these four items, two items measured the likelihood that the applicant would be pursued by the organization ("How likely are you or your organization to offer the applicant an on-site visit?", "How likely are you or your organization to offer the applicant a job?"). These measures are focused on applicants' suitability and likelihood of being hired, but they do not differentiate among different dimensions which may concur to constitute the overall evaluation of applicants. For instance, this measure seems to disregard specific aspects related to the applicants' perceived competence, likability, and also hirability. Good and Rudman (2010), in their study on the effect of recruiters' sexism on applicant evaluation, distinguished between three different dimensions of evaluation: applicants' likability (e.g., "Overall, how would you rate the applicant as a person?"), competence (e.g., "How qualified do you think the applicant is for the job?"), and hirability (e.g., "Do you think the applicant should be hired

for the job?"). In addition to the one item used to test hirability, the researchers included one item asking participants to indicate the starting salary of the applicants. All other items were rated on a seven-point scale. Following Good and Rudman's (2010) classification, I believed that a scale including these three dimensions as one single variable should be tested. With my studies, I aimed at contributing to the current literature with a more effective and comprehensive measure for the evaluation of applicants.

#### **The Current Research**

Gender bias is based on the concept that women should be communal and men should be agentic. This belief could encourage recruiters to look for a fit between genderstereotypical characteristics of applicants and gender-typed jobs, which could result in choosing women for a female-typed job and men for a male-typed job (Cohen & Bunker, 1975; Cohn, 1985; Eagly & Karau, 2002; Glick, 1999; Hansen et al., 2016; Heilman, 1983; Horvath & Sczesny, 2016; Howell & Weeks, 2017; Rudman & Glick, 2001). This could be one of the reasonable explanations behind the horizontal gender segregation in Europe. But what would happen if the job vacancy was gender-neutral? How would applicants be selected? How would gender bias work? Besides the Lack-of-Fit Model (Heilman, 1983), and the role of congruence theory (Eagly & Karau, 2002), which have been investigated in depth by literature, other mechanisms occur in conveying gender stereotypes in the recruitment process. For this reason I decided to include a gender-neutral-typed job to isolate these mechanisms. Starting from the fact that the hiring process entails not only oral interviews but also curricula and presentation letters to evaluate applicants, in these studies I examined the written language for investigating applicants' impression when they disclose positive or negative personal characteristics within presentation letters.

First, I studied the role of recruiters' characteristics (Davison & Burke, 2000; Good & Rudman, 2010; Latu et al., 2015; Rice & Barth, 2017; Rice & Greenlee, 2018; Ryan et al., 2010), focusing specifically on subtle gender bias, and attitudes toward women. I also
included the recruiters' self-perceptions in terms of agency and communion. This dimension and its effect on the evaluation of applicants have not been investigated yet. Wojciszke et al. (2011) and Gebauer et al. (2013) revealed that the agency dimension is more important when individuals perceive themselves than when they evaluate others. Conversely, the communion dimension is more important when individuals evaluate others than when they evaluate themselves. I investigated those variables (attitudes toward women, gender bias, and selfreported agency and communion dimensions) as predictors of applicants' perceived honesty and through honesty as indirect predictors of their overall evaluation. In fact, previous studies considered sexism and gender bias either as focal predictors of individuals' likability or hirability, or as moderators between individuals' gender and their likability or hirability.

Nevertheless, honesty is an important and positive predictor of the evaluation of applicants (Buller & Burgoon, 1996; Roulin et al., 2014; Vrij et al., 2010). Gender bias is strictly related to the stereotypical dimensions of communion and agency; the more individuals endorse gender bias, the more they positively evaluate stereotypical targets. In addition, communion is positively related to the honesty dimension (Abele & Wojciszke, 2007; Trapnell & Paulhus, 2012), thus, it is reasonable to posit that gender bias could predict a higher perception of honesty in women. Likewise, attitudes toward women, which are a measure of traditional gender role beliefs, should work in the same way as gender bias. No previous hypotheses have been posited for self-perception in terms of agency and communion and their relationship with individuals' honesty and preference along with their personality traits. In line with the fact that honesty is a common cluster of communion (Abele & Wojciszke, 2007; Cislak, & Wojciszke, 2008), I predicted that the self-ascribed communion dimension would have positively and more strongly predicted applicants' perceived honesty than the self-ascribed agency dimension.

Secondly, I examined the effect of language on modifying applicants' impression, referring to the abstractness-concreteness property of language. Language is not gender-

neutral, and by describing men with more agentic-related words and women with more communal-related words, language contributes to reinforcing stereotypical beliefs (Gaucher et al., 2011; Madera et al., 2009; Moscatelli et al., 2020). In contrast, by describing men with more communal-related words and women with more agentic-related words, language contributes to decreasing stereotypical beliefs. In fact, by using both masculine and feminine IM styles, women have higher chances of being promoted than by using only a feminine IM style, and providing stereotype-consistent information versus stereotype-inconsistent information increases versus decreases gender stereotypes (Guadagno & Cialdini, 2007; Maris et al., 2016; Varghese et al., 2018). The property of abstraction-concreteness of language may be manipulated to reinforce or reduce the gender stereotype-consistent (vs. inconsistent) descriptions of applicants. Describers who used abstract terms to describe other persons' behaviors were perceived by external observers as having more biased attitudes than those describers who used concrete terms (Douglas & Sutton, 2006). Language seems to affect the cognitive process at different levels.

Nonetheless, literature is divergent on how language affects the cognitive process and its effect. According to Doest et al. (2002), it seems that when language is abstract (adjectives/traits) in a target description, observers are more influenced by gender stereotypes, activating the superficial cognitive fluency processing. Conversely, when language is concrete (verbs/behaviors), observers are less influenced by heuristics or gender stereotypes, activating the systematic cognitive processing. According to Rubin et al. (2013), on the other hand, it seems that when language is abstract in a target description, observers are less influenced by gender bias, liking counterstereotypical individuals more than stereotypical ones, but no significant differences occur when language is concrete. Due to these divergent findings, I thought it would have been worth investigating further the effect of the abstractness-concreteness property of language on stereotypical and counterstereotypical perception and evaluation of individuals. In particular, I extended this investigation to hiring decisions and

included, for the first time, a measure of cognitive load along with processing fluency. Cognitive load was disregarded in studying applicants' impression in the hiring process, and not much is known about its interaction with processing fluency in cognitive processing (Reber & Greifeneder, 2016). However, the less cognitive capacity an individual has, the more the individual activates stereotypes in forming impressions of others. I included cognitive load and processing fluency as focal predictors of applicants' perceived honesty. Indeed, low levels of processing fluency seem to be positively associated with less skepticism and positive attitudes toward commercial products that conform to the participants' stereotypical expectations than non-conforming ones (Hanks et al., 2016).

Thirdly, along with language, I examined the effect of disclosing versus not disclosing weaknesses on the evaluation of applicants' stereotypicality. Consumers consider more credible and prefer products that show both positive and negative rather than only positive characteristics (Bohner et al., 2003). Moreover, women who are seen as both communal and agentic have higher chances of being hired and get better evaluations than women who are only seen as either communal or agentic (Heilman, 2012; Moscatelli et al., 2020; Rudman & Glick, 1999). Furthermore, applicants' weaknesses, considered as negative traits, might be expressed in terms of applicants' stereotypicality. The literature on the effect of negative personality traits in individuals (e.g., Abele & Bruckmüller, 2011; Abele & Wojciszke, 2014; Bruckmüller & Abele, 2013; Wojciszke, 1994, 1997) showed that when a target's high (low) agency (communion) was mentioned but not the other content dimension, perceivers inferred the opposite for the not mentioned dimension (Gebauer et al., 2013). Moreover, we know that throughout gender stereotype-consistent information men are perceived as more agentic (as compared to before participants received the stereotype-consistent information), but women are not only perceived as more communal, but also less agentic than before. In contrast, throughout stereotype-inconsistent information men are perceived as more communal (as

compared to before participants received the stereotype-inconsistent information), and women are perceived as more agentic than before.

Thus, I hypothesized that applicants who showed their weaknesses would have been considered more honest than applicants who did not and that this effect would have affected the evaluation of applicants concerning the type of weaknesses disclosed. Finally, my aim was to contribute to literature with a more effective measure of evaluation of applicants, combining the existing variables used to measure different components of the recruiters' final decision.

Building on the theoretical considerations reviewed so far, I conducted three pilot studies and three studies to pursue my research goals. The pilot studies provided some of the instruments that were included in the main studies. Specifically, Pilot Study 1 provided the gender-neutral-typed job to be implemented in Studies 1, 2, and 3, and a list of applicants' gender-neutral traits to be implemented in Study 2. To prevent the effects which occur due to the lack-of-fit theory (Heilman, 1983), I needed to include a gender-neutral-typed job to isolate the effect of the job's gender type. Then, to obtain the expected positive effects of weaknesses on the evaluation of applicants, I needed the two-sided conditions with both positive and negative traits (i.e., Bohner et al., 2003). Negative traits coincided with weaknesses described in terms of a lack of communion or lack of agency ascribed to female or male applicants for varying their perceived prototypicality. Positive traits had to be genderneutral to avoid participants making inferences about the applicants' prototypicality from positive traits. Pilot Studies 2 and 3 provided Studies 1 and 3 with the concrete version of the prototypical traits and weaknesses. Specifically, Pilot Study 2 asked participants to classify each abstract and concrete sentence with one of the four possible categories proposed by the LCM (Semin & Fiedler, 1991) for increasing levels of abstraction: Descriptive action verbs (DAVs), interpretative action verbs (IAVs), state verbs (SVs), adjectives (ADJs), and a "Not Classified" option. Finally, Pilot Study 3 tested the correspondence in terms of meaning

between each of the concrete sentences resulting from Pilot 2 and the originating adjective traits. Moreover, Pilot 3 verified the suitability of each weakness that resulted from the traits classified as a lack of communion and agency by Abele et al. (2008). Participants were asked to what extent they were likely to show each weakness in a presentation letter to apply for the specific job vacancy (tested in Pilot 1). The concrete versions of both traits and weaknesses were then implemented as experimental conditions in Studies 1 and 3, respectively. The abstract version was manipulated, including the original positive traits and negative (lack of communion or agency) traits for weaknesses, which were already adjectives.

Study 1 aimed at building a measure of evaluation of applicants, investigating the effect of abstract and concrete terms along with the two dimensions of communion and agency on the perceived honesty and evaluation of female and male applicants. Finally, Study 1 aimed at examining recruiters' internal characteristics like gender bias, self-reported communion and agency dimensions, and cognitive load as focal predictors of perceived honesty of applicants, as well as the mediating role of honesty in the evaluation of applicants. In Study 1 only cognitive load (but not processing fluency) was considered, in order to focus on the effect of language manipulation of applicants' traits on cognitive load and contributes to literature with new insights into this unexplored pattern. Study 2 first aimed at examining whether disclosing versus not disclosing weaknesses would have affected the perception of applicants' honesty and, consequentially, recruiters' evaluation of applicants. Secondly, it investigated which types of weaknesses between those described as a lack of communion and those described as a lack of agency were more effective in line with the applicants' gender in increasing applicants' perceived honesty and evaluation. Finally, a new path model was tested against the path model tested in Study 1, including as focal predictors processing fluency along with cognitive load, attitudes toward women along with gender bias, and applicantreported communion and agency along with the recruiters' self-reports in regard to the same variables. Study 3 aimed at investigating the interaction effect between the agentic traits

(consistent with results from Study 1, for those significant differences that occurred between the experimental conditions) and weaknesses described as a lack of communion (consistent with results from Study 2, for those significant differences that occurred between the experimental conditions), and concrete versus abstract language on applicants' perceived honesty and evaluation. The path model from Study 2 was further tested.

### **Pilot Study 1**

Pilot Study 1's first aim was to test the gender neutrality of the job for which applicants would be evaluated throughout the main studies in order to avoid possible effects due to the lack-of-fit theory (Heilman, 1983), and to focus on the effects of the manipulation of traits' and weaknesses' language on stereotypical and counterstereotypical applicants' impression.

Pilot Study 1's second aim was to generate a list of positive gender-neutral personal traits to describe both female and male applicants. Positive gender-neutral traits were used in Studies 2 and 3 to create the two-sided conditions with both positive and negative traits (i.e., Bohner et al., 2003). Negative traits were the weaknesses described in terms of a lack of communion or lack of agency ascribed to female or male applicants for varying their perceived prototypicality.

# Method

### **Participants**

One hundred forty-six students (78 women, 62 men;  $M_{age} = 22.85$ ; SD = 2.48; the datasets of 6 participants were excluded because of missing data) attending different faculties of a private Italian university participated voluntarily in the experiment. They did not receive any compensation.

# Procedure

All participants were asked to read a list of 20 job positions (e.g., lawyer, medical doctor, architect, etc.) of which five were taken from a list of job positions classified as

neutral by Julian Anslinger (2012), based on their mean scores between 3.5 and 4.3 on the item "Who does the job?", rated on a seven-point scale, from 1 (*exclusively men*) to 7 (*exclusively women*). Additionally, I included other jobs taken from a list of academic disciplines (e.g., researcher in medicine, professor of sociology, etc.) rated as gender-neutral in terms of gender segregation (Barone & Barone, 2016). Subsequently, participants were asked to carefully read definitions of agency and communion (Bakan, 1966; Diehl et al., 2004; Meadows, 2005), and then to rate a list of 22 gender-neutral traits (e.g., conscientious, curious, dogmatic) selected from a list created by Vianen and Willemsen (1992) and negative gender-stereotypical traits (e.g., bossy, incompetent, unreliable) selected from a list developed by Abele et al. (2008), in relation to the traits' belongingness to respectively the communion and agency dimension.

### Measures

To assess the gender neutrality of each of the 20 occupations, participants indicated the extent to which women or men would be attracted to it, rated on a nine-point scale ranging from FFFF (*women much more attracted*) to MMMM (*men much more attracted*) (Cejka & Eagly, 1999); they also estimated the actual percentage of women and men for each occupation on a nine-point scale ranging from FFFF (*100% women*) to MMMM (*100% men*). I added both items creating the variable "gender-type job" coded from 1 to 9 (r = .63, p <.001) for each occupation.

To assess the gender neutrality of traits, participants indicated for the 22 traits their belongingness to respectively the communion and the agency dimension, rated on a seven-point scale from 1 (*totally related to communion/agency*), through 4 (*nothing to do with communion/agency*), to 7 (*lack of communion/agency*).

## Results

To identify the gender-neutral job occupation I ran for each occupation a one-sample t-test analysis for the gender-type job variable, testing against the midpoint of 5. Results showed that four occupations were rated as gender-neutral: researcher in medicine (M = 4.86, SD = 1.28, t(144) = -1.33, p = .19); physician (M = 4.49, SD = 1.12, t(144) = -1.20, p = .16); researcher in law (M = 4.44, SD = 1.09, t(144) = -1.37, p = .17); sociologist (M = 5.13, SD = 1.33, t(144) = 1.18, p = .24). To test whether there were any gender differences in perceiving these occupations as gender-neutral among respondents, I performed an independent t-test analysis by participants' gender, showing that only the occupation researcher in medicine revealed no significant differences between male and female participants (female/male, t(137) = -1.58, p = .11). Hence, I selected the occupation researcher in medicine as the gender-neutral occupation to implement in Study 1. Nonetheless, in Studies 2 and 3 the researcher in medicine was made to help participants to imagine the occupation more easily, allowing them to base their evaluations on applicants relying on a more familiar occupation than the one used in Study 1. For the general population research jobs are usually not as familiar as medical jobs.

As regards the gender neutrality of traits, one paired-samples t-test was performed for each trait, comparing its agency and communion ratings (means and standard deviation are shown in Appendix A, Table A1). Afterwards, I selected traits with nonsignificant differences and, with these, conducted two further one-sample t-tests for each trait, testing the mean of agency and communion, respectively, against the scale midpoint of 4. Then, all traits that were not significantly above the scale midpoint were selected. Finally, I kept only those traits that fulfilled both criteria of no significant differences between agency and communion dimensions and of average values (neither high nor low values) on the scale measuring agency and communion belongingness: "broad-minded," "conscientious," "curious."

In conclusion, Pilot 1 provided the two gender-neutral jobs (researcher in medicine and physician) I implemented in Studies 1, 2, and 3, and the neutral positive traits (broadminded, conscientious, curious) which I included in the applicants' presentation letter of Studies 2 and 3.

#### Pilot Study 2

The aim of Pilot Study 2 was to test in a qualitative way whether participants would have found a correspondence between the concrete version of stereotypical traits and weaknesses (traits and weaknesses taken from the ones selected by Abele et al., 2008), described as behaviors, and the abstract version of the same traits, described as adjectives. The concreteness property of language was manipulated, including the two categories classified by Semin and Fiedler (1991) as concrete: Descriptive action verbs (DAVs) and interpretative action verbs (IAVs).

## Method

## **Participants**

Five female students ( $M_{age} = 21$ ; SD = 16.8) from a private Italian university attending a course of social and political science participated voluntarily in the experiment.

## **Procedure and Materials**

For the stereotypical traits, I used the traits classified by Abele et al. (2008) as follows: eight communal traits; eight agentic traits; four lack of communion traits; and four lack of agency traits. To vary the level of abstraction-concreteness of each trait according to the LCM coding rules (Semin & Fiedler, 1991), I created 72 short sentences in Italian. three for each category (one abstract and two concrete sentences) for each of the 24 traits, including claims as plausible as possible to be disclosed in a presentation letter for a researcher in medicine applicant. I provided the students firstly with extensive instructions on the LCM's coding rules, asking them to read them carefully, and then with the list of 72 sentences, asking them to classify each sentence in terms of concreteness-abstractness, according to the LCM code. Participants were asked to fill in an open field (placed beside each sentence) with one of the four possible categories proposed by the LCM: Descriptive action verbs (DAVs), interpretative action verbs (IAVs), state verbs (SVs), and adjectives (ADJs), and a "Not Classified" option.

### Results

I combined the four different categories into two macrocategories: abstract (SVs and ADJs) and concrete (DAVs and IAVs). The frequency of concordance among the five participants was calculated for each of the 72 sentences. When the percentage of accordance was superior or equal to 80%, the sentences were considered well classified; when the percentage was less the sentences were rejected. In this way, I obtained one concrete sentence for each trait, for a total of 24 concrete sentences: eight for the communal traits, eight for the agentic traits, four for the lack of agency traits, and four for the lack of communion traits (see Appendix B for the full sentences). I lastly included the resulting concrete sentences in the experimental condition of Studies 1 and 3. Neverthless, after obtaining the concrete sentences, effective correspondence to the originating abstract traits needed to be tested. Thus, the selected sentences were presented in Pilot Study 3 to verify the match in terms of meaning between concrete sentences and their corresponding abstract terms.

#### **Pilot Study 3**

The first aim of Pilot Study 3 was to test the effective correspondence in terms of meaning between the concrete sentences tested in Pilot Study 2 and the correspondent traits. The second aim was to test the suitability of the negative traits as possible weaknesses to be mentioned in a presentation letter for applying as a researcher in medicine or physician.

## Method

#### **Participants**

Thirteen students (8 women, 5 men;  $M_{age} = 23$ ; SD = 21.2) from a private Italian university participated voluntarily in the pilot study.

# Procedure

I provided participants with the 24 concrete sentences in random order on one side of the page, and their corresponding adjectives (abstract sentences) in a different random order on the opposite side. Participants were asked to find the corresponding concrete sentence for each abstract adjective. I divided the 24 sentences and corresponding adjectives into two different clusters of 12 sentences each to make the task easier. Subsequently, participants were asked to rate the list of eight negative traits (four lack of agency traits, four lack of communion traits) in terms of the likelihood of mentioning each trait as a possible weakness in a presentation letter for a job position as a researcher in medicine, using a scale ranging from 1 (*Very likely*) to 7 (*Not likely at all*).

### Results

In regard to the concordance of concrete sentences and abstract traits, I calculated the frequency of each trait as being equivalent to the concrete sentences, considering satisfactory a percentage over 80% of accordance. The majority of sentences were correctly associated with their equivalent abstract terms, with only a few exceptions. Based on these results, I excluded the misinterpreted sentences from Studies 1 and 3's experimental conditions.

Finally, in regard to the weaknesses, I calculated the means of the likelihood ratings, classifying as most suitable the traits with ratings below or equal to 4 (the neutral value), which were the following: "conceited" (M = 3.13, SD = 1.14) and "dominant" (M = 2.56, SD = 1.10) for the lack of communion dimension, and "shy" (M = 4.25, SD = 1.65) and "vulnerable" (M = 4.06, SD = 1.80) for the lack of agency dimension.

In Studies 1 and 3 four concrete sentences and four corresponding abstract traits were finally implemented for the two dimensions of communion and agency, and two concrete sentences and two corresponding abstract traits for the two types of weaknesses, namely lack of communion and lack of agency.

#### **Summary**

The three pilot studies provided the gender-neutral job of researcher in medicine used in Study 1, and the gender-neutral job of physician used in Studies 2 and 3. Additionally, the pilot studies provided the concrete version of traits and weaknesses to manipulate language's property of abstractness-concreteness used in Studies 1 and 3. Finally, the pilot studies provided gender-neutral traits to create the two-sided conditions in the experimental design of Studies 2 and 3, as well as realistic weaknesses suitable to be included in a presentation letter of an applicant as a physician. In Study 1, I manipulated the stereotypicality of traits (communal vs. agentic), applicants' gender (female vs. male), and the language property of abstraction-concreteness of traits (concrete vs. abstract) to investigate whether stereotypical and counterstereotypical applicants would be perceived differently in line with the property of language. Specifically, I tested whether the effect of language in describing counterstereotypical and stereotypical applicants would affect recruiters' evaluation of applicants.

# Study 1

### **Objectives**

Prototypical applicants who are consistent with their gender prescription obtain more positive judgments among recruiters, avoiding the display of gender bias (Cohen & Bunker, 1975; Eagly & Karau, 2002; Glick, 1999; Howell & Weeks, 2017; Rudman & Glick, 2001). In addition, language is not gender-neutral, and by describing men with more agentic-related words and women with more communal-related words, language contributes to reinforcing stereotypical beliefs (Gaucher et al., 2011; Madera et al., 2009; Moscatelli et al., 2020). In contrast, by describing men with more communal-related words and women with more agentic-related words, language contributes to decreasing stereotypical beliefs. Providing gender stereotype-consistent information makes individuals evaluate men as more agentic but not less communal, and women as more communal and less agentic than before being exposed to the gender stereotype-consistent information. Conversely, providing gender stereotype-inconsistent information makes individuals evaluate men as more communal but not less agentic, and women as more agentic but not less communal (Maris et al., 2016). The property of abstraction-concreteness of language may be manipulated to reinforce or reduce the gender stereotype-consistent (vs. -inconsistent) descriptions of applicants. Describers who used abstract terms to describe other persons' behaviors were perceived by external observers as having more biased attitudes than those describers who used concrete terms (Douglas & Sutton, 2006). When language was abstract (adjectives/traits) in a target description, participants were more influenced by gender stereotypes than when language was concrete (verbs/behaviors) (Doest et al., 2002).

Following this evidence, Study 1 aimed at investigating whether in the context of applying for a gender-neutral job, stereotypical applicants described in abstract terms would have been considered more honest, evaluated more positively, and obtained a higher salary than stereotypical applicants described in concrete terms. In contrast, counterstereotypical applicants described in concrete terms would have been considered more honest, evaluated more positively, and obtained a higher salary than stereotypical applicants described in abstract terms.

Several experiments confirmed that the less cognitive capacity an individual has, the more the individual activates stereotypes in forming impressions of others (Bodenhausen & Lichtenstein, 1987; Dijksterhuis et al., 2001; Dijksterhuis & van Knippenberg, 1995; Gilbert & Hixon, 1991; Macrae et al., 1993, 1994, 1999; Pratto & Bargh, 1991; Stangor & Duan, 1991). Investigating the effect of self-reported cognitive processing fluency in judging stereotypical and counterstereotypical individuals described with either abstract or concrete language, Doest et al. (2002) and Rubin et al. (2013) found contradictory evidence. On the one hand, Doest et al. (2002) found that counterstereotypical individuals described in concrete terms were liked more than those described in abstract terms, due to what they called the activation of systematic processing, which is less affected by gender biases than superficial processing. On the other hand, Rubin et al. (2013) found that counterstereotypical individuals described in abstract terms, due to the activation of a superficial cognitive process which they called the heuristic of "uniqueness is good" (Kim & Markus, 1999) rather than gender bias. In these two studies, the authors took

into consideration processing fluency, but not cognitive load. Reber and Greifeneder (2016) suggested that future research should examine the relationship between cognitive load and fluency processes. Only a few studies considered cognitive load as a direct consequence of the written stimulus material provided to participants, and this was usually in the education research field (e.g., Cerdan et al., 2018; Klepsch et al., 2017; Moreno, 2010; Paas, 1992).

The second aim of this study was to extend the aforementioned studies' implications (Doest et al., 2002; Rubin at al., 2013) to the hiring domain, and to contribute to the current literature with new evidence about the role of cognitive load and processive processing fluency in relation to recruiters' perception and evaluation of stereotypical and counterstereotypical applicants. Accordingly, in Study 1 I considered the effect of perceived cognitive load regardless of the processing fluency. In Studies 2 and 3, I also included processing fluency along with cognitive load. Starting with the current evidence on cognitive load (i.e., Reber & Greifeneder, 2016), I assumed that low levels of processing fluency correspond to high levels of cognitive load, and vice versa. In line with Doest et al. (2002), I hypothesized that when stereotypical applicants were described in abstract terms, participants would perceived lower levels of cognitive effort than when counterstereotypical applicants were described in concrete terms. To test this hypothesis, participants were asked to state how effortless versus effortful was to read the applicant's description. Moreover, extending Rubin et al.'s (2013) findings on processing fluency to the cognitive load dimension, and investigating its relationship with applicants' evaluation, I posited assumptions in line with Doest et al. (2002), which are the following; by low levels of perceived cognitive effort, stereotypical applicants described in abstract terms would be evaluated more positively than those described in concrete terms. In contrast, by high levels of perceived cognitive effort, counterstereotypical applicants described in concrete terms would be evaluated more positively than those described in abstract terms. Indeed, gender bias affects both men and women who violate their gender prescriptions, women are expected to be communal and men

agentic (Eagly & Karau, 2002; Glick et al., 1997; Heilman, 2001; Rice & Greenlee, 2018; Rudman & Glick, 2001). The usage of abstract terms emphasize the perception of a personal traits, therefore counterstereotypical applicants described with concrete terms would be evaluated more positively than those descrived in abstract terms, by making participants to perceive great cognitive efforts and reducing the disclosure of gender bias, typical of low cognitive efforts.

Further, perceived honesty is an important and positive predictor of the evaluation of applicants (Buller & Burgoon, 1996; Roulin et al., 2014; Vrij et al., 2010). In line with these considerations, it is reasonable to hypothesize that participants' gender bias may positively predict the perceived honesty of female applicants, and negatively the perceived honesty of male applicants. Indeed, the communion dimension is positively related to the honesty and femininity dimensions, and agency to the masculinity and competence dimensions (Abele & Wojciszke, 2007; Bem & Bem, 1973; Trapnell & Paulhus, 2012); gender biased individuals perceive women as communal and consequentially as honest. Thus, I posited that participants with high levels of gender bias would have perceived women as being more honest than men, and this might have resulted in a more positive evaluation of women as compared to men.

Moreover, I expected that participants self-reporting high levels of communion would have perceived female applicants as being more honest than male applicants, and further, would have evaluated more positively and recommended a higher salary for female over male applicants. Conversely, participants self-reporting high levels of agency would have perceived male applicants as being more honest than female applicants, and evaluated more positively and recommended a higher salary for male over female applicants. According to Rubin et al. (2013), processing fluency is a predictor of the likability of individuals. The authors tested a model including self-reported processing fluency as mediating variable between perceived targets' stereotypicality and likability of target, and results showed that processing fluency had a significant direct effect on likability. Therefore, I assumed self-reported cognitive load could have worked opposite to processing fluency, and been a predictor of applicants' evaluation as well. In addition, in the marketing field, Hanks et al. (2016) provides evidence of a causal relation between processing fluency and skepticism, and through skepticism on consumers' attitudes toward a product. Namely, consumers at low levels of processing fluency were less skeptical and had more positive attitudes toward the stereotypical than the counterstereotypical product; at high levels of processing fluency no significant differences occurred in skepticism. Despite the fact that skepticism and perceived honesty concern different mental frames, several studies showed their reversed effect: The more skeptical individuals are, the less honest they perceive others, and vice versa (e.g. Obermiller et al., 2005; O. Bowlin et al., 2015; Schindler & Reinhard, 2015). In line with all these findings, I assumed that processing fluency and cognitive load could have been predictors of the perceived honesty of applicants. Specifically, I posited that respondents who perceived a female applicant's letter as difficult to understand (which should correspond to high levels of cognitive load and low levels of processing fluency) would have also perceived that applicant as less honest, and consequentially would have evaluated her less positively as compared to male applicants. This effect would have been apparent for female applicants and reversed for male applicants, due to the fact that honesty is a female-stereotypical dimension, highly correlated with the communion dimension.

Furthermore, taken together, these findings can be summarized in a path model built as following: Honesty as mediator from participants' internal characteristics, like gender bias (Davison & Burke, 2000; Latu et al., 2015; Rice & Barth, 2017; Ryan et al., 2011), cognitive load, self-reported communion and agency facets, to the final evaluation and salary recommendation of applicants.

Finally, literature, to date, has not provided an overall measure of evaluation of applicants. IM research investigated applicants' impression through their real-outcome evaluation (hired or not; i.e., Moscatelli et al., 2020). The remaining studies (e.g., Roulin et

al., 2014) commonly assessed recruiters' evaluation with similar scales to the one used by Stevens and Kristof (1995), which mostly relates to the applicants' suitability, but does not mention the different dimensions that may concur to constitute the overall evaluation of applicants. Good and Rudman (2010), in their study on the effect of recruiters' sexism on applicant evaluation, distinguished three different dimensions of evaluation of applicants' likability, competence, and hirability (including one item to measure the starting salary of the applicants). Following Good and Rudman's (2010) classification, I considered that a scale including these three dimensions should be tested. Hence, Study 1 additionally aimed at testing and contributing to literature with a more effective and comprehensive measure of evaluation of applicants.

### **Design and Hypotheses**

The design of the study was a 2 (applicants' gender, male or female) x 2 (applicants' traits, agentic or communal) x 2 (language of traits, concrete or abstract) between-subjects factorial.

My hypotheses are as follows:

**Hypothesis 1a**. Communal female and agentic male applicants (stereotypical applicants) described with abstract language will be perceived as more honest, evaluated more positively, and recommended for a higher salary than communal female and agentic male applicants described with concrete language.

**Hypothesis 1b.** Agentic female and communal male applicants (counterstereotypical applicants) described with concrete language will be perceived as more honest, evaluated more positively, and recommended for a higher salary than agentic female and communal male applicants described with abstract language.

**Hypothesis 2**. Participants will perceive a lower cognitive effort while reading about communal female and agentic male applicants described with abstract language than with concrete language. Conversely, participants will perceive a higher cognitive effort while

reading about agentic female and communal male applicants described with concrete language than with abstract language.

**Hypothesis 2a.** Participants who perceive a higher cognitive effort will evaluate more positively communal female and agentic male applicants described in abstract terms than those described in concrete terms.

**Hypothesis 2b.** Participants who perceive a higher cognitive effort will evaluate more positively agentic female and communal male applicants described in concrete terms than those described in abstract terms.

**Hypothesis 3**. Participants' internal characteristics (cognitive load, gender bias, and self-reported communion/agency dimensions) are focal predictors of perceived honesty, being honesty the mediating variable between the internal characteristics, the evaluation of applicants, and the salary recommendation (see Figure 1). I assume that different effects among male and female applicants are possible:

**Hypothesis 3a.** For female applicants, participants' cognitive load and self-reported agency will negatively predict perceived honesty, whereas gender bias and self-reported communion will positively predict honesty.

**Hypothesis 3b.** For male applicants, participants' cognitive load and self-reported agency will positively predict honesty, whereas gender bias and self-reported communion will negatively predict perceived honesty.

# Method

## **Participants**

A sensitivity power analysis using G\*Power 3.1 (Faul et al., 2007) for an ANCOVA with fixed effects, main effects and interaction showed that a sample of this size (n = 210) is sufficient to detect moderate special, main, and interaction effects, i.e., f(U) = 0.25 with power = 0.95 (assuming  $\alpha$  = 0.05, eight groups, one covariate, and df = 1). Two hundred eighty-two undergraduate college students from several Italian universities, attending specific

faculties which prepare future human resources (HR) workers, participated in the study voluntarily and without getting any compensation. Data from 42 participants were excluded for giving the wrong answer to a control item which asked to indicate the gender of the applicant evaluated in the questionnaire (27 participants out of 143 who were assigned to the male applicant condition stated that they had evaluated a female applicant instead of a male; 15 participants out of 139 who were assigned to the female applicant condition stated that they had evaluated a male applicant instead of a female). The remaining 240 individuals (90 men, 150 women;  $M_{age} = 23.84$ , SD = 4.61) were retained in the final sample. The sample was highly educated, with 13.2% of them having at least graduated from high school, 33.4% holding a bachelor's degree, 25.1% a master's degree, 1% a master of science degree, and 0.3% a Ph.D. Most students came from the Social and Political Sciences faculty (44%), some from Economics (10.9%), and a few from Psychology (5.2%) and Humanities (2.1%). However, participants showed a rather low interest in becoming recruiters: They were asked to rate how much they would like to become recruiters after their graduation, using a sevenpoint scale ranging from 1 = Not at all to 7 = Very likely, with the mean for this item being 3.92 (SD = 1.92), and how much they would expect to become recruiters after their graduation, using a seven-point scale ranging from 1 = Not at all to 7 = Very likely, with the mean for this item being 3.72 (SD = 1.79). Further, the 240 participants were randomly assigned to evaluate either a male communal applicant described in concrete terms (n = 27), a female communal applicant described in concrete terms (n = 33), a male agentic applicant described in concrete terms (n = 31), a female agentic applicant described in concrete terms (n= 25), a male communal applicant described in abstract terms (n = 29), a female communal applicant described in abstract terms (n = 31), a male agentic applicant described in abstract terms (n = 29), or a female agentic applicant described in abstract terms (n = 35) for a position as a researcher in medicine.

#### **Procedure and Materials**

I used an experimental manipulation in which participants evaluated a male or female applicant for the pretested gender-neutral position as a researcher in medicine (see Pilot Study 1) on their hirability, likability, competence, honesty, and salary recommendation. I built a unique measure for hirability, likability, and competence which I call "evaluation", based on previous research by Good and Rudman (2010), while also including a measure for applicants' honesty to consider alongside the applicants' evaluation.

Participants were asked to read a presentation letter by a young researcher who was applying for the job of researcher in medicine. I manipulated the applicants' gender by presenting each applicant as "Maria" or "Mario," and the applicants' personal traits by either describing them with four agentic traits ("able," "independent," "assertive," "rational") or four communal traits ("understanding," "polite," "loyal," "caring"). The language of traits, pretested in Pilot Studies 2 and 3, was either concrete (e.g., "I wait my turn to talk in discussion in a public context" or "I can work by myself if my colleagues are not there") or abstract ("polite" or "independent," respectively) (see Appendix B for the corresponding versions between the concrete and abstract conditions). The presentation letter was structured as follows: The first part referred to professional competencies ("I have a master's degree in medicine, over four years of clinical research experience, and I have worked in the hospital close to the preceptors that help to qualify me for this job. If chosen for this position, it will be a huge step in helping me reach my career goals and I have important knowledge to share with your facility"); the second part referred to personal skills ("My experience includes collecting and analyzing data, writing reports explaining the details and the results of each project, and maintaining accurate records. My abilities include handling the administrative duties associated with this position and articulating information clearly and in a concise manner, which allows me to interact with all levels of the company efficiently"). Importantly, the third part referred to the manipulated condition of applicants' traits. For instance, for the condition of concrete communal traits of the applicant, participants read: "Finally, I could say

that I can manage different situations. For instance, when a colleague reacts in a negative way I ask for the reason behind his or her behavior, without taking it personally; or I always wait my turn to talk in a discussion. In a public context, I support my colleague even when he or she is doing poorly. Finally, I like to stay in touch with my patients." Participants were asked to rate each applicant in terms of the overall evaluation, perceived honesty, and salary recommendation. Further, to determine the impact of participants' preexisting subtle gender bias, the Gender Beliefs Scale developed by Evans and Diekman (2009) was included. Finally, to assess participants' prototypical traits, agency and communion were assessed using the Agency Communion (AC) Scale developed by Abele et al. (2016).

## Measures

**Confirmatory Factor Analysis for Evaluation of Applicants Dimension.** To build the measure of evaluation of applicants, a confirmatory factor analysis (CFA) was performed to confirm the dimensionality of the evaluation of applicants based on five dimensions:

- 1. Likability, which included three items, two of which were developed by Good and Rudman (2010): "Overall, how favorably would you rate Maria/o?", "How much do you like Maria/o as an applicant?"; and one which was developed by me: "How suitable would you consider Maria/o as an applicant for this job?". Responses ranged from 1 (*not at all*) to 7 (*very much*) ( $\alpha = .77$ ).
- 2. Hirability, which included three items, two of which were assessed by Good and Rudman (2010): "Do you think Maria/o should be hired for the job?", measured on a scale from 1 (*not at all*) to 7 (*very much*), as well as one item measuring participants' salary recommendation for the applicant: "The national average starting salary for a researcher in medicine is €2000 per month. If hired, what do you think Maria/o's starting salary should be?", with response choices ranging from 1 (*€500*) to 7 (*€3500*). A third item was added to strengthen this dimension: "How much would you support Maria/o's application for the further steps of the

hiring process?", with responses ranging from 1 (*not at all*) to 7 (*very much*) ( $\alpha$  = .69).

- 3. Competence, which included four items (Good & Rudman, 2010): "How qualified do you think the applicant is for the job?", "How competent do you think Maria/o is?", "How well do you think Maria/o would be able to complete all the duties of the job?", and "Overall, how would you rate Maria/o's strength as an applicant?" Responses ranged from 1 (*not at all*) to 7 (*very much*) (α = .86).
- 4. Honesty, which included four items measuring participants' perception of applicants' honesty, two items by Roulin et al. (2014): "Do you think that Maria/o has been honest in describing her/his personality?" and "Overall, how honest would you perceive Maria/o to be?"; and two items added to the specific experimental condition: "Do you believe that Maria/o has been honest in describing her/his academic and professional experiences?" and "Do you believe that Maria/o has been honest in describing her/his skills and abilities?", with responses ranging from 1 (*not at all*) to 7 (*very much*) ( $\alpha = .84$ ).
- 5. Cognitive load, which included three items readapted and simplified from the 12 items included in the Cognitive Load questionnaire for Multiple Document Reading (CL-MDR) (Cerdan et al., 2018): "Was it easy to understand the motivation letter?", "How much effort did the motivation letter require to be read?", and "How clear and coherent did you find the motivation letter?", with responses ranging from 1 (*not at all*) to 7 (*very much*) ( $\alpha$  = .56). The first and the third items were reversed, and high scores of cognitive load correspond to high levels of cognitive load.

The dimensionality of the evaluation of applicants was evaluated by testing measurement and structural equation models and was carried out using the R Package *lavaan* version 0.6-5 Index. The *lavaan* package is developed to provide users with a package for latent variable modeling. Lavaan may be used to estimate several multivariate statistical models, like path analysis, confirmatory factor analysis, structural equation modeling, and growth curve models. Goodness of fit was checked using several indices simultaneously (Bollen, 1989). Two indices were  $\chi^2$  and the ratio between  $\chi^2$  and degree of freedom ( $\chi^2$  /df). Further, to overcome the fact that the chi-square statistic is sensitive to the sample size, I considered it along with chi-square, comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA). CFI values equal to or above .90 were considered as good. RMSEA values equal to or smaller than .08 were considered as reasonable (Hu & Bentler, n.d.; Ullman, 2006; Wang & Wang, 2012). This CFA aimed to check if it was worth considering separately the dimensions of likability, hirability, and competence (Good & Rudman, 2010), rather than together as a whole dimension of evaluation of applicants. Additionally, to test for the first time the relationship of these three dimensions with the perceived honesty of applicants and the cognitive load, which was included for the first time as a measure to consider in hiring decisions. A model with five dimensions and 18 items (see Appendix C) was evaluated, without correlation among the hirability, likability, competence, honesty, and cognitive load dimensions. It showed a quite good fit:  $\chi^2$  (236) = 295.919, p < .001,  $\chi^2$  /df = 2.37; TLI = 91, CFI = .93, RMSEA = .08 [.07–.09]. All the factor loading values were significant to p < .001 with values between .55 and .91, except for two that were lower than .35. I found positive and significant correlations among all dimensions (p < .001) (see Figure 2). Nonetheless, the correlations among the likability, hirability, and competence dimensions suggested collinearity among them.

In fact, likability, hirability, and competence were strongly correlated (r > .90), and for this reason, I evaluated a second model with only one latent variable, which I called "evaluation," without distinguishing between the hirability, likability, and competence dimensions. I expected all the items to saturate one factor so that the distinction among the three factors would thus come to naught. Honesty and cognitive load remained distinguished dimensions. I excluded from this second model Item 24, Item 20, and Item 22, which had factor loading values lower than .55. This model produced better fit indexes:  $\chi^2$  (237) = 242.999, p < .001.  $\chi^2$  /df = 2.80; TLI = .92, CFI = .93, RMSEA = .09 [.08–.10]. Hence, as I expected, combining the three aspects into one single dimension was justified (see Figure 3). I decided to implement the final model and refer to the evaluation dimension (9 items;  $\alpha$  = .93, M = 5.21; SD = 0.91), honesty dimension (4 items,  $\alpha$  = .89, M = 4.78, SD = .99) and cognitive load dimension (2 items,  $\alpha$  = .59, M = 5.28, SD = .94) in the further analysis.

**Evaluators' Subtle Gender Bias.** To measure participants' subtle gender bias, the Gender Beliefs Scale developed by Evans and Diekman (2009) was used. This scale assessed gender norms through participants' ratings of agency and communion of ideal women and men: "Please indicate to what extent the ideal man would possess the following characteristics" (e.g., "competitive," "daring," "affectionate," "gentle"). Ratings were made on seven-point scales ranging from 1 (Not *at all*) to 7 (*Extremely*). For both male and female targets, the same four items for agency (male,  $\alpha = .76$ ; female,  $\alpha = .82$ ) and four items for communion (male,  $\alpha = .89$ ; female,  $\alpha = .76$ ) were assessed. A measure of gender norms was constructed by subtracting the counterstereotypic from the stereotypic dimension (e.g., for women, subtracting ideal agency from ideal communion) and averaging the two dimensions of both men and women (r = -.389; p < .01). Positive scores represented a greater gender bias.

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participants' self-report measure of agency and communion belongingness was assessed with the Agency Communion (AC) Scale developed by Abele et al. (2016). This scale measures how participants consider their traits in terms of agency and its subdimensions assertiveness and competence, and communion and its subdimensions morality and warmth: "Please indicate how the following characteristics apply to you: If you, for instance, think that you are very diligent, please mark the '2' on the left-hand side. If you think you are very lazy, please mark the '2' on the right-hand (e.g., 'very diligent/lazy,' 'go to pieces under pressure / stand up well under pressure')." Ratings were made on a five-point response scale, ranging from -2 (*low*), -1, 0, 1, to 2 (*very*). The order of ratings changed for some adjectives from -2 (*very*), -1, 0, 1, to 2 (*very*). The order of ratings changed for some adjectives from -2 (*very*), -1, 0, 1, to 2 (*low*). In this way, some items at the left end of the scale had -2 (*low*) and at the right end 2 (*very*); conversely, other items at the left end of the scale had -2 (*very*) and at the right end 2 (*low*). The 21 traits presented in the scale belonged to the two dimensions of agency ( $\alpha = .76$ ) and communion ( $\alpha = .79$ ). The adjective "diligent" was for warming up and not to be considered in the analysis. Answers were recorded on a five-point scale, from the left end of the scale corresponding to the 2 (*low*) rating to the right end corresponding to the 2 (*very*) rating; then the two dimensions of both communion and agency were averaged.

**Manipulation Checks**. Participants' perceived communion/agency in regard to applicants was assessed with one item measuring applicants' communion: "How cooperative did you perceive Maria/o to be?", and one item measuring applicants' agency: "How competitive did you perceive Maria/o to be?", with response options ranging from 1 (*Not at all*) to 7 (*Very*).

#### Results

# Check on Participants' Perception of Applicants' Prototypicality

To check the effectiveness of the manipulated condition of applicants' prototypicality (agentic/competitive vs. communal/cooperative), a *t*-test for independent samples analysis comparing applicants in the agentic vs. communal conditions along the two dimensions of cooperation and communion was run. Agentic applicants (M = 4.58, SD = 1.55) were not perceived as significantly more competitive than communal applicants (M = 4.43, SD = 1.42), agentic/communal t(238) = .781, p = .44, whereas communal applicants (M = 5.87, SD = 1.15) were perceived as more cooperative than agentic applicants (M = 4.86, SD = 1.28),

communal/agentic t(238) = 1.96, p = .05. The effectiveness of communal manipulation worked, but the same cannot be inferred for agency manipulation. Perhaps communion was rather easy to relate to cooperation as compared to competition, but it was rather difficult to relate agency to competition as compared to cooperation. Maybe the description of agentic traits did not let participants infer exclusively the presence of agentic traits, whereas the description of communal traits let participants not only infer on the presence of communal traits, but also on the scarcity of agentic attitudes (Gebauer et al., 2013; Kervyn et al., 2012).

# Check on Indipendence among Participants' Gender Bias, Self-reported

# Communion/Agency Dimension Independency

To check for independence among participants' internal characteristics and the experimental conditions, three 2 (applicants' gender) x 2 (applicants' traits: agentic vs. communal) x 2 (traits' language: concrete vs. abstract) ANOVAs were run for participants' gender bias and self-reported communion/agency, respectively. The results for gender bias revealed no significant effects of target gender, target traits, language, or their interactions, all Fs(1, 239) < .64, ps > .43,  $\eta^2 = .010$ . Participants' gender bias was not influenced by applicants' manipulated conditions (see Table 1 for correlations). Further, the experimental conditions did not affect participants' self-reported communion or agency; the two ANOVAs run separately for self-reported agency and communion revealed no significant interactions, all Fs(1, 232) < 3.04, ps > .08,  $\eta^2 = .010$ .

### Analysis of Evaluation, Honesty, and Salary Recommendation of Applicants

With Hypotheses 1a and 1b, I assumed that communal female and agentic male applicants described in abstract terms would be evaluated more positively, perceived as being more honest, and recommended for a higher salary than applicants described in concrete terms. Conversely, agentic female and communal male applicants described in concrete terms would be evaluated more positively, perceived as being more honest, and recommended for a higher salary than applicants described in abstract terms. Given that evaluation, honesty, and salary were correlated (see Table 1), and for reducing the global Type I error rate, to test such hypotheses, I ran a 2 (applicants' gender) x 2 (applicants' traits) x 2 (traits' language) MANOVA for the evaluation of applicants, honesty, and salary recommendation (see Table 1 for means and correlations). The MANOVA was not significant for the main effects of gender, traits, or language, nor for any of the two-way interactions, but yielded a significant three-way interaction (Wilks'  $\Lambda = .96$ , F(3, 229) = 3.01, ps = .031,  $\eta^2 = .038$ ). Table 2 shows the means and standard deviations. No significant differences emerged for salary Fs < 1, ps = .69. Further, none of the two-way interaction effects were significant on evaluation, honesty, or salary Fs < 1, ps = .17. The multivariate three-way interaction was due to the univariate three-way interactions on evaluation F(1, 231) = 6.29, ps = .013,  $\eta^2 = .027$  and on honesty Fs(1, 231) = 4.95, ps = .037,  $\eta^2 = .019$ .

In regard to the evaluation dimension, when female applicants were agentic (counterstereotypical) and described concretely, they were evaluated more positively than agentic men (stereotypical) (female/male t(54) = 2.17, p = .031); a trend difference occurred for communal female applicants (stereotypical) described abstractly, as they were evaluated more positively than communal men (counterstereotypical) (female/male t(58) = 1.84, p = .07). Hypotheses 1a and 1b were supported consistently in regard to the agency dimension: When language was concrete, agentic female applicants were evaluated more positively than agentic male applicants. Nonetheless, the differences in the communion dimension were just a trend, and the effect seems to support Hypotheses 1a and 1b, which is also consistent with the communion dimension: When language was abstract, communal female applicants were evaluated more positively than communal male applicants. Significant differences did not occur either when the applicants were communal and described in concrete terms, nor when the applicants were agentic and described in abstract terms.

For the honesty dimension almost the same results as observed for evaluation were obtained: When language was concrete, agentic female applicants were perceived as being more honest than agentic male applicants (female/male t(54) = 1.93, p = .05), which supports Hypotheses 1a and 1b regarding honesty.

### The Moderating Role of Cognitive Load

With Hypothesis 2 I assumed that participants perceived lower cognitive efforts when they read about communal female and agentic male applicants described with abstract language than with concrete language, and higher cognitive efforts when they read about agentic female and communal male described with abstract terms than with concrete. To test this hypothesis, I ran a 2 (applicants' gender) x 2 (applicants' traits) x 2 (traits' language) ANOVA on cognitive load ratings. The main effect of language was not significant F(1, 288)= .002, p = .962,  $\eta^2 < .01$ , hence, Hypothesis 2 could not corroborated in this regard. Results showed neither a significant main effect of gender F(1, 288) = .465, p = .496,  $\eta^2 < .01$  nor of traits F(1, 288) = .474, p = .492,  $\eta^2 < .01$ . The only significant interaction effect was a twoway interaction of gender and traits F(1, 288) = 3.79, p = .05,  $\eta^2 = .013$  (see Table 2 for means and standard deviations). Post hoc comparisons using Tukey's HSD test indicated that in regard to agentic applicants F(1, 288) = 3.52, p = .05,  $\eta^2 = .012$ , participants perceived a higher cognitive effort when they read about female (M = 2.78, SD = .13) than about male applicants (M = 2.43, SD = .13). However, in regard to communal applicants F(1, 288) = .79, p = .38,  $\eta^2 < .01$ , there were no significant differences in participants' perception of cognitive load when they read about male (M = 2.60, SD = .13) as compared to female applicants (M =2.43, SD = .14). This last result is really interesting; in fact, it suggests that the participants' cognitive process was affected by the level of cognitive load in relation to the applicants' stereotypicality, but only for agency. In other words, participants' cognitive process seems to be affected only when female applicants violated their gender prescriptions, but not when male applicants did so. This is even more interesting if we consider that regardless of the manipulation of language, participants found it more difficult to read about agentic female applicants than about communal, whereas this was not the case in regard to communal male

applicants. These results supported Hypothesis 2 to the extent that stereotypical versus counterstereotypical descriptions of applicants affected participants' cognitive load, but only when applicants were female. In addition, contrary to my expectations, and Doest et al.'s (2002) and Rubin et al.'s (2013) findings, in the context of hiring decisions, language does not seem to have any moderating effect on this relation.

Finally, with Hypothesis 2a I assumed that participants who perceived a higher cognitive effort will evaluate communal female and agentic male applicants described in abstract terms more positively than those described in concrete terms. With hypothesis 2b, I assumed that participants who perceived a higher cognitive effort would have evaluated agentic female and communal male applicants described in concrete terms more positively than those described in abstract terms. Rubin et al. (2013), to test similar hypotheses, ran a moderating mediation analysis, with individuals' stereotypicality condition (stereotypical vs. counterstereotypicality) as the focal predictor, language condition (abstract vs. concrete) as the moderating variable, processing fluency as the mediating variable, and individuals' likability as the dependent variable. Initially, I replicated this model substituting processing fluency with cognitive load, but taking into account previous results which revealed an effect of gender and traits on cognitive load, I decided to run a 2 (applicants' gender) x 2 (applicants' traits) x 2 (traits' language) ANCOVA on the evaluation of applicants, controlling for cognitive load ratings. A significant main effect of cognitive load was apparent, F(1, 281) = 39.24, p < .01,  $\eta^2 = .12$ , as well as a significant three-way interaction among gender, language, and cognitive load F(1, 281) = 3.99, p = .05,  $\eta^2 = .01013$  (see Table 3 for means and standard deviations). One possible way to explain a three-way interaction of categorical variables with continuous covariates is to use the moderated multiple regression analysis (Dawson & Richter, 2004). Accordingly, a moderated mediation analysis was carried out using the package lavaan version 0.6-7 (Rosseel, 2011) by R version 4.0.2 (R Core Team, 2017), including cognitive load as the independent variable, language of description and gender of applicants as moderator, and evaluation of applicants as the dependent variable (see Table 4), revealing a significant three-way interaction among gender, language, and cognitive load ( $\Delta R^2 = .011$ , F(1, 288) = 3.77, p = .05).

It seems that when female applicants were described with concrete language, participants' cognitive load affected more negatively their evaluation ( $\beta$  = -.466, 95% bootstrap *CI* [-.644, -.287], *t*(288) = -5.12, *p* < .01) than when female applicants were described with abstract language ( $\beta$  = -.261, 95% bootstrap *CI* [-.457, -.064], *t*(288) = -2.60, *p* < .01). Conversely, for the evaluation of male applicants, participants' cognitive load negatively affected their evaluation for the condition of abstract language only ( $\beta$  = -.319, 95% bootstrap *CI* [-.515, -.123], *t*(288) = -3.20, *p* < .01), whereas, for the condition of concrete language the effect was not significant ( $\beta$  = -.156, 95% bootstrap *CI* [-.329, .017], *t*(288) = -1.78, *p* = .07). Hypotheses 2a and 2b were not supported, but it seems that for high levels of cognitive load, participants gave a more negative evaluation of only female applicants.

Throughout the previous analysis, participants perceived more cognitive effort when the female target was described as agentic; here we found that language also concurred with the cognitive load in affecting the evaluation of applicants: Different descriptions of the gender-target applicants had different effects on their evaluation. Specifically, it seems that reading about agentic female applicants resulted in a perception of higher cognitive effort, and a concrete description resulted in a worse evaluation of female applicants as compared to an abstract description.

## Path Model

To test Hypothesis 3 I conducted a path model in which participants' internal characteristics (cognitive load, gender bias, and self-reported communion/agency dimensions) were focal predictors of perceived honesty, and honesty was the mediating variable between the internal characteristics and the variables evaluation of applicants and salary

recommendation to applicants (see Figure 1). I also assumed different effects between male and female applicants: For female applicants, high levels of cognitive load and self-reported agency would have negatively predicted honesty, whereas high levels of gender bias and selfreported communion would have positively predicted honesty (Hypothesis 3a). For male applicants, high levels of cognitive load and self-reported agency would have positively predicted honesty, whereas high levels of gender bias and self-reported communion would have negatively predicted honesty (Hypothesis 3b).

To test these hypotheses, a path analysis (see Figure 1) was run using the package lavaan version 0.6-7 (Rosseel, 2012) by R version 4.0.2 (R Core Team, 2017). I built a multigroup model with applicants' gender as a grouping variable, in which I inserted participants' cognitive load, gender bias, self-reported agency, and communion as free parameters from perceived applicants' honesty to evaluation and recommended salary to test the mediating role of honesty in evaluation and recommended salary.

To assess the mediation's significance, I used the bootstrapping approach (Hayes, 2009). Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and a 95% confidence interval was computed with the percentile method.

The moderating role of applicants' gender was tested with the Wald test, but it was not significant (Wald  $\chi 2$  (14) = 19.94, p = .13). Despite this, since I was interested in examining the different paths between male and female applicants, I reported all the results distinguishing by applicants' gender. Fit indices for the total sample were good overall [( $\chi 2$  (30) = 238.88, p = .01); RMSEA = .01 (90% CI = [.01, .02]); CFI = 1; TLI = 1].

Table 5 shows that applicants' perceived honesty positively predicted the evaluation of both female (b = .44; p = .001) and male (b = .33; p = .001) applicants, as well as positively predicting the recommended salary for both female (b = .28; p = .001) and male (b = .23; p = .001) applicants. Cognitive load was a negative predictor of the evaluation of female (b = .21; p = .001) and male ( $\beta = -.34$ ; p = .001) applicants, and of the perceived honesty of both

female (b = -.42; p = .001) and male (b = -.25; p = .001) applicants. On the other hand, cognitive load negatively predicted the recommended salary for male applicants (b = -.24; p = .001) but not for female applicants. On the other hand, gender bias negatively affected the recommended salary only for female applicants (b = -.25; p = .001). Finally, the participants' self-reported communion dimension predicted the perceived honesty regarding female (b = ..38; p < .01), but not male applicants.

In Table 6, the indirect effects are shown. In regard to the female applicants, honesty positively mediated the relation between participants' self-reported communion dimension and the evaluation of female applicants (b = .38; p = .01). Perceived honesty also negatively mediated the effect of participants' cognitive load on the evaluation of female applicants (b = ..19; p < .01). There were no significant mediations with participants' self-reported agency and gender bias. Nevertheless, we can say that Hypothesis 3a was confirmed to the extent that honesty mediated the relation between cognitive load and participants' self-reported communion dimension and female applicants' evaluation. In regard to the male applicants, honesty mediated the relation between participants' cognitive load and evaluation of male applicants (b = -.08; p = .01), but also of their recommended salary (b = -.12; p = .01). Hypothesis 3b was partially supported, but only to the extent that honesty mediated the relation between cognitive load and the evaluation of male applicants, but I assumed that cognitive load would be a positive predictor of male applicants' perceived honesty. These results suggested that this effect was negative, similarly to the female applicants.

# Discussion

First of all, Study 1 provided a unified measure of the evaluation of applicants by integrating the different dimensions (i.e., competence, hirability, likability) existing in the literature (Good & Rudman, 2010). The three constructs overlap to a very high degree, making the disregard of the distinction among them plausible. In fact, likability, hirability, and competence were strongly correlated, collinear (r > .90), and for this reason, I evaluated a

second model with only one latent variable, which I called "evaluation." I expected that all items would saturate one factor so that the distinction among the three factors would thus come to naught. I also included honesty and cognitive load, which remained distinguished dimensions. The honesty construct remained composed of the initial four items that were confirmed by the CFA and the cognitive load dimension of two items; the third item initially included was droped out because it did not have a good factor loading. I think that such a measure of evaluation of applicants could be helpful in future studies on hiring decisions, especially in those studies in which the aim is to investigate how manipulated conditions impact (positively or negatively) the recruiters' evaluation of applicants.

Secondly, this study aimed at investigating whether for the gender-neutral job (researcher in medicine) stereotypical applicants described in abstract terms would have been considered more honest, evaluated more positively, and obtained a higher salary than stereotypical applicants described in concrete terms. Conversely, counterstereotypical applicants described in concrete terms would have been considered more honest, evaluated more positively, and obtained a higher salary than stereotypical applicants described in abstract terms. I also hypothesized that gender bias would have negatively affected stereotypical female applicants described in concrete terms to a higher degree as compared to those described in abstract terms, as well as counterstereotypical female applicants described in abstract terms as compared to those described in concrete terms.

Results showed that agentic females were evaluated more positively than agentic males when language was concrete, whereas (although it emerged only as a trend) communal females were evaluated more positively than communal males when language was abstract. This evidence not only supports my hypotheses, but is also in line with results obtained by Doest et al. (2002) and against results shown by Rubin et al. (2013): Counterstereotypical applicants are evaluated more positively if described concretely rather than abstractly, and stereotypical applicants are evaluated more positively if described abstractly rather than concretely. More importantly, these results highlighted the fact that the applicants who can benefit most from the different usage of language are female applicants. Indeed, there were no significant differences when participants evaluated stereotypical male applicants described in abstract terms or counterstereotypical male applicants described in concrete terms. Very similar results were obtained when participants rated applicants in terms of perceived honesty: When language was concrete, counterstereotypical female applicants were perceived as more honest than stereotypical male applicants, whereas in regard to abstract language no significant results were obtained.

The reason why stereotypical female applicants are evaluated more positively than male counterstereotypical applicants when the language of their description is abstract may be because stereotypical applicants who are consistent with their gender prescription obtain a positive judgment among recruiters, avoiding the display of gender bias (Cohen & Bunker, 1975; Eagly & Karau, 2002; Glick, 1999; Howell & Weeks, 2017; Rudman & Glick, 2001). On the other hand, the reason why counterstereotypical female applicants are evaluated more positively than male stereotypical applicants when the language of their description is concrete may be because providing gender stereotype-inconsistent information makes individuals evaluate men as more communal but not less agentic, and women as more agentic but not less communal (Maris et al., 2016). In line with Maris, describing women in concrete agentic terms lets participants make inferences about both their agency and communion. Indeed, women are required to be both communal and agentic to be hired (Rudman & Glick, 1999), and, for instance, using an equal number of feminine and masculine IM tactics simultaneously (Guadagno & Cialdini, 2007) increases womens' chances of being hired. However, Varghese et al. (2018) found that the hybrid style not only helped female applicants but also male applicants. In their studies, the authors found that gender was not a relevant factor in determining whether applicants' hirability would be influenced by the IM style. In my study, I found that although gender per se was not a relevant factor, in interaction with

applicants' traits and language it was, indicating that language manipulation may be more useful for women than for men. Results for the honesty dimension were in line with those for evaluation.

Thirdly, this study was aimed at extending Doest et al.'s (2002) and Rubin et al.'s (2013) studies' implications to the hiring domain, and at providing the current literature with new evidence on the effect of cognitive load on recruiters' perception and evaluation of stereotypical and counterstereotypical applicants. Following the current evidence on cognitive load (i.e., Reber & Greifeneder, 2016), I assumed that low levels of processing fluency would correspond to high levels of cognitive load, and vice versa. In line with Doest et al. (2002), I hypothesized that when stereotypical applicants were described in abstract terms, participants scored lower on levels of cognitive load than when counterstereotypical applicants were described in concrete terms (Hypothesis 2). Moreover, I assumed that for low levels of cognitive load, stereotypical applicants described in abstract terms would have been evaluated more positively than those described in concrete terms (Hypothesis 2a). In contrast, for high levels of cognitive load, counterstereotypical applicants described in concrete terms would have been evaluated more positively than those described in abstract terms (Hypothesis 2b). First of all, results revealed that the perceived cognitive effort affected the perception of applicants' stereotypicality, but only for female applicants. Indeed, perceived cognitive effort seemed to be affected by the applicants' trait manipulation only when participants read about female applicants represented with gender stereotype-inconsistent information (i.e., agentic traits). I expected a significant main effect of language, which did not occur. Nevertheless, I believe that the fact that participants perceived a higher cognitive effort when reading about counterstereotypical female applicants as compared to stereotypical, effect which was not present in regard to male applicants, is a shred of new important evidence worthy of further investigation.

Moreover, perceived cognitive load seemed to also affect applicants' evaluation; indeed, cognitive load interacted with language and applicants' gender having an influence on the final evaluation. In other words, my results suggested that when participants read about female applicants described in concrete terms, perceived cognitive effort was higher and its effect harsher on the evaluation as compared to when female applicants were described in abstract terms. We can explain this finding relying on the fact that concrete language normally increases levels of cognitive load (Doest et al., 2002; Rubin et al., 2013), and, according to my aforementioned results, female-target descriptions more likely lead to an increase of cognitive load than male-target descriptions. These two considerations together could explain female-target applicants' results. Further, as we found throughout the previous analyses, when the described target is male, no significant differences in the usage of one language rather than the other in regard to cognitive load and applicant's evaluation was apparent. However, since this has been uncharted territory until now, I strongly believe that it deserves further investigation. In Studies 2 and 3 I further tested the effects of cognitive effort on the evaluation of applicants.

Finally, Study 1's goal was to perform a new path model to investigate the mediating role of applicants' perceived honesty in the relationship between participants' internal characteristics (cognitive load, gender bias, and self-reported communion/agency dimensions), and evaluation of male and female applicants and their salary recommendation. Specifically, I hypothesized that participants' internal characteristics were focal predictors of perceived honesty, honesty the mediating variable, and the evaluation of applicants and salary recommendation for applicants the dependent variables (Hypothesis 3). In particular, for female applicants, cognitive laod and self-reported agency would have negatively predicted honesty, whereas gender bias and self-reported communion would have positively predicted perceived honesty. Conversely, for male applicants, cognitive load and self-reported agency
would have positively predicted honesty, whereas gender bias and self-reported communion would have negatively predicted honesty.

First of all, in line with other studies (i.e., Buller & Burgoon, 1996; Roulin et al., 2014; Vrij et al., 2010), results confirmed that honesty was a positive predictor of the evaluation of male and female applicants, as well as of their recommended salary. Moreover, in line with Rubin et al. (2013), cognitive load was a negative predictor of the evaluation of both male and female applicants; furthermore, in line with Hanks et al. (2016), cognitive load was also a negative predictor of both female and male applicants' perceived honesty. Surprisingly, cognitive load was a negative predictor of only male applicants' salary recommendation, and not of female applicants. I did not make different assumptions for the evaluation of applicants and their salary recommendations, but this effect will be further investigated in the following studies. A further effect which can be outlined, is the fact that gender bias negatively affected the recommended salary only for female applicants. This finding is easier to explain as compared to the previous one, as there is vast literature available on gender bias and its penalties against women in the workplace (Eagly & Karau, 2002; Glick et al., 1997; Heilman, 2001; Rice & Greenlee, 2018; Rudman & Glick, 2001). Finally, participants' belongingness to the communion dimension, as I expected, positively predicted the perceived honesty of female applicants, but not of male. However, participants' belongingness to agency communion was not a significant predictor of either evaluation of applicants, their salary recommendation, or their perceived honesty.

Thus, the results can be seen as evidence supporting my path model, since the mediating role of honesty was confirmed for all other variables except for the moderating role of applicants' gender. I will discuss the path model's results distinguishing for applicants' gender, even if all of these differences only reflect chance observations. In the female-target condition, honesty positively mediated the relation between participants' belongingness to the communion dimension and the evaluation of female applicants. As I assumed, participants

who rated themselves as more communal, perceived female applicants as more honest, possibly due to the implicit association of women with communal traits, which as a consequence resulted in more positive evaluations of female applicants. This finding were further investigated in Studies 2 and 3, introducing a measure of perceived applicants' stereotypicality and a measure of how participants imagine their ideal applicants in terms of communion and agency facets, respectively. In this way, I could test whether participants high in communion perceived female applicants as more honest than men, because they made inferences about the high levels of the communion of female applicants. Furthermore, honesty mediated the relation between cognitive load and female applicants' evaluation: Namely, as I expected, the higher the levels of participants' cognitive load, the less honest and more negatively they evaluated the female applicants. This finding corroborated Hanks et al.'s (2016) results in the marketing field, now extended to the hiring process. Finally, honesty mediated the relation between participants' cognitive load and the evaluation of male applicants, as well as their recommended salary. Nonetheless, although I assumed that cognitive load would have a positive effect on male applicants' perceived honesty, results suggested that this effect was negative, similarly to the one observed in regard to female applicants. Although some modifications need probably to be implemented, and further evidence is necessary to corroborate my findings, I am confident that my path model may provide interesting and reliable data in regard to the assessed effects. Thus, in the next two studies, I continued focusing on the model, although with a few variations.

To conclude, a further limitation related to the drop-out rates needs to be mentioned: Data from 42 participants were excluded for giving the wrong answer to the control item. This might mean that many of those who gave the right answer may just have guessed it correctly. One first possible cause for this could be participants' lack of motivation while filling out the questionnaire, due to the fact that they did not get any compensation for participation. Another reasonable explanation which is consistent with my results might be related to the fact that no main effects of gender were found across the different analyses. Applicant's gender might not have been a relevant factor which participants took into consideration when evaluating an applicant.

In Study 2, I examined whether disclosing versus not disclosing weaknesses affected the perception of applicants' honesty and consequentially recruiters' evaluation of applicants. Further, the study investigated which type of weaknesses among those described as a lack of communion and those described as a lack of agency was more effective in line with applicants' gender in increasing applicants' perceived honesty and evaluation. Finally, I replicated the path model tested in Study 1, including as focal predictors processing fluency along with cognitive load, attitudes toward women along with gender bias, and applicantreported, as well as self-reported communion and agency.

## Study 2

## **Objectives**

In the marketing field, consumers consider more credible and prefer products showing both positive and negative, rather than only positive characteristics (Bohner et al., 2003). Applicants' transparency is a fundamental factor which increases their positive evaluation and their chance of being hired (Buller & Burgoon, 1996; Roulin et al., 2014). Taking these two considerations together, it is reasonable to posit that weaknesses, which are negative traits, could represent an advantage for applicants in terms of perceived honesty and consequentially of positive evaluation. As weaknesses' effect on evaluation of applicants have not been investigated yet in relation to the gender-target applicants, it would be interesting to see which type of weaknesses would be the most effective in line with the gender-target applicants. The literature on the effect of negative personality traits in individuals (e.g., Abele & Bruckmüller, 2011; Abele & Wojciszke, 2014; Bruckmüller & Abele, 2013; Wojciszke, 1994, 1997) shows that when a target's high (low) agency (communion) is mentioned, but not the other content dimension, perceivers infer the opposite for the omitted dimension (Gebauer et al., 2013). Moreover, IM research highlighted that IM tactics are different between male and female applicants, and female applicants should implement hybrid tactics (masculine and feminine) to have higher chances of being hired or promoted. Women who are seen as both communal and agentic have higher chances of being hired and get better evaluations than only communal or agentic women (Heilman, 2012; Moscatelli et al., 2020; Rudman & Glick, 1999). Furthermore, as already mentioned, after being exposed to gender stereotypeconsistent information, participants perceive men as more agentic than before, and women are not only perceived as more communal but also less agentic than before. In contrast, after being exposed to gender stereotype-consistent information, participants perceive men as more communal than before, and women as more agentic (Maris et al., 2016). Thus, I hypothesized that applicants who showed their weaknesses would have been considered more honest than applicants who did not, and that this effect would affected the evaluation of applicants in relation to the type of weaknesses disclosed.

First of all, Study 2's goal was to investigate whether disclosing weaknesses along with positive but gender-neutral traits would have increased the applicants' perceived honesty compared to not disclosing weaknesses, and whether disclosing counterstereotypical weaknesses (a lack of communion for female applicants and a lack of agency for male applicants) would have increased the positive evaluation of applicants compared to disclosing stereotypical weaknesses.

Study 1 showed that perceived cognitive load was affected by the description of applicants in terms of their gender stereotypicality, regardless of the different usage of language (agentic vs. abstract). Perceived cognitive load also interacted with the type of language and the gender of applicants in affecting the evaluation of applicants. Moreover, Study 1's results showed that salary recommendations for applicants followed different patterns as compared to evaluation, and the effects on its ratings were different between male and female applicants. Indeed, perceived cognitive load seemed to positively affect salary recommendation ratings for male applicants, but not for female. According to several studies (e.g., Heilman & Caleo, 2018), female and male applicants are evaluated based on double standards. Commonly, recruiters expect lower levels of performance from female applicants than from male, due to the perception of a lack of fit between what an applicant is like and what is required by the specific job to succeed in it. For this reason, it is likely that gender bias and gender discrimination against female applicants will be promoted with negative consequences in terms of their selection, compensation, promotion, and evaluation. In light of these considerations, I wanted to include a measure of promotion of applicants along with salary recommendations. I expected that promotion of employees would have followed the same pattern as the salary recommendation because these two measures entail the same dimension: They are more related to the vertical segregation phenomenon than to the horizontal.

Secondly, I aimed to further investigate the effect of applicants' stereotypicality on perceived cognitive load and the effect of perceived cognitive load on both salary recommendation and promotion. This time I included a measure of processing fluency along with cognitive load to also examine their relationship, as suggested by Reber and Greifeneder (2016).

Finally, Study 2's goal was to replicate the path model of Study 1, including not only promotion as a dependent variable along with evaluation and salary recommendation, but also processing fluency as focal predictor and an additional measure of gender stereotype: the AWS. According to Parks and Mary Ann (2004), the mediating role of AWS between individuals' gender and their attitudes toward sexist language revealed that women and men viewed women's rights differently. Namely, women were more supportive of women's rights as compared to men, who tended to be ambivalent about, or indifferent to, women's rights, Moreover, in line with some findings on the role of AWS, Spence and Hahn (1997) speculated that old-fashioned sexism might be returning. Hence, I believe that including AWS along with the previous measure of gender bias used in Study 1 could contribute to literature with interesting insights. Another measure that I considered in this path model was the perceived prototypicality of applicants. In line with Study 1, participants who self-reported high levels of communion tended to rate female applicants as more honest and to evaluate them more positively. This tendency did not occur for male applicants. In Study 1, I speculated that this tendency could be explained by the fact that women are strongly associated with the communion dimensions, which are strongly associated with honesty as well. To test my assumptions, I decided to include a measure of applicants' perceived stereotypicality. I assumed that the more communal female applicants were perceived, the more honest they would be rated.

#### **Design and Hypotheses**

The design of the study was a 2 (applicants' gender, male or female) x 3 (types of weaknesses, lack of agency or lack of communion or none) between-subjects factorial design.

My hypotheses were as follows:

**Hypothesis 1.** Applicants who disclose their weaknesses will be perceived as more honest, evaluated more positively, and recommended for a higher salary and promotion than applicants who do not disclose their weaknesses.

**Hypothesis 1a.** Female applicants who disclose weaknesses described as a lack of communion will be perceived as more honest, evaluated more positively, and recommended for a higher salary and promotion than female applicants who disclose weaknesses described as a lack of agency or none.

**Hypothesis 1b.** Male applicants who disclose weaknesses described as a lack of agency will be perceived as more honest, evaluated more positively, and recommended for a higher salary and promotion than male applicants who disclose weaknesses described as a lack of communion or none.

Hypothesis 2. Processing fluency is negatively related to cognitive load.

**Hypothesis 3**. Participants perceive less cognitive effort and more fluent processing when they read about applicants disclosing no weaknesses, female applicants disclosing weaknesses described as lack of agency, and male applicants disclosing weaknesses described as lack of communion (stereotypical applicants), than when they read about female applicants disclosing weaknesses as a lack of communion, and male applicants disclosing weaknesses as a lack of agency (counterstereotypical applicants).

**Hypothesis 3a.** Participants who perceive higher cognitive effort and less fluent cognitive processing will evaluate female applicants disclosing weaknesses described as lack of agency and male applicants disclosing weaknesses described as lack of communion or none more positively than female applicants disclosing weaknesses as a lack of communion, and male applicants disclosing weaknesses as a lack of agency.

**Hypothesis 4**. Participants' internal characteristics (cognitive load, processing fluency, AWS, gender bias, applicants' perceived prototypicality, and self-reported communion/agency) are focal predictors of perceived honesty, and honesty is the mediating variable between the internal characteristics and the evaluation of applicants, including promotion and salary recommendation (see Figure 4). I assumed different effects among male and female applicants:

**Hypothesis 4a**. For female applicants, participants' cognitive load, processing fluency, negative attitudes toward women, and self-reported agency will negatively predict perceived honesty, whereas gender bias, AWS, self-reported communion, and perception of applicants' prototypicality will positively predict perceived honesty.

**Hypothesis 4b.** For male applicants, participants' self-reported communion, gender bias, and perception of applicants' prototypicality will negatively predict perceived honesty, whereas cognitive load, processing fluency and self-reported agency will positively predict perceived honesty. I do not expect significant results from attitudes toward women on male applicants' perceived honesty.

#### Method

## **Participants**

A sensitivity power analysis using G\*Power 3.1 (Faul et al., 2007) showed that a sample of this size (n = 245) is sufficient to detect moderate special, main, and interaction effects, i.e., f(U) = 0.25 with power = 0.95 (assuming  $\alpha = 0.05$ , six groups, and df = 2); a sample of this size (n = 94) is sufficient to detect small special, main, and interaction effects. Two hundred fifty-three undergraduate college students from several Italian universities attending specific faculties which prepare future human resources (HR) workers, and the Medicine faculty, participated in the study voluntary. They did not get any compensation for participation. Sixty-four participants were excluded for giving the wrong answer to the control item asking to indicate the gender of the applicants they evaluated in the questionnaire (32 participants out of 121 who were assigned to the male applicant condition stated that they evaluated a female applicant instead of a male; 32 participants out of 132 who were assigned to the female applicant condition stated that they evaluated a male applicant instead of a female). The remaining 189 individuals (75 men, 114 women; M age = 23.16, SD = 1.51) were retained in the final sample. I obtained a sample size larger than the 94 suggested to detect the small effect size, among whom 81.5% held a master's degree and 18% a bachelor's degree. Most students came from the Social and Political Sciences faculty (36.7%), while others were from Economics (26.6%), Psychology (10.1%), and Medicine (9.5%). In this study, the participants' perceived likelihood of becoming recruiters was rather high: they were asked to rate how likely it was that they would become recruiters after their graduation, using a seven-point scale ranging from 1 (Not at all) to 7 (Very likely); the mean for this item was 6.83 (SD = 1.76). The participants' interest in being recruiters was still low: They were asked to rate how much they would like to become recruiters after their graduation, using a sevenpoint scale ranging from 1 (Not at all) to 7 (Very likely); the mean for this item was 3.71 (SD = 1.93).

The one hundred eighty-nine participants were randomly assigned to evaluate either a male applicant disclosing a lack of communal weaknesses (n = 34), a female applicant disclosing a lack of communal weaknesses (n = 34), a male applicant disclosing a lack of agency weaknesses (n = 26), a female applicant disclosing a lack of agency weaknesses (n =40), a male applicant disclosing no weaknesses (n = 29), or a female applicant disclosing no weaknesses (n = 26) for a position as a junior physician.

#### **Procedure and Materials**

I used an experimental manipulation in which participants evaluated a male or female applicant for a position as a junior physician. I substituted Study 1's job position (researcher in medicine) because I considered that it would be easier for participants to think of a regular physician than of a researcher in medicine. I also pretested this position in Pilot 1 throughout which the mean score of 4.49 (*SD* = 1.12) was obtained, a score very close to the gender-neutral value of 5. Participants were asked to read a presentation letter by a young physician who was applying for an available vacancy in a private hospital. I manipulated the applicant's gender by presenting the applicant as "Maria" or "Mario," and the applicant's weaknesses by describing them respectively with a lack of communion ("dominant," "overconfident"), a lack of agency ("shy," "vulnerable"), or none. Weaknesses were pretested in Pilot Studies 2 and 3. The presentation letter was structured as in Study 1: The first part included professional; the second part covered personal; and the third part included gender-neutral personality traits (pretested in Pilot Study 1: "I can say that I am a curious, conscientious, and tolerant person") and the weaknesses condition, which variated among participants.

The lack of a communal weaknesses condition was: "Finally, I would like to state also my weaknesses to let you know me better: I am used to being a little dominant and sometimes I feel overconfident"; and the lack of agency condition was: "Finally, I would like to state also my weaknesses to let you know me better: I am used to being a little shy and sometimes I feel vulnerable." The no-weaknesses condition had no weaknesses disclosed. Participants were asked to rate the applicant in terms of evaluation, honesty, and salary recommendation, as in Study 1. Further, I added a dichotomous variable assessing hirability, and a measure of promotion for the researcher positions recommendation to investigate alongside salary recommendation. Additionally, I introduced a measure of applicants' typicality by Rubin et al. (2013) to measure applicants' perceived prototypicality and a measure of subjective processing fluency. Then, as for Study 1, to determine the impact of participants' preexisting subtle gender bias, the Gender Beliefs Scale (Evans & Diekman, 2009) was assessed. I additionally included the Attitudes Toward Women Scale (Whatley, 2008). Further, to investigate participants' belongingness to the communion/agency dimension as in Study 1, the Agency Communion (AC) Scale developed by Abele et al. (2016) was used. Finally, as I included measures to detect participants' gender bias, negative attitudes toward women, and self-perceived communion and agency, I considered a check of applicants' social desirability as necessary. To this end, I used the Social Desirability Scale (Italian version developed by Bobbio & Manganelli, 2011).

### Measures

**Evaluation of Applicants.** Evaluation was assessed as in Study 1, basing on the results obtained throughout the CFA, with a total of nine items and response options ranging from 1 (*Not at all*) to 7 (*Very*) ( $\alpha = .94$ ).

**Hirability.** A dichotomous measure of applicants' hirability was added and assessed with one item: "Would you hire Maria/o?", *yes/no*.

**Applicants' Perceived Honesty.** Basing on the results of the CFA from Study 1, the measure of honesty was assessed with a total of four items with response options ranging from 1 (*Not at all*) to 7 (*Very*) ( $\alpha = .90$ ).

**Applicants' Weaknesses Honesty.** One specific item was added to measure the extent for which participants perceived as more honest the applicants who disclosed weaknesses

compared to those who did not, using a seven-point scale ranging from 1 (*Not at all*) to 7 (*Very*) (M = 4.85, SD = 1.52).

**Salary Recommendation.** One item was assessed to measure participants' salary recommendation for the applicant: "The national average starting salary for a junior physician is  $\notin 2,000$  per month. If hired, what do you think Maria/o's starting salary should be?" Response options ranged from 1 ( $\notin 500$ ) to 7 ( $\notin 3,500$ ) (M = 5.68, SD = 1.10).

**Promotion Recommendation.** A measure of the likelihood of career promotion for the applicants was added, assessed with the item "Assuming that Maria/o will be hired for this occupation, if you were Maria/o's boss and after several months a position as a senior physician is available, would you promote her/him to a higher-level position?", with response options ranging from 1 (*Not at all likely*) to 7 (*Very likely*) (M = 3.65, SD = 1.23).

**Applicants' Prototypicality.** Given that in Study 1 the manipulation check on applicants' agency (i.e., "How competitive do you rate the applicant") did not reveal any significant differences between communal- and agentic-described applicants, I substituted Study 1's manipulation check on perceived applicants' communion and agency with a measure of applicants' perceived typicality. This measure is assessed with two items measuring stereotypicality and conventionality (Rubin et al., 2013), respectively: "How conventional do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" and "How stereotypical do you perceive the applicant to be?" applicant 1 (*Not at all*) to 7 (*Very*) (r = .60).

**Processing Fluency.** A measure of the subjective processing fluency was introduced to control the cognitive level of processing style, assessed with the following item: "Can you please indicate how easy it was to imagine the target individual" (Rubin et al., 2013), with response options ranging from 1 (*Very difficult*) to 7 (*Very easy*) (M = 4.70, SD = 1.33).

**Cognitive Load.** As in Study 1, a measure of cognitive load was assessed with two items: "Was it easy to understand the motivation letter?" and "How much effort did the

motivation letter require to be read?". Response options ranged from 1 (*Not at all*) to 7 (*Very much*) (r = .53,). The first item was reversed, and high scores of cognitive load correspond to high levels of cognitive effort.

**Evaluators' Subtle Gender Bias.** For male targets, four items for agency ( $\alpha = 83$ .) and four items for communion ( $\alpha = .82$ ) were assessed, and for the female targets the same four items for agency ( $\alpha = .76$ ) and the same four items for communion ( $\alpha = .81$ ) were assessed. A measure of gender norms was constructed by subtracting the counterstereotypic from the stereotypic dimension (e.g., for women, subtracting ideal agency from ideal communion) and averaging the two dimensions for both men and women (M = .18, SD = .64, r = -.417, p < .01). Positive scores represented a higher gender bias for both women and men, and negative scores represented a lower gender bias.

Attitude Toward Women (AWS). A measure of attitudes toward women was added along with the gender bias measure to have higher probabilities, as compared to Study 1, of detecting effects of gender bias. AWS was assessed with the short version of the Attitude Toward Women Scale (Whatley, 2008), with a total of 15 items, e.g., "Swearing and obscenity are more repulsive in the speech of a woman than of a man," with the following response options:  $A = Agree \ strongly$ ,  $B = Agree \ mildly$ ,  $C = Disagree \ mildly$ , and D = $Disagree \ strongly$  ( $\alpha = .80$ ). High scores in AWS correspond to negative attitudes toward women, and vice versa.

**Facets of Fundamental Content Dimensions: Agency and Communion.** The 21 traits presented, which were the same as presented in Study 1, belonged to the two dimensions of agency ( $\alpha = .75$ ) and communion ( $\alpha = .69$ ), using a seven-point scale ranging from 1 (*Not at all*) to 7 (*A lot*) for each trait.

**Control variables.** I added two control variables. First, a measure of social desirability, which was assessed with the Italian version of the Social Desirability Scale (Bobbio & Manganelli, 2011). The scale comprised a total of 16 items, e.g., "I am very

confident in my judgments," with response options ranging from 1 (*Strongly disagree*) to 6 (*Strongly agree*), without a central neutral point in order to force respondents to express judgments about themselves ( $\alpha = .72$ , M = 3.97, SD = .65). Further, I also asked participants whether the applicants they evaluated had disclosed their weaknesses and to indicate each applicant's gender.

### Results

## Check on Applicants' Prototypicality

To check whether stereotypical applicants (female applicants disclosing their weaknesses as a lack of agency and male applicants as a lack of communion) would be rated as being significantly more typical than counterstereotypical applicants (female applicants disclosing their weaknesses as a lack of communion and male applicants as a lack of agency), a 2 (applicants' gender) x 3 (applicants' weaknesses) ANOVA for ratings of prototypicality of applicants was performed. Results showed that the two-way interaction effect was not significant, F(2, 258) = .71, p = .46,  $\eta^2 < .01$ . This means that participants did not perceive female applicants disclosing weaknesses as a lack of agency (M = 4.60, SD = .18), and male applicants disclosing weaknesses as a lack of communion (M = 4.81, SD = .19), as being more stereotypical than female applicants disclosing weaknesses as a lack of agency (M = 4.38, SD= .20), and male applicants disclosing weaknesses in terms of prototypicality did not bring the expected effect. Nonetheless, I used the weaknesses' condition in the following analyses to test for differences between male and female applicants for the different types of weaknesses to disclose, without inferring about the applicants' prototypicality.

## Analysis of Evaluation, Honesty, Promotion, and Salary Recommendation of Applicants

With Hypotheses 1 to 1b, I assumed that applicants who disclose their weaknesses would have been perceived as being more honest, evaluated more positively, and recommended for a higher salary and promotion than applicants who did not disclose their weaknesses. Specifically, female applicants who disclosed weaknesses described as a lack of communion would have been perceived as being more honest, evaluated more positively, and recommended for a higher salary and promotion than female applicants who disclosed weaknesses described as a lack of agency or none. Conversely, male applicants who disclosed weaknesses described as a lack of agency would have been perceived as being more honest, evaluated more positively, and recommended for a higher salary and promotion than female applicants who disclosed weaknesses described as a lack of agency would have been perceived as being more honest, evaluated more positively, and recommended for a higher salary and promotion than female applicants who disclosed weaknesses described as a lack of agency as a lack of communion or none.

To test these hypotheses, I initially performed a correlation analysis (see Table 7). Given the medium correlations among evaluation, honesty, and promotion dimensions on the one hand, and the fact that salary recommendation was significantly correlated only with promotion and not with either evaluation or honesty on the other, I decided to run a 2 (applicants' gender) x 3 (applicants' weaknesses) MANOVA for ratings of the evaluation of applicants, promotion, and honesty, but not for salary. For salary, a same-design univariate ANOVA was run.

Significant differences emerged for all of the three variables on gender and weaknesses main effects, but not for the two-way interaction. Both main effects for gender (all Wilks'  $\Lambda = .96$ , *Fs* (1, 259) = 2.79, *ps* = .04) and weaknesses (Wilks'  $\Lambda = .92$ , *F*(2, 258) > 2.75, *ps* < .01) were significant, but the two-way interaction was not significant for any of the dependent variables (all Wilks'  $\Lambda = .98$ , *Fs*(2,258) < 1.27, *ps* > .28). For evaluation ratings, neither main effects nor a two-way interaction were significant. For promotion ratings, only the gender main effect was significant, *F*(1, 259) = 6.10, *p* = .014,  $\eta^2$  = .032, revealing that participants promoted female applicants (*M* = 3.85, *SD* = 1.19) more than male (*M* = 3.42, *SD* = 1.23) (female/male *t*(259) = 2.46, *p* =.02) (see Table 8 for all the means). For honesty ratings, the two main effects of gender, *F*(1, 259) = 4.04, *p* = .046,  $\eta^2$  = .022 and weaknesses, *F*(2, 258) = 5.52, *p* = .005,  $\eta^2$  = .057 were significant. Tukey's HSD test on gender-target condition revealed that female applicants (*M* = 5.10, *SD* = 1.06) were considered generally

more honest than male applicants (M = 4.72, SD = 1.21) (female/male t(259) = 2.24, p = .03). This result also supported the findings from Study 1, which revealed that female applicants who disclosed weaknesses as a lack of agency were perceived as being more honest than male applicants who disclosed weaknesses as a lack of agency. Post hoc comparisons using Tukey's HSD test on the weaknesses condition confirmed Hypothesis 1: Applicants who disclosed weaknesses either as a lack of agency (M = 5.27, SD = .14) or as a lack of communion (M = 4.84, SD = .14) were rated as more honest than those who disclosed no weaknesses (M = 4.61, SD = .15). Hypotheses 1a and 1b were not supported since the expected interaction between gender and weaknesses was not apparent.

For salary recommendation ratings, I performed a 2 (gender) x 3 (weaknesses) ANOVA. Results showed both a significant main effect of gender, F(1, 259) = 3.87, p = .05,  $\eta^2 = .020$  and weaknesses, F(2, 258) = 9.41, p < .01,  $\eta^2 = .07$ , and a significant two-way interaction between gender and weaknesses, F(2, 258) = 11.35, p < .01,  $\eta^2 = .08$ . Tukey's HSD test comparisons on gender revealed that participants recommended a higher salary for female applicants (M = 5.83, SD = 1.14) than male (M = 5.52, SD = .93) (female/male t(259)) = 1.98, p = .05). Post hoc comparisons using Tukey's HSD test indicated that participants recommended a higher salary for applicants who disclosed weaknesses in terms of a lack of agency (M = 5.27, SD = .14) than a lack of communion (M = 4.84, SD = .14), or none (M = .14)4.61, SD = .15). To interpret the two-way interaction, comparisons using Tukey's HSD test were performed, revealing that only for female applicants did significant differences among the weaknesses' condition occur: When female applicants disclosed their weaknesses in terms of a lack of communion (M = 6.67, SD = .17) they were recommended for a higher salary than when they disclosed their weaknesses in terms of a lack of agency (M = 5.52, SD = .15) (lack of communion/lack of agency t(258) = 1.15, p < .01; no weaknesses (M = 5.30, SD = .16); lack of communion/none t(258) = 1.36 (see Table 8)). Eventually, Hypothesis 1a was supported, limited to my assumptions on applicants' salary recommendation: Female

applicants who showed weaknesses as a lack of communion were recommended for a higher salary as compared to those who showed stereotypical weaknesses as a lack of agency or none. In contrast, Hypothesis 1b was not supported; the disclosure of weaknesses in regard to male applicants seemed to be irrelevant for their salary compensation.

## Applicants' Hirability

To further test Hypotheses 1 to 1b by using the categorical variable hirability of applicants, a chi-square test of independence was performed to examine the relationship between gender and applicants' hirability for the three levels of weaknesses. For all three levels, the relation between these variables was not significant ( $Xs^2$  (1, Ns = 66) < .03, ps > .38).

#### The Moderating Role of Perceived Processing Fluency and Cognitive Load

Initially, I tested Hypothesis 2, which assumed that processing fluency was negatively correlated to cognitive load. However, as shown in Table 7, these two variables did not correlate (r = -.06, p = .24). Thus, hypothesis 2 was not supported. In line with this result, we cannot infer that cognitive load works in opposition to processing fluency but only assume that both variables are independent. Since cognitive load and processing fluency were not correlated, in order to test Hypotheses 3 to 3a I ran separate ANOVAs for both variables.

Specifically, Hypothesis 3 posited that participants who read about female applicants disclosing weaknesses as a lack of agency, male applicants disclosing weaknesses as a lack of communion, or no disclosing any weaknesses perceived lower cognitive efforts, and more fluent cognitive processing as compared to when they read about female applicants disclosing weaknesses as a lack of communion, and male applicants disclosing weaknesses as a lack of agency. To test this Hypothesis, I ran two 2 (gender) x 3 (weaknesses) ANOVAs on cognitive load and processing fluency rating, respectively. The first ANOVA on cognitive load ratings showed neither significant simple main effects of applicants' gender (F(1, 259) = 1.85, p = .18,  $\eta^2 = .01$ ) or of weaknesses (F(2, 258) = .61, p = .55,  $\eta^2 = .01$ ), nor a two-way interaction

effect ( $F(2, 258) = 1.05, p = .35, \eta^2 = .01$ ). Means are reported in Table 9. The second ANOVA on processing fluency ratings showed neither significant simple main effects of applicants' gender ( $F(1, 259) = .64, p = .43, \eta^2 = .01$ ) or of weaknesses ( $F(2, 258) = 1.23, p = .30, \eta^2 = .01$ ), nor a two-way interaction effect ( $F(2, 258) = .76, p = .47, \eta^2 = .01$  (see Table 9)). Thus, Hypothesis 3 was not corroborated. Contrary to the findings from Study 1 for in regard to cognitive load, here the fact that participants described their weaknesses in terms of stereotypicality/counterstereotypicality did not affect the participants' cognitive process throughout the present study. This evidence needs to be further investigated.

Moreover, with Hypotheses 3a, I posited that when participants perceived a higher cognitive effort, and less fluent cognitive processing, female applicants disclosing weaknesses as a lack of agency, male applicants disclosing weaknesses as a lack of communion, or not disclosing any weaknesses, would have been evaluated more positively than female applicants disclosing weaknesses as a lack of communion, and male applicants disclosing weaknesses as a lack of agency. To test such hypothesis, a 2 (gender) x 3 (weaknesses) ANCOVA was performed including cognitive load and processing fluency as covariates, on the evaluation of applicants. Neither significant simple main effects nor interaction were apparent, either for cognitive load ( $F(1, 259) = 2.42, p = .12, \eta^2 = .01$ ) or for processing fluency (F(1, 259) =.04, p = .84,  $\eta^2 = .01$ ), and the three-way interaction of both cognitive load (F(2, 258) = .17, p= .84,  $\eta^2$  = .01) and processing fluency (*F*(2, 258) = .12, *p* = .89,  $\eta^2$  = .01) with the two experimental conditions did not occur (means adjusted for the covariates are reported in Table 10). According to these results, my hypothesis regarding the effects of cognitive load and processing fluency was not supported. One possible explanation for the lack of effects in regard to processing fluency dimension might be its measurement with one single item, implemented following Rubin et al.'s (2013) design. While Rubin et al. investigated processing fluency's effect in line with language manipulation, in my study there was no manipulation of language, but only of applicants' stereotypicality, obtained by manipulating

applicants' weaknesses. Therefore, the fact that processing fluency's effect did not occur might be due to the absence of an interaction with manipulated language. In addition, we should bear in mind that the manipulation of applicants' stereotypicality in relation to their weaknesses was not recognized by participants. In fact, participants did not find any differences between the stereotypical and counterstereotypical applicants. However, I further examined this aspect in Study 3.

#### Path Analysis

With Hypothesis 4, I wanted to test a path model replicating and extending the model of Study 1. I assumed that participants' internal characteristics (cognitive load, processing fluency, AWS, gender bias, applicants' perceived prototypicality, and self-reported communion/agency dimensions) were focal predictors of honesty, and honesty was the mediating variable between the internal characteristics and the evaluation of applicants, promotion, and salary recommendation (see Figure 4). I also assumed different paths between male and female applicants: For female applicants, participants' cognitive load, and selfreported agency would have negatively predicted honesty, whereas gender bias, processing fluency, negative attitudes toward women, self-reported communion, and perception of their prototypicality would have positively predicted honesty (Hypothesis 4a). On the other hand, for male applicants, participants' processing fluency, self-reported communion, gender bias and perception of their prototypicality would have negatively predicted honesty. I did not expect significant results from attitudes toward women on male applicants' perceived honesty (Hypothesis 4b).

To test Hypotheses 4 to 4b, a path analysis was run using the package *lavaan* version 0.6-7 (Rosseel, 2011) by R version 4.0.2 (R Core Team, 2017). I built a multigroup model with applicants' gender as a grouping variable, in which I inserted participants' gender bias, cognitive load, processing fluency, AWS, self-reported agency and communion, and

applicants' perceived prototypicality as free parameters from applicants' perceived honesty to evaluation, recommended salary, and promotion.

To assess the mediation's significance, I used the bootstrapping approach (Hayes, 2009). Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and a 95% confidence interval was computed with the percentile method.

Fit indices for the total sample were good overall [( $\chi 2$  (68) = 225.95, p = .01); RMSEA = .01 (90% CI = [.01, .02]); CFI = 1; TLI = 1]. The moderating role of applicants' gender was tested with the Wald test, but significance was not reached (Wald  $\chi 2$  (10) = 15.25, p = .12). Despite this, I reported all the results distinguished by applicants' gender.

Table 11 shows that for female applicants, perceived honesty positively predicted their evaluation (b = .48; p < .01), as well as their promotion (b = .27; p < .01). Likewise, processing fluency positively predicted female applicants' promotion (b = .24; p < .01). Similarly, participants' self-reported communion positively predicted female applicants' promotion (b = .51; p < .01), which is an important result extending the one obtained in Study 1, which showed that self-reported communion was a positive predictor of female applicants' perceived honesty. I speculated that this could be due to the fact that participants make inferences about female applicants' communion, regardless of the explicit mention of communal traits. Indeed, in the same analysis introducing the participants' perception of applicants' prototypicality, proved to be a positive predictor of female applicants' perceived honesty. The more communal participants perceived female applicants to be, the more honest participants rated them, whereas cognitive load emerged as a negative predictor of the evaluation of female applicants (b = -.28; p < .01) and their perceived honesty (b = -.24; p < .01) .01). Negative AWS was a strong negative predictor of the evaluation of female applicants (b = -.53; p < .01), their recommended salary (b = -.97; p < .01), and promotion (b = -1.20; p < -.01) .01). Finally, participants' self-reported agency negatively predicted applicants' promotion (b = -.63; *p* < .01).

Further, for male applicants, as well as for female applicants, perceived honesty positively predicted their evaluation (b = .61; p < .01), and their promotion (b = .35; p < .01). Moreover, gender bias was a positive predictor of male applicants' perceived honesty (b = .44, p < .01). This is a surprising result, definitely worthy of further consideration, since gender bias did not emerged as a predictor of female applicants' perceived honesty, whereas prototypicality was identified as a negative predictor of male applicants' recommended salary (b = ..18; p < .01) and perceived honesty (b = ..25; p < .01). In other words, the more counterstereotypical (i.e., communal) male applicants were perceived to be, the more honest they were rated. Strangely, the same result emerged when they were rated regarding the recommended salary. The more communal they were perceived to be, the higher the salary recommendation. This evidence was further tested in Study 3.

Table 12 shows the indirect effects. For female applicants, honesty mediated the relationship between participants' cognitive load and the evaluation of female applicants (b = -.11; p = .02). This mediation analysis was the only one confirmed among all the hypothesized mediations in Hypothesis 4a. Thus, I can conclude that Hypothesis 4a was not corroborated.

In regard to male applicants, honesty positively mediated the relation between participants' gender bias and male evaluation of applicants (b = .27; p = .05). As stated above, this result is worthy of further speculation, as it is completely opposed to my assumptions: I expected that participants endorsing gender bias would have seen male applicants as more agentic than female, and for this reason perceived male applicants as being less honest. I also assumed the contrary for female applicants, but gender bias was not a significant predictor in regard to any of the variables . Surprisingly, gender bias turned out to be an ally for male applicants. I speculated that this might have happened because when participants endorsed gender bias, the male applicant was evaluated against its gender, but not its prototypicality. The fact that he was not prototypical seems to not even matter. However, this speculation was tested in Study 3. Finally, as I expected, honesty seemed to mediate the effect of participants' perception of male applicants' prototypicality on their final evaluation: The less stereotypical (more communal) participants perceived the male applicants to be, the more honest participants rated the male applicants (b = -.15; p = .05). Further, for the female applicants, only two mediating effects were apparent, one in line with my assumptions and the other opposed. Hence, Hypothesis 4b was as well not fully supported by data.

#### Discussion

The first goal of this study, in line with Bohner et al. (2003), was to investigate the effect of disclosing weaknesses along with positive traits on ratings of applicants' perceived honesty and evaluation. Specifically, following Maris et al. (2016), I wanted to investigate whether disclosing counterstereotypical weaknesses (a lack of communion for female applicants and a lack of agency for male applicants) would have increased the evaluation of applicants compared to disclosing stereotypical weaknesses. My results suggested that the manipulation of weaknesses in terms of prototypicality did not brought the expected effects. Participants did not perceive any differences between stereotypical and counterstereotypical applicants. This could be explained by the measure used to ask participants' perception of applicants' prototypicality, which was weak in relation to the type of manipulation I used. Indeed, manipulating weaknesses in terms of gender-prototypicalitity might not be very evident for participants who did not recognize any differences. This first evidence may explain why the two-way interaction effects of applicants' gender and traits did not occur for the evaluation and promotion of applicants, and their perceived honesty. However, one interesting finding was that female applicants were considered generally more honest than male applicants. This also supported the findings from Study 1, which revealed that stereotypical female applicants were perceived as being more honest than counterstereotypical male applicants. Moreover, disclosing weaknesses, regardless of the gender target, led to

applicants being perceived as more honest than not disclosing any weaknesses, confirming my first assumption.

Another interesting finding was the two-way interaction of applicants' weaknesses and gender for applicants' recommended salary. Although, I made the same assumptions for all the dependent variables (i.e. evaluation, honesty, promotion, and salary), significant results were only obtained in regard to recommended salary.

More interesting still was the fact that significant differences among the three weaknesses' conditions were registered only for female applicants: When female applicants showed counterstereotypical weaknesses (lack of communion) they were compensated more than when they showed stereotypical weaknesses (lack of agency), or none. This finding corroborated my hypothesis on the effectiveness of counterstereotypical weaknesses over stereotypical and added new evidence to discuss. Likewise, in Study 1 it seemed that the applicants who were more advantaged by the language manipulation of stereotypical traits were the female applicants, while in Study 2, disclosing weaknesses seemed to benefit female applicants only in regard to salary recommendation. This evidence is also plausible taking into account current literature, which points out that women are evaluated with double standards, while men are not (Heilman, 2012; Moscatelli et al., 2020; Rudman & Glick, 1999).

Secondly, Study 2 was aimed at examining the relationship between cognitive load and processing fluency. Results showed that those dimensions were not correlated, so we cannot infer that cognitive load may work in opposition to processing fluency. This could be due not only to the fact that cognitive load and processing fluency were self-reported measures, but also because processing fluency was measured by using one single-item. In addition, in line with the results of Study 1, I wanted to further test the effect of cognitive load on evaluating applicants in relation to their stereotypicality. Contrary to the findings from Study 1 in regard to cognitive load, the fact that participants described their weaknesses in terms of stereotypicality/counterstereotypicality did not affect participants' perceived cognitive process in the current study. Again, this result might be explained by the fact that participants did not perceive any differences between the stereotypical and counterstereotypical descriptions of applicants. In this regard, the way in which weaknesses were described could have played an important role in participants' perception of applicants' stereotypicality. Weaknesses were manipulated as "lack of communion" with the aim that respondents read those as a statement of agency, and "lack of agency" as a statement of communion. However, it is among the possibilities that the descriptions provided were not understood in the intended manner. Indeed, being "dominant and overconfident" does not necessarily imply a lack of communion, whereas being "shy and vulnerable" does imply a lack of agency. Nevertheless, although I previously tested these descriptions throughout a pilot study, it is possible that a larger number of participants did not infer lack of communion by the weaknesses described using the terms "dominant" and "overconfident". Further studies should test more effective terms to describe weaknesses in terms of lack of communion.

Finally, I wanted to replicate and extend the path model tested in Study 1. The aim was to further test the model and to confirm its effects, aiming to reach a more efficient model including processing fluency, AWS, and applicants' perceived prototypicality as new focal predictors of honesty. Each of these focal predictors was included based on seemingly relevant reasons: Processing fluency to investigate the effect of participants' cognitive process in evaluating applicants (Doest et al., 2002; Rubin et al., 2013), along with cognitive load; AWS to investigate the effects of different aspects of gender stereotype and expectations along with gender bias (Spence & Hahn, 1997); and perceived prototypicality of applicants due the fact that female applicants are usually expected to be communal (Cohen & Bunker, 1975; Eagly & Karau, 2002; Glick, 1999; Howell & Weeks, 2017; Rudman & Glick, 2001). Indeed, female applicants were rated as more honest than male, which also confirmed my speculation on the reason why participants who rated themselves as high in the communion dimension tended to consider female applicants as being more honest, as I found in Study 1.

As for Study 1, I assumed different paths between male and female applicants. Again, not significant differences were found between female and male applicants. For this reason, I discussed the path model's results distinguishing for applicants' gender only in a speculative, exploratory manner. My main aim was to at least confirm the results obtained for the model developed in Study 1. Indeed, perceived honesty positively predicted both the evaluation of female and male applicants, confirming the path found in Study 1. Nevertheless, contrary to Study 1, although honesty was not a predictor of salary recommendation, t it was a significant predictor of applicants' promotion. In Study 1, cognitive load was a negative predictor of the evaluation of both male and female applicants, and their perceived honesty. Further, with Study 2, I additionally aimed at investigating the unexpected finding that cognitive load was a negative predictor of only male applicants' salary recommendation, and not of female. However, in the present study, cognitive load was a negative predictor of the evaluation of only female applicants, and it did not predict any variables in regard to male targets. Moreover, in Study 1, participants' self-reported communion positively predicted female applicants' evaluation, and in Study 2 female applicants' promotion. Prototypicality positively predicted female applicants' perceived honesty, as we expected. This path could explain the fact that female applicants are rated as more honest and promoted more often as compared to their male counterparts when they are evaluated by participants who described themselves with higher scores in the communion dimension. Interestingly, on the other hand, participants' self-reported agency negatively predicted applicants' promotion. Female applicants are perceived as more honest by participants who are high in communion but promoted more by participants who are high in agency.

Prototypicality, however, was a negative predictor of male applicants' recommended salary and perceived honesty: The more counterstereotypical (i.e., communal) male applicants

were perceived to be, the more honest they were rated, and the higher salary recommendations they got. This evidence appears to be in contrast with most available literature on gender bias in the labor market. Allegedly, men are promoted and compensated more often than women due to being agentic, not communal. This finding was further tested in Study 3. Additionally, Study 2 added new findings to the ones obtained through Study 1: Processing fluency positively predicted female applicants' promotion, as I hypothesized. Likewise, negative AWS was a negative predictor of only the evaluation of female applicants, and not of male. An unusual result registered was the fact that while negative attitudes toward women affected only the evaluation of female applicants, gender bias was a positive predictor of male applicants' perceived honesty. I had assumed that the exact opposite would be the case; in fact, participants scoring higher levels of gender bias should have seen men as agentic, and women as communal, and if communion is strongly related to honesty, participants should, consequently, have evaluated men as being less honest. This last result was examined in Study 3.

Finally, in regard to the mediating effects, the only effect replicated was the one concerning honesty, which mediated the relationship between participants' cognitive load and the evaluation of female applicants. In Study 1, honesty additionally mediated the relation between cognitive load and the evaluation and salary of male applicants. Furthermore, in Study 2, the mediation chain from participants' self-reported communion via female applicants' perceived honesty to evaluation of female applicants did not occurred. Finally, in Study 2, honesty positively mediated the relation between participants' gender bias and male evaluation of applicants. Again, this finding is not only contrary to my hypotheses, but also to available literature on gender bias and applicants' evaluation. One possible speculation regards the possibility that it occurred because for participants who endorse gender bias, the only applicants who were considered worthy of a positive evaluation dimension, it would

not be surprising if gender bias increases favoritism of male applicants. However, considering the mediating role of the honesty dimension, it is surprising. I had assumed that in regard to male applicants, participants' gender bias would have helped recall the agency dimension, which is not related to honesty. This was the reason why I expected a negative relation between gender bias and perceived honesty for male applicants, which could not be corroborated. Certainly, this effect was investigated in Study 3.

Study 3 aimed at jointly examine the main results from Studies 1 and 2. Thus, Study 3's goal was to investigate the effects of language containing agentic traits and weaknesses expressed as a lack of communion, on the evaluation of applicants. Agentic traits were selected in line with Study 1's results, in which counterstereotypical female applicants were evaluated more positively than stereotypical male applicants when language was concrete. Weaknesses described in terms of a lack of communion were selected in line with Study 2's results, in which female applicants who disclosed counterstereotypical weaknesses were compensated more than female applicants who did not disclose any weaknesses, or disclosed stereotypical ones. Taking these findings together, I wanted to examine their combined effects on the evaluation, promotion, perceived honesty, and salary recommendation of female applicants. Finally, the path model from Study 2 was further tested and extended.

Similarly to Study 1, drop-out rates in the present study were rather high. Sixty-four participants had to be excluded for giving the wrong answer to the control item. As stated in regard to Study 1, a possible and reasonable explanation could be that since participants did not get any compensation for participating, their motivation to complete the questionnaire might not have been high enough.

## Study 3

#### **Objectives**

First, Study 3 aimed to investigate the effects of the language in which agentic traits and weaknesses stated as a lack of communion are described on the evaluation, promotion, perceived honesty, and salary recommendation of applicants. Indeed, according to Study 1's results, agentic traits seemed to be most compelling for female applicants when described in concrete terms; in fact, female applicants obtained higher evaluation ratings than male applicants described with agentic traits in concrete terms. According to Study 2's results, female applicants who disclosed weaknesses in terms of a lack of communion were recommended for a higher salary than female applicants who disclosed weaknesses in terms of a lack of agency, or no weaknesses. Unfortunately, the interaction effect of weaknesses and gender was significant only for the salary, but not for the evaluation, promotion or perceived honesty of applicants. Hence, I decided to include gender-prototypical traits and language, to check for the interaction effect of traits and language with weaknesses.

In Study 1, counterstereotypical female applicants were evaluated more positively and perceived as being more honest than stereotypical applicants if described concretely rather than abstractly. In line with this finding, I expected those female applicants to be evaluated more positively than their male counterparts when the agentic traits were described concretely rather than abstractly.

In Study 2, female applicants who disclosed counterstereotypical weaknesses were compensated more than female applicants who either disclosed stereotypical weaknesses or did not disclose any weaknesses. Taken together with the results from Studies 1 and 2, it is reasonable to assume that those female applicants who disclosed counterstereotypical weaknesses concretely would not only be compensated more but also promoted more and evaluated more positively than female applicants who disclosed counterstereotypical weaknesses abstractly. Moreover, since promotion was tested only once in Study 2, I made the same assumptions for promotion as for evaluation, honesty, and salary. Neither in Study 1 nor in Study 2 did significant differences emerged for male applicants; for this reason, I posited that no significant differences would be apparent for male applicants when disclosing their traits and weaknesses either concretely or abstractly.

Secondly, Study 3 aimed to further test the effects of perceived cognitive efforts and processing fluency. According to Study 1, the participants' perception of applicants' stereotypicality is affected by how much cognitive effort and fluency the participants perceived, but only in the condition of the agentic traits. Participants perceived more cognitive efforts when female applicants violated their gender prescriptions, but not male applicants. Indeed, participants found it more difficult to read about counterstereotypical female applicants than stereotypical, which did not happen when male applicants were counterstereotypical. Moreover, cognitive load interacted with applicants' gender and language, affecting the evaluation of female applicants. Specifically, when female applicants were described with concrete language, participants' cognitive load affected more negatively their evaluation than when they were described with abstract language. However, since in Study 3 female applicants' counterstereotypicality was reinforced by describing them with both agentic positive traits and weaknesses, I may expect cognitive load to interact with female applicants' evaluation when their traits are described abstractly rather than concretely (Doest et al., 2002).

In Study 2, in which processing fluency was also introduced for the first time, none of the effects encountered in Study 1 on cognitive load emerged. For this reason, I wanted to further investigate these findings within a new experimental design in which I manipulated not only the language of traits but also of weaknesses. The purpose was to investigate whether both cognitive load and processing fluency would have been activated by the perceived stereotypicality of applicants more than by the language or other variables. To this end, I also wanted to test the effects of cognitive load and processing fluency not only on the evaluation of applicants but also on their perceived honesty, salary recommendation, and promotion, since these variables were disregarded in the first two studies.

Finally, Study 3 aimed to corroborate the findings of Studies 1 and 2 on the role of personal preexisting characteristics such as gender bias, cognitive processing, attitudes toward

women, self-reported agency, and communion in affecting the evaluation of applicants. In particular, Study 3 aimed to define the final paths extending the models tested in Studies 1 and 2. This time, a measure of the participants' perception of the ideal applicant as a communal or an agentic applicant was integrated. Along with a measure of participants' perception of applicants' prototypicality, it was worth including also the participants' ideal perception of applicants, what the ideal applicant should be like, and whether applicants should be high in communion or in agency.

However, we need to bear in mind that in line with the results of Study 2, honesty mediated the negative relationship between the participants' perceived prototypicality and the evaluation of male applicants: Male applicants were rated as less honest when they were perceived as more stereotypical, which means agentic. Nonetheless, in Studies 1 and 2, applicants were described as either stereotypical or counterstereotypical, and in Study 3, both male and female applicants were described as agentic; for this reason, I expected different results in terms of honesty ratings. I assumed that honesty would have mediated the positive relationship of participants' ideal agentic applicants and female and male applicants' evaluation, salary recommendation, and promotion.

# Design and Hypotheses

The design of the study was a 2 (applicants' gender, male vs. female) x 2 (language of agentic traits, concrete vs. abstract) x 2 (language of weaknesses as lack of communion, concrete vs. abstract) between-subjects factorial.

My hypotheses were as follows:

**Hypothesis 1a.** Female applicants who disclose agentic traits and weaknesses in terms of lack of communion concretely will be perceived as more honest, evaluated more positively, promoted more, and recommended for a higher salary than male applicants.

**Hypothesis 1b.** Female applicants who disclose agentic traits and weaknesses in terms of lack of communion abstractly will be perceived as less honest, evaluated less positively, promoted less, and recommended for a lower salary than male applicants.

Hypothesis 2. There is a relation between cognitive load and processing fluency.

**Hypothesis 3**. I assume an interaction effect of traits and weaknesses with applicants' gender on participants' cognitive load, and on processing fluency: Participants will perceive higher cognitive efforts and less fluent cognitive processing when they read about female applicants who disclosed agentic traits and weaknesses in terms of lack of communion concretely as compared to when they disclosed them abstractly. Consistent with studies 1 and 2's results, I posit that no significant effect will occur when participants read about male applicants.

**Hypothesis 4.** I assume an interaction of the language of traits, cognitive load, and processing fluency on the evaluation, perceived honesty, promotion, and salary recommendation of female applicants: When female applicants' agentic traits are described abstractly, participants' cognitive load will negatively, affect their evaluation, perceived honesty, promotion, and salary recommendation more than when they are described concretely, while processing fluency will affect the same variables positively.

**Hypothesis 5.** Participants' internal characteristics (cognitive load, processing fluency, AWS, gender bias, applicants' perceived prototypicality, self-reported communion/agency dimensions, and ideal applicants' communion/agency facets) are focal predictors of honesty, and honesty is the mediating variable between the internal characteristics and the evaluation of applicants, and the promotion and salary recommendation of applicants (see Figure 5). I assumed a different effect between male and female applicants:

**Hypothesis 5a.** For female applicants, participants' processing fluency, negative attitudes toward women, gender bias, self-reported communion, and perception of the ideal

applicant as communal will negatively predict honesty, whereas cognitive load, self-reported agency, perception of applicants' prototypicality, and perception of the ideal applicant as agentic will positively predict honesty.

**Hypothesis 5b.** For male applicants, participants' cognitive load, self-reported communion, and perception of the ideal applicant as communal will negatively predict honesty, whereas processing fluency, perception of applicants' prototypicality, gender bias, self-reported agency, and perception of the ideal applicant as agentic will positively predict honesty. I did not expect significant results regarding attitudes toward women on male applicants' perceived honesty.

## Method

#### **Participants**

A sensitivity power analysis using G\*Power 3.1 (Faul et al., 2007) showed a sample of this size (n = 142) is sufficient to detect moderate special, main, and interaction effects, i.e., f(U) = 0.25 with power = 0.95 (assuming  $\alpha = 0.05$ , eight groups, and df = 1). Two hundred sixteen undergraduate college students from several Italian universities, attending specific faculties that prepare future human resources (HR) workers, participated in the study voluntarily and without compensation. No participant was excluded since none gave the wrong answer to the control item in which they were asked to indicate the gender of the applicants they evaluated in the questionnaire. The 216 individuals (66 men, 150 women;  $M_{age} = 24.34$ , SD = 2.42) were retained in the final sample. The sample was highly educated, with 69% of the sample holding a master's degree and 30.1% a bachelor's degree. Some 22.2% of the students came from the Social and Political Sciences faculty, 18.5% from Economics, 18.5% from Psychology, and 4.6% from Medicine. Participants perceived the likelihood of becoming recruiters as being quite low. Again I asked participants to rate how likely it was that they would become recruiters after their graduation, using a seven-point scale ranging from 1 = Not at all to 7 = Very likely; the mean for this item was 3.03 (SD = 1.76). Also, participants' interest in being recruiters was low: They were asked to rate how much they would like to become recruiters after their graduation, using a seven-point scale ranging from 1 = Not at all to 7 = Very much; the mean for this item was 3.28 (SD = 1.87). The 216 participants were randomly assigned to evaluate either a male agentic applicant described in abstract terms disclosing a lack of communal weaknesses in concrete terms (n =22), or a female agentic applicant described in abstract terms disclosing a lack of communal weaknesses in concrete terms (n = 26), or a male agentic applicant described in concrete terms disclosing a lack of communal weaknesses in concrete terms (n = 27), or a female agentic applicant described in concrete terms disclosing a lack of communal weaknesses in concrete terms (n = 28), or a male agentic applicant described in abstract terms disclosing a lack of communal weaknesses in abstract terms (n = 29), or a female agentic applicant described in abstract terms disclosing a lack of communal weaknesses in abstract terms disclosing a lack of communal weaknesses in abstract terms (n = 29), or a female agentic applicant described in abstract terms (n = 25), or a female agentic applicant described in abstract terms (n = 25), or a female agentic applicant described in concrete terms disclosing a lack of communal weaknesses in abstract terms disclosing a lack of communal agentic applicant described in concrete terms disclosing a lack of communal weaknesses in abstract terms (n = 25), or a female agentic applicant described in concrete terms disclosing a lack of communal weaknesses in abstract terms (n = 29), for a position as a junior physician.

# **Procedure and Materials**

I used an experimental manipulation in which participants evaluated a male or female applicant for a position as a junior physician. The procedure used to conduct Study 3, as well as the variables implemented, were the same as in Study 2. Participants were asked to read a presentation letter by a young physician who was applying for an available vacancy in a private hospital. I manipulated the applicant's gender by presenting the applicant as "Maria" or "Mario." Applicants' weaknesses' language was manipulated by describing them respectively in abstract ("Sometimes I am dominant or I feel too confident") or concrete terms ("Sometimes I order my colleagues to do a task on my behalf, or I give suggestions even if I do not know the topic"). The same was done for the agentic traits described as abstract (i.e., "I am independent") or concrete (i.e., "I can work on my own if my colleagues are not there"). The presentation letter was structured as in the previous two studies: the first part included professional competencies, the second part personal skills, and the third part the information on traits and weaknesses that varied by condition.

# Measures

The variables implemented in Study 3 were the same as those implemented in Study 2, with the addition of the subtle gender bias on the ideal applicant. For the sake of brevity, I reported a shortened list with all the variables and their alpha:

**Evaluation of Applicants**. Nine items, with response scale ranging from 1 (*Not at all*) to 7 (*Very*) ( $\alpha = .96$ ).

**Hirability.** A dichotomous measure of applicants' hirability was added and assessed with one item: "Would you hire Maria/o?", *yes/no*.

**Applicants' Perceived Honesty.** Four items, with response scale ranging from 1 (*Not at all*) to 7 (*Very*) ( $\alpha = .91$ ).

**Applicants' Weaknesses Honesty.** One item, with response scale ranging from 1 (*Not at all*) to 7 (*Very*) (M = 5.13, SD = 1.44).

**Salary Recommendation.** One item; response choices ranging from 1 ( $\notin$ 500) to 7 ( $\notin$ 3,500) (M = 5.59, SD = .97).

**Promotion Recommendation.** One item, with response scale ranging from 1 (*Not at all likely*) to 7 (*Very likely*) (M = 4.06, SD = 1.40).

**Applicants' Prototypicality.** Two items measuring stereotypicality and conventionality, with response scale ranging from 1 (*Not at all*) to 7 (*Very*) (r = .71).

**Processing Fluency.** One item, with response scale ranging from 1 (*Very difficult*) to 7 (*Very easy*) (M = 4.81, SD = 1.24).

**Cognitive Load.** Two items, with response scale ranging from 1 (*Not at all*) to 7 (*Very much*) (r = .21, M = 5.58, SD = 1.23). High scores of cognitive load correspond to high levels of cognitive load.

**Evaluators' Subtle Gender Bias.** For the male targets, four items for agency ( $\alpha = .83$ ) and four items for communion ( $\alpha = .91$ ) were assessed, and for the female targets, the same four items for agency ( $\alpha = .79$ ) and the same four items for communion ( $\alpha = .75$ ) were assessed. A measure of gender norms was constructed by subtracting the counterstereotypic from the stereotypic dimension (e.g., for women, subtracting ideal agency from ideal communion) and averaging the two dimensions of both men and women (M = .29, SD = .75, r = .227, p = .03).

## Ideal Applicant's facets of Fundamental Content Dimensions: Agency and

**Communion.** To assess the evaluators' image of the ideal applicant in terms of agency and communion, the Gender Beliefs Scale developed by Evans and Diekman (2009) was used, asking how much the ideal applicant (instead of the ideal man or woman) should be endowed with each trait. Four items for the ideal applicant's agency ( $\alpha = .70$ ) and four items for the ideal applicant's communion ( $\alpha = .78$ ) with response options ranging from 1 (*Not at all*) to 7 (*A lot*) were included.

Attitude Toward Women (AWS). The short version of the Attitude Toward Women Scale (Whatley, 2008) with 15 items was used, including the following response options:  $A = Agree \ strongly$ ,  $B = Agree \ mildly$ ,  $C = Disagree \ mildly$ , and  $D = Disagree \ strongly \ (\alpha = .85)$ .

Facets of Fundamental Content Dimensions: Agency with Competence and Assertiveness – Communion with Warmth and Morality. The 21 traits presented in the scale belonged to the two dimensions of agency (10 items,  $\alpha = .82$ ), and communion (nine items,  $\alpha = 71$ ).

**Control Variables**. I added two control variables; a measure of social desirability was assessed with the Italian version of the Social Desirability Scale (Bobbio & Manganelli, 2011) composed of 16 items, with response options ranging from 1 (*Strongly disagree*) to 6 (*Strongly agree*) ( $\alpha = .76$ ).

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## Check on Applicants' Prototypicality

A 2 (applicants' gender, female, male) x 2 (language of applicants' weaknesses, concrete, abstract) x 2 (language of applicants' agentic traits, concrete, abstract) ANOVA for ratings of the perceived applicants' prototypicality was run. Results showed a nonsignificant two-way interaction effect of applicants' gender and traits F(1, 216) = .01, p = .98,  $\eta^2 < .01$ and a nonsignificant two-way interaction effect of applicants' gender and weaknesses F(1, 216) = .36, p = .55,  $\eta^2 < .01$ . Likewise, in Study 2, participants did not perceive the male applicants as being more stereotypical than the female. The manipulation of applicants' prototypicality seems not to have worked. Nonetheless, I tested my hypotheses relying on the experimental conditions, but without referring to specific effects of prototypicality.

## Analysis of Evaluation, Honesty, Promotion, and Salary recommendation of Applicants

With Hypotheses 1a and 1b I assumed that, on the one hand, female applicants who disclosed agentic traits and weaknesses in terms of a lack of communion concretely would have been perceived as more honest, evaluated more positively, promoted more, and recommended for a higher salary than male applicants, and on the other hand that female applicants who disclosed agentic traits and weaknesses in terms of a lack of communion abstractly would have been perceived as less honest, evaluated less positively, promoted less, and recommended for a lower salary than male applicants. The correlation analysis revealed (see Table 13) a strong correlation between evaluation and the both honesty and promotion dimensions, and a medium correlation between the evaluation, and salary dimension. Honesty was also strongly correlated with promotion and to a lesser degree with salary. Further, promotion was as well lowly correlated with salary. To test Hypotheses 1a and 1b, according to the correlation analysis, I ran a 2 (applicants' gender, female, male) x 2 (language of applicants' weaknesses, concrete, abstract) x 2 (language of applicants' agentic traits, concrete, abstract) MANOVA for ratings of the evaluation, honesty, salary, and promotion of

applicants. Significant differences emerged for all of the three variables, but the only main effect was the language of weaknesses' one (Wilks'  $\Lambda = .91$ , *F* (4, 205) = 4.68, *p* = .001). The only dependent variable which registered significant effects was evaluation (see Table 14 for all the means): There were both a main effect of language of traits, *F* (1, 216) = 5.09, *p* = .02,  $\eta^2 = .02$ , revealing that agentic traits described concretely (*M* = 5.03, *SD* = .11) led to the applicants obtaining a more positive evaluation than agentic traits described abstractly (*M* = 4.68, *SD* = .11), and of language of weaknesses, *F* (1, 216) = 10.05, *p* < .01,  $\eta^2$  = .05, revealing that disclosing weaknesses in terms of lack of communion abstractly (*M* = 5.11, *SD* = .11) led to the applicants obtaining a more positive evaluation than disclosing weaknesses in terms of lack of communion concretely (*M* = 4.59, *SD* = .11). Further, a significant two-way interaction of applicants' gender and language of weaknesses emerged, *F* (1, 216) = .02, *p* = .05,  $\eta^2$  = .02. Multiple comparisons using Tukey's HSD test were performed, indicating that when language was concrete female applicants were evaluated more positively (*M* = 4.86, *SD* = .16) than male applicants (*M* = 4.33, *SD* = .16), *t*(208) = 5.54, *p* = .02. This finding partially corroborated Hypothesis 1a.

Nevertheless, although I assumed a three-way interaction effect of language of traits, language of weaknesses, and applicants' gender, for all the dependent variables, only a twoway interaction effect of language of weaknesses and applicants' gender on evaluation rating occurred. I can say that my assumptions were supported in so far as female applicants who disclosed counterstereotypical weaknesses concretely were evaluated more positively than male applicants who disclosed their stereotypical weaknesses. One consideration is that while in Study 1 this effect occurred for the agentic traits, in the current study it emerged for the weaknesses expressed as a lack of communion. This finding is interesting in terms of the weight of the weaknesses upon the positive traits. Looking at the F values of traits, F(1, 216)= 5.09, and weaknesses, F(1, 216) = 10.05, we can immediately recognize that the effect of weaknesses is almost twice the effect of traits. This may mean that when applicants disclose
weaknesses which make participants draw inferences about applicants' agency, along with agentic traits, the effect of agentic traits on participants' perception of applicants disappear, probably masked by the effect of weaknesses.

# Moderating Role of Participants' Perceived Processing Fluency and Cognitive Load

First of all, I tested Hypothesis 2, which assumed that processing fluency was correlated with cognitive load, and as shown in Table 13, these two variables did correlate (r = -.201, p < .01). Compared to Study 2's results, based on which I formulated Hypothesis 2, in the present study the two aforementioned variables seemed to be correlated, as I had previously assumed. Thus, Hypothesis 2 was confirmed. Again, the fact the results from Study 2 and 3 are inconsistent might be due to the usage of one single item to measure processing fluency.

With Hypothesis 3 I posited an interaction effect of traits, weaknesses, and applicants' gender on participants' cognitive load and processing fluency: When participants read about female applicants who disclosed agentic traits and weaknesses in terms of lack of communion abstractly, they would have perceived higher cognitive efforts and less fluent cognitive processing than when they read about them concretely. I also posited that no significant effect would have occurred when participants read about male applicants. To test this hypothesis, I performed two 2 (applicants' gender, female, male) x 2 (language of applicants' weaknesses, concrete, abstract) x 2 (language of applicants' agentic traits, concrete, abstract) ANOVAs for cognitive load and processing fluency ratings respectively. Results for cognitive load showed a no significant three-way interaction effect of applicants' gender, language of traits, and language of weaknesses, F(1, 216) = .03, p = .86,  $\eta^2 < .01$ , and a no significant two-way interaction effect of applicants' gender and language of weaknesses, F(1, 216) = .03, p = .56,  $\eta^2 < .01$ . Additionally, no significant main effects emerged. Likewise, results for processing fluency showed a no significant three-way interaction effect of applicants' gender, language of weaknesses, F(1, 216) = .03, p = .56,  $\eta^2 < .01$ . Additionally, no significant main effects emerged. Likewise, results for processing fluency showed a no significant three-way interaction effect of applicants' gender, language of weaknesses, F(1, 216) = .03, p = .56,  $\eta^2 < .01$ . Additionally, no significant three-way interaction effect of applicants' gender, language of weaknesses, F(1, 216) = .03, p = .56,  $\eta^2 < .01$ . Additionally, no significant main effects emerged. Likewise, results for processing fluency showed a no significant three-way interaction effect of applicants' gender, language of traits, and language of weaknesses, F(1, 216) = .03, p = .56,  $\eta^2 < .01$ . Additionally, no significant three

 $(1, 216) = .05, p = .82, \eta^2 < .01$ , and a no significant two-way interaction effect of applicants' gender and language of weaknesses,  $F(1, 216) = 2.67, p = .10, \eta^2 < .01$ , and language of traits,  $F(1, 216) = .19, p = .66, \eta^2 < .01$ . Additionally, no significant main effects occurred. Means are reported in Table 14.

Likewise, in Study 2, cognitive load and processing fluency were not affected by the manipulation of language of either traits or weaknesses of female and male applicants. Hypothesis 3 was thus not corroborated. One possible explanation may be that participants, as in Study 2, did not perceive any differences between male and female applicants in terms of stereotypicality. Considering that in Study 1 cognitive load seemed to be affected by participants' perception of stereotypicality versus counterstereotypicality of female applicants, this could explain the different results across the three studies.

Finally, with Hypothesis 4, I assumed interaction of language of traits, and both cognitive load and processing fluency on the evaluation, honesty, salary, and promotion of female applicants: When female applicants were described abstractly, participants' cognitive load would have negatively affected their evaluation, perceived honesty, salary recommendation, and promotion more than when female applicants were described concretely. To test Hypothesis 4 I performed two multiple moderation analyses, using the package *lavaan* version 0.6-7 (Rosseel, 2011) by R version 4.0.2 (R Core Team, 2017) exclusively for the female-target condition, integrating evaluation, honesty, promotion, and salary as dependent variables; the language of traits' condition was integrated as the focal predictor, and processing fluency and cognitive load as moderators, respectively. In the first model, processing fluency was the moderator. No significant moderation effects emerged.

In the second model, cognitive load was the moderator (see Table 15, which reports all the effects of both the simple and interaction effects on each of the dependent variables. Results were further distinguished for the two models, which included processing fluency and cognitive load, respectively). The interaction of cognitive load and language of traits was significant in the evaluation of female applicants ( $\beta = .18, 95\%$  bootstrap *CI* [.06, .30], *t*(113) = 3.02, *p* = .00). When participants perceived low cognitive efforts, they evaluated more negatively female applicants described in abstract terms ( $\beta = -.71, 95\%$  bootstrap *CI* [-1.02, - .40], *p* = .00) than female applicants described in concrete terms, ( $\beta = -.49, 95\%$  bootstrap *CI* [-.78, -.27], *p* = .00). When they perceived higher cognitive efforts, no significant differences occurred. Although the condition of high cognitive efforts was not significant, so far, I can say that Hypothesis 4 was supported for the female applicants' evaluation.

The interaction of cognitive load and language of traits was also significant in salary recommendation ( $\beta = .17, 95\%$  bootstrap *CI* [.08, .26], *t*(113) = 3.65, *p* = .00). Likewise, for the evaluation, when participants perceived low cognitive efforts, they recommended a lower salary for female applicants described in abstract terms ( $\beta = -.49, 95\%$  bootstrap CI [-.73, -.26], p = .00) than for those described in concrete terms ( $\beta = -.29, 95\%$  bootstrap CI [-.49, -.13], p = .00), whereas when participants perceived high cognitive efforts, female applicants described in concrete terms were recommended for a higher salary ( $\beta = .29, 95\%$  bootstrap CI [.01, .08], p = .04) than those described in abstract terms ( $\beta = -.38$ , 95% bootstrap CI [-.56, -.13], p = .02). This last finding fully supported Hypothesis 4. When participants perceived that cognitive load was low, the fact that the language was abstract or concrete in describing the female applicants was marginally relevant in so far as the cognitive load negatively predicted the female applicants' salary recommendation. The compensation was slightly lower if female applicants were described abstractly than concretely. The real difference occurred when participants' perceived cognitive load was high: When the female applicants were described concretely, they gained a more positive salary recommendation than when they were described abstractly. This finding was also aligned with Doest et al. (2002), according to whom, counterstereotypical individuals concretely described were better evaluated than counterstereotypical individuals abstractly described.

The interaction of cognitive load and language of traits was significant for promotion too ( $\beta$  = .18, 95% bootstrap *CI* [.06, .30], *t*(113) = 3.02, *p* = .00). When participants perceived low cognitive efforts, female applicants described in concrete terms ( $\beta$  = -.55, 95% bootstrap *CI* [-.83, -.27], *p* = .00) were promoted more than those described in abstract terms ( $\beta$  = -.89, 95% bootstrap *CI* [-1.27, -.49], *p* = .00), whereas no significant differences occurred when participants perceived high cognitive efforts. Again, this finding corroborated Hypothesis 4.

Finally, the same results were found for honesty ratings ( $\beta = .14, 95\%$  bootstrap *CI* [.03, .24], t(113) = 2.44, p = .01): For low perceived cognitive load, female applicants described in concrete terms ( $\beta = -.38, 95\%$  bootstrap *CI* [-.57, -.18], p = .00) were rated as more honest than those described in abstract terms ( $\beta = -.54, 95\%$  bootstrap *CI* [-.82, -.25], p = .00). No significant differences occurred for high perceived cognitive load. With this last result, I can say that Hypothesis 4 was fully confirmed.

#### Path Analysis

To test Hypotheses 5 to 5b, a path analysis (see Figure 5) was run using the package *lavaan* version 0.6-7 (Rosseel, 2011) by R version 4.0.2 (R Core Team, 2017). I built a multigroup model with applicants' gender as a grouping variable, in which I inserted participants' gender bias, cognitive load, processing fluency, AWS, self-reported agency and communion, applicants' perceived prototypicality, and ideal applicant's agency and communion as free parameters from applicants' perceived honesty on evaluation, recommended salary, and promotion. In addition, social desirability was integrated as a covariate to detect its confounding effect on promotion and on AWS, cognitive load, processing fluency, self-reported agency and communion, and ideal applicant's agency and communion (see Table 13 for correlations).

To assess the mediation's significance, I used the bootstrapping approach (Hayes, 2009). Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and a 95% confidence interval was computed with the percentile method. Fit indices for the total sample were moderately good [( $\chi 2$  (76) = 183.26, p = .01); RMSEA = .10 (90% CI = [.09, .14]); CFI = .83; TLI = .60]. The moderating role of applicants' gender was tested with the Wald test, but it was not significant (Wald  $\chi^2$  (12) = 16.69, *p* = .16). As for Studies 1 and 2, the paths distinguishing by gender are discussed merely as speculations on exploratory results.

Table 16 shows the direct effects. Regarding female applicants, perceived honesty positively predicted evaluation (b = .81; p = .001) and promotion (b = .73; p = .001). Further, processing fluency was a significant and positive predictor for female applicants' salary (b = .15; p = .001) and honesty (b = .23; p = .001). In Study 2, processing fluency positively predicted female applicants' promotion. Participants' communion positively predicted the evaluation of female applicants (b = .36; p = .001); in Study 1, it predicted their honesty and in Study 2 their promotion. As I expected, ideal applicant's agency was a significant and positive predictor of salary recommendation (b = .22; p = .001), perceived honesty (b = .25; p = .001), and promotion (b = .29; p = .001) of female applicants. Given that the female applicants were always presented as agentic, the match between the target applicant and the ideal one resulted in an overall positive evaluation of the female applicants, as I hypothesized.

On the other hand, cognitive load negatively predicted the evaluation of female applicants (b = -.17; p = .001), perfectly in line with results from Studies 1 and 2. In line with the results of the ideal applicant variable, prototypicality here was a negative predictor of female evaluation (b = -.17; p = .001); in fact, the more communal the female applicants were seen as being, the farther from the ideal and target applicant they were perceived and the worse they were evaluated. Although participants' self-reported agency negatively predicted the evaluation of female applicants (b = -.29; p = .001), this effect never occurred in Studies 1 and 2.

There was a confounding effect of social desirability, in that it positively predicted the participants' self-reported agency when participants were assigned to the female-target

condition (b = .23; p = .001). This means that participants who were asked to evaluate the female applicants reported higher levels of self-ascribed agency for increasing levels of social desirability. Social desirability also predicted the measure of ideal applicant's agency in the female-target condition (b = .45; p = .001). The confounding effects should be considered in discussing the paths with these variables.

For male applicants, as well as for female applicants, perceived honesty was a positive predictor of evaluation (b = .57; p = .001) and promotion of male applicants (b = .77; p = .001) .001). These paths confirmed the paths from Studies 1 and 2 both for female and male applicants. Moreover, perceived honesty also positively predicted the recommended salary for male applicants (b = .26; p = .001) but not for female. Negative AWS was a significant positive predictor of male applicants' salary (b = .57; p = .001), and their promotion (b = .81; p = .001). In Study 2, gender bias revealed itself as a positive predictor of perceived honesty of male applicants, while in Study 3, gender bias was not a significant predictor of any variables. However, these last results are even more unexpected than the one regarding gender bias. I did not expect any significant effect of AWS on the male target, although I may speculate that in presenting all the applicants as agentic, participants with higher levels of negative attitudes toward women tended to favor male applicants more than penalizing female applicants. Of course, this finding needs further investigation. Moreover, participants' selfreported agency positively predicted the male salary (b = .48; p = .001) and promotion (b = .48) .30; p = .001). Likewise, ideal applicant's agency was also a positive predictor for male promotion (b = .25; p = .001).

On the other hand, cognitive load this time negatively affected male applicants and their perceived honesty (b = -.53; p = .001), as occurred in Study 1, but not in Study 2. Finally, for the male-target condition, participants' social desirability seemed to be a negative predictor of cognitive load (b = -.36; p = .001), which means that participants who were assigned to the male-target condition reported lower levels of cognitive load for increasing social

desirability's scores. Interestingly, while participants who registered higher levels of social desirability tended to attribute higher scores of promotion to female applicants, in the male-target condition social desirability was a negative predictor of male applicants' promotion (b = -.32; p = .001): The higher the participants' social desirability levels, the lower the effective score of male applicants' promotion. As for the female-target condition, social desirability positively predicted self-reported agency (b = .34; p = .001), but also communion (b = .18; p = .001). Finally, as for the female-target condition, social desirability positively predicted the ideal applicant's agency (b = .35; p = .001).

Table 17 shows the indirect effects. Honesty mediated the positive relationship between participants' processing fluency and the evaluation of female applicants (b = .19; p = .01) and promotion (b = .17; p = .001). This first finding confirmed one path expected in Hypothesis 5a. On the other hand, honesty mediated the negative relationship between cognitive load and evaluation (b = -.30; p = .01), salary (b = -.14; p = .03), and promotion (b = -.41; p = .001) of male applicants. However, I assumed the same effect for both male and female applicants, so Hypothesis 5b was supported to this extent. Finally, as I hypothesized, honesty mediated the positive relationship between the ideal applicant's agency and evaluation (b = .20; p = .02) and promotion (b = .19; p = .02) of female applicants.

In conclusion, this model revealed more mediating effects than the model performed in Studies 1 and 2. The choice of including the measure of the ideal applicant's agency was well supported, although we need to bear in mind that it was affected by the confounding effect of participants' social desirability.

#### Discussion

The main aim of Study 3 was to investigate the effects of the language in which agentic traits and weaknesses stated as a lack of communion are described, on the evaluation, promotion, perceived honesty, and salary recommendation of applicants. In line with the findings of Studies 1 and 2, I posited that female applicants who disclosed counterstereotypical weaknesses concretely would have not only been compensated more, but also promoted more often and evaluated more positively than female applicants who disclosed counterstereotypical weaknesses abstractly. Moreover, since neither in Study 1 nor Study 2 did significant differences emerge for male applicants, I posited that no significant differences would have emerged in their regard when disclosing their traits and weaknesses either concretely or abstractly.

Nevertheless, although I assumed a three-way interaction effect of language of traits and weaknesses with applicants' gender, and that this effect would have emerged for all the dependent variables, the current results only showed a the two-way interaction effect of language of weaknesses and applicants' gender on evaluation. Thus, at least to this regard, I might say that my assumptions were supported: Female applicants who disclosed counterstereotypical weaknesses concretely were evaluated more positively than male applicants who disclosed their stereotypical weaknesses. This is a quite different finding from the one observed in Study 1, in which this effect was registered for agentic traits; conversely, it did not occur for agentic traits, but for weaknesses expressed in terms of agency. Looking at the effect size of weaknesses against the effect size of traits, I argued that in this experimental condition, participants may have given more weight to weaknesses. However, it is important to bear in mind that both traits and weaknesses went in the same direction in describing applicants, and for this reason, we can infer a tendency to better evaluate female applicants if described concretely.

The second aim of Study 3 was to further test the effects of cognitive load and processing fluency. According to Study 1, participants' cognitive load increased when female applicants violated their gender prescriptions, but not when male applicants did. In other words, participants found it more difficult to read about counterstereotypical female applicants than stereotypical. Moreover, cognitive load interacted with applicants' gender and language, affecting the evaluation of only female applicants: When the female applicants were described with concrete language, participants' cognitive load affected more negatively their evaluation than when the female applicants were described with abstract language, whereas in Study 2, no significant effect occurred. Given that in Study 1, cognitive load seemed to be activated by the description of applicants as counterstereotypical, I explained this lack of effects by the fact that participants did not distinguish applicants along the dimension of agency and communion, which means that participants did not perceive applicants as stereotypical or counterstereotypical. Hence, in Study 3, I reinforced the female applicants' counterstereotypicality by describing them with both agentic positive traits and weaknesses. I assumed that cognitive load would interact with female applicants' agentic traits and affect more negatively female applicants' evaluation when their traits were described abstractly than concretely (Doest et al., 2002). Moreover, the measure of cognitive load was not very strong, and the correlation between the two items was very low.

The first interesting result was that cognitive load and processing fluency were negatively correlated, as I assumed, while in Study 2 they were not. This represents a very interesting finding to take into consideration in further studies on applicants' impression.

Results showed that the expected interaction of cognitive load and language of traits was significant in the evaluation of female applicants: When participants perceived low cognitive effort, they evaluated more negatively female applicants described in abstract terms than female applicants described in concrete terms. The same tendency was registered for the perceived honesty, promotion, and salary recommendation of female applicants. For the salary recommendation, significant differences in the language manipulation also occurred for participants' high levels of cognitive load: When the female applicants were described concretely, they gained a more positive salary recommendation than when they were described abstractly. This finding is also aligned with Doest et al. (2002), according to whom, counterstereotypical individuals described concretely were better evaluated than counterstereotypical individuals described abstractly.

The final aim of Study 3 was to test another more efficient path model that could better explain the effect of participants' preexisting characteristics such as gender bias, cognitive processing, attitudes toward women, self-reported agency, and communion in affecting the evaluation of applicants. This time a measure of the participants' perception of the ideal applicant as a communal or an agentic applicant was integrated. The purpose was to investigate new possible paths which could explain some unexpected mediating effects that occurred in Study 2 – for instance, the opposite mediating effects of perceived honesty: one positive on the relation of gender bias with male evaluation, and the other one negative on the relation of perceived prototypicality of applicants with male evaluation. Arguably, if participants imagined the ideal applicant as being high in agency, and the real target applicant is presented as agentic, participants could end up rating the target applicants as being high in honesty, because of the cognitive assonance due to the match between the ideal applicant and the target applicant.

Results revealed some direct effects that occurred in all three studies: for instance, that the perceived honesty positively predicted the evaluation of both male and female applicants. Likewise, in the previous two studies, there was not significant moderating effect of gender, therefore the following considerations are purely observational ones: Cognitive load was again a negative predictor of perceived honesty of male applicants. Other effects were new and some of those completely unexpected. First of all, negative AWS seemed to be a positive predictor of male applicants' salary and their promotion. This time gender bias was not significant, but AWS was. I did not expect any significant effect of AWS on the male target, although I may speculate that in presenting all the applicants as agentic, participants with higher levels of negative attitudes toward women tended to favor male applicants more than penalizing female applicants. This finding needs further investigation. Moreover, as I assumed, the ideal applicant's agency was a positive predictor for both male and female applicants' promotion, and also for the salary recommendation of female applicants. Given that the female applicants were presented always as agentic, the match between the target applicant and the ideal one resulted in a positive overall evaluation of the female applicant. This speculation seems to be supported by the fact that prototypicality was a negative predictor of female evaluation; in fact, the more communal the female applicants were seen as being, the farther from the ideal and target applicant they were perceived and the worse they were evaluated. Another new finding is that participants' self-reported agency negatively predicted the evaluation of female applicants; this effect never occurred in Studies 1 and 2.

Some confounding effects of social desirability on the participants' self-reported agency were revealed: on promotion with different directions for the male- and female-target conditions; on cognitive load for the male-target condition; and on participants' self-reported agency and communion.

Finally, in this path model, the number of mediating effects that occurred was the highest in all three studies. Honesty mediated the positive relation between participants' processing fluency and the evaluation of female applicants and their promotion. On the other hand, honesty mediated the negative relationship between cognitive load and evaluation of applicants, as well as the ones between cognitive load and salary and promotion (b = -.41; p =.001) of male applicants. In Study 3, the mediating effect of honesty on the relation of cognitive load and evaluation of female applicants did not happen, as it did in both Studies 1 and 2. Here was revealed the positive effect on processing fluency. Moreover, perceived honesty mediated the positive relationship between ideal applicant's agency and the evaluation and promotion of female applicants, corroborating my hypotheses. I may suggest implementing this model in further studies on the recruiters' evaluation process. It would provide new insights into the effects of several recruiters' characteristics on the final evaluation of the applicant, through the perceived honesty of applicants. It is the first model to take all these variables into consideration together to investigate the effect of recruiters' internal characteristics in evaluating applicants.

## **General Discussion**

The most important contribution of my study was to highlight the language property of abstraction-concreteness in modifying applicants' impression in line with their prototypicality in the hiring process. Throughout the three studies, one aspect emerged significantly: The target applicant who benefited from language manipulation was the female target. Study 1 showed how women, to be evaluated more positively, perceived as being more honest, and recommended for a higher salary than their male counterparts, should describe themselves either concretely if counterstereotypical or abstractly if stereotypical. Likewise, Study 2 revealed that disclosing weaknesses advantaged only the female applicants, who should state counterstereotypical weaknesses (lack of communion) to be compensated more than stereotypical ones (lack of agency). Finally, Study 3, in line with these findings, showed that female applicants who disclosed counterstereotypical weaknesses concretely were evaluated more positively than male applicants who disclosed their stereotypical weaknesses.

My findings appear to be in line with all the literature on the evaluation of women in the labor market following double standards: Female applicants should be both competent and moral, agentic and communal to be considered equally as good applicants as men (Heilman, 2012; Moscatelli et al., 2020; Rudman & Glick, 2001). Even the research on IM tactics pointed out that IM tactics should be different for female and male applicants if female applicants want to increase their chance of being hired. The use of a hybrid communication style (equal number of feminine and masculine IM tactics simultaneously) makes female applicants more hirable (Guadagno & Cialdini, 2007; Varghese et al., 2018). Following these considerations, I may argue that the reason why abstractly described stereotypical female applicants are evaluated more positively than male counterstereotypical might be that female applicants who highlight their consistency with their gender prescription obtain a positive judgment among recruiters, avoiding the display of gender bias (Cohen & Bunker, 1975; Eagly & Karau, 2002; Glick, 1999; Howell & Weeks, 2017; Rudman & Glick, 2001). On the other hand, the reason why female counterstereotypical applicants are evaluated more positively than male stereotypical applicants when the language of their description is concrete, could be that providing gender stereotype-inconsistent information makes individuals evaluate men as more communal but not less agentic, and women as more agentic but not less communal (Maris et al., 2016). In line with Maris (2016), describing women in concrete agentic terms lets participants make inferences about both their agency and communion and participants following the double standards' evaluation evaluate female applicants more positively. Besides, I also showed that as for products (Bohner, 2003), for applicants disclosing weaknesses along with gender-neutral or prototypical positive traits is an advantage, even if not as much as in terms of honesty, as I expected, but of evaluation and salary recommendation of female applicants.

To sum up, my studies supported the literature on the presence of gender bias in hiring decisions and highlighted that gender bias affected women rather than men. However, most of the studies investigating gender bias in the hiring decisions process included the applicants' gender-job congruence (i.e., Cohen & Bunker, 1975, Davison & Burke, 2000, Frauendorfer & Mast, 2013, Latu et al., 2015; Rice & Barth, 2017; Ryan et al., 2010). I did not manipulate the applicants' gender-job congruence, but only the applicants' prototypicality, and it is possible that participants' evaluations of applicants were less affected by bias than they could have been by manipulating the congruence dimension. I aimed to test implications if the job was gender-neutral by purposely excluding the largely studied lack of fit between gender, stereotypical characteristics of applicants, and gender-typed jobs. However, further studies taking into consideration the aspect of congruency in examining the effect of language on recruiters gender bias are required.

Moreover, my studies shed light on the role of language and weaknesses in applicants' impression within presentation letters. Some scholars claimed that language is not genderneutral, and by describing men with more masculine-related words and women with more feminine-related words, language contributes to reinforcing stereotypical beliefs (Gaucher et al., 2011; Madera et al., 2009; Moscatelli et al., 2020). In contrast, by adopting mixed words (both feminine and masculine-related), language contributes to decreasing genderstereotypical beliefs. Likewise, providing stereotype-inconsistent information increases gender stereotypes (Guadagno & Cialdini, 2007; Maris et al., 2016; Varghese et al., 2018). To manipulate language, I used its property of abstraction-concreteness to emphasize or reduce the gender stereotype-consistent (vs. -inconsistent) descriptions of applicants. This was a novelty in the field of gender bias in hiring processes, as recent literature seems to have only focused on the role of abstraction-concreteness of language either for detecting the presence of recruiters' biased feedback (see Menegatti et al., 2010), or of observers biased attitudes toward describers (Douglas & Sutton, 2006). No study has yet been conducted to examine the effect of abstract/concrete language in describing stereotypical (vs. counterstereotypical) applicants on their evaluation. Nevertheless, my studies showed that the language's manipulation helped female applicants in increasing their chances to be hired, but we could argue, from a theoretical point of view, that it could have also negatively affected their chances to be hired. It is well known that, for instance, job advertisements written by using a more masculine-related language than a more feminine-related one, discourage women to apply (Bem and Bem, 1973; Gaucher et al., 2011; Stout and Dasgupta, 2011). Likewise, the wording of job advertisements affects not only the applicants' willingness to apply but also recruiters' decisions. Recruiters evaluated female applicants as fitting less well with a highstatus position than male applicants when the job was described with masculine wording, even if they perceived both to be equally competent. Conversely, recruiters evaluated male and female applicants as equally well suited for a high-status position when the job was

described with gender-neutral wording ( Hansen et al., 2016; Horvath & Sczesny, 2016). These findings were investigated not only in the field of the job market but also in more general fields (Douglas & Sutton, 2003, 2006; Rubini et al., 2014). For this reason, we can infer that language could affect women in several domains of their life. For instance, when applying for a degree program, maybe they would be influenced by the wording used to describe it, as well as their way to write their cover letters or CVs could affect the professor's decision to consider them for the course. Another example could be in the field of commercial advertisement: Using certain types of wording for selling products could be way more appealing to women than men, and vice versa. Thus, I think it is important to be aware of the possible consequences of language, and in particular, women should be informed about its effects, by including specific programs about this topic at schools, or even job places.

Additionally, along with language, I investigated the effect of disclosing versus not disclosing weaknesses on the evaluation of applicants' stereotypicality. Following the assumptions made in the field of consumer psychology, I posited that similarly like products are considered more credible and preferred when they show both positive and negative rather than only positive characteristics (Bohner et al., 2003), applicants as well would be considered more honest and better evaluated when they show both positive and negative rather than only positive traits. My studies revealed that female applicants who disclosed weaknesses were the most advantaged in terms of positive evaluation and salary recommendation. Interestingly, weaknesses work for applicants in the same way that negative traits work for commercial products. The usage of language describing weaknesses has the same effect that it has in describing applicants' positive traits. It advantages female, but not male applicants. This evidence was a constant in my three studies, revealing that female applicants seem to be the only ones who would take advantage of the usage of a certain language in describing both their positive and negative traits. The same assumptions I made in

regard to language could be made in regard to the disclosure of weaknesses, as well as generalized to several domains.

A further important aim of these studies was to investigate the role played by perceived cognitive load and processing fluency in the evaluation of applicants. Although the measures of cognitive load and processing fluency were self-reported, the goal of my research was to provide exploratory findings on the role of participants' cognitive process in the evaluation of applicants, which was briefly investigated in the field of hiring decisions. The purpose was to extend Doest et al.'s (2002) and Rubin et al.'s (2013) studies' implications to the hiring domain and to contribute to the current literature with new evidence about the role of perceived cognitive load and processing fluency in recruiters' perception and evaluation of stereotypical versus counterstereotypical applicants. Following the current evidence on cognitive load (i.e., Reber & Greifeneder, 2016), I assumed for self-reported measures of both processing fluency and cognitive load, that low cognitive efforts would correspond to high fluent processing, and vice versa. In line with Doest et al. (2002), I hypothesized that when respondents read about stereotypical applicants described in abstract terms, respondents would have perceived lower cognitive efforts, and higher fluent processing than when they read about counterstereotypical applicants described in concrete terms.

Moreover, I assumed that when respondents perceived low cognitive efforts, they would have evaluated stereotypical applicants described in abstract terms more positively than those described in concrete terms. In contrast, when respondents perceived high cognitive efforts, they would have evaluated counterstereotypical applicants described in concrete terms more positively than those described in abstract terms. First of all, results revealed that participants' perception of cognitive load changed in relation to the applicants' stereotypicality, exclusively when the gender target was female. In other words, participants find it more difficult to read about counterstereotypical female applicants than about stereotypical, and this tendency did not happen when they read about male applicants. Furthermore, perceived cognitive load interacted with language and applicants' gender to affect the final evaluation of applicants. Again, this effect occurred only for female applicants: When participants perceived high cognitive efforts and read about female applicants described in concrete terms, the evaluation of female applicants was harsher than when they read about female applicants described in abstract terms. We can explain this finding by the fact that concrete language normally increases the perception of cognitive load (Doest et al., 2002; Rubin et al., 2013), and, according to my aforementioned results, female-target descriptions lead more likely to an increasing of the cognitive load than male-target descriptions. These two considerations together could explain female-target applicants' results.

Another interesting finding concerns the relation between cognitive load and processing fluency. Results from Study 2 showed that these dimensions were not correlated, but results from Study 3 showed that the two dimensions, according to my assumptions, were negatively correlated. This represents a very interesting finding to take into consideration in further studies on applicants' impression and possibly manipulated measures of cognitive load and processing fluency together (Reber & Greifeneder, 2016). In Study 3, results showed that the expected interaction of cognitive load and the language of agentic traits was significant in the evaluation of female applicants: When participants perceived low cognitive efforts, they evaluated more negatively female applicants described in abstract terms than female applicants described in concrete terms. The same tendency was registered for the perceived honesty, promotion, and salary recommendation of female applicants. For the salary recommendation, significant differences in the language manipulation also occurred for participants who perceived high cognitive efforts: When female applicants were described concretely, they gained a more positive salary recommendation than when they were described abstractly. This finding is also aligned with Doest et al. (2002), according to whom counterstereotypical individuals described concretely received better evaluations than counterstereotypical individuals described abstractly.

The usage of self-reported measures of cognitive load and processing fluency was not without shortcomings, and my results in this regard should be interpreted carefully. I was forced to include cognitive load and processing fluency as self-reported measures due to the already complex design of my studies. For this reason, I relied on the works by Doest et al. (2002), and Rubin et al. (2013) to elaborate my assumptions. Nevertheless, both these works were not free from criticisms: There are several limits regarding to the authors' methodology, starting from their operationalization and ending with their interpretation of the cognitive process. The authors assumed that the respondents' perception of cognitive load and processing fluency were proper substitutes of the actual manipulation of those. Indeed, they misleadingly discuss their findings, without informing the reader about the fact that they did not manipulate participants' cognitive load, obtaining as a consequence only correlational results and speculative conclusions. To avoid similar shortcomings, I informed the reader several times about the limitations of the self-reported measures of cognitive load and processing fluency throughout my studies. Thus, I wanted to provide at least some interesting insights for further studies that would include the effect of a real-manipulating measure of cognitive efforts, and not only the correlational effect of a cognitive efforts' perception. In this regard, despite the rich tradition of manipulating cognitive load and processing fluency as tools for studying cognitive process and as potential drivers of biases (e.g. Bodenhausen & Lichtenstein, 1987; Dijksterhuis et al., 2001; Dijksterhuis & van Knippenberg, 1995; Gilbert & Hixon, 1991; Macrae et al., 1993, 1994, 1999; Pratto & Bargh, 1991; Stangor & Duan, 1991), and several studies on the role of cognitive process in decision making in organizational context (e.g., Macan and Merritt, 2011, Uhlmann et al., 2012), there is still a lack of literature in investigating the effects of cognitive processes on interviewers' judgments of applicants (Derous et al., 2016, Macan, 2009, Macan and Merritt, 2011, Nordstrom et al., 1996), especially in considering the interaction between cognitive load and gender discrimination.

A study conducted by Kith (2018) investigated the effect of manipulated cognitive load on the recruiters' likelihood to discriminate applicants for positions associated with strong gender-stereotypical norms. The study aimed to examine the effect of the increased cognitive load of recruiters on their decision to hire between two equally qualified, but gender different applicants (applicants A and B) for gender-congruent versus gender-incongruent positions. The author hypothesized that high cognitive load led to stereotypes, and consequentially to discrimination of applicants who did not fit with the gender-type job (e.g. male applicant with male-typed job, and female applicant with female-typed job). In this study participants were asked to listen to two structured interviews of a male and female applicant, respectively, and evaluated the applicant's suitability for the position, then participants were asked to hire just one of the two applicants. Participants' cognitive load was manipulated using a secondary task, asking participants in the high cognitive load condition to type out an unrelated passage, while performing the primary task of listening to the applicant's interviews, whereas participants in the low cognitive load condition were not asked to perform the secondary task. Subsequently, after completing the final hiring decision, participants' cognitive load was assessed by using a nine-point scale ranging from 1 (very, very low mental efforts) to 9 (very, very high mental efforts). Evaluation of applicants was measured by providing individual questions for critical thinking and monitoring, the overall ratings for both the congruent and incongruent applicant, and the final hiring decision (applicant A instead of B). Results revealed that the interaction effect of cognitive load and perceived congruency between the applicant and the position did not emerge on the decision of evaluating and hiring the applicant. In line with these findings, it seems that structured interviews resist the discrimination toward an incongruent candidate.

In my opinion, this last study provides interesting insights to further study the relation between a manipulated cognitive load and applicants' prototypicality by also introducing the language manipulation of the abstractness/concreteness property. Indeed, in the above study, the role of the cognitive load was investigated in the context of a structured interview, which might as well be worthy to investigate in the context of written-language tools such as CVs and cover letters. Additionally, future studies could examine not only the interaction between cognitive load and applicant's congruency, but also the interaction among cognitive load, applicants' prototypicality (communal female and agentic male vs. communal male and agentic female), and language of traits (abstract vs. concrete). Such study's design would aim at deepening what I did in a correlational way, but experimentally, by implementing a manipulated measure of cognitive load.

Thirdly, the other important contribution of these studies was to investigate several recruiters' preexisting characteristics, such as gender bias, attitudes towards women, perceived cognitive load and processing fluency, self-ascribed communion and agency, and ideal applicant's perception in terms of communion and agency. No previous study has included all these dimensions in investigating the evaluation of applicants. To this end, I tested three different path models by integrating gradually new variables in the three studies. The last path model appeared to be well fitted overall. More mediating effects occurred in comparison to those that occurred in Studies 1 and 2. The path that was confirmed in all three studies was the mediating role of perceived honesty in the negative relationship between participants' cognitive load and the evaluation of applicants. Specifically, in Studies 1 and 2, this path was significant for female applicants but not for male, while in Study 3 it was significant for male applicants but not female. Moreover, cognitive load was also mediated by honesty on salary recommendation of female (Study 1) and male (Study 3) applicants, and even on the promotion of male applicants. Despite the gender target, it is important to consider applicants' perceived honesty as a valid mediator of participants' cognitive load and evaluation of applicants in further studies. Another aspect to consider refers to how participants perceived themselves in terms of agency and communion: Perceived honesty mediated the positive relationship between participants' self-reported communion and

evaluation of female applicants. Likewise, it is important to consider how participants perceived the ideal applicant in terms of communion and agency: In the condition where male and female applicants were described as agentic, the perceived honesty mediated the positive relation between participants' ideal agentic applicant and both evaluation and promotion of female applicants, while also mediating the negative relation between participants' perception of applicants' prototypicality and evaluation of male applicants.

However, the repeated failure of finding the gender moderation effect across the three studies' models should be discussed in relation to the fact that our samples were quite small, and a larger sample should be required to test a multigroup path analysis and obtaining a significant effect of the grouping-variable. I believe this model could be implemented in further studies, with larger samples, to test further effects regarding the evaluation of female and male applicants. Likewise, I suggest that future studies should focus on a comparison of the three models, testing them against each other to eventually identify the most efficient one.

Finally, I provide literature on hiring decisions with a new measure of evaluation of applicants which is more parsimonious than the distinguished measures used as far, and comprehensive in terms of different aspects against which applicants are allegedly judged.

## **Limitations and Future Directions**

One limitation of the current studies is the absence of an ecological sample of real-life recruiters. Importantly, my sample was composed of students attending those faculties that provide knowledge about the hiring process and the labor market process. Even so, it would be illuminating to conduct this experiment among recruiters or substitute the cover letter with simulated oral interviews to investigate the language property of abstractness/concreteness in the oral language. Regarding the sample, across Studies 1 and 2 rather high drop-out rates were identified, which I explained by referring to participants' lack of motivation in completing the questionnaire due to the absence of compensation for their participation. Unfortunately, given the high frequency of incorrect recall, it is possible that even those

participants who correctly reported the target gender may just have guessed correctly. Surprisingly, this drop-out issue did not occur in Study 3, which had a very similar design to the other two studies. The time for completing the questionnaires was the same across the three studies, as well as the place of the checked item in the questionnaire. One possible solution to this issue could be to previously ask participants if they are seriously interested in participating in the research study and select only those who declare a strong interest in completing the questionnaire.

Additionally, the current studies pertain to self-reported measures of gender bias, but I assume that Implicit Association Tests (IATs) would be more powerful for capturing the presence of gender stereotypes and attitudes. However, even though gender bias works in some studies, and AWS in others, I was not able to confirm their effects throughout my three studies, contrary to my predictions. I suggest carrying out other research in this field implementing IATs or other instruments with higher effectiveness than self-report scales. Indeed, one way to evaluate subtle stereotypes, such as gender bias or negative attitudes toward women, is by assessing changes in explicit or implicit attitudes after exposure to diverse stimuli. Explicit attitude measures, or self-reports, are easy to administer but are vulnerable to threats to validity, such as social desirability and experimenter demand effects (Wittenbrink & Schwarz, 2007). Although I included a measure of social desirability, which predicted neither gender bias nor AWS, I believe that the use of implicit attitude measures, such as an Implicit Association Test (IAT, Greenwald et al., 1998), would help to reduce issues of response distortion. Indeed, implicit attitude measures reflect the automatic activation of unconscious knowledge. In this way, participants are not conscious of what is being assessed, which helps minimizing reactivity and reducing threats to validity (Greenwald & Banaji, 1995).

Moreover, an important consideration concerns the use of cognitive load and processing fluency as self-reported variables. Following Rubin et al. (2013), I used one single

item to assess participants' self-reported processing fluency, and two items to assess participants' self-reported cognitive load. First of all, my one-item cognitive fluency measure may not ideally have captured the process that participants were presumably engaged in when they evaluated the target. I asked how easy it was to imagine the candidate, which might not have been the best way to measure the participants' processing fluency. Several scholars claimed the importance of using a single-item or a multi-item measure of cognitive fluency depending on the definition of the construct. The single-item measure seems to be favored when the construct is a single, concrete object, easily and uniformly imagined (Rossiter, 2002, Bergkvist & Rossiter, 2007). Moreover, a review by Graf et al. (2017) showed that in consumer behavior research a form of cognitive fluency that should be included to consistently measure this process is the "fit fluency", which is the fit between two factors of an object (e.g. spatial and time, past = left and future = right) that the consumer expected to be related. In our study, we did not consider this aspect of processing fluency, and it would be worthy to implement a multi-item measure of processing fluency, for instance by asking participants how the applicant description matched with the participant's ideal applicant. Considering that in my studies I asked participants to evaluate stereotypical vs. counterstereotypical applicants, the fit between the target-description and the ideal target might be more interesting than the easiness in imagining the applicant. Nevertheless, the most important issue of both the measures of cognitive load and processing fluency is that I measured them without effectively manipulating participants' effort.

Cognitive processing fluency pertains to either the ease or difficulty with which individuals process new, external information (e.g., Jacoby et al., 1989). On the other hand, cognitive load pertains to the deprivation of processing resources. There is a host of operationalizations of cognitive load and processing fluency (e.g., Mutlu-Bayraktar et al., 2020, Reber et al., 2004, Sweller, 2018, Winkielman et al., 2006). The most successful measure commonly implemented to assess cognitive load is the one by Gilbert and Hixon (1991), which consists in asking participants to memorize an eight-digit number before performing an experimental task, and writing down the number after the end of the task. We also saw that in the organizational field cognitive load has been manipulated by providing participants with a secondary task (see Kith, 2018). Only a few studies have considered cognitive load as a direct consequence of the written stimulus material provided to participants, and usually in the education research field (e.g., Cerdan et al., 2018; Klepsch et al., 2017; Moreno, 2010; Paas, 1992). There is still a lack of literature in investigating cognitive load on gender-biased hiring decisions. As I suggested in the General Discussion section, following the work of Kith (2018), I consider that it could be useful to manipulate the actual cognitive load and processing fluency as experimental factors in further studies to corroborate and extend my findings. Finally, it would be worth investigating these effects for a gendered-type job (masculine vs. feminine) to check for significant differences among the experimental conditions and for the different usage of language in describing applicants' traits or a lack of those, related to the different job sectors. The congruency between applicants' gender and the gender-typed job could activate to a higher degree the subtle gender bias in participants and provide more information about gender-biased hiring choices.

Theoretically, my studies extend research on gender bias and applicants' impression with a particular focus on the role of language (Carlsson et al., 2018; Frauendorfer & Mast, 2013; Glick et al., 1988; Hoover, 2018; Keck, 2019; Moscatelli et al., 2020; Rice & Barth, 2017; Rice & Greenlee, 2018; Rubini & Menegatti, 2008) in presenting stereotypical (vs. counterstereotypical) applicants. Moreover, I added a new cue on the effect of disclosing weaknesses on the evaluation of female applicants. Also, I provided a more effective measure of evaluation of applicants, which included together competence, likability, and hirability ratings. Finally, I developed a path model including several participants' internal characteristics that have not been considered altogether in literature to date. This model could be used in further studies on the same topic. Future studies examining the interaction effect among manipulated cognitive load and processing fluency, applicants' prototypicality, and language on the evaluation of applicants are needed. Likewise, future studies on the effect of language and weaknesses on applicant's evaluation in congruent (vs. incongruent) jobs are required too.

Practically, my findings have important implications for applicants' presentation. Women who want to apply for gender-neutral jobs should describe themselves with concrete counterstereotypical traits or abstract stereotypical traits to increase their chance of being hired. Likewise, they should disclose their weaknesses expressed in terms of a lack of communion by using concrete language to enhance their chance of being hired. My studies revealed that language might help especially female applicants in modifying their impression and increasing their chances to be positively evaluated for a job. Of course, we should consider the other side of the coin: The usage of a specific type of language in describing female applicants, on one hand, could contribute to a reduction of gender bias and discrimination toward women, whereas, on the other hand, it could contribute to a perpetuation of existing gender bias. Recruiters and applicants should be aware of the power of language in shaping impressions. Companies, universities, and governments should implement educational programs to teach the importance of using a certain language in writing CVs, cover letters, and job application materials. These programs should be particularly addressed to young women who are going to enter the labor market.

# Conclusion

The present studies showed that manipulating the language in which information on traits and weaknesses is presented helpes women more than men in improving their evaluation: Female applicants should describe counterstereotypical (agentic) traits in concrete terms, and vice versa, stereotypical traits in abstract terms, to have more chances than their male competitors of being hired for the same job. The perception of applicants' honesty was a positive driver of their final evaluation, promotion or salary recommendation, and this was, again, more effective for women than for men. These findings revealed that women should appear as agentic, but moderately, to gain an advantage over men, and at the same time, be honest to benefit from recruiters' gender stereotypes (Moscatelli et al., 2020). Moreover, this research contributes to shedding light on the effects of recruiters' perceived cognitive process in interacting with applicants' prototypical traits and affecting the evaluation of female applicants. Managing female applicants' presentations might represent a necessary device for overcoming gender stereotypes, at least in the first steps of a woman's career. Training women to write up their CVs or presentation letters in a way that positively changes their impression does not imply that women have to pretend to have traits they do not have, but rather that they should learn how to present those they have (and don't have) more successfully.

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# Table 1

Descriptive Statistics and Correlations (Study 1)

Variable	п	М	SD	1	2	3	4	5	6	7
1. Evaluation	240	5.21	0.84	_						
2. Honesty	240	4.76	0.99	.59**	—					
3. Salary	239	3.48	1.05	.30**	.26**	—				
4. Gender Bias	240	0.47	0.92	15*	13*	.19**	—			
5. Cognitive Load	239	5.28	0.94	49**	35**	16*	.19*	_		
6. Communion	240	3.89	0.69	.22**	.29**	.02	16*	.15*	_	
7. Agency	240	3.58	0.56	.11	.05	03	.02	.11	.49**	_

*Note.* High scores of cognitive load correspond to high levels of cognitive load.

 $p^* < .05. p^* < .01.$ 

Means and Standard Deviations for Applicants' Evaluation, Honesty, Salary, and Cognitive Load by Applicants' Gender, Traits, and Language Condition (Study 1)

	Female Applicants		Male App	olicants	Gender differences	
	М	SD	М	SD	$t(Ns^*)$	р
Evaluation				-		
Communal Concrete <sup>a</sup>	5.14	.89	5.26	.77	54	.59
Communal Abstract <sup>b</sup>	5.36	.79	5.00	.72	1.84	.07
Agentic Concrete <sup>c</sup>	5.52	.76	4.96	1.1	2.17*	.03
Agentic Abstract <sup>d</sup>	5.20	.73	5.31	.81	56	.58
Salary						
Communal Concrete	3.36	.94	3.74	.96	-1.52	.13
Communal Abstract	3.32	1.00	3.50	.92	71	.49
Agentic Concrete	3.24	.87	3.45	1.31	69	.49
Agentic Abstract	3.71	1.2	3.45	1.10	.35	.93
Honesty						
Communal Concrete	4.69	.89	4.81	.77	46	.65
Communal Abstract	4.85	1.10	4.37	1.10	1.64	.11
Agentic Concrete	5.17	.86	4.71	.86	1.99*	.05
Agentic Abstract	4.77	.89	4.84	.84	34	.74
Cognitive Load						
Communal Concrete	2.35	1.05	2.66	1.28	31	.24
Communal Abstract	2.52	1.17	2.54	1.11	02	.94
Agentic Concrete	2.83	1.19	2.42	1.19	.41	.12
Agentic Abstract	2.72	1.04	2.45	.94	.28	.28

*Note.* Ns = Number of participants for the four conditions  ${}^{a}Ns = 33$  for the female target, 27 for the male target.  ${}^{b}Ns = 31$  for the female target, 29 for the male target.  ${}^{c}Ns = 25$  for the female target, 31 for the male target.  ${}^{d}Ns = 35$  for the female target, 29 for the male target.

Means and Standard Deviations for Evaluation of applicants, including Cognitive Load as Covariate by Applicants' Gender, Traits, and Language Condition (Study 1)

	Female Applicants		Male Applic	cants	Gender differe	Gender differences	
	М	SD	М	SD	$t(Ns^*)$	р	
Evaluation							
Communal Concrete	5.10	.15	5.11	.15	01	.97	
Communal Abstract	5.30	.16	5.02	.14	.28	.20	
Agentic Concrete	5.17	.15	5.09	.15	.09	.69	
Agentic Abstract	5.23	.15	5.08	.15	.16	.45	

Note. Reported means for each condition are adjusted for the cognitive load covariate's levels.

Moderator Analysis: Cognitive Load, Gender, and Language on Evaluation of Applicants' ratings

(Study 1)

Effect	Estimat	e SE	95% CI		р
			LL	UL	
Fixed effects					
Intercept	6.95	1.34	4.32	9.58	.01
Cognitive load	91	.49	-1.87	.05	.06
Gender <sup>a</sup>	72	.86	-2.41	.98	.41
Language <sup>b</sup>	-1.15	.82	-2.77	.47	.16
Cognitive Load*Gender	.43	.31	18	1.04	.17
Cognitive Load*Language	.53	.30	06	1.12	.08
Gender*Language	.78	.53	26	1.82	.14
Cognitive Load*Gender*Language	37	.19	74	.01	.05

*Note*. Total N = 296. CI = confidence interval; LL = lower limit; UL = upper limit.

<sup>a</sup>1 = Male, Agentic, Abstract; 2 = Female, <sup>b</sup> 1=Abstract, 2=Concrete. *Note*. High scores of cognitive load correspond to high levels of cognitive effort.

	Female ( $N = 124$ )	Male (N = 115)
Honesty -> Evaluation	.44**	.33**
Gender Bias -> Evaluation	06	.02
Cognitive Load -> Evaluation	21**	34**
Communion -> Evaluation	.07	.07
Agency -> Evaluation	.16	16
Honesty -> Salary	.28**	.23**
Gender Bias -> Salary	25**	10
Cognitive Load -> Salary	.11	24**
Communion -> Salary	04	12
Agency -> Salary	.04	.01
Gender Bias -> Honesty	14	.01
Cognitive Load -> Honesty	42**	25**
Communion -> Honesty	.38**	.12
Agency -> Honesty	25	08
R2 Evaluation	.57	.35
R2 Salary	.12	.12
R2 Honesty	.26	.07

Unstandardized Factor Loadings for Each Group of Female and Male Applicants (Study 1)

Note. High scores of cognitive load correspond to high levels of cognitive effort.

p < .05, p < .01.

R2 Honesty

Table 5

Mediating Paths from Gender Bias, Self-reported Communion (Communion) and Agency (Agency),

	Indirect effect for female applicants		Indirect effect for male applicants		
	<i>N</i> = <i>124</i>	p	N = 115	р	
Gender bias -> Honesty -> Evaluation	06	.19	.00	.92	
Communion -> Honesty -> Evaluation	.17	.01	.04	.44	
Agency -> Honesty - > Evaluation	11	.16	03	.72	
Cognitive Load -> Honesty -> Evaluation	19	.00	08	.01	
Gender bias -> Honesty -> Salary	04	.21	.00	.99	
Communion -> Honesty -> Salary	.11	.07	.03	.71	
Agency -> Honesty - > Salary	07	.21	02	.72	
Cognitive Load -> Honesty ->Salary	12	.01	.06	.10	

and Cognitive Load to Evaluation and Salary via Honesty (Study 1)

Note. High scores of cognitive load correspond to high levels of cognitive effort

Variable	М	SD	1	2	3	4	5	6	7	8	9	10	11
1. Evaluation	4.71	1.01											
2. Honesty	4.92	1.15	.65**	_									
3. Promotion	3.65	1.23	.43**	.26**									
4. Salary	5.68	1.05	.10	.01	.14*								
5. AWS	3.52	0.36	.06	.12	08	16*	_						
6. Gender Bias	0.18	0.64	.11	.02	00	.00	33**						
7. Agency	3.66	0.59	.04	.02	04	07	.11	.11	_				
8. Communion	4.00	0.65	.16*	.05	.02	02	.28**	.06	.62**				
9. Prototypicality	4.70	1.25	18*	18*	.05	08	.12	13	03	.05			
10. Social Desirability	5.50	3.97	.06	.08	01	.11	.10	.04	.44**	.28**	05	—	
11. Processing Fluency	4.70	1.33	.15*	.06	.19*	04	.12	01	03	.17*	.27*	.02	
12. Cognitive Load	5.58	1.23	21**	17*	.05	14*	24**	03	04	13	.02	03	06

Descriptive Statistics and Correlations for Study Variables (Study 2)

*Note.* n = 189; high scores of cognitive load correspond to high levels of cognitive effort

 $p^* < .05. p^* < .0$ 

Means and Standard Deviations for Applicants' Typicality and Salary by Applicants' Gender and

	Fe app	male licants	Male a	pplicants	Weaknesses differences for Female		Weaknesses differences for Male	_
	М	SD	М	SD	$t(Ns^*)$	р	$t(Ns^*)$	р
Evaluation								
Lack of Agency <sup>a</sup>	4.83	.14	4.80	.16	08	.73	.21	.35
Lack of Communion <sup>b</sup>	4.91	.16	4.59	.16	.15	.49	.25	.27
None <sup>c</sup>	4.69	.16	4.56	.15	.22	.33	.03	.88
Honesty								
Lack of Agency <sup>a</sup>	5.20	.15	5.12	.18	.02	.90	.41	.09
Lack of Communion <sup>b</sup>	5.17	.18	4.70	.17	.24	.30	.77* <sup>d</sup>	.01
None <sup>c</sup>	4.96	.17	4.35	.16	.21	.39	.35	.13
Promotion								
Lack of Agency <sup>a</sup>	3.83	.17	3.63	.20	32	.21	02	.95
Lack of Communion <sup>b</sup>	4.15	.20	3.64	.19	.29	.25	.15	.58
None <sup>c</sup>	3.54	.19	3.48	.18	.62* <sup>e</sup>	.02	.16	.53
Salary								
Lack of Agency <sup>a</sup>	5.52	.15	5.75	.17	-1.15*	.01	.25	.29
Lack of Communion <sup>b</sup>	6.67	.17	5.50	.17	.22	.33	.29	.20
None <sup>c</sup>	5.30	.16	5.46	.15	1.36*	.01	.04	.23

Weaknesses Condition (Study 2)

*Note*. For the first three dependent variables, a MANOVA analysis was run, and for Salary an ANOVA analysis. Ns\* = Number of participants for the six conditions. All applicant ratings were on a scale from 1 to 7.  $^{a}Ns = 40$  for the female target, 26 for the male target.  $^{b}Ns = 33$  for the female target, 34 for the male target.  $^{c}Ns = 26$  for the female target, 29 for the male target.

Under the column Ns, the differences among the means of the weaknesses conditions are reported as follows: The first number refers to the differences between Lack of Agency and Lack of Communion; the second number to the differences between Lack of Agency and None; the third number to the differences among the Lack of Communion and None conditions. <sup>d,e</sup>Post hoc significant results were not taken into consideration because the MANOVA results showed not significant interaction effects.

Means and Standard Deviations for Applicants' Cognitive Load and Processing Fluency by

	Female Applicants		Male Applicants		
	М	SD	М	SD	-
Cognitive Load					
Lack of Agency <sup>a</sup>	2.39	.17	2.30	.20	
Lack of Communion <sup>b</sup>	2.33	.20	2.66	.19	
None <sup>c</sup>	2.36	.19	2.75	.18	
Processing Fluency					
Lack of Agency <sup>a</sup>	4.73	.19	4.33	.22	
Lack of Communion <sup>b</sup>	4.83	.22	4.71	.22	
None <sup>c</sup>	4.40	.21	4.50	.20	

Applicants' Gender and Weaknesses Condition (Study 2)

*Note.* High scores of cognitive load correspond to high levels of cognitive effort.

Means and Standard Deviations for Evaluation of Applicants with Cognitive Load and Processing Fluency as Covariates by Applicants' Gender and Weaknesses Condition

	Female Applicants		Male Applicants		
	М	SD	М	SD	
Evaluation					
Lack of Agency	4.83	.14	4.84	.17	
Lack of Communion	4.84	.17	4.57	.16	
None	4.79	.16	4.54	.15	

Note. Reported means for each condition are adjusted for the cognitive load and processing fluency covariates'

levels.

Unstandardized Factor	Loadings for Each	Group of Female	and Male Applicants	(Study 2)
e noren angea i actor		Or onp of I ontone		

	Female ( $N = 99$ )	Male ( <i>N</i> = 89)
Honesty -> Evaluation	.48**	.61**
Gender Bias -> Evaluation	.03	.20
Cognitive Load -> Evaluation	28**	07
Cognitive Fluency -> Evaluation	.05	.11
AWS -> Evaluation	53*	.19
Communion -> Evaluation	.38	.33
Agency -> Evaluation	19	.00
Prototypicality -> Evaluation	04	14
Honesty -> Salary	08	09
Gender Bias -> Salary	03	27
Cognitive Load -> Salary	18	.13
Processing Fluency -> Salary	03	01
AWS -> Salary	97**	62
Communion -> Salary	.37	01
Agency -> Salary	46	.05
Prototypicality -> Salary	.09	18*
Honesty -> Promotion	.27**	.35**
Gender Bias -> Promotion	25	.04
Cognitive Load -> Promotion	.00	22
Processive Fluency -> Promotion	.24**	.01
AWS -> Promotion	-1.20**	.09
Communion -> Promotion	.51*	29
Agency -> Promotion	63*	.45
Prototypicality -> Promotion	.05	.17
Gender Bias -> Honesty	25	.44*
Cognitive Load -> Honesty	24**	.04
Processing Fluency -> Honesty	02	.15
AWS -> Honesty	.17	.48
Communion -> Honesty	03	.06
Agency -> Honesty	.23	27
Prototypicality -> Honesty	.15	25*
R <sup>2</sup> Evaluation	.37	.53
R <sup>2</sup> Salary	.12	.14
R <sup>2</sup> Promotion	.25	.18
R <sup>2</sup> Honesty	.14	.13

Note. High scores of cognitive load correspond to high levels of cognitive load.

\*p < .05, \*\*p < .01.

#### Mediating Paths from Gender Bias, Cognitive Load, Processing Fluency, AWS, Self-reported

Communion and Agency, and Prototypicality to Evaluation, Salary, and Promotion via Honesty (Study

	Indire femal N = 99	ect effect for le applicants	Indir mal N =	ect effect for e applicants 89 p
Gender Bias -> Honesty -> Evaluation	12	.23	.27	.05
Cognitive Load -> Honesty -> Evaluation	11	.02	03	.73
Processing Fluency -> Honesty -> Evaluation	01	.80	.09	.19
AWS -> Honesty -> Evaluation	.08	.64	.29	.32
Communion -> Honesty -> Evaluation	01	.92	.04	.84
Agency -> Honesty -> Evaluation	.11	.42	17	.36
Prototypicality -> Honesty -> Evaluation	07	.15	15	.05
Gender Bias -> Honesty -> Salary	02	.57	04	.41
Cognitive Load -> Honesty -> Salary	02	.52	00	.80
Processing Fluency -> Honesty -> Salary	00	.88	01	.48
AWS -> Honesty -> Salary	.01	.77	04	.54
Communion -> Honesty -> Salary	00	.95	01	.89
Agency -> Honesty -> Salary	.02	.65	.03	.61
Prototypicality -> Honesty -> Salary	01	.49	.02	.41
Gender Bias -> Honesty -> Promotion	07	.27	.15	.09
Cognitive Load -> Honesty -> Promotion	.06	.11	01	.74
Processing Fluency -> Honesty ->	01	.81	.05	.22
AWS -> Honesty -> Promotion	.05	.66	.17	.37
Communion -> Honesty -> Promotion	01	.93	.02	.85
Agency -> Honesty -> Promotion	.06	.48	09	.37
Prototypicality -> Honesty -> Promotion	04	.19	09	.10

Note. High scores of cognitive load correspond to high levels of cognitive effort.

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Table 13		

Descriptive Statistics and Correlations (Study 3)

Variable	М	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.Promotion	4.06	1.40	-														
2.Processing Fluency	4.81	1.24	.28**	-													
3.Salary	5.59	0.97	.27**	.22**	-												
4.Evaluation	4.88	1.18	.68**	.24**	.29**	-											
5.Honesty	5.13	1.12	.59**	.25**	.32**	.71**	-										
6.Cognitive Load	2.17	.98	23**	20**	14*	36**	37**	-									
7.Prototypicality	4.28	1.17	.04	.28**	05	.04	06	.17*	-								
8.Ideal Applicant Agency	5.34	0.95	.18**	.11	.29**	.29**	.29**	30**	09	-							
9.Ideal Applicant Communion	5,25	1,00	.12	.13.	.04	.15*	.15*	06	.09	03	-						
10.Self-reported Communion	4.05	.55	.11	.06	.02	.13	.09	21**	12	.09	.17*	-					
11.Self-reported Agency	3.82	.60	.09	.11	.13	.06	.03	16*	05	.10	.01	.43**	-				
12.AWS	3.38	.45	07	.01	.06	.03	.05	03	.07	07	.02	.18**	09	-			
13.Gender Bias	.29	.75	.03	.11	.01	.03	01	09	02	.08	12	05	03	09	-		
14.Social Desiderability	4.44	0.73	.18**	.16*	.08	.12	.10	21**	02	.32**	.17*	.20**	.33**	17*	.05	-	
15.Sex			05	.05	.11	12	10	.03	.06	02	10	14*	.24**	33**	.14*	.01	-
16.Age	24.34	2.42	10	20**	.18**	14*	10	.23**	05	.01	16*	14*	06	.05	.10	02	.01

*Note.* n = 216; high scores of cognitive load correspond to high levels of cognitive effort.

p < .05. p < .01.

Means and Standard Deviations for Evaluation, Honesty, Salary, and Promotion of Applicants,

Participants' Perceived Cognitive Load and Processing Fluency by Applicants' Gender, Language of

Traits, and Weaknesses Condition (Study 3)

	Female App	olicants	Male Ap	plicants
	М	SD	M	SD
Evaluation				
Abstract Traits & Weaknesses	5.04	.21	5.11	.21
Abstract Traits & Concrete Weaknesses	4.49	.22	4.07	.24
Concrete Traits & Abstract Weaknesses <sup>c</sup>	5.10	.21	5.17	.23
Concrete Traits & Weaknesses <sup>d</sup>	5.23	.22	4.59	.22
Honesty				
Abstract Traits & Weaknesses	5.26	.21	5.05	.21
Abstract Traits & Concrete Weaknesses	5.01	.22	4.93	.24
Concrete Traits & Abstract Weaknesses <sup>c</sup>	5.06	.21	5.27	.22
Concrete Traits & Weaknesses <sup>d</sup>	5.46	.22	4.95	.22
Salary				
Abstract Traits & Weaknesses	5.70	.18	5.79	.18
Abstract Traits & Concrete	5 16	10	5 50	21
Weaknesses	5.40	.19	5.59	.21
Concrete Traits & Abstract	5 45	18	5 52	20
Weaknesses <sup>c</sup>	5.45	.10	5.52	.20
Concrete Traits & Weaknesses <sup>d</sup>	5.82	.19	5.37	.19
Promotion				
Abstract Traits & Weaknesses	4.33	.28	4.10	.26
Abstract Traits & Concrete	3.89	.26	3.59	.30
Concrete Traits & Abstract				
Weaknesses <sup>c</sup>	4.17	.26	4.04	.28
Concrete Traits & Weaknesses <sup>d</sup>	4.25	.27	3.96	.27
Cognitive Load				
Abstract Traits & Weaknesses	1.92	.20	2.14	.18
Abstract Traits & Concrete Weaknesses	2.16	.18	2.17	.18
Concrete Traits & Abstract Weaknesses <sup>c</sup>	2.22	.19	2.36	.21
Concrete Traits & Weaknesses <sup>d</sup>	2.18	.19	2.21	.19
Processing Fluency				
Abstract Traits & Weaknesses	4.77	.97	4.93	1.26
Abstract Traits & Concrete	4 0 1	1.26	100	1.02
Weaknesses	4.81	1.30	4.90	1.02
Concrete Traits & Abstract	1 10	1 /2	5 70	04
Weaknesses <sup>c</sup>	4.40	1.43	3.28	.74
Concrete Traits & Weaknesses <sup>d</sup>	4.81	1.36	4.55	1.34

*Note.* Ns = Number of participants for the four conditions.  $^{a}Ns = 30$  for the female target, 29 for the male target.

 $^{b}Ns = 26$  for the female target, 22 for the male target.  $^{c}Ns = 29$  for the female target, 25 for the male target.  $^{d}Ns = 26$ 

28 for the female target, 27 for the male target. High scores of cognitive load correspond to high levels of

cognitive effort.

Multiple Moderator Analysis: Cognitive Load/Processing Fluency and Language of Traits on

Evaluation, Honesty, Promotion, and Salary ratings of Female Applicants (Study 3)

Effect	Estimate	SE	(	95% CI		
			LL	UL		
Evaluation						
<sup>a</sup> Cognitive Load Moderator						
Fixed effects						
Intercept	4.36	.322	3.72	4.87	.001	
Traits' Language	272	.102	471	073	.007	
Cognitive Load	.435	.203	.036	.833	.033	
Cognitive Load*Traits' Language	.182	.060	.003	.064	.001	
R <sup>2</sup>	.177					
<sup>a</sup> Processing Fluency Moderator						
Fixed effects						
Intercept	4.37	.322	3.72	4.87	.001	
Traits' Language	.421	.204	.022	.821	.039	
Processing Fluency	.883	.337	.225	1.54	.009	
Processing Fluency*Traits' Language	290	.202	685	.105	.151	
R <sup>2</sup>	.175					
Salary						
<sup>a</sup> Cognitive Load Moderator						
Fixed effects						
Intercept	5.51	.244	5.03	5.98	.001	
Traits' Language	097	.077	245	.056	.083	
Cognitive Load	.090	.154	212	.392	.557	
Cognitive Load*Traits' Language	.167	.046	.077	.257	.001	
R <sup>2</sup>	.135					
<sup>a</sup> Processing Fluency Moderator						
Fixed effects						
Intercept	5.49	.245	3.74	5.97	.001	
Traits' Language	.102	.155	202	.406	.510	
Processing Fluency	159	.256	681	.323	.485	
Processing Fluency*Traits' Language	.281	.153	019	.582	.066	
R <sup>2</sup>	.127					
Promotion						
<sup>a</sup> Cognitive Load Moderator						
Fixed effects						

3.97

.407

3.18

4.77

.001

Effect	Estimate	SE	9	5% CI	р
			LL	UL	_
Traits' Language	223	.128	474	.029	.083
Cognitive Load	.163	.257	341	.668	.526
Cognitive Load*Traits' Language	.274	.076	.125	.424	.001
$\mathbb{R}^2$	.147				
<sup>a</sup> Processing Fluency Moderator					
Fixed effects					
Intercept	3.97	.407	3.18	4.77	.001
Traits' Language	.145	.256	356	.646	.569
Processing Fluency	.930	.423	.102	1.76	.028
Processing Fluency*Traits' Language	229	.253	725	.266	.364
$\mathbb{R}^2$	.161				
Honesty					
<sup>a</sup> Cognitive Load Moderator					
Fixed effects					
Intercept	5.03	.296	4.42	5.58	.001
Traits' Language	214	.093	397	031	.022
Cognitive Load	.148	.187	219	.514	.429
Cognitive Load*Traits' Language	.136	.056	.027	.244	.014
R <sup>2</sup>	.115				
<sup>a</sup> Processing Fluency Moderator					
Fixed effects					
Intercept	5.02	.296	4.42	5.58	.001
Traits' Language	.136	.187	230	.502	.467
Processing Fluency	.742	.309	.137	1.35	.016
Processing Fluency*Traits'Language	262	.185	623	.100	.156
$\mathbb{R}^2$	.119				

*Note.* Female Target N = 113; CI = confidence interval; LL = lower limit; UL = upper limit.

<sup>a</sup>Cognitive Load's low levels (16<sup>th</sup> quantile) = -1.20, high levels (84<sup>th</sup> quantile) = 1.16;

<sup>b</sup>Processing Fluency's low levels (16<sup>th</sup> quantile) = -.66, high levels (84<sup>th</sup> quantile) = .96;

Abstract Traits = 1, Concrete Traits = 2. High scores of cognitive load correspond to high levels of cognitive

effort.

Unstandardized Factor Loadings for Each Target of Female and Male Applicants (Study 3)

	Female ( <i>N</i> = 113)	Male ( <i>N</i> = 103)
Honesty -> Evaluation	.81**	.57**
Gender Bias -> Evaluation	06	.14
Cognitive Load -> Evaluation	17*	13
Cognitive Fluency -> Evaluation	.07	07
AWS -> Evaluation	07	02
Communion -> Evaluation	.36*	14
Agency $\rightarrow$ Evaluation	29*	.26
Prototypicality -> Evaluation	.17*	.05
Ideal Applicant Communion -> Evaluation	00	.07
Ideal Applicant Agency -> Evaluation	.03	.18
Honesty -> Salary	.17	.26**
Gender Bias -> Salary	.06	04
Cognitive Load -> Salary	04	.18
Processing Fluency -> Salary	.15*	.12
AWS -> Salary	00	.57**
Communion -> Salary	14	21
Agency -> Salary	07	.48*
Prototypicality -> Salary	00	18
Ideal Applicant Communion -> Salary	03	.01
Ideal Applicant Agency -> Salary	.22**	.24
Honesty -> Promotion	.73**	.74**
Gender Bias -> Promotion	.15	08
Cognitive Load -> Promotion	08	.18
Processive Fluency -> Promotion	.19	04
AWS -> Promotion	08	.81**
Communion -> Promotion	.28	.12
Agency -> Promotion	22	.30*
Prototypicality -> Promotion	.06	.18
Ideal Applicant Communion -> Promotion	04	07
Ideal Applicant Agency -> Promotion	.29**	.29*
Social Desirability -> Promotion	.55**	32**
Gender Bias -> Honesty	15	04
Cognitive Load -> Honesty	13	53**
Processing Fluency -> Honesty	.23**	.15
AWS -> Honesty	.11	.15
Communion -> Honesty	.05	15
Agency -> Honesty	10	12
Prototypicality -> Honesty	08	12
Ideal Applicant Communion -> Honesty	.09	.15
Ideal Applicant Agency -> Honesty	.25**	.15
Social Desirability -> AWS	08	13
Social Desirability -> Communion	.12	.18**
Social Desirability -> Agency	.23**	.34**
Social Desirability -> Ideal Applicant Communion	.39**	04
Social Desirability -> Ideal Applicant Agency	.45**	.35**
Social Desirability -> Cognitive Load	25	36**
Social Desirability -> Processing Fluency	.41**	.16
R <sup>2</sup> Evaluation	.66	.50
R <sup>2</sup> Salary	.25	.24
R <sup>2</sup> Promotion	.41	.50
R <sup>2</sup> Honesty	.22	.29

\*p < .05, \*\*p < .01.

*Note*. AWS = Attitude toward Women. High scores of cognitive load correspond to high levels of cognitive efforts.

Mediating Paths from Gender bias, Cognitive Load, Processing Fluency, AWS, Self-reported Communion and Agency, Prototypicality and Ideal Applicant's Communion and Agency to

Evaluation, Salary, and Promotion via Honesty (Study 3)

	Indirect effect for female applicants		Indirect effec for male applicants	t
	N = 99	р	<i>N</i> = <i>89</i>	р
Gender Bias -> Honesty -> Evaluation	12	.25	03	.81
Cognitive Load -> Honesty -> Evaluation	10	.26	30	.01
Processing Fluency -> Honesty -> Evaluation	.19	.01	.08	.13
AWS -> Honesty -> Evaluation	.09	.65	.08	.73
Communion -> Honesty -> Evaluation	.04	.82	09	.57
Agency -> Honesty -> Evaluation	08	.63	07	.59
Prototypicality -> Honesty -> Evaluation	06	.36	07	.34
Ideal Applicant's Communion -> Honesty -> Evaluation	.08	.35	.09	.19
Ideal Applicant's Agency -> Honesty -> Evaluation	.20	.02	.09	.27
Gender Bias -> Honesty -> Salary	03	.36	01	.83
Cognitive Load -> Honesty -> Salary	02	.42	14	.03
Processing Fluency -> Honesty -> Salary	.04	.12	.04	.17
AWS -> Honesty -> Salary	.02	.68	.04	.76
Communion -> Honesty -> Salary	.01	.84	04	.60
Agency -> Honesty -> Salary	02	.68	03	.62
Prototypicality -> Honesty -> Salary	01	.43	03	.38
Ideal Applicant's Communion -> Honesty -> Salary	.02	.44	.04	.29
Ideal Applicant's Agency -> Honesty -> Salary	.04	.12	.04	.35
Gender Bias -> Honesty -> Promotion	11	.27	03	.81
Cognitive Load -> Honesty -> Promotion	09	.28	40	.00
Processing Fluency -> Honesty -> Promotion	.17	.01	.04	.17
AWS -> Honesty -> Promotion	.08	.65	.11	.12
Communion -> Honesty -> Promotion	.04	.81	.11	.73
Agency -> Honesty -> Promotion	07	.63	11	.55

	Indirect effect for female applicants	t	Indirect effect for male applicants	
	N = 99	р	N = 89	р
Prototypicality -> Honesty -> Promotion	05	.37	09	.58
Ideal Applicant's Communion -> Honesty -> Promotion	.07	.34	09	.31
Ideal Applicant's Agency -> Honesty -> Promotion	.19	.02	.11	.17
Social Desirability -> AWS -> Promotion	.06	.81	.11	.15
Social Desirability -> Communion -> Promotion	.03	.53	.02	.62
Social Desirability -> Agency -> Promotion	05	.36	.10	.07
Social Desirability -> Ideal Applicant's Communion -> Promotion	02	.77	.03	.86
Social Desirability -> Ideal Applicant's Agency -> Promotion	13	.06	.10	.06
Social Desirability -> Cognitive Load -> Promotion	.02	.65	06	.21
Social Desirability -> Processing Fluency -> Promotion	.08	.19	01	.79

*Note.* High scores of cognitive load correspond to high levels of cognitive effort.

#### Figure 1

Paths Model, the Grouping Variable Is the Applicants' Gender (Study 1)

#### Female Target



*Note*. The unstandardized coefficients for the male and female target from Table 6 are reported in the figures. In brackets the standard error coefficients are reported. High scores of cognitive load correspond to high levels of cognitive effort.

CFA Model 1 Performed on the Basis of Five Dimensions (Study 1)



CFA Model 2 Performed on the Basis of Three Dimensions (Study 1)



Path Model, the Grouping Variable Is the Applicants' Gender (Study 2)

#### Female Target



*Note*. The unstandardized coefficients for the female target from Table 11 are reported in the figure. In brackets the standard error coefficients are reported.

Male Target



*Note*. The unstandardized coefficients for the male target from Table 11 are reported in the figure. In brackets the standard error coefficients are reported.

Path Model, the Grouping Variable Is the Applicants' Gender (Study 3)

#### Female Target



Note. The unstandardized coefficients for the male target from Table 16 are reported in the figure.

In brackets the standard error coefficients are reported.

The social desirability covariate is not reported in the figure for the sake of clarity.
### Male Target



Note. The unstandardized coefficients for the male target from Table 16 are reported in the figure.

In brackets the standard error coefficients are reported.

The social desirability covariate is not reported in the figure for the sake of clarity.

# Appendices

# Appendix A

T-test Results and Means for Each Trait's Agency and Communion Rating

Traits	Ag	ency	Con	nmunion	<i>t</i> (135)	р	Cohen's d
	М	SD	М	SD	_		
Broad-minded	5.04	1.69	5.16	1.59	-0.66	0.51	0.302
Chaotic	2.83	1.42	3.03	1.74	-1.18	0.24	0.840
Communicative	4.86	1.63	4.50	1.41	2.24	0.03	
Competent	4.79	1.36	5.65	1.26	-6.55	0.00	
Conscient	5.13	1.45	5.08	1.48	0.34	0.73	
Consistent	4.96	1.47	5.39	1.47	-2.91	0.00	
Curious	5.21	1.69	5.12	1.49	0.57	0.57	
Open	5.56	1.71	5.05	1.51	2.94	0.00	
Dogmatic	3.44	1.54	4.11	1.44	-4.06	0.00	
Outgoing	5.93	1.47	3.90	1.40	12.19	0.00	
Flexible	5.40	1.48	4.10	1.58	7.75	0.00	
Improvisational capacities	4.61	1.58	5.20	1.43	-4.03	0.00	
Cooperative	5.86	1.49	3.84	1.78	9.72	0.00	
Serious	4.48	1.45	5.28	1.43	-5.36	0.00	
Versatile	5.10	1.46	4.47	1.72	3.68	0.00	
Bossy	2.70	1.72	5.18	1.82	-11.35	0.00	
Narrow interests	2.05	1.50	2.89	1.71	-5.06	0.00	
Moody	2.20	1.38	2.73	1.50	-3.41	0.00	
Incompetent	2.21	1.23	2.03	1.26	1.72	0.09	
Unreliable	2.04	1.35	2.16	1.36	-0.92	0.36	
Pessimistic	2.02	1.45	2.22	1.41	-1.75	0.08	
Brave	4.23	1.72	5.31	1.45	-5.73	0.00	2.078

### Appendix B

Concrete Sentences Corresponding to the Abstract Traits for the Abstraction, Concreteness, Lack of

Agency,	and Lack	of Com	munion	Dime	nsions
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Concrete	Abstract		
Agency			
Mi adatto facilmente ai diversi ambienti lavorativi (I easily adapt myself to the different workplaces)	Essere abile (Able)		
Dopo il lavoro vado dritto in palestra (After working I go straight to the gym)	Essere attivo (Active)		
Parlo apertamente e onestamente dei miei bisogni al mio supervisore (I openly and honestly talk about my needs to my supervisor)	Essere assertivo (Assertive)		
Agisco sulla base dei miei obiettivi e sogni (I follow my dreams and goals)	Essere autonomo (Self-reliant)		
Sono in grado di gestire situazioni di emergenza in ospedale rimanendo focalizzata sul da farsi. (I can handle emergency situation in the hospital being focused on what mast be done)	Essere razionale (Rational)		
Posso lavorare da solo se i miei colleghi non sono presenti (If my collegues are absent, I can work on my own)	Essere indipendente (Independent)		
Di solito, riesco a risolvere anche i casi clinici più complessi quando i miei colleghi non sono in grado (Usually, I can solve the most difficult clinical cases even when my collegues cannot)	Essere intelligente (Intelligent)		
Durante il mio tempo libero, scrivo canzoni per la mia band (In my spare time, I write songs for my band)	Essere creativo (Creative)		
Communion			
Non danneggerò mai un mio collaboratore per raggiungere i miei obiettivi a causa dell'angoscia che potrei causare (I will	Essere empatico (Sympathetic)		

never damage a colleague because of the pain I could cause)

Concrete	Abstract			
Mantengo sempre i miei appuntamenti con gli studenti (I always keep my appointments with students)	Essere affidabile (Trustworthy)			
Quando un collaboratore risponde male chiedo sempre il motivo del suo nervosismo, senza prenderla sul personale (When colleagues answer badly I always ask the reason behind their behaviors, without taking it personally)	Essere comprensivo (Understanding)			
Mi piace rimanere in contatto con i miei pazienti (I like to stay in touch with my patients)	Essere attento agli altri (Caring)			
In un contesto pubblico, sostengo i miei colleghi, anche se non sono d'accordo con loro (In a public context I support my colleagues even if I do not agree with them)	Essere leale (Loyal)			
Aspetto sempre il mio turno per parlare (I always wait my turn for talking)	Essere educato (Polite)			
Non parlo con i pazienti terminali (I do not talk with terminally ill persons)	Essere sensibile (Sensitive)			
Aiuto i miei pazienti e i loro parenti a capire il percorso di diagnosi e le terapie annesse (I help my patients and their caregivers to understand the diagnosis and therapies)	Essere collaborativo (Helpful)			
Lack of Agency				
Controllo sempre più volte cosa dire ai pazienti prima di incontrarli (I check several times what I should say to my patients before meeting them)	Essere insicuro (Insecure)			
Evito di fare domande durante le conferenze anche se vorrei avere una risposta (I avoid asking questions during congress even if I would like to have an answer)	Essere timido (Shy)			
Smetto di parlare quando qualcuno mi sta criticando (I stop to talk if someone is criticizing me)	Essere vulnerabile (Vulnerable)			
A lavoro, una volta che mi sono seduto alla mia scrivania se ho bisogno di qualcosa, chiedo ai miei colleghi di passarmela	Essere pigro (Lazy)			

Concrete	Abstract
(When I sit, I ask my colleagues to provide me with	
something too far from my position)	
Lack of Communion	
A volte do suggerimenti ai miei colleghi, anche se non ho familiarità con l'argomento di cui sta parlando (Sometimes I give suggestions to my colleagues even if I am not familiar with the topic)	Essere troppo sicuro di me (Conceited)
A volte, comando ai miei studenti di fare un compito per me anche se non dovrebbero farlo (Sometimes I ask my students to do unrelated jobs for my personal gain)	Essere dominante (Dominant)
A volte, prendo tutti gli strumenti di laboratorio che mi servono per lavorare anche se ne hanno bisogno anche i miei colleghi (Sometimes, even if my colleagues need some tools, I take them away from them if I need them too)	Essere egoista (Egoistic)
A volte, non rispondo alle richieste dei parenti di un paziente (Sometimes I do not reply to caregivers' questions)	Essere insensibile (Insensitive)

# Appendix C

Italian and English Versions of the Applicant's Evaluation Dimension

English Version	Italian Version	ID code
Please, answer to the following questions, using a scale from 1 to 7, where 1= "Not at all" and 7= "Very much"	Per favore, risponda alle seguenti domande, utilizzando una scala da 1 a 7, dove 1= "Per niente" e 7= "Moltissimo".	
1.How favorably would you rate Maria/o?	1.In generale, quanto favorevolmente valuta Maria/o?	Item 1
2.How much do you like Maria/o as a person?	2.Quanto le piace Maria/o come persona?	Item 2
3.How suitable would you consider Maria/o as an applicant for this job?	3.Quanto ritiene idonea Maria/o come candidata per questa posizione?	Item 3
4. How much would you support Maria/o's application for the further steps of the hiring process?	4.Supporterebbe Maria/o nei futuri step del processo di selezione?	Item 4
5.Do you think Maria/o should be hired for the job?	5.Pensa che Maria/o dovrebbe essere assunta/o per questa posizione?	Item 5
6.How competent do you think Maria/o is?	6.Quanto competente ritiene Maria/o?	Item 6
7.How qualified do you think Maria/o is for the job?	7.Quanto reputa qualificata/o Maria/o per la posizione?	Item 7
8.How well do you think Maria/o would be able to complete all the duties of the job?	8.Quanto ritiene probabile che Maria/o sia in grado di adempiere ai suoi doveri di lavoro?	Item 8
9. Overall, how would you rate Maria/o's strength as an applicant?	9.Quanto ritiene forte la candidatura di Maria/o?	Item 9
10.Do you believe that the applicant has been honest in describing her academic and professional experiences?	10.Pensa che la/il candidata/o sia stata sincera nel descrivere le sue esperienze accademiche e professionali?	Item 16
11.Do you believe that the applicant has been honest in describing her abilities and skills (e.g., "able to handle administrative duties")?	11.Pensa che la/il candidata/o sia stata sincera rispetto alle sue abilità e competenze (es. "capacità di gestire i doveri amministrativi")?	Item 17

English Version	English Version Italian Version	
Please, answer to the following questions, using a scale from 1 to 7, where 1= "Not at all" and 7= "Very much"	Per favore, risponda alle seguenti domande, utilizzando una scala da 1 a 7, dove 1= "Per niente" e 7= "Moltissimo".	
12.Do you think that the applicant has been honest in describing her personality (e.g., "able")?	12.Pensa che la/il candidata/o sia stata sincera nel descrivere la sua personalità (es. "abile")?	Item 18
13.Overall, how honest would you perceive Maria/o to be?	13.Quanto le sembra sincera Maria/o, nel suo complesso?	Item 19
14.Was it easy to judge the applicant's honesty?	14.È stato facile giudicare l'onestà della candidata?	Item 20
15.Was it easy to understand the motivation letter?	15.La lettera motivazionale quanto le  è risultata di semplice comprensione?	Item 21
16.How clear and coherent do you find the applicant's presentation of the motivation letter?	16.Quanto ha trovato lineare l'esposizione della/lo candidata/o nella lettera motivazionale?	Item 22
17. How much effort did the motivation letter require to be read?	17.Quanto sforzo ha richiesto leggere la lettera motivazionale?	Item 23 (Reverse)
18. The national average starting salary for a medical researcher is $\notin$ 2000 per month. If hired, what do you think Maria/o's starting salary should be?" Response choices ranged from 1 ( $\notin$ 500) to 7 ( $\notin$ 3,500).	18.La paga media nazionale per un medico ricercatore come Maria/o è di circa 2000€ al mese. Se assunta, quanto ritieni debba essere il salario iniziale di Maria/o? Risponda utilizzando una scala da 1 (500) a 7 (3500)	Item 24