

## The Legitimizing Role of Stereotypical Content for the Gender Pay Gap

### O Papel Legitimador do Conteúdo Estereotípico para a Diferença Salarial entre Homens e Mulheres

### El papel legitimador de los contenidos estereotipados en las diferencias salariales entre hombres y mujeres

*Ana Karolyne Florencio Amorim(1); Andreza Conrado Conceição(2); Cicero Roberto Pereira(3);  
Emerson Araújo Do Bú(4)*

1 Faculdades Nova Esperança - FACENE, João Pessoa - Paraíba, Brazil.

E-mail: karollyne\_Amoriim@hotmail.com | ORCID: <https://orcid.org/0000-0002-6104-4512>

2 Department of Psychology, University of Brasília, Brasília – DF, Brazil.

E-mail: andreza.conrado.conceicao@gmail.com | ORCID: <https://orcid.org/0000-0002-3976-7167>

3 Institute of Social Sciences, University of Lisbon, Lisbon, Portugal. Department of Psychology, Federal University of Paraíba, João Pessoa – Paraíba, Brazil.

E-mail: crp@labesp.org | ORCID: <https://orcid.org/0000-0003-3406-3985>

4 Department of Public Health Sciences, University of Virginia, Charlottesville – VA, USA. Institute of Social Sciences, University of Lisbon, Lisbon, Portugal.

E-mail: emerson.bu@campus.ul.pt | ORCID: <https://orcid.org/0000-0003-3864-3872>

Revista de Psicologia da IMED, Passo Fundo, v. 16, n. 1, p. 3-21, janeiro-junho, 2024 - ISSN 2175-5027

DOI: <https://doi.org/10.18256/2175-5027.2024.v16i1.5170>

Sistema de Avaliação: *Double Blind Review*

Editora: Márcia Fortes Wagner

Como citar este artigo / To cite this article: [clique aqui! / click here!](#)

## Abstract

Discrimination against women is widespread in contemporary societies, and the persistent wage gap for identical roles compared to men suggests that this bias is socially justified. We addressed this issue by proposing that individuals evoke gender stereotypes in a way that reinforces their tendency to reaffirm gender pay gaps. In two experiments, we analyzed how the mere act of evoking reasons for hiring someone produces the gender pay gap and whether stereotype-based justifications mediate this effect. In Study 1 ( $N = 95$ ), we manipulated the gender of a candidate applying for a job position and identified that the simple act of justifying hiring influences the gender pay gap. In Study 2 ( $N = 302$ ), participants evoked more stereotypes of competence for a male job applicant, and this evocation mediated the gender pay gap. In the discussion, we addressed the role of stereotype-based justification in gender disparity on critical decisions within work-relation contexts. The insights generated by this research program have important implications for understanding discrimination against women in the workplace and for the development of public policies aimed at promoting gender equality.

**Keywords:** Social Discrimination, Sexism, Social Inequality.

## Resumo

A discriminação contra as mulheres é generalizada nas sociedades contemporâneas, e a persistente disparidade salarial para funções idênticas em comparação aos homens sugere que esse viés é socialmente justificado. Abordamos essa questão propondo que os indivíduos evocam estereótipos de gênero de uma maneira que reforça sua tendência a reafirmar as diferenças salariais de gênero. Em dois estudos, analisamos como o mero ato de evocar justificações para contratar alguém produz a disparidade salarial de gênero e se as justificativas baseadas em estereótipos medeiam esse efeito. No Estudo 1 ( $N = 95$ ), manipulamos o gênero de um candidato a uma posição de trabalho e identificamos que o simples ato de justificar a contratação influencia a disparidade salarial de gênero. No Estudo 2 ( $N = 302$ ), os participantes evocaram mais estereótipos de competência para um candidato a emprego do sexo masculino, e essa evocação mediou a disparidade salarial de gênero. Discutimos o papel da justificativa baseada em estereótipos na disparidade de gênero em decisões críticas dentro de contextos relacionados ao trabalho. Esses achados possuem implicações importantes para a compreensão da discriminação contra mulheres no local de trabalho e para o desenvolvimento de políticas públicas voltadas à promoção da igualdade de gênero.

**Palavras-chave:** Discriminação Social, Sexismo, Desigualdade Social.

## Resumen

La discriminación contra las mujeres es generalizada en las sociedades contemporáneas, y la persistente disparidad salarial para funciones idénticas en comparación con los hombres sugiere que este sesgo está socialmente justificado. Proponemos que los individuos evocan estereotipos de género de una manera que refuerza su tendencia a reafirmar las diferencias salariales de género. En dos estudios, analizamos cómo el acto de evocar justificaciones para contratar a alguien produce la disparidad salarial de género y si las justificaciones basadas en estereotipos median este efecto. En el Estudio 1 ( $N = 95$ ), manipulamos el género de un candidato a un puesto de trabajo e identificamos que el simple acto de justificar la contratación influye en la disparidad salarial de género. En el Estudio 2 ( $N = 302$ ), los participantes evocaron más estereotipos de competencia para un candidato a empleo masculino, y esta evocación medió la disparidad salarial de género. Discutimos el papel de la justificación

basada en estereotipos en la disparidad de género en decisiones críticas dentro de contextos relacionados con el trabajo. Estos hallazgos tienen implicaciones para la comprensión de la discriminación contra las mujeres y para el desarrollo de políticas públicas orientadas a promover la igualdad de género.

**Palabras-clave:** Discriminación Social, Sexismo, Desigualdad social.

## The Legitimizing Role of Stereotypical Content for the Gender Pay Gap

Discrimination against women is widespread in contemporary societies. For example, even in consolidated Western democracies, women occupy only 27% of managerial positions. In general, it takes 135.6 years to close the gender gap worldwide (World Economic Forum, 2021). Furthermore, women are more likely to perform informal jobs with limited access to social protection, and they earn 18.8% less than men, even when they have the same or better qualifications (International Labor Organization, 2019). In fact, unequal pay for the same work is a powerful indicator of gender. Previous research on this issue has shown that both men and women tend to assume that men earn higher salaries than women (e.g., Biernat *et al.*, 1991; Diekmann & Eagly, 2000). Recent studies have pointed to the existence of what is called the gender wage gap, a term used to describe the unequal pay between genders (Sin *et al.*, 2022; Casado-Díaz *et al.*, 2022; Masso *et al.*, 2022). This phenomenon is also known as the salary estimation effect (Williams *et al.*, 2010). Such disparity is openly tolerated, even in democratic countries, which suggests that gender discrimination is a descriptive social norm that defies the normative codes inscribed in laws prohibiting the open expression of prejudice, as has recently been demonstrated (e.g., Verniers & Vala, 2018). At least two factors are symptomatic of gender disparity in the workplace: intra-occupational discrimination; and occupational segregation.

The first of these factors corresponds to paying women less money to perform the same job as men (Araújo & Ribeiro, 2002). The second factor occurs because women are outnumbered in the highest paid positions. Both factors may be closely linked to stereotypes relating to people's beliefs about the positions that each gender can occupy and in which they are able to perform best. Accordingly, managers discriminate against women because they are subject to social stereotypes that associate women more with the traits of sociability and less with the traits of competence (e.g., Cuddy *et al.*, 2011). The perception of women as less competent than men leads managers to assign them to typically female jobs that focus on care and sociability (Glick, 1991) or to positions that are considered neutral (Glick *et al.*, 1988). However, when hiring candidates for jobs that are considered male and have a greater prestige and higher salary expectations (Adamovic & Leibbrant, 2022; Hogue *et al.*, 2010), such as technology-oriented (Zajac

*et al.*, 2024) or managerial positions (Glick, 1991; Glick *et al.*, 1988), managers assign these jobs to men because they infer those men are endowed with greater reliability, assertiveness, and intelligence. This phenomenon suggests that competence and sociability traits can be used by decision-makers to legitimize gender disparities in the workplace.

The first question we ask here is whether individuals are motivated to favor men, especially regarding pay differences between men and women, even in a social environment where promoting equality and non-prejudice against minority groups is the norm. In other words, do individuals value men more than women by giving men higher incomes, even in the absence of any objective criteria indicating that the men are more qualified? The second question we ask is whether people perceive men as more competent than women. Finally, the third question is whether this perception of competence is associated with people's tendency to attribute higher incomes to men. Our central hypothesis predicts that if the content of the stereotypes justifies gender disparities, then the evocation of these stereotypes should mediate the gender differences in the incomes of men and women. In other words, decision-makers tend to allocate higher payments to men than women because this difference is legitimized by the content of the stereotypes they associate with men and women.

### **Legitimization of Gender Inequalities**

In Western democratic societies, discriminatory behaviors need to be justified to be perceived as fair, legitimate, and necessary (e.g., Costa-Lopes *et al.*, 2013; Jost, 2019). People can justify unequal pay for women using motherhood myths. For example, based on the Justified Discrimination Model (Pereira *et al.*, 2010; 2018), Verniers and Vala (2018) investigated how motherhood myths (i.e., beliefs that it is a woman's natural destiny to be a mother and that childcare is her duty) legitimize and mediate the relationship between sexism and gender discrimination and are thus used to justify discrimination against women in relation to their professional careers.

The attribution of the inequality in income between genders to the existence of specific gender roles allows sexist individuals to support gender inequality without appearing to be sexist (e.g., Connor & Fiske, 2018). For example, Cuddy *et al.* (2004) found that women with children were perceived as less competent. Moreover, Glick *et al.* (1988) manipulated the genders of would-be candidates for positions considered to be typically male, typically neutral, and typically female, by associating the personal characteristics of the candidates in such a way as to match or not match the genders. The results showed a greater preference for candidates whose personal characteristics corresponded to the stereotype of the position. They also showed that the gender-based characteristics perceived in the candidates mediated gender discrimination, in that participants perceived the "male" characteristics as being more important

for the job than the “female” characteristics. In another study, González *et al.* (2019) manipulated the résumés of men and women so that they differed only in relation to the qualifications and the fact that they showed whether the candidate had children. Participants discriminated against women described as mothers, but not when they were depicted as highly qualified and childless women. Although they were not directly tested, this set of results suggests that stereotypes can be used to legitimize discrimination against women in employment contexts.

Recent research also shows that stereotypes have an important evaluative function for men and women. Hentschel *et al.* (2019) argue that while agency-based evaluations may be more flexible depending on the context or gender of the evaluator, there is still a tendency to see women as more affectionate and emotional. This stereotypical view, according to Eagly *et al.* (2020) and Moscatelli *et al.* (2020), can influence decisions regarding both genders in organizational settings. Indeed, research in this area has shown that when the job in question is typically considered to be male, men are selected more frequently for the work and receive more rewards (Davison & Burke, 2000; Koch *et al.*, 2015), just as women are preferred for typically female positions. A plausible explanation for the role of the perception of competence and sociability in gender disparities in the workplace is that the content of these stereotypes serves as a context-based justification for giving preference to men. In other words, individuals may think that their greater appreciation for a man is not motivated by sexism. Rather, they may base their position on the belief that, in a specific situation, the man is more competent. That is, decision-makers can justify their choice by denying that they are being sexist when acting in a way that deliberately favors men. They can base their preference on the fact that they perceive men as more competent at performing certain tasks, while women are better at other tasks.

## Overview of the Studies

In two studies, we examined how the simple act of evoking reasons to justify hiring decisions affects the tendency to offer higher salaries to men than to women. We used the pay gap as an indicator of gender discrimination. In Study 1, we investigated whether individuals who advocate for hiring candidates demonstrate gender discrimination in their decision-making. In Study 2, we explored whether individuals justify hiring decisions by invoking stereotypes of competence and sociability, which may contribute to perpetuating the gender pay gap. The Research Ethics Committee of a Federal University in Brazil approved all procedures (reference number: CAEE: 94619018.4.0000.5188). The data and materials are publicly accessible on the Open Science Framework at <https://osf.io/yk8na/>

## Study 1

The aim of this study was to test the hypothesis that individuals act in ways that reaffirm the gender pay gap when given the opportunity of justifying their decisions in a male vs. female hiring scenario for a job. We used the experimental paradigm developed by Goldberg (1968), which presents a hiring scenario for measuring discrimination and manipulating the gender of participants. We produced two résumés that had purportedly been submitted for a position that was not considered stereotypically male or female, i.e., the position of an administrative assistant (Glick *et al.*, 1988). The résumés were the same, differing only in terms of the candidate's gender, which we manipulated by changing each candidate's first and middle names. The participants' task was to evaluate each application and provide salary estimates for each candidate. Before indicating the salary that they thought the candidate should earn, half of the participants had the opportunity to list the aspects that justified the hiring of a candidate.

We predicted that the participants would attribute higher salaries to the male candidate than to the female one when they were asked to justify hiring a candidate. According to our reasoning, if individuals provide explanations that justify their discriminatory behavior, as predicted by the Justified Discrimination Model (Pereira *et al.*, 2010; Verniers & Vala, 2018), it is very likely that the simple act of justification motivates them to act in ways that attribute higher salaries to men, but not to women. Additionally, we explored whether the justifications content could be classified in terms of stereotypical competence and sociability traits, and whether the male candidate is evaluated more in terms of competence and the female candidate is evaluated more in terms of sociability.

## Method

### Participants and Design

We defined a sample size based on a priori power analyses of 80%. At least 90 participants were needed for a detectable middle effect or higher ( $d = .60$ , with  $p = .05$  and power = .80). To be eligible for participation in the study, participants should self-declare as Brazilian, be at least 18 years old, participate voluntarily and sign the informed consent form. Accordingly, ninety-six university students of humanities, exact sciences, or social studies (44 males and 52 females) aged between 18 and 39 years ( $M = 23.1$ ,  $SD = 4.03$ ) participated in the study. We excluded one extreme outlier ( $\pm 3 SD$  from the mean), leaving 95 valid cases in the sample. We randomly allocated the participants to one of four conditions in a 2 (female vs. male) x 2 (justification vs. non-justification) between-subject factorial design.

## Context for Observing the Gender Pay Gap

Participants were recruited via advertisements on social networks such as Facebook. The study was conducted using the Qualtrics online platform, starting with a page that presented the informed consent form, which included basic information about the study. Once consent was obtained, the next page informed participants that the main objective was to gather their opinions on the selection process for a position. They were then introduced to a scenario where they were asked to assist a human resources manager in evaluating a candidate for the position of administrative assistant, a role not considered stereotypically male or female according to Glick *et al.* (1988). The participants read the following text:

“This study is part of a research program to assist human resources managers in the decision-making process. In the questionnaire to be answered, the manager needs to evaluate different people’s résumés to ascertain the extent to which each person meets the qualifications required for the position. Your task will be to help the manager make a decision. Below, you will find a résumé and questions about it. Remember: the manager needs your help. Answer as accurately as possible.”

Following this introduction, the software randomly assigned participants to different conditions, which varied solely based on the gender of the candidate whose résumé was shown and whether justifications were included or not.

## Manipulation of the Candidate’s Gender

To manipulate the candidate’s gender, we used résumés for a candidate applying for an administrative assistant position, altering only the candidate’s name—Maria Bastos for the female version and José Bastos for the male version. The academic background, work experience, and fluency in languages remained identical on both résumés.

## Manipulating the Justification for Hiring

We asked half of the participants to indicate the candidate’s qualities that they considered to justify his or her being hired for the job (i.e., the justification condition). Our idea was that the mere act of writing out the candidates’ qualities would allow the participants to focus on aspects that would justify deciding either in their favor or against them. For the condition without justifications, the participants did not provide any reason for hiring the candidate and so moved directly to the measurement of the dependent variable.

## Access to stereotypes

In the condition where participants provided justifications ( $n = 45$ ), we analyzed and categorized the content of these justifications into two groups based on the stereotype content model by Fiske *et al.* (2002): competence traits and sociability traits. Sociability traits included friendly, well-meaning, reliable, sincere, humorous, and warm, while competence traits comprised capable, efficient, skillful, competent, intelligent, and confident. We tallied how often each trait was mentioned in the hiring justifications. To ensure consistent categorization, both the author and a specialist in intergroup relations independently categorized and counted the traits. Interrater consistency was high, with competence traits at  $\alpha = .71$  and sociability traits at  $\alpha = .76$ .

## Measures

We measured the dependent variable by asking the participants to indicate how much they thought the candidate should earn if he or she were hired. Specifically, the participants indicated an estimated salary for the candidate in Brazilian currency (BRL). Finally, the participants answered a question to check the manipulation that we had made (“What is the candidate’s gender?”), in which all participants correctly indicated the candidate’s gender.

## Results

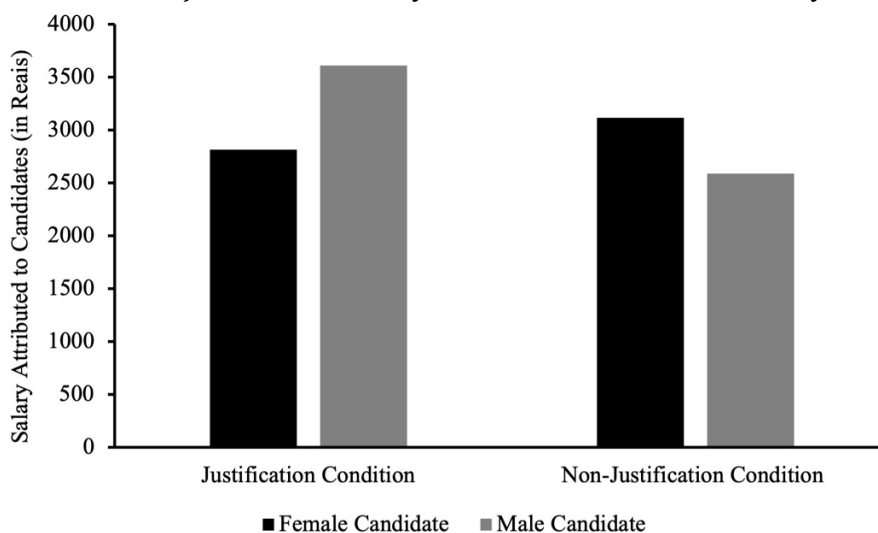
To test our hypothesis that the opportunity to justify the hiring would facilitate the gender pay gap, we performed a 2 (Candidate Gender: female candidate vs. male candidate) x 2 (Justification: justification vs. non-justification) between-subject factorial ANOVA. The results indicated that neither the main effect of the candidate’s gender ( $F(1, 91) = 0.17, p = .67, \eta_p^2 = .00$ ) nor the provision of justifications were significant ( $F(1, 91) = 1.31, p = .25, \eta_p^2 = .014$ ). However, and most importantly for our hypothesis, we obtained a significant interaction between the candidate’s gender and the justification ( $F(1, 91) = 4.37, p < .05, \eta_p^2 = .046$ ). Simple effects (see Figure 1) indicated that when the candidate was male the participants who justified their decisions provided a higher salary estimate ( $M = 3606.80, SD = 2104.50$ ) than the participants who did not justify their decisions ( $M = 2585.40, SD = 1097.00$ ),  $b = 1021.43, SE = 469.59, p = .03, d = .45$ . When the candidate was female, the difference in the means between the justification ( $M = 2815.22, SD = 1632.86$ ) and non-justification conditions ( $M = 3112.60, SD = 1165.51$ ) was not significant ( $b = 297.38, SE = 421.72, p = .48, d = -0.14$ ). Analyzing the interaction from the candidate’s gender simple effect, the participants tended to attribute a higher salary to the male candidate than to the female one when



they justified the hiring, with this effect being marginally significant ( $b = 791.64$ ,  $SE = 459.27$ ,  $p = .08$ ,  $d = .35$ ). When the participants did not have the opportunity to justify the hiring, the difference in the remuneration awarded did not differ significantly between the male and the female candidates ( $b = - 527.17$ ,  $SE = 432.94$ ,  $p = .23$ ,  $d = .24$ ).

**Figure 1.**

*Estimated Salary as a Function of Candidate Gender and Justifications*



Given that the participants in the justification condition could write the reasons for their decisions about the candidates ( $n = 44$ ), it was possible to perform an analysis of the content of these reasons by categorizing them in terms of the number of competence traits (e.g., capable, efficient, skillful, competent, intelligent, and confident) and the number of sociability traits (e.g., friendly, well-meaning, reliable, sincere, humorous, and warm) provided by each participant. We submitted these traits to a 2 (trait type: competence vs. sociability)  $\times$  2 (gender: female vs. male) ANOVA. We found a main effect of the type of trait evoked ( $F(1, 43) = 98.46$ ,  $p = .001$ ,  $\eta_p^2 = .70$ ), which indicates that the participants evoked more competence traits ( $M = 1.91$ ,  $SE = .11$ ) than sociability traits ( $M = .37$ ,  $SE = .09$ ). The interaction between the type of trait and the candidate's gender was not significant ( $F(1, 43) = .65$ ,  $p = .43$ ,  $\eta_p^2 = .01$ ).

## Discussion

The results indicated that the simple act of evoking reasons to decide in a hiring process played a key role in reaffirming the gender pay gap. The primary result of this study indicated that participants recommended a higher salary to the man applicant to a job when we asked them to evoke reasons for hiring an applicant compared to when they were not. Additionally, the participants tended to attribute higher salaries to the male than to the female candidate when we allowed them to evoke reasons for hiring.

In contrast, those we did not offer the opportunity to produce reasons for hiring the candidate did not differentiate between the man and woman in terms of salary. These results are the first experimental demonstration that the mere act of justifying a hiring decision influences individuals' tendency to promote the gender pay gap, corroborating previous research showing justifications lead to discrimination without the participants being aware of it or appearing to be prejudiced (Pereira *et al.*, 2010; Verniers & Vala, 2018). The higher salary attributed to the man also corroborates previous research indicating a pivotal gender pay gap in hiring contexts (Hogue *et al.*, 2010). The current study went further by showing that this gap occurred when individuals were allowed to justify their hiring decisions.

Importantly, the results also showed a gender bias in the content of the reasons that participants evoked in their justifications. They attributed more competence traits than sociability traits to both candidates. Taking into consideration the higher salaries attributed to the men, we may assume that the evocation of the competence traits was related to the higher salary attributions. In other words, when the participants produced justifications for hiring a male candidate, they probably evoked these stereotypes, which, in turn, prompted them to assess the men more positively than they assessed the women, thereby legitimizing the discrimination. If this were an explanatory examination of the effect of the justifications, it is likely that the stereotypes would mediate the observed gender pay gap. To test this possibility, we conducted a second study that better specified the questions relating to the justifications to facilitate the evocation of competence traits and sociability traits to determine whether they mediated the gender pay gap.

## Study 2

One of the objectives of this second study was to replicate the results of the first study by maintaining the same experimental design. Additionally, we sought to analyze whether the stereotypes (specifically those relating to competence) would play a justifying role in the discrimination process by mediating the relationship between the gender of the candidate to be hired and the salary attributed. This hypothesis follows the empirical evidence, which indicates that stereotypes contribute to the justification of discrimination against women in the organizational field (Verniers & Vala, 2018; Connor & Fiske, 2018; González *et al.*, 2019), and individuals use traits perceived as typically male to support this discrimination (Cuddy *et al.*, 2008; Glick *et al.*, 1988; Glick, 1991). Accordingly, the participants would be likely to evoke more competence traits when justifying the hiring of the male candidate than when justifying the hiring of the woman, and the greater evocation of competence traits would be positively related to the higher estimated salary.

Thus, greater attention was given to the content of the justifications given by the participants, and the following hypotheses were derived from this: a) there will be a tendency to favor men over women, which will translate into a difference in estimated salary, especially when the decision can be justified; and b) competence traits will mediate the relationship between the candidate's gender and the estimated salary, which will indicate that stereotypes are part of the legitimizing mechanism of gender discrimination in hiring situations.

## Method

### Participants and Design

We estimated the sample size before data collection by using the procedures proposed by Schoemann *et al.* (2017) to determine power for simple mediation models. Using the predicted low correlation between variables (i.e.,  $r = .20$ ) and setting confidence intervals at 95%, we need a sample of about  $N = 300$  to give an 80% chance of detecting a simple mediation effect. Accordingly, 302 university students (55% women), aged between 17 and 60 ( $M = 22.59$ ,  $SD = 6.60$ ) participated in the study. Eligibility criteria required participants to self-identify as Brazilian, be at least 18 years old, volunteer for the study, and sign an informed consent form. From the initial sample, 13 participants were identified as extreme outliers on the dependent variable, 12 had missing data, and 26 failed the manipulation check, resulting in their exclusion. This left 252 participants in the final sample. They were randomly assigned to one of four conditions in a 2 (female vs. male)  $\times$  2 (justification vs. non-justification) factorial design, with the variables varying between individuals.

### Manipulations of the Candidate's Gender and Hiring Justifications

The discrimination context mirrored the first study, where a candidate applied for an administrative assistant role. Résumés were identical except for the candidate's name, maintaining consistent academic and work backgrounds, and language skills. The gender manipulation and the use of justification were also replicated, with minor adjustments in the questioning. Instead of asking what qualities should or should not be present for hiring, the questions asked about qualities that justify hiring or not hiring the candidate. In conditions without justifications, participants proceeded directly to assessing dependent variables, similar to the first study.

### Measures

The dependent variable was, once again, the participants' answer to the question about how much the candidate should earn if he/she was hired. We then asked

the participants to indicate the candidate's gender to verify the effectiveness of the manipulation.

### Access to stereotypes

The categorization of stereotypes was performed in the same way as in Study 1, that is, analyzing the conditions that the participants gave justifications ( $n = 126$ ), categorizing them into competency traits and sociability traits. Again, the first categorization was carried out by the author and a second categorization was carried out by a specialist in intergroup relations. We analyzed the interrater consistency, which showed that the categorizations of the traits were highly consistent (competence traits,  $\alpha = .99$ ; sociability traits,  $\alpha = .96$ ).

### Procedures

The questionnaires were administered in person in the classrooms of a public university. Access to the classrooms was gained by contacting departmental professors through their emails listed on the university platform to request permission for the research. Once granted, the questionnaires were distributed in the respective classrooms. Students were briefed that the research was part of a study on decision-making processes before the questionnaires were handed out. The first page of each questionnaire provided instructions on how to complete the study and included contact information for the responsible researcher for any necessary debriefing.

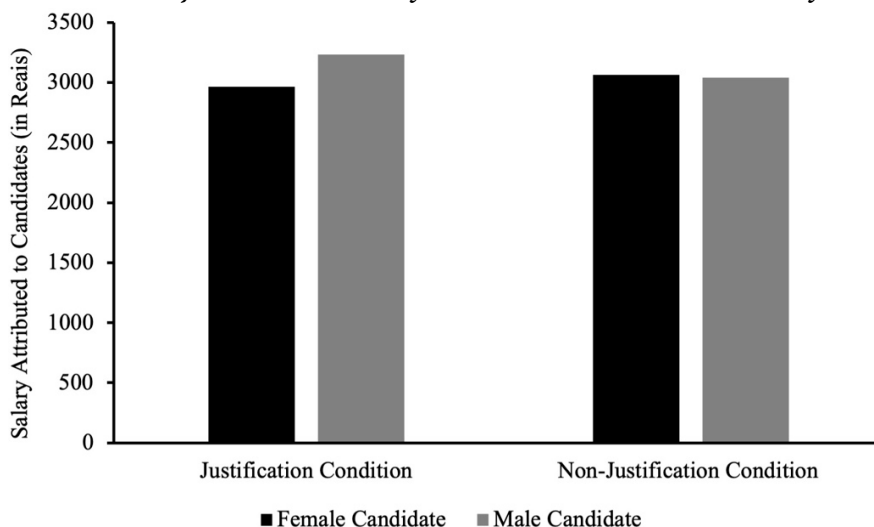
## Results

### Estimated Salary

We used a 2 (female vs. male) x 2 (justification vs. no justification) ANOVA, with salary as the dependent variable. We observed no significant main effect of the justifications ( $F(1, 247) = .08, p = .76, \eta_p^2 = .00$ ) or the candidate's gender ( $F(1, 247) = .54, p = .46, \eta_p^2 = 0.00$ ), nor was there an interaction effect between the target gender of the candidate and the justifications ( $F(1, 247) = .78, p = .37, \eta_p^2 = .00$ ), which did not replicate the findings in Study 1. Indeed, although, when operating under the justification condition, the participants attributed higher salaries to the men ( $M = 3235.15, SE = 166.41$ ) than to the women ( $M = 2966.31, SE = 163.79$ ) ( $b = 268.84, SE = 233.49, p = .25$ ), and, when operating under the non-justification condition, they attributed a slightly lower salary to the men ( $M = 3038.84, SE = 172.05$ ) than to the women ( $M = 3064.16, SE = 160.08$ ) ( $b = 25.32, SE = 235.01, p = .91$ ), the observed effects were not significant in either of the situations. The mean values are shown in Figure 2.

**Figure 2.**

*Estimated Salary as a Function of Candidate Gender and Justifications*



### Evocation of Stereotypes

Table 1 shows the descriptive statistics for the stereotypes evoked. A 2 (competence trait vs. sociability trait) x 2 (female candidate vs. male candidate) ANOVA showed a significant main effect of traits,  $F(1, 146) = 412.99, p < .001, \eta_p^2 = .74$ , which indicates that the participants attributed more competence traits ( $M = 2.33, SE = .09$ ) than sociability traits ( $M = .32, SE = .04$ ) to the candidates ( $b = 2.01, SE = .10, p < .001$ ). Moreover, the main effect of the target was significant,  $F(1, 146) = 4.09, p < .05, \eta_p^2 = .03$ , in that the participants attributed more traits to the male candidates ( $M = 1.43, SE = .07$ ) than to the female candidates ( $M = 1.23, SE = .07$ ). Moreover, the participants tended to attribute more competence traits to the male than to the female candidate ( $b = .34, SE = .17, p = .059$ ), while they did not differentiate the attribution of sociability traits according to the candidate's gender ( $b = .05, SE = .08, p = .52$ ). Despite this different response pattern, we found nonsignificant interactions between trait type and gender ( $F(1, 146) = 2.03, p = .16, \eta_p^2 = .01$ ).

**Table 1.**

*Means and standard deviations (in parentheses) for the evocation of traits by gender, and trait type*

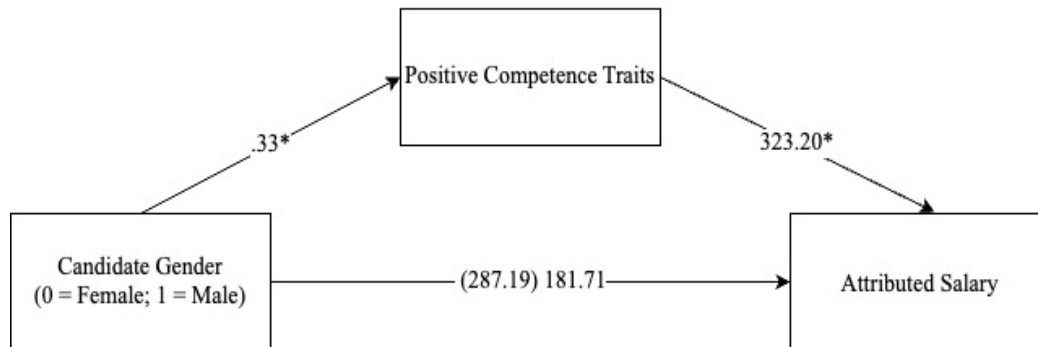
Gender	Competence	Sociability
Male	2.50 (.12)	.35 (.06)
Female	2.17 (.13)	.30 (.06)

## Analysis of Mediation

To test the hypothesis that positive competence traits (i.e., those that were evoked differently according to the gender of the candidates) mediate the relationship between candidate gender and the attributed salary, we estimated a mediation model in PROCESS (Hayes, 2013, Model 4), using the positive competence traits as mediators, the candidate's gender as the independent variable, and salary as the dependent variable (Figure 3). As we observed in the ANOVA, the effect of the candidate's gender on the identification of competence traits indicates that the participants presented more competence traits for the male candidate than for the female candidate ( $b = .33$ ,  $SE = .18$ ,  $90\%$  IC: .03; .62). We also found that the more traits that were described, the higher was the attributed salary ( $b = 323.20$ ,  $SE = 131.60$ ,  $95\%$  IC: 105.17; 541.23). These results indicate that the attribution of positive competence traits functions as a mediator of the effect of the candidate's gender on the attributed salary, so that participants described the male candidate as being more competent than the female candidate, and the more competent the candidate was perceived as being, the higher was the attributed salary. However, the indirect effect was only marginally significant ( $b = 105.47$ ,  $SE = 82.21$ ,  $95\%$  IC: -1.74; 258.04). This process can be seen in Figure 3.

**Figure 3.**

*Relationship Between Candidate Gender and Attributed Salary,  
Mediated by Positive Competence Traits*



Note. PCT = Positive Competence Traits. \* $p < .05$

## Discussion

Although the pattern of the differences between the means was the same as the one that we observed in Study 1, the results of the current study did not replicate the interaction effect between the candidate's gender and the mere act of justification. However, as far as the content of the reasons evoked to justify the hiring was concerned, the results showed marginal evidence for a gender's effect on participants' tendency to associate more competence traits to the man than the woman candidate.

Notably, the gender pay gap emerged indirectly: the more competence traits evoked by participants concerning the male candidate, the higher the salary they attribute to this candidate. These results corroborate studies in which individuals gave greater privilege to the male candidate to the detriment of the female candidate (Olian *et al.*, 1988; Glick, 1991) and attributed higher salaries to men (Beyer, 2016), using gender stereotypes to determine salary expectations (Hogue *et al.*, 2010). In other words, individuals first perceived the gender of the candidate, and then applied stereotypes that resulted in a differentiated evaluation between men and women, which was then related to the pay gap.

## General Discussion

In two experimental studies, we examined how individuals legitimize gender discrimination by citing stereotypical reasons that justify allocating more income to a male candidate, thus contributing to the gender pay gap. We found that simply evoking reasons for hiring an applicant for a job promoted the gender pay gap (Study 1). Participants assigned a higher income to a male applicant than to a female, which may be related to gender stereotypes. In Study 2, we found marginal evidence that evoking more competence stereotypes mediated the process between perceiving an applicant as male and assigning a higher estimated salary. Overall, these results are consistent with our prediction that stereotype content is somewhat related to and may legitimize the gender pay gap.

These results have several interesting theoretical implications. Firstly, they bring fresh insights to gender pay gap research (e.g., Auspurg *et al.*, 2017; Sin *et al.*, 2022; for an overview, see Bishu & Alkadry, 2016) by framing it within the context of previous research on the social-psychological legitimation of social inequality (e.g., Costa-Lopes *et al.*, 2013). This phenomenon can be related to the well-known motivation of individuals to legitimize discrimination and perceive the group-based hierarchy that reinforces the status quo (Jost, 2019). Our findings shed considerable light on how the justification of gender inequality contributes to the gender pay gap by showing that individuals tend to compensate a male more than a female applicant for a job when they are merely asked to elaborate the reasons for their decision. This phenomenon is especially relevant since critical decisions within a work-related context are usually based on a careful analysis of the applicant's profile. Our results showed the pervasiveness of gender inequalities, since individuals biased the content of the reasons that they invoked to justify hiring, resulting in a better evaluation of a candidate when this was a man rather than a woman.

Secondly, our findings also provide insights into the stereotype-based justification effect. Indeed, they add to the existing evidence of the pervasiveness of the stereotype-based effect in social judgment (see Fiske, 2017, for a review of

this phenomenon). The participants evoked competence traits differently when we merely asked them to provide reasons that justified the hiring of the candidate for the job. This selective evocation suggests that, in a decision-making process in which it is imperative to explain the options, the participants use a frame of reference that associates the requirements for hiring a candidate for a job with more stereotypically male characteristics. It is intriguing that they did this even though we had not told them to think about gender-based stereotypes. This phenomenon is also particularly interesting because it confirms the ubiquity of stereotypical thinking in a process that differentiates men and women in a critical organizing dimension of the gender pay gap (see Koch *et al.*, 2015, meta-analysis).

Indeed, in hiring contexts, the members of the discriminated group need to show even more competence to have any chances when applying for a job (Agerström *et al.*, 2012). Our results indicated that this contributes to reinforcing the gender pay gap in a particular situation in which the candidates' résumés gave no clue regarding their competence. Even not emphasizing stereotypical competence traits, decision-makers inferred these features as belonging to male candidates more than to women. This biased evocation is consistent with previous research showing that individuals often perceive agentic attributes (dominance, ambition, confidence, etc.) as typically male attributes (Ellemers, 2018). This effect usually leads people to perceive women as being unfit for leadership roles and to evaluate certain behaviors linked to a leadership role as being less favorable when they come from a woman since leadership is perceived as less congruent with the female gender role (Eagly & Karau, 2002).

Our study is subject to the customary limitations of research that uses samples of university students. This may be a less pressing concern in the present case given the social relevance of this group's gender pay gap effect. The extent to which these students had been involved in hiring processes or knew anything about them is unknown. Future studies could explore how the discrimination mechanism occurs in real-world company contexts to determine whether this bias persists in individuals who are expected to have been trained to avoid biased judgments towards women within such contexts.

In conclusion, our findings provide important insights about how stereotypes can legitimize discrimination through justifications and mitigate them in the hiring context. Furthermore, this study also shows how stereotypes relate to the salaries that people believe the candidates should earn. Future research can deepen the analysis of this phenomenon by considering how counter-stereotypical information can change stereotypes in the long term and impact the gender pay gap. For instance, previous studies on the backlash effect have suggested that, when evaluating highly competent women, individuals perceive them as having weak qualifications in other aspects, which are then reinterpreted as being more critical than competence for hindering the



likelihood of selection (e.g., Phelan *et al.*, 2008). Moreover, even when men and highly qualified women apply for a job, the women are less likely to be hired (Rudman *et al.*, 2012). Indeed, the analysis of the role of counter-stereotyping in the dynamics of the justifications of the gender pay gap can be elucidative of the decision-making process carried out by both men and women managers in the work context.

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