## SOCIOLOGY

# A Survey Experiment on "Bad Bosses": The Effect of Social Networks on Gender Solidarity 

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#### Abstract

Are women and men in positions of authority judged differently? If a gender evaluation gap exists, is it due to persistent stereotypes or notions of gender solidarity? We explore gender differences in judgement through a survey experiment in Argentina with a national sample of 4,068 employees. Respondents were asked to recommend a salary increase for a "bad boss" whose behavior was characterized as aggressive and at the limit of what is fair and appropriate. The survey experiment measures the extent to which respondents punish and reward female and male managers differently. The main finding is that women are more likely to punish male bad bosses, and men are more likely to punish female bad bosses. We explain variation as a function of respondents' social and personal networks. Study findings carry significant implications for the study of the gender pay gap.


#### Abstract

¿Son las mujeres y hombres que detentan posiciones de autoridad juzgados de forma diferente? Si existe una brecha de evaluación, ¿se debe esto a estereotipos que persisten a nociones distintas de solidaridad de género? En este artículo analizamos diferencias de género en la evaluación de hombres y mujeres en posición de autoridad utilizando un experimento de encuesta entre 4,068 empleados asignados aleatoriamente en muestras iguales. Se les pidió a votantes adultos en Argentina que recomendaran un aumento salarial a "malos jefes", quienes se comportan en forma agresiva, transgrediendo la línea de lo que es justo y apropiado. El experimento evalúa en qué medida los encuestados premian o penalizan en forma diferente a hombres y mujeres en posición de autoridad. Los resultados muestran que las mujeres encuestadas tenían mayor probabilidad de penalizar las transgresiones de hombres en posición de autoridad, en tanto que los hombres mostraron una mayor probabilidad de penalizar a las mujeres, aunque estos últimos eran menos sensibles al tratamiento experimental. Explicamos la variación en la propensión a penalizar la mala conducta de hombres y mujeres en función de diferencias en el tamaño y estructura de las redes personales de los encuestados. Estos resultados contribuyen en forma sustantiva al estudio de la brecha salarial en el mercado de trabajo.


I also think it is important for women to help one another. I have a saying: There is a special place in hell for women who don't.
-Madeleine Albright

The gender stereotypes introduced in childhood are reinforced throughout our lives and become self-fulfilling prophesies. Most leadership positions are held by men, so women don't expect to achieve them, and that becomes one of the reasons they don't.
-Sheryl Sandberg, Lean In

## Introduction

Are women and men in position of authority evaluated differently? Two leaders of the political and the corporate world, cognizant that women in positions of authority are judged more harshly than their male
counterparts, offer different prescriptions to the problem. Madeleine Albright, the first female American Secretary of State, has stated repeatedly that women, especially those in power, must support one another in order to overcome the systemic discrimination they face. As Secretary Albright explains, "What we have begun to see is that, as women get into a variety of positions, networking is very important. We really understand that we have to help each other. ...The bottom line is, the more we have a cadre of women moving up the scale, and it doesn't seem threatening, and people realize that women actually work much harder than men, and realize that they need more women in these jobs, I think that [discrimination] goes away." ${ }^{11}$ On the other hand, Sheryl Sandberg, chief executive officer (CEO) of Facebook and one of the few women at the top of the tech industry, recommends that women "lean in" and become more assertive and bold-in a way, mimic the stereotypical male overconfidence in the workplace. Sandberg acknowledges that this strategy is not without negatives, as more aggressive women are less liked. As she has affirmed time after time, "success and likeability are positively correlated for men and negatively for women. When a man is successful, he is liked by both men and women. When a woman is successful, people of both genders like her less. ${ }^{22}$ Ms. Sandberg believes gender differences in how female and male leaders are evaluated will begin to disappear once women are able to close the ambition (and fear) gap that hampers their careers and reduces the number of women in charge. The prescriptions advanced by Secretary Albright and Ms. Sandberg beg the question, are women and men as bosses judged differently, and if so, is it a function of differences in personal ties or gender stereotypes? We theorize that personal networks, as essential sources of interpersonal norms and information, shape (gendered) evaluations of authority. ${ }^{3}$

The question of an "evaluation gender gap" is significant. Competitive markets, such as the labor and the political ones, rely heavily on the evaluation of candidates for selection, promotion, and dismissal. If there is a gender gap in the perception of equivalent female and male candidates, the implications for political success, professional advancement, and income disparity are critical. Indeed, a wealth of studies in the social sciences point to differences in the way women and men are rewarded and punished (Rudman and Glick 1999; Lawless 2004; Weikart et al. 2007; Lammers, Gordijn, and Otten 2009; Mendez and Osborn 2010; Dolan and Lynch 2014; Esarey and Chirillo 2013; Morgan and Buice 2013). Overwhelmingly, the scholarship focuses on the different conditions under which gender stereotypes shape individuals' perceptions and evaluations (Rudman and Glick 1999; Lawless 2004; Weikart et al. 2007; Lammers, Gordijn, and Otten 2009; Mendez and Osborn 2010; Abers and Keck 2013; Dolan and Lynch 2014; Morgan and Buice 2013). Few examine how men and women, as evaluators, differ in the normative assessments they make (Eckel and Grossman 1996; Andreoni and Vesterlund 2001; Eckel and Grossman 2008; Esarey and Chirillo 2013, Barnes and Beaulieu 2014). Yet the information and values that shape individuals' decision whether to reward or punish the behavior of others are formed and disseminated through social interaction, which in turn unequivocally is gendered (Erickson 2006). Thus, drawing from the literatures on the gendered nature of social networks (McPherson and Smith-Lovin 1986; Molyneux 2002; Caiazza and Gault 2006; Erickson 2006; Norris and Inglehart 2006; Carpenter and Moore 2014; Djupe, McClurg, and Sokhey 2016), we expect to find a connection between the size of personal networks of evaluators and their gendered evaluations of women and men in positions of authority. We anticipate gender solidarity in leadership evaluation among women with larger networks, given that past scholarship has found that "women are more responsive to their networks than men" since their "subordinate position in our gender stratification system makes gendered issues more costly for women, and hence women are more attentive to information and influence on these topics" (Erickson 2006, 305).

We explore gender differences in judgement through a survey experiment in Argentina. We believe Argentina is an excellent case in which to conduct our survey experiment as it is a middle-income country with a strong yet highly stratified female labor force. As reported in the 2011 Census Bureau, women make up 38.5 percent of all private sector employees and 53 percent of all public sector employees. ${ }^{4}$ However, there

[^0]are fewer women in leadership roles: 30.3 percent of total managers (directores) and 27 percent of section chiefs (jefes) are women. Even though the country in the early 1990s was one of the first to implement legislative gender quotas and in 2015, at the time of this survey, had a female president serving her second term, women remain underrepresented in positions with the power to make hiring and promotion decisions.
The survey has a national sample of 4,068 employed respondents and four treatments randomly assigned in roughly equal samples of approximately 1,000 respondents per treatment. We provide respondents with four vignettes depicting female or male managers, all of whom have increased profits for the firm yet have transgressed by either yelling at employees or denying them overtime pay. These are aggressive company leaders who toe the line of what is fair and appropriate-hence, "bad bosses." The purpose of an aggressive manager is to present respondents with cases that clearly go against dominant female stereotypes so as to offer the most stringent conditions to test both our theory of gender solidarity stemming from the size of personal networks and the dominant hypothesis of the literature regarding gendered likability (i.e., both women and men will disapprove of aggressive female leaders). The survey question proposes a base increase of 10 percent in salary to reward the managers for improving earnings. Respondents then are asked to recommend their own salary increase. The experiment is designed to measure the extent to which respondents penalize and reward female and male managers differently. To the best of our knowledge, our survey experiment is the first to measure gendered penalties for improper behavior by authorities.
In contrast to past studies of leadership and candidate evaluation, which overwhelmingly find evidence that women and men share similar biases based on gender stereotypes, our survey experiment offers little support for this. Rather, we find that female and male respondents judge women and men managers differently, with women punishing male bad bosses more and female bad bosses less. In other words, we find evidence of gender solidarity shaping the evaluation of women by women. Interestingly, gender solidarity does not extend to men judging other men in power. We explain this variation in gender solidarity as a function of how men and women draw differently from their social and personal networks, whereby women rely on them more to decide behaviors and attitudes (Erickson 2006; Carpenter and Moore 2014; Barnes 2016). Our findings carry implications for the study of the gender pay gap, showing that the gender of the individual recommending the raise has a large and significant effect on future wages. Furthermore, our empirical findings contribute to the rich research on social networks. As we will describe in detail in the methods section, the survey we conducted extensively measures respondents' networks. Thus, the study gauges in a novel way the link between the size of an individual's network and the individual's assessment of leaders. This novel connection should be of interest to students of social network analysis, who may be persuaded to test this in other policy areas.

## Is There an Evaluation Gender Gap?

The first question our survey experiment answers is whether women and men in positions of authority are judged differently by respondents. A wealth of anecdotal data points to differences in how women in positions of leadership are evaluated in relation to equally skilled men. ${ }^{5}$ It is widely accepted that there are persistent double standards in perceptions of competence that overwhelmingly tend to benefit men. Increasingly, dominant gender biases are being exposed and debated publicly in the political and business worlds as well as in the realms of culture, sports, and education. ${ }^{6}$

Much of the research concentrates on examining how, ceteris paribus, women and men are rewarded and punished differently in the workforce (Blau and Kahn 2000; Cohen, Huffman, and Knauer 2009; Iversen and Rosenbluth 2010). Gender-based evaluations may help explain consistent findings across the world, such as the unrelenting gender wage gap-whereby women at equal level of skills and responsibility systematically earn less than men-and the recognition of a glass ceiling that tacitly hinders women from being promoted to the highest ranks. Recent research has revealed the existence of a gender wage gap favoring men even in traditionally female-dominated sectors such as nursing and education (Budig 2002; Smith 2012). These studies advance gendered differences in evaluation to explain wage inequality and the so-called glass

[^1]elevator phenomenon, whereby the men in these occupations-fewer and on average less senior than their female counterparts-are promoted swiftly to positions of authority (Smith 2012): Research indicates that stereotypes about what a prototypical man is match with stereotypes about what a prototypical manager is as men tend to be perceived as more assertive. "Because of the stereotype matching, men more readily fulfill our notions of what a manager should look like. And when you're in a female-dominated profession, there are fewer people that have the ability to match it."7

Within the political representation scholarship, we also find the conventional wisdom that candidates are perceived (and might be rewarded) differently according to their gender (Huddy and Terkildsen 1993; Sanbonmatsu 2002; Thames and Williams 2010; Dolan and Lynch 2014). Often, when it comes to the leadership traits that appeal to voters, female politicians seem to be judged by a different standard than male ones. For example, voters tend to evaluate the same candidate differently solely because of the candidates gender: "Male candidates are perceived as better able to handle crime, defense, and foreign policy issues; and female candidates are rated as more likely to be liberal, Democratic, and feminist" (Sanbonmatsu 2002, 21). ${ }^{8}$ Other research, such as Esarey and Chirillo's recent study on the gender of politicians and citizens' perception of corruption, argue: "This may be because women are punished more harshly for corruption than men because of different social expectations for their behavior, as has been anecdotally observed in American politics: Celinda Lake, a Democratic strategist, says female politicians are punished more harshly than men for misbehavior. 'When voters find out men have ethics and honesty issues, they say, Well, I expected that. When they find out it's a woman, they say, I thought she was better than that'" (Esarey and Chirillo 2013, 365).

On the basis of these past studies we expect to find gender differences in the evaluation of female and male bad bosses. Yet despite a strong consensus of an evaluation gender gap in the literature, the question of whether women and men are judged by different standards remains an empirical one. ${ }^{9}$ If there are gender differences in how women and men are punished and rewarded in the workplace, are they driven by attitudinal gender-based biases, by stereotypes associated with the position that is evaluated, and/or by social context and personal networks? Next, we discuss recent scholarship that addresses the reasons behind gender differences in evaluation, and lay out our expectations of causality.

## What Explains the Evaluation (and the Evaluators') Gender Gap?

If there are gender-based differences in how female and male leaders are evaluated, what factors explain the gap? This question has been examined across the social sciences and business studies, with the scholarship roughly falling into one of two camps. There are those that explain this gap as a matter of gender stereotypes shared by all evaluators. Others, in contrast, find evidence that female and male evaluators differ in how they judge women and men in power. In this section, we survey this literature and present our argument.

A significant number of studies focus on the effect gender stereotypes have on how individuals evaluate women and men in positions of power (Rudman and Glick 1999; Lawless 2004; Weikart et al. 2007; Lammers, Gordijn, and Otten 2009; Mendez and Osborn 2010; Abers and Keck 2013; Dolan and Lynch 2014; Morgan and Buice 2013). The extant research finds that under conditions of crises or high risk, gender stereotypes shape individuals' perceptions. Often, the salience of these stereotypes results in a belief that men are more effective leaders than women. In her 2004 study of gender stereotypes in the post 9-11 world, Jennifer Lawless explains:

> I find that a clear bias favoring male candidates and elected officials accompanies the "war on terrorism." Citizens prefer men's leadership traits and characteristics, deem men more competent at legislating around issues of national security and military crises, and contend that men are superior to women at addressing the new obstacles generated by the events of September 11, 2001. As a result of this stereotyping, levels of willingness to support a qualified woman presidential candidate are lower than they have been in decades. (Lawless 2004, 479-480)

Similarly, Rudman and Glick (1999) find empirical evidence that when management jobs are "feminized" (i.e., described with stereotypical female characteristics) women who do not live up to those criteria are

[^2]punished more than their male counterparts. Lammers, Gordijn, and Otten (2009) and Dolan and Lynch (2014) advance and test explanations of an evaluation gap based on context. Lammers, Gordijn, and Otten (2009) find that a country's "Most Important Problem," such as the threat of terrorism, determines whether voters will prefer male or female candidates, according to the particular gender stereotypes that are associated with the resolution of the problem. ${ }^{10}$ Dolan and Lynch (2014) assert that gender stereotypes can be contingent on type of policy and shape voters' attitudes toward candidates. ${ }^{11}$ Finally, Mendez and Osborn (2010) find that regardless of their objective levels of political knowledge, women are perceived as less informed about politics than men, which in turn better positions men to participate in politics.
The scholarship discussed above, however, presupposes little difference in how women and men judge. Yet a growing body of research lends support to the view that women and men's evaluations may also differ systematically (Gilligan 1982; Eckel and Grossman 1996; Andreoni and Vesterlund 2001; Dollar, Fisman, and Gatti 2001; Eckel and Grossman 2008; Esarey and Chirillo 2013; Friesdorf, Conway, and Gawronski 2015; Gottlieb, Grossman, and Robinson 2016). Scholars have explained the observed differences between female and male evaluators as resulting from women and men's different perception of risk, whereby the former are more risk averse than the latter (Olsen and Cox 2001; Eckel and Grossman 2008; Esarey and Chirillo 2013), and as resulting from gendered differences in the evaluation of moral dilemmas (Friesdorf, Conway, and Gawronski 2015).

Increasingly, research on behavioral differences between women and men identify the individual's personal and professional networks as critical sources of information and values (McPherson and Smith-Lovin 1986; Molyneux 2002; Caiazza and Gault 2006; Erickson 2006; Norris and Inglehart 2006; Carpenter and Moore 2014; Barnes 2016; Djupe, McClurg, and Sokhey 2016). In the workforce, networks matter enormously for the professional advancement of women precisely because individuals' ties vary in number and type by gender (Ibarra 1997; Campion and Shrum 2004). Research has shown also that solidarity ties tend to be stronger for women than for men (Fajak and Haslam 1998; Esarey and Chirillo 2013; Morgan and Buice 2013; Barnes 2016), given that women "are more powerfully subject to social norms because systematic discrimination against them makes their position more tenuous" (Esarey and Chirillo 2013, 365).

Network theories of social capital tell us that face-to-face ties lead to interpersonal trust, which in turn results in increased cooperation (Putnam 2000; Norris and Inglehart 2006). This is particularly true of the denser "bonding" social capital, based on close and discriminative ties, which tends to promote "specific reciprocity and mobilizing solidarity" (Putnam 2000, 22). Accordingly, we expect evaluators with stronger and more social connections to evaluate managers of the same gender more favorably. We expect, especially, evaluations that reflect gender solidarity to be stronger for female respondents, because "as a dominated rather than a dominant group in society, women's gender-based identity tends to be chronically salient, because they (unlike men) are forced to define themselves, and be defined, in relation to the opposite sex" (Fajak and Haslam 1998, 73; see also Barnes 2016).

In the following sections we test our argument and answer whether women and men are judged differently and why.

## "Bad Bosses": A Survey Experiment

To measure biases in the evaluation of women and men in positions of authority, we designed a survey experiment whereby respondents had to recommend a wage raise for a manager that increased company profits by 20 percent but, in the process of doing so, also mistreated employees. Different from most research on implicit bias that centers on positive traits, our objective was to measure differences in the respondent's assessments of "bad bosses." That is, we ask whether successful yet aggressive male and female bosses become "less likable," as Sandberg suggested. The experiment allows us to test whether respondents penalize women that transgress and misbehave to a larger extent than they do their male counterparts. The experiment was embedded in a national-level survey conducted in Argentina, eliciting answers from 7,494 randomly selected respondents, 4,068 of which were eighteen or older and employed or seeking employment at the time of the survey. ${ }^{12}$

[^3]Each individual in the survey received only one of four possible treatment assignments of our survey experiment. The question was worded as follows:

I will now ask you to make a decision as if you were the CEO of a company. Evaluate the following situation: 'Since s/he was selected as section chief, just 12 months ago, [María Laura Padilla/José Morales] increased her/his division's profits by 20\%. As a reward, you have decided to give [her/him] a raise. However, [María Laura Padilla/José Morales] has been criticized by [her/his] employees, who accuse [her/him] [of asking them to work extra-hours without compensation/of yelling at and insulting them]. You had thought about giving [her/him] a $10 \%$ raise, as you have done in similar cases before. However, you do not want to leave unattended the complaints of your employees'. What raise do you think will reward [María Laura Padilla/José Morales] but will also acknowledge complains by company employees?

Respondents would only see one out of four possible scenarios: (1) the manager was a woman (María Laura Padilla) and required employees to work extra hours without compensation; (2) the manager was a man (José Morales) and required employees to work extra hours without compensation; (3) the manager was a woman and she yelled at and insulted her employees; and (4) the manager was a man and he yelled at and insulted his employees. No other features distinguish the four treatments at any point of the survey or in this question. All questionnaires were randomized prior to being assigned to the surveyors, ensuring randomization throughout the collection of responses. The question was posed after a general module on media preferences and ahead of our other control questions. Tests show balanced samples across all four treatments, as shown in the online Supporting Information File.

By providing a baseline raise of 10 percent and eliciting a recommended raise, we sought to assess the extent to which respondents reward or penalize bad bosses conditional on the gender status of the boss, the gender status of the respondent, and the type of transgression committed against employees. ${ }^{13}$ We considered a nonviolent abuse of power (not paying overtime for extra work hours) and a more aggressive abuse of power (yelling at and insulting employees). Each treatment had a large number of respondents, which ensures sensible samples for all relevant combinations of respondents, bosses, and types of transgression. Among the independent variables, we include a measure of personal network size, following Killworth et al. (2006) and Zheng, Salganik, and Gelman (2006), as described in the next section and detailed in the Supporting Information File (SIF). We also include a number of other explanatory and control variables.

Descriptive results of the four treatments are provided in Figure 1. Graphs include raises in the original scale (percent) and in logs, to linearize the data and minimize the effect of a small number of relatively large raises in the overall means. ${ }^{14}$ Results from the experiment show that bad bosses receive on average a 6.5 percent raise rather than the suggested baseline of 10 percent. The difference is large and statistically significant, indicating that respondents understood what was being asked and penalized transgressions as expected. The mean raise for all bad bosses among female respondents was 6.49 percent while among male respondents it was 6.51 percent. That is, both male and female respondents penalized bad bosses at roughly similar rates, reducing raises from the 10 percent baseline to 6.5 percent. However, as shown in Figure 1 and discussed here, that is where similarities between male and female respondents end.

Descriptive results show statistically significant differences in the wage raises given by respondents to María Laura Padilla and to José Morales. While respondents on average recommended a 6.75 percent raise for María Laura Padilla, the raise for José Morales was a lower 6.25 percent. The difference across means was substantive and statistically significant at $p<.01$. In all, results indicate that a female bad boss was given a 0.5 percentage point premium over her male counterpart. Further, men that yell at and insult employees were more heavily penalized by all respondents than equally aggressive female bosses. Results would seem to cast doubt on the dominant assumption that aggressive behavior is expected and less damaging for men in positions of authority than for women. On average, men did worse both when failing to pay overtime and when verbally abusing their employees.

[^4]

Figure 1: Difference in proposed raises for bad bosses (all respondents by type of treatment and split samples by women and men respondents). Mean wage raise and $\log$ (raise) offered by respondents to the "bad boss," down from a 10 percent ( 2.3 in the log scale) suggested raise. Responses were truncated below 0 ( 3 cases) and above 30 ( 168 cases), which represent 2.8 percent of respondents; 43.9 percent of respondents are men while 56.1 percent are women.

While results cast doubt that male bad bosses fair better than female bosses when exercising arbitrary authority, results do lend at least some limited support for this hypothesis when we split the sample by gender. The survey experiment shows that women penalize transgressions by male bosses more than do male respondents. On average, women gave María Laura Padilla a 7.03 percent raise when she withheld wages from employees compared to a raise of just 6.17 percent for José Morales. The difference is statistically significant and substantively important among women respondents. By contrast, male respondents gave a 6.84 percent raise to José Morales compared to a 6.56 percent raise to María Laura Padilla. Results for male respondents, however, were not statistically significant.
Female respondents also gave María Laura Padilla an average raise of 6.78 percent when she yelled at and insulted her employees, compared to a 5.99 percent for José Morales. Again, the difference was large and statistically significant at 95 percent in the original scale ( $p=.0310$ ) as well as in the log scale $(p<.01)$. Finally, when a bad boss yelled at and insulted her/his employees, male respondents offered María Laura Padilla a 6.48 percent raise but a raise of just 6.06 percent for José Morales, although the difference was not statistically significant. In all, results show that women penalized male bad bosses more than they penalize female bosses, while male respondents were insensitive to the treatment.

## Why Do Respondents Evaluate Female and Male Bad Bosses Differently?

Descriptive plots and $t$-tests from the four treatments of the survey experiment show that: (1) respondents penalize bad bosses for transgressions of the rights of employees; (2) female and male bad bosses were evaluated differently for misbehaving; and (3) female and male respondents sanctioned bad behavior differently. Women respondents evaluated female managers significantly less harshly than male managers. The results seem to indicate that there is gender solidarity in wage raises among women, in support of our argument and in contrast to the dominant hypothesis of gender stereotypes. Next, we seek to test whether differences in the size of personal networks of respondents and in their preference to interact with male or female authorities explain differences across all four treatments and in the overall raises offered.

## Dependent and independent variables

As in the previous section, the dependent variable is the percent raise (log) that respondents gave to the two bad bosses (María Laura Padilla and José Morales). We control for the four different frames of our experiment, holding the first treatment as a baseline (María Laura Padilla docking overtime pay). We include a number of covariates that explore the effects of (1) the size of the respondents' personal networks; (2) prior experiences with sexual harassment and personal safety at work; (3) the perceived level of autonomy and support for professional growth (training); (4) proclivities to interact with male or female bosses at work; and (5) sociodemographic variables such as the gender of the respondent and their educational achievement.

The most important variables are those that describe the relative size of the respondent's personal network and their perceived propensity to engage with men and women bosses in their own jobs (descriptive information of the variables is available in the online Supporting Information File).

To measure the size of the respondent's personal networks, we draw from recent developments in social network analysis that use indirect survey questions (such as "How many $X$ 's do you know?") to estimate the gregariousness of individuals and to uncover the social structure in individual-level data (Zheng, Salganik, and Gelman 2006; Calvo and Murillo 2013). As in Calvo and Murillo (2013), we asked each respondent to indicate the number of individuals that they know and with whom they interact on a yearly basis from a variety of social categories. ${ }^{15}$ We then estimate individual-level parameters for personal network and grouplevel parameters of prevalence using a Poisson distribution with overdispersion (see online supplemental file for estimation details). The personal network parameter returned by the Poisson specification has a normal distribution, with negative numbers indicating that a respondent $i$ knows fewer people than the average respondent (a smaller personal network) and with positive numbers indicating that the respondent knows more people than the average respondent (a larger personal network).

To measure the respondent's inherent propensity to engage with male or female bosses, we consider two different items in the survey. The first question asks respondents to indicate on a five-point scale the extent to which they agree with the statement: "When I have problems at work, I prefer to talk about them with a man." The second question asks respondents to indicate their agreement with the statement: "In all work environments, men tend to help men and women tend to help women." These two variables seek to measure a baseline inclination to prefer a male or a female boss while at work and are estimated on split samples of men and women.

Controls include a five-point autonomy question (low to high) measuring the respondents' perceived level of autonomy to buy goods that are needed at work. We also include a question that asks on a five-point scale whether the respondent felt physically insecure at work during the last year, whether she or he felt sexually harassed or resigned within the previous year because of being harassed. These controls sought to assess whether respondents had a higher sensitivity to misbehavior by bad bosses.

Two survey items inquire on whether on-the-job training was important for the individual and whether employers should bear the responsibility of paying for such training. This sought to assess the extent to which employees consider that career advancement is the responsibility of the employer or of the employee. Finally, we introduced controls for education and gender.

## Personal networks and interpersonal work ties

Results are presented in Table 1, with five different specifications that explain the wage raises recommended by either men or women respondents (a total of ten models). The first four columns ( 1 through 4 ) present the basic estimates of wage raises proposed by men and women respondents using only the experimental treatments, with the baseline set to María Laura Padilla docking extra hours to employees. As described in the previous section, differences in the raises proposed by men were less sensitive to framing (Models 1 and 3), while female respondents more heavily penalized male bad bosses both when they failed to pay extra hours and when they yelled at and insulted employees (Models 2 and 4).

Given that the samples for all four treatments are well balanced (see the online Supporting Information File), we expect differences across treatments to hold even when adding all model controls. Readers can verify that this is the case, with women being more likely to penalize bad behavior by male bosses in all specifications.

As shown in Table 1, larger personal networks have a negative and statistically significant effect on raises offered to bad bosses. In all specifications, women with larger personal networks more heavily penalized both female and male bad bosses when they docked overtime payment and when they yelled at employees. Among men, on the other hand, the negative effect of large personal networks was only observed in the last model specification (Table 1, Model 10).

The conditional effect of personal network by the type of treatment is extremely interesting, showing that more gregarious male and female respondents tend to penalize differently female and male bosses that

[^5]Table 1: Determinants of wage raises.

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male Respond. WRaise | Female Respond. WRaise | Male Respond. In(WRaise) | Female Respond. In(WRaise) | Male Respond. In(WRaise) | Female Respond. $\ln$ (WRaise) | Male Respond. $\ln$ (WRaise) | Female Respond. In(WRaise) | Male Respond. $\ln$ (WRaise) | Female Respond. $\ln$ (WRaise) |
| José fails to pay overtime | 0.284 | -0.858** | -0.00350 | -0.134** | 0.0949 | -0.169** | 0.0906 | -0.182** | 0.188 | -0.418** |
|  | (0.422) | (0.366) | (0.0705) | (0.0624) | (0.0851) | (0.0777) | (0.0863) | (0.0796) | (0.202) | (0.181) |
| María Laura shouts at employees | -0.0690 | -0.246 | -0.0473 | -0.0445 | 0.0353 | -0.00648 | 0.0517 | -0.0484 | 0.200 | 0.0531 |
|  | (0.427) | (0.361) | (0.0713) | (0.0616) | (0.0856) | (0.0756) | (0.0875) | (0.0781) | (0.201) | (0.176) |
| José shouts at employees | -0.495 | $-1.040^{* * *}$ | -0.126* | -0.163*** | -0.0824 | -0.149** | -0.0799 | -0.156** | 0.360* | 0.0587 |
|  | (0.423) | (0.363) | (0.0707) | (0.0619) | (0.0856) | (0.0756) | (0.0867) | (0.0783) | (0.198) | (0.176) |
| Respondent felt unsafe |  |  |  |  | -0.00240 | 0.0736 | -0.00288 | 0.0765 | -0.00608 | 0.0640 |
|  |  |  |  |  | (0.0752) | (0.0689) | (0.0753) | (0.0689) | (0.0753) | (0.0690) |
| Respondent was harassed |  |  |  |  | 0.341 | 0.0320 | 0.336 | 0.0248 | 0.353 | 0.0495 |
|  |  |  |  |  | (0.229) | (0.169) | (0.230) | (0.169) | (0.230) | (0.169) |
| Resigned because was harassed |  |  |  |  | -0.260* | -0.122 | -0.262* | -0.119 | -0.249* | -0.130 |
|  |  |  |  |  | (0.150) | (0.132) | (0.150) | (0.132) | (0.151) | (0.132) |
| Size of personal network |  |  |  |  | -0.0485 | -0.0641** | -0.0391 | -0.127** | -0.0518* | -0.0667** |
|  |  |  |  |  | (0.0311) | (0.0293) | (0.0576) | (0.0571) | (0.0312) | (0.0294) |
| Age (LN) |  |  |  |  | 0.0388 | -0.0552 | 0.0384 | -0.0595 | 0.0358 | -0.0440 |
|  |  |  |  |  | (0.0845) | (0.0791) | (0.0846) | (0.0791) | (0.0846) | (0.0791) |
| Education |  |  |  |  | 0.0327** | 0.0157 | 0.0330** | 0.0152 | 0.0322** | 0.0180 |
|  |  |  |  |  | (0.0158) | (0.0141) | (0.0158) | (0.0141) | (0.0159) | (0.0142) |
| Autonomy |  |  |  |  | 0.0385** | 0.0249* | 0.0379** | 0.0244* | 0.0379** | 0.0260* |
|  |  |  |  |  | (0.0175) | (0.0138) | (0.0175) | (0.0138) | (0.0175) | (0.0138) |
| Employer pays for training |  |  |  |  | -0.0309 | -0.102*** | -0.0322 | $-0.105^{* * *}$ | -0.0311 | -0.102*** |


| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male Respond. WRaise | Female Respond. <br> WRaise | Male Respond. In(WRaise) | Female Respond. In(WRaise) | Male Respond. In(WRaise) | Female Respond. In(WRaise) | Male Respond. In(WRaise) | Female Respond. In(WRaise) | Male Respond. In(WRaise) | Female Respond. In(WRaise) |
| Training is important |  |  |  |  | -0.0347 | -0.0346 | -0.0337 | -0.0347 | -0.0320 | -0.0359 |
|  |  |  |  |  | (0.0309) | (0.0308) | (0.0310) | (0.0308) | (0.0310) | (0.0308) |
| Likes to talk to males |  |  |  |  | -0.0357 | -0.0370* | -0.0366* | -0.0370* | 0.00867 | -0.0672* |
|  |  |  |  |  | (0.0220) | (0.0193) | (0.0221) | (0.0193) | (0.0443) | (0.0372) |
| Likes to talk to males $\times$ José 2 |  |  |  |  |  |  |  |  | -0.0104 | 0.106* |
|  |  |  |  |  |  |  |  |  | (0.0622) | (0.0550) |
| Likes to talk to males $\times$ María Laura 3 |  |  |  |  |  |  |  |  | -0.0578 | 0.0463 |
|  |  |  |  |  |  |  |  |  | (0.0614) | (0.0530) |
| Likes to talk to males $\times$ José 4 |  |  |  |  |  |  |  |  | -0.107* | -0.0191 |
|  |  |  |  |  |  |  |  |  | (0.0634) | (0.0535) |
| Men w/Men vs Women w/Women |  |  |  |  | 0.0202 | 0.0412** | 0.0207 | 0.0422** | 0.0397 | 0.0797** |
|  |  |  |  |  | (0.0217) | (0.0194) | (0.0217) | (0.0194) | (0.0428) | (0.0374) |
| M-M vs W-W $\times$ José 2 |  |  |  |  |  |  |  |  | -0.0237 | -0.0108 |
|  |  |  |  |  |  |  |  |  | (0.0611) | (0.0542) |
| M-M vs W-W $\times$ María Laura 3 |  |  |  |  |  |  |  |  | 0.00213 | -0.0767 |
|  |  |  |  |  |  |  |  |  | (0.0606) |  |
| M-M vs W-W <br> $\times$ José 4 |  |  |  |  |  |  |  |  | -0.0537 | -0.0658 |
|  |  |  |  |  |  |  |  |  | (0.0614) | (0.0529) |
| Personal Net $\times$ José 2 |  |  |  |  |  |  | 0.0539 | 0.0531 |  |  |
|  |  |  |  |  |  |  | (0.0838) | (0.0808) |  |  |
| Personal Net $\times$ María Laura 3 |  |  |  |  |  |  | -0.0771 | 0.166** |  |  |
|  |  |  |  |  |  |  | (0.0832) | (0.0792) |  |  |


| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male Respond. WRaise | Female Respond. WRaise | Male Respond. $\ln$ (WRaise) | Female Respond. $\ln$ (WRaise) | Male Respond. $\ln$ (WRaise) | Female Respond. <br> In(WRaise) | Male Respond. $\ln$ (WRaise) | Female Respond. <br> In(WRaise) | Male Respond. In(WRaise) | Female Respond. In(WRaise) |
| Personal Net $\times$ José 4 |  |  |  |  |  |  | $\begin{aligned} & -0.0151 \\ & (0.0868) \end{aligned}$ | $\begin{array}{r} 0.0331 \\ (0.0785) \end{array}$ |  |  |
| Constant | $\begin{aligned} & 6.558^{* * *} \\ & (0.300) \end{aligned}$ | $\begin{gathered} 7.033^{* * *} \\ (0.252) \end{gathered}$ | $\begin{aligned} & 1.609^{* * *} \\ & (0.0502) \end{aligned}$ | $\begin{gathered} 1.655^{* * *} \\ (0.0430) \end{gathered}$ | $\begin{aligned} & 1.492^{* * *} \\ & (0.373) \end{aligned}$ | $\begin{gathered} 2.280^{* * *} \\ (0.350) \end{gathered}$ | $\begin{aligned} & 1.494^{* * *} \\ & (0.373) \end{aligned}$ | $\begin{aligned} & 2.323^{* * *} \\ & (0.351) \end{aligned}$ | $\begin{aligned} & 1.313^{* * *} \\ & (0.390) \end{aligned}$ | $\begin{aligned} & 2.218^{* * *} \\ & (0.363) \end{aligned}$ |
| Observations | 1,784 | 2,279 | 1,784 | 2,279 | 1,273 | 1,517 | 1,273 | 1,517 | 1,273 | 1,517 |
| LogLik | -5820 | -7387 | -2628 | -3355 | -1885 | -2233 | -1884 | -2231 | -1881 | -2228 |

Note: Models estimate the wage raise for a bad boss proposed by respondents. Cells report coefficients with standard errors in parentheses.
mistreat their employees. As shown in Figure 2, women with large personal networks tend to penalize male bosses more heavily, both when he is unfair with payment and when he is aggressive. Female respondents with larger personal networks (two standard deviations above the mean) gave both types of male managers a raise of approximately 4 percent. By comparison, these female respondents increased the salary of female bad bosses by 6 percent, a statistically significant difference of two points.

Men with large personal networks, in contrast, offered lower wage raises to bad bosses that yelled at and insulted employees, but the differences were only statistically significant when compared to respondents with very small personal networks. Otherwise, the effect of larger personal networks among male respondents had a negative but statistically insignificant effect. In all, results show that more gregarious women display stronger gender solidarity and sanction bad behavior to a much larger extent than do both all men and less gregarious women.

We seek to shed light on how prior gendered biases shape wage raises. Results in Table $\mathbf{1}$ show that a favorable predisposition toward men has important consequences for how respondents evaluate female and male superiors. Respondents that agreed with the statement "When I have a problem at the office I prefer to discuss it with a man" were more lenient toward male bosses that failed to pay extra hours but more critical of bosses that yelled at or insulted their employees. These results seem to line up with recent research on the negative effects of betrayed expectations on sanctioning behavior (Koehler and Gershoff 2003; Bohnet and Zeckhauser 2004; Bohnet et al. 2008). Koehler and Gershoff (2003) coined the term "betrayal cost" to describe the extra penalty that is incurred not just for transgressions committed against an individual but, more importantly, resulting from the defiance of prior expectations. In the case at hand, respondents who confided in a male boss may feel betrayed by his aggressive behavior. In Figure 3, we show that male and female respondents who were positively inclined to talk to men at the office were lenient toward bosses that failed to pay extra hours but harsh toward bosses that betrayed a disposition to dialog.

Results from Table 1 (reported in Figure 4) show also that respondents predisposed to believe that the work environment is biased along gender lines were more lenient toward bosses who transgressed. Indeed, the more respondents agreed with the statement that at work men help men and women help women, the less likely they were to penalize transgressions by bosses. This was the case for three of the four treatments, again with the noticeable exception of male bosses that yell at and insult their employees, whose behavior elicited the strongest negative reactions across the board.


Figure 2: Proposed raise conditional on size of personal network. Marginal effects computed from Table 1 (7) and (8).


Figure 3: Proposed raise conditional on agreement with the statement: "When I have problems at work I prefer to talk about them with a male colleague." Marginal effects computed from Table 1 (9) and (10).


Figure 4: Proposed raise conditional on agreement with the statement: "At work, men help men and women help women." Marginal effects computed from Table 1 (9) and (10).

Finally, estimates from the control variables behave as expected. More-educated respondents that report higher autonomy at work tend to identify with the boss and provide larger raises. By contrast, women who agree that training should be paid for by the employer tend to penalize the transgressions of bosses more heavily. There is no negative effect on raises from female employees who were sexually harassed, yet there is a positive bias in the case of male respondents; both results are somewhat surprising although the sample of individuals reporting harassment does not allow for reliable estimates. A total of ninety-four women reported being harassed at work during the previous year (representing a 4.6 percent of total female respondents) compared to forty-four men (a 2.7 percent of male respondents). ${ }^{16}$

## Conclusion

The results of the survey experiment conducted among over four thousand respondents in Argentina lends credence to our argument of female gender solidarity and offers little support for the dominant hypothesis that leadership stereotypes work against women. Study results show that women respondents punish misbehaving male managers much more than female transgressors. Gender solidarity is stronger among women than men, as we had anticipated, and overall, female respondents appear much more sensitive to treatment than men. Interestingly, regardless of gender, respondents most heavily punished the male manager who yelled at his employees. Our survey experiment does not allow us to test the reason for this, but we speculate that respondents might perceive the shouting man in power as either too threatening or too incompetent. Another critical finding of the study is the relationship between respondents' larger personal networks and an increase in their negative evaluations of bad bosses. Among women, gregariousness in and of itself serves as a source of moral judgement and increases negative evaluation, especially of men in positions of authority. We interpret this finding to mean that more socially oriented individuals are more likely to punish socially undesirable behavior. Our survey experiment, however, raises the issue of why gregarious women are more willing to punish male bad bosses rather than bad bosses in general. The novel finding in this research is that larger social networks make punishment more selectively gendered.
The survey experiment was conducted in Argentina, a middle-income state that has shown significant leadership in pushing for gender parity in political representation but has lagged in the number of women bosses in the private sector. As a country with mixed evidence when it comes to women in power, we believe that the role of social networks-as a source of information used by individuals to decide behaviors and attitudes-should matter considerably. Moreover, we believe our findings help further the study of gendered attitudes toward authority in Argentine society. We suspect that as gender parity is met across all economic sectors and the workforce in Argentina, we should see less evidence of gender solidarity among female evaluators of transgressing women in power. Needless to say, we think more research across countries is required to answer this question.
In the meantime, we see possible implications of our findings in the field of political representation, especially in the area of recruitment and selection of female candidates. Given the results of our study, we intuit that if there were more women in party leadership and in general more party leaders with gendered networks, women would be more likely to be placed in powerful positions, such as heading a party list of candidates or obtaining more powerful positions once in office. We believe scholars focused on the selection

[^6]and recruitment of female candidates-especially from a comparative politics perspective-will find our study of interest.

Finally, a significant implication of our study and one area where we hope to see further research concerns the possible link between our findings and the gender pay gap. Given how men outnumber women in the top ranks of the corporate world, and what we have learned here about gender solidarity in determining raises, we can venture a possible causal relationship. That is, if those with the power to give raises tend to be men, and men tend to evaluate women less favorably, then female employees suffer a systematic disadvantage. However, as Secretary Albright has advocated and our findings seem to corroborate, if there were more female CEOs and board members who developed bigger professional networks, women employees might be more likely to receive better pay. Indeed, recent research has found evidence of a link between increased numbers of women on corporate boardrooms and a narrowing of the gender pay gap. ${ }^{17}$

## Additional File

The additional file for this article can be found as follows:

\author{

- Supporting Information File (SIF). A Survey Experiment on "Bad Bosses". DOI: https:// doi.org/10.25222/larr.453.s1
}


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[^0]:    1 "Madeleine Albright on Barriers Broken and Barriers That Remain," Wall Street Journal, May 7, 2012, https://www.wsj.com/articles/ SB10001424052702304746604577383721974234282.
    ${ }^{2}$ Sheryl Sandberg, "Why We Have Too Few Women Leaders," Ted Talk, December 2010. https://www.ted.com/speakers/sheryl_ sandberg.
    ${ }^{3}$ We operationalize personal network as the number of individuals with whom a respondent interacts on a yearly basis. This includes not only the close personal ties of an individual, but also the extended personal ties, which in turn include acquaintances that interact with the respondent on a given year. Further details of our definition and survey questions to capture network size are reported in the Supporting Information File.
    ${ }^{4}$ The Permanent Survey of Argentine Households (Encuesta Permanente de Hogares or EPH in Spanish), National Institute of Statistics and Census (INDEC), www.indec.gov.ar.

[^1]:    ${ }^{5}$ For example, see Justin Wolfers, "Even Famous Female Economists Get No Respect," New York Times, November 11, 2015, http:// www.nytimes.com/2015/11/12/upshot/even-famous-female-economists-get-no-respect.html; or "Why Aggressive Women Can't Win at Work (and How to Deal)," Forbes, June 5, 2013, http://www.forbes.com/sites/dailymuse/2013/06/05/why-aggressive-women-cant-win-at-work-and-how-to-deal.
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[^2]:    ${ }^{7}$ In Jenna Goudreau, "A New Obstacle for Professional Women: The Glass Escalator," Forbes, May 21, 2012, http://www.forbes.com/ sites/jennagoudreau/2012/05/21/a-new-obstacle-for-professional-women-the-glass-escalator/.
    ${ }^{8}$ Findings are mixed on whether voters' perceptions based on gender stereotypes shape their vote choices. See Sanbonmatsu 2002; Thames and Williams 2010; and Dolan and Lynch 2014.
    ${ }^{9}$ Again, findings are mixed (see Lawless and Fox 2005; and Dolan and Lynch 2014) and reinforce our expectation that the question should be settled through a survey experiment.

[^3]:    ${ }^{10}$ In an interesting twist, when the authors showed pictures of the candidates that were not prototypically gender-based, the gender effect disappeared (Lammers, Gordijn, and Otten 2009).
    ${ }^{11}$ Like Lammers, Gordijn, and Otten (2009), Dolan and Lynch (2014) do not find evidence that gender stereotypes matter to voters' evaluation of real candidates all of the time.
    ${ }^{12}$ The survey was implemented by the PASCAL research center of the University of San Martín (Argentina) between December 2014 and March 2015. Our survey experiment was part of a five-question module attached to the General Survey for Media and TV Consumption (GSMTVC). Of the 7,494 respondents in the Gender Module, 4,068 were eighteen or older and employed or seeking

[^4]:    employment when the survey was administered. Four different treatments included over 1,000 respondents each. The survey included seventy-eight questions answered in under twenty minutes.
    ${ }^{13}$ It is important to note that we embed a baseline raise of 10 percent for a "good boss" directly into the vignette rather than using a six-way-treatment design. Results indicate that respondents understood that 10 percent was the baseline for good bosses, as they withheld on average 2 to 6 points from that baseline as a penalty. We use an embedded baseline to reduce heteroscedasticity from respondents having different assumptions about what constitutes an acceptable raise, which would have added significant noise to the experiment.
    ${ }^{14}$ We added a one to all raises when computing the logs, Inraise $=\log ($ raise +1$)$, to prevent respondents that gave no raises to bad bosses ( 1,081 cases) from being dropped from the sample.

[^5]:    ${ }^{15}$ The groups' categories are fully described in the online Supporting Information File, using questions about the number of individuals known to the respondent from different name, occupation, and employment categories. The selection of group categories (Silvia, Patricia, Antonio, Francisco, Angel, teacher, policemen or policewomen, lawyer, doctor, municipal public employee, provincial employee, or judges, had-children, died, married, and victims of a crime) follows Calvo and Murillo (2013).

[^6]:    ${ }^{16}$ No question was asked on the gender of those who had sexually harassed the 139 respondents.

[^7]:    ${ }^{17}$ See Luca Flabbi, Mario Macis, Andrea Moro, and Fabiano Schivardi, "Female Executives and Gender Wage Gaps," Vox/Centre for Economic Policy Research, April 24, 2015, http://www.voxeu.org/article/female-executives-and-gender-wage-gaps; and Sara Murray, "Female CEOs Make Strides, but Pay Gap Persists," Wall Street Journal, May 27, 2014, http://www.wsj.com/articles/female-ceos-make-strides-but-pay-gap-persists-1401232881.

