Naming Biases: Gender and Race Biases in Reference to Politicians

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Abstract

Implicit biases continue to promote gender and racial inequality in many professions. Our research investigated a particular variable, terms of reference, that may play a role in voter opinions of politicians and in particular influence perceptions of historically underrepresented groups (women and black politicians). We collected data from real Facebook posts and their responding comments for all 412 current members of the United States Senate and House of Representatives. We found that (1) first names are used more frequently when referring to female and white politicians and (2) last names and titles (both common and formal) are used more frequently when referring to male and black politicians. These results suggest that gendered and racial biases exist for terms of reference which may impact voter perceptions of women and black professionals in politics in different ways. Future directions for this research include investigations into how these naming biases impact voter perceptions of politicians as well as their voting decisions in an election cycle.

Keywords: Facebook, gender inequality, racial inequality, implicit bias, terms of reference, politics

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Despite significant strides in social justice over the past decades, gender inequality in professional contexts persists. In the United States, men still outearn women, who remain largely underrepresented in a number of high-status and high-paying fields, including science, technology, engineering, and math (Proctor et al., 2016; National Science Board 2016). Though explicit gender bias has greatly decreased in recent years, its still-present implicit form perhaps continues to contribute to this unequal state (Moss-Racusin et al. 2012).

Such implicit bias is often demonstrated via important differences in the way we perceive male and female professionals. Eagly and Karau (2002) proposed that the prejudice held against female leaders is rooted in a perceived mismatch between the stereotypical role of the female gender and the role of a leader. Their research uncovered two specific prejudices which emerge from this incongruity: (a) women being seen as less suitable for leadership positions than men, and (b) women's leadership being evaluated more harshly than their male counterparts.

The way one presents oneself in a professional setting has a large impact on people's perceptions and can also vary greatly by one's gender. Sebastian and Bristow (2008) examined business students' perceptions of their professors' attributes based on attire and forms of address. Overall, professors in formal attire were rated higher on credibility and expertise and professors in informal attire were seen as more likable. The pattern differed, however, as a function of gender. Whereas female professors in casual attire were perceived as approachable but not credible, male professors in casual attire were seen as approachable without losing credibility. These findings suggest that female professionals face a particular challenge in balancing perceptions of likability and credibility.

The way in which we perceive professionals can significantly impact, and in turn be impacted by, the way we talk about them. When exploring gender bias in the language used to describe professionals, Atir and Ferguson (2018) found that people tend to use more communal and nurturing words when referring to women, whereas men are more often described using agentic and assertive terms. The authors assert that this seemingly subtle bias can influence people's perception of male and female professionals and serve to reinforce gender stereotypes in the workplace.

The words we use to describe male and female professionals are not the only gendered difference related to language. Different terms of address also connote different levels of respect or authority toward that individual. For example, someone calling someone else by their first name suggests equal status between the two individuals. Indeed, Rubin's (1981) study found that female professors (especially those between the ages of 26-33) are more often referred to by their first name by students than male professors. This finding points to the possibility that students perceive they have equal status with female, but not male, professors.

Along this same line of reasoning, Takiff et al. (2001) examined how students' choice of address (title versus first name) affects perceptions of professors' status. Overall, professors addressed by their title were seen as holding a higher status than those addressed by their first name. A bias with regard to gender arises in this context as well. Female (but not male) professors were seen as less approachable when addressed by their title. In contrast, male professionals addressed by their titles are perceived as having high status with no reduction in their perceived approachability. This finding highlights the dilemma of being a female professional; women are caught between trying to be respected as an authority and seen as warm and approachable.

Within a professional context where perceived status is essential to success, it follows then that men are more concerned with seeming likable whereas women are more concerned with being respected. Indeed, Cowan and Kasen (1984) found that letter of recommendation writers were far more likely to refer to men by their first name than women. In addition, when writing letters of recommendation, men used first names to refer to other men and titles to refer to women, whereas women used titles to refer to both genders. Male recommenders reported that first-name references were intended to indicate personal liking, whereas female recommenders' formal language was meant to assure appropriate conveyance of respect.

These biases in the way we reference and perceive female professionals compared to male professionals as well as the consequences of these biases are particularly apparent in media coverage of female politicians. Uscinski and Goren (2011) examined the forms of address that television newspeople use to refer to Democratic primary candidates in the 2016 presidential election. They found that Hillary Clinton was addressed with significantly less formality than her male competitors, especially by male reporters. The authors concluded that this altered coverage of Clinton's campaign may have subtly delegitimized her as a presidential candidate to viewers. However, due to the fact that Hillary Clinton's husband Bill Clinton is also a famous politician and she advertised as "Hillary" to distinguish herself, there may be confounding variables at play.

Mitigating these concerns, a particularly interesting phenomenon occurs when professionals are referred to by only their last name (which is common practice in academic papers, literature, etc.). Across four experiments, Gardner and Brown-Schmidt (2024) showed that people tend to infer that an individual is a man when introduced by their last name alone, despite the fact that last names do not vary by gender. Furthermore, this bias persists even when individuals were introduced by their first and full names. This paper highlights a continuous bias to assume male gender, which the authors assert affects the way in which we perceive and refer to others in conversation.

In the wake of the 2024 presidential election between Donald Trump and Kamala Harris, a discussion of gender biases in politics is most salient for not only newspeople, but all citizens. Thus, in this study, we will continue the previous literatures' investigation of gender differences in the way we refer to professionals with a particular focus on the involvement of social media in politics. Using Facebook posts about politicians and their responses and engagements, we aim to investigate the effect of the gender of the politician and the use of various forms of reference, namely first name, last name, and title (common, such as "Mrs." and formal, such as "Senator"). Based on past literature findings, we hypothesize that (1) the use of first name will increase when referring to female politicians and (2) the use of last name and title (both common and formal) will increase when referring to male politicians. We also explore the effect of the politician's race on the use of these forms of reference, which may shed light on the extent to which language biases emerge with politicians from other historically marginalized groups as well as their underlying mechanism. Following the pattern, we anticipate that (3) the use of first name will increase when referring to black politicians and (4) the use of last name and title (both common and formal) will increase when referring to white politicians.

Methods

Our dataset consists of top-level comments on Facebook posts from political figures (response count of 13,866,507), scraped from their public pages. We only include top-level comments (that is, comments directly responding to the post) to reduce the influence of comment-internal discussion so each comment is a response directly to the original poster. Each post is associated with the page of its relevant political figure, and includes metadata such as whether the post was text-only or included an image, video, or link.

The posts and responses in question are all public; however, to protect the anonymity of Facebook users in our dataset we remove all identifying user information as well as Facebook-internal information such as User IDs and Post IDs, replacing these with randomized ID numbers. Therefore, users whose comments appear multiple times in our dataset may be compared without revealing their identity. We also only report commenter first names because this is less identifying but still allows for running gender-identification algorithms. As a baseline, we provide masculine/feminine ratios for these first names from Bergsma and Lin (2006).

We collect posts and their associated top-level comments for all 412 current members of the United States Senate and House who have public Facebook pages meeting the requirements outlined above (306 men and 96 women). In each case we find the page for the speaker with a novel method for finding gender-labeled speakers from Wikipedia. Specifically, our method takes as input a Wikipedia category page such as https://en.wikipedia.org/wiki/Category:American_female_House_Representative, and for each name listed runs a search for public pages using Facebook's Graph API. If an exact match for the name appears in the top three results, and the category of the page matches a relevant category (for instance, ”Public Figure” or ”Politician” in the case of female House representatives), and their gender is listed, and the page is "verified" with Facebook, we accept it as a member of that category and scrape the relevant posts and comments.

This dataset inherently includes a strong control for content, since politicians tend to be talking about the same sorts of topics. Each politician is also labeled with their party affiliation to further control for cross-party stylistic and topical differences.

We ran linear mixed effects regressions on the dataset, including random effects for the post nested in random effects for the politician. These random effects should account for the fact that there is an interdependence between responses to the same post and between posts from the same person. Each regression was first pre-tested on a smaller subsample of 20,000 observations and then run with the full dataset. We collected results comparing politician gender, race, age, political affiliation, and position in the Senate or House of Representatives as well as responder gender with reference type used in each post.

Results

Supporting our hypotheses, the politician's gender predicted last name use, as responding Facebook users were 40% more likely to refer to a male than a female politician by their last name ($z = 46.17$, $p < 0.001$, Figure 1). This gender bias in use of last name remained significant when controlling for politician age, position in the House of Representatives or Senate, race, political party affiliation, and responder gender ($b = 0.38$, $z = 39.49$, $p < 0.001$). In addition, Facebook responders were also 53% more likely to refer to a female than a male politician by their first name ($z = -75.74$, $p < 0.001$, Figure 1). This gender bias too persisted when controlling for politician age, position in the House of Representatives or Senate, race, political party affiliation, and responder gender ($b = -0.53$, $z = -69.13$, $p < 0.001$).

Also aligning with our predictions, Facebook responders used a common title 62% more often to refer to a male than a female politician ($z = 125.1$, $p < 0.001$, Figure 1). This gender bias in common title use remained significant when controlling for politician age, position in the House of Representatives or Senate, race, political party affiliation, and responder gender ($b = 0.54$, $z = 47.57$, $p < 0.001$). Moreover, Facebook responders used a formal title 32% more often to refer to a male than a female politician ($z = 36.43$, $p < 0.001$, Figure 1). This gender bias too persisted when controlling for politician age, position in the House of Representatives or Senate, race, political party affiliation, and responder gender (b = 0.62, z = 52.13, p < 0.001).

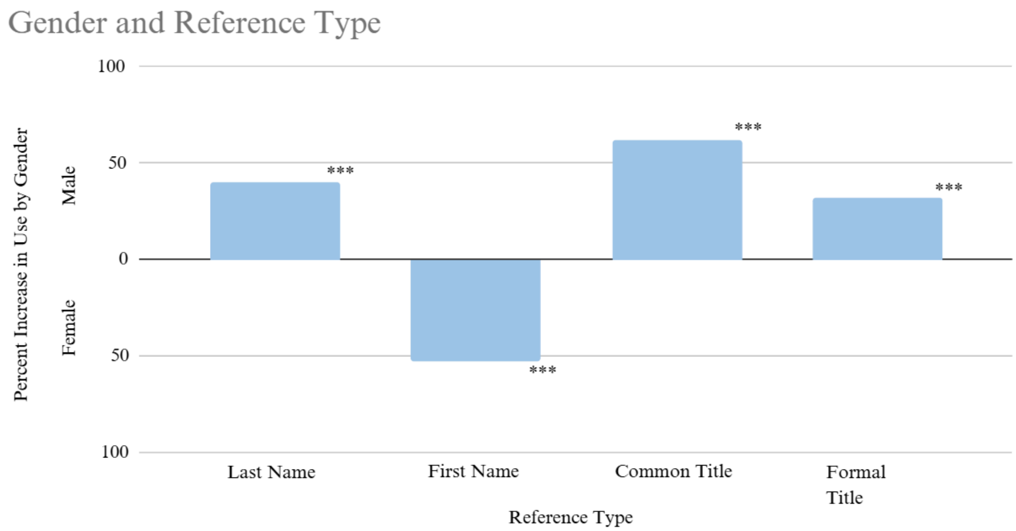

Figure 1. Percent increase in reference type use was evaluated by gender. Statistics performed by linear mixed effects regressions with random effects for the post nested in random effects for the politician, ***p < 0.001.

However, our predicted results for the analyses investigating whether a politician's race could predict the reference type used by commenters were found to be completely reversed. In fact, Facebook responders more often referred to black than white politicians by their last name (b = -0.07, z = -5.37, p < 0.001, Figure 2). This racial bias in last name use remained significant when controlling for politician age, position in the House of Representatives or Senate, gender, political party affiliation, and responder gender (b = -0.22, z = -14.22, p < 0.001). In addition, Facebook responders were 39% more likely to refer to white than black politicians by their first name (z = 30.55, p < 0.001, Figure 2), a significant effect which persisted even when controlling for politician age, position in the House of Representatives or Senate, gender, political party affiliation, and responder gender (b = 0.57, z = 43.24, p < 0.001).

Additionally, Facebook responders more often used a common title when talking about a black than white politician ($b = -0.19$, $z = -12.78$, $p < 0.001$, Figure 2). This racial bias in common title use remained significant when controlling for politician age, position in the House of Representatives or Senate, gender, political party affiliation, and responder gender ($b = -0.47$, $z = -28.18$, $p < 0.001$). Furthermore, Facebook responders used a formal title 26% more often when talking about a black than white politician ($z = -18.37$, $p < 0.001$, Figure 2), a significant effect which persisted when controlling for politician age, position in the House of Representatives or Senate, gender, political party affiliation, and responder gender ($b = -0.35$, $z = -19.18$, $p < 0.001$).

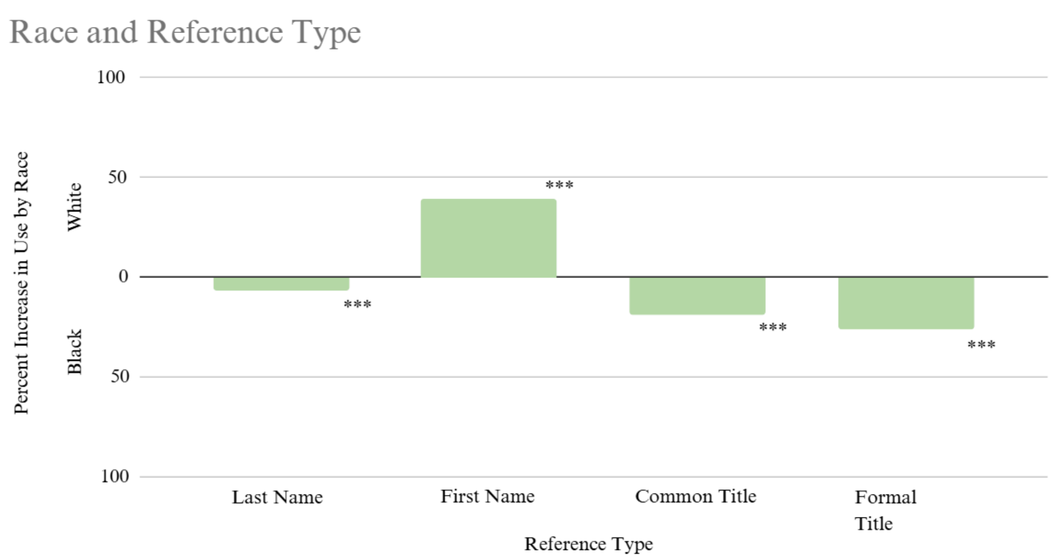

Figure 2. Percent increase in reference type use was evaluated by race. Statistics performed by linear mixed effects regressions with random effects for the post nested in random effects for the politician, ***$p < 0.001$.

Discussion

The way in which we talk about others influences (and is deeply influenced by) the way in which we perceive them. Across multiple investigations using linear mixed regression methods, we find evidence of both gender and racial biases in the way that we speak about professionals in politics. Specifically, analyses of the reference types used by Facebook users responding to politicians' posts revealed that people are more likely to refer to female politicians by their first name and male politicians by their last name as well as common and formal title. These results align with our hypotheses and indicate that gender predicts the way that we speak about professionals.

What might explain this gender bias in use of reference type? First, one's last name may be more associated with men due to the fact that, in many cultures, women's surnames are traditionally less permanent and may change to their male partner's surname upon marriage. Second, use of a first name frequently serves as a cue for someone's gender. Perhaps particularly in male-dominated, high-status professions such as politics, male is the assumed default gender. As a result, using a first name may be deemed (intentionally or unintentionally) more necessary when referring to a woman. Finally, using a title – whether formal or common – can signal respect or status. It may be the case that such titles are omitted more frequently for female politicians due to implicit biases that question their legitimacy in male-dominated fields or emphasize their approachability and familiarity over formality.

We intended to shed more light on the underlying mechanism for this language bias by investigating the effect of a politician's race on the terms of reference most often used. Directly contradicting our hypotheses, we find evidence that Facebook responders are more likely to refer to white politicians by their first name and black politicians by their last name, common and formal title. These results run contrary to the predicted pattern of marginalized groups in politics. Taken together, our findings for gender and race's effect on terms of reference reveal that people do not talk about female and black politicians in similar ways, despite the fact that these groups are both underrepresented in politics. Perhaps responders feel that white politicians are more familiar than black politicians and so tend to use more familiar terms to refer to them. It also may be the case that Facebook responders feel especially pressured to be socially desirable online and use more respectful or professional terms to talk about black politicians, such as last name, common and formal title, so they appear unprejudiced and accepting.

The evidence reported here across data from over 14 million Facebook posts documents significant gendered and racial biases in reference to professionals in politics. Our research points to a variable, terms of reference, that may play a role in voter opinions of politicians and in particular influence perceptions of historically underrepresented groups (women and black politicians). The consequences of these linguistic patterns could extend beyond online discourse and shape public perceptions of a politician's competence, legitimacy, and electability.

Our research included certain limitations. Though we controlled for many variables having to do with the politician, namely their age, position in the House of Representatives or Senate, gender, race, and political party affiliation, we controlled for just the gender of the responder themself. Investigation into how a responder's race, age, and political party affiliation affect the terms of reference they use when talking about a politician could serve to further characterize the effects we observed. In addition, the data we collected were based on correlations between our variables, so delving deeper into the mechanism underlying this language bias phenomenon by employing the use of a controlled experiment would be extremely informative for this area of research. Finally, directions for future study ought to include investigations into how these gender and race biases impact voter perceptions of politicians as well as their voting decisions during an election cycle.

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