Social Media and Sexism in the 2016 Presidential Election

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Abstract

The 2016 U.S. presidential election was marked by discussions of sexism, particularly in relation to Hillary Clinton's candidacy. Previous research has suggested that hostile sexism played a role in voter preferences. In this study, we analyzed a large dataset of tweets (N = 5,962,713) collected during the three presidential debates and election night, classifying them for sexist content using BERTweet-large-sexism-detector. Electoral college outcomes and popular vote percentages for Donald Trump were modeled as a function of sexist tweets by state. Results indicated no significant correlation between sexism in tweets and election outcomes. However, a significant increase in sexist tweets was observed over time. Limitations and implications of these findings are discussed.

Introduction

The role of sexism in political decision-making has been widely studied, particularly in the context of the 2016 U.S. presidential election. Prior research indicates that sexism influenced voter preferences, with studies showing that hostile sexism predicted voting behavior in favor of Trump over Clinton (Knuckey, 2018; Ratliff et al., 2017). Given the continuing relevance of gender biases in political discourse, this study examines whether sexist content on social media was associated with electoral outcomes.

Method

Tweets posted during the three presidential debates and election night in 2016 were collected (N = 5,962,713). The BERTweet-large-sexism-detector model (Nguyen et al., 2020) was used to classify tweets as sexist. All data and code are available at this project's OSF repository at https://osf.io/mqgch.

Analysis

User location data were extracted and mapped to U.S. states. Electoral college outcomes and the percentage of the popular vote for Trump were modeled as functions of state-level sexism using generalized linear mixed-effects models (glmer) in R's lme4 package (Bates et al., 2015). The proportion of sexist tweets was nested within events and states to predict:

1. Whether Trump won in a given state (dichotomous outcome).
2. The percentage of popular votes for Trump (continuous outcome).

Results

No significant relationship was found between sexist tweets and election results. Neither the electoral vote model nor the popular vote model showed improvement over a null model (see

Figure 1). A significant increase in sexist tweets was observed over time, $F(3, 147) = 86.62$, $p < .001$ (see Figure 2).

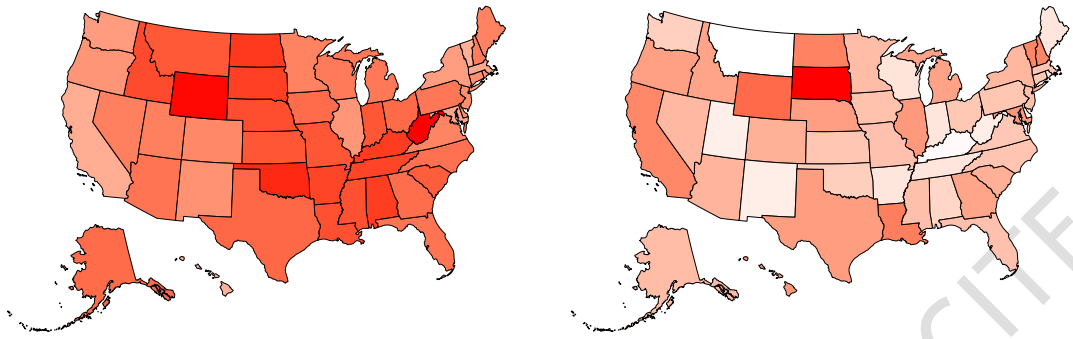

Figure 1. Percentage popular vote for Trump (left) compared to percentage of Tweets labeled sexist (right).

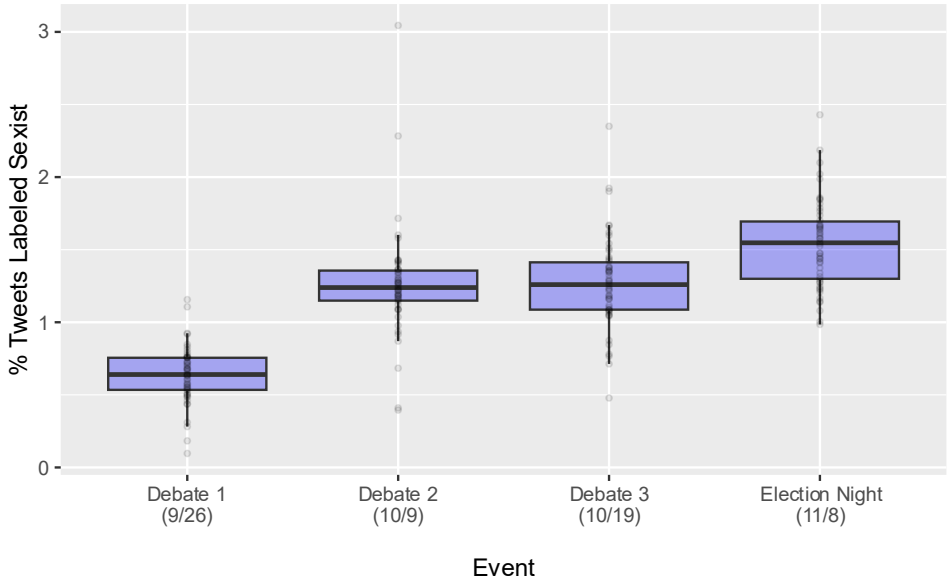

Figure 2. Percentage of Tweets labeled sexist across all three debates and election night.

Discussion

The findings suggest that, although sexism played a role in voter attitudes, measurable sexist content on social media did not predict election outcomes. A trend toward increased sexist tweets across timepoints raises concerns about shifts in discourse leading up to the election. This study had limitations, including the use of state-level data instead of more granular municipality-level data, reliance on a single social media platform, a limited set of keywords, and the near-singularity of the popular vote model.

Of course, the amount of sexist language on a single social media platform is in no way wholly dispositive regarding the role sexism played in the 2016 U.S. presidential election. It is, perhaps, best to think about the present results as a small addition to our understanding of the role of attitudes regarding gender in politics.

References

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software, 67*(1). https://doi.org/10.18637/jss.v067.i01

Knuckey, J. (2018). "I just don't think she has a presidential look": Sexism and vote choice in the 2016 election. *Social Science Quarterly, 100*(1), 342-358. https://doi.org/10.1111/ssqu.12547

Nguyen, D. Q., Vu, T., & Nguyen, A. T. (2020). BERTweet: A pre-trained language model for English tweets. *arXiv preprint arXiv:2005.10200*.

Ratliff, K. A., Redford, L., Conway, J., & Smith, C. T. (2017). Engendering support: Hostile sexism predicts voting for Donald Trump over Hillary Clinton in the 2016 U.S. presidential election. *Group Processes & Intergroup Relations, 22*(4), 578-593. https://doi.org/10.1177/1368430217741203