Moral Rhetoric in Politics: How Conservatives and Liberals Differ in Moral Values

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ABSTRACT

In this paper, Moral Foundations Theory (MFT) is used to quantify and measure the moral rhetoric in the Facebook posts of Democratic and Republican candidates for the House of Representatives and the Senate, for the upcoming 2020 US presidential elections. We identified the moral loadings of the Facebook posts of the candidates in the five moral dimensions of MFT, for both vice and virtue categories. The results indicate that posts of House candidates contain a greater amount of moral loading than the posts of Senate candidates. Furthermore, House candidates tend to share posts that involve a stronger moral rhetoric compared to the posts of Senate candidates. Also, posts of all candidates include more Care, Harm and Authority related rhetoric, among all morality dimensions. Finally, we conclude that the likelihood of expressing multiple morality dimensions in a single post is higher for the Democrats, while Republicans are more likely to express a single moral rhetoric.

KEYWORDS

Facebook, MFT, moral foundations, moral rhetoric, US presidential election

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1 INTRODUCTION

Moral values and judgement are important drivers of human cognitive processing, decision making and reasoning in general. People use certain standards or principles as moral guidance to make a distinction of what is right or wrong; while at the same time trying to strike a balance between clashing moral values and utility maximizing behavior. Understanding the influence of subjective moral values on cognition and intellectual functioning is crucial for modeling and predicting human interaction and behavior. Differences in moral values and judgement at both cultural and individual levels can cause polarization in a society; for instance, conflicting moral values in online social networks can fuel tensions towards out-groups, and hostility against immigrants [3].

In the context of political decision making, ethics and moral values can be powerful tools to evaluate public policy decisions [17] and shape voting behavior [6]. In this paper, the moral compass of US politicians is investigated and analyzed using the moral foundations theory [8]. The aim of the paper is to identify the moral judgment of politicians who are involved in policymaking, namely the liberal and conservative candidates of the United States House of Representatives and the United States Congress for the 2020 elections. By using the moral foundations theory, we are able to shed light on the moral values of the two political groups on the left-right political spectrum. Moral foundations theory is a commonly used approach to quantify and measure moral values and their loadings in textual data, to investigate issues on judicial system [16], political ideologies [9], philosophy of social institutions [13], and climate change prevention [2]. Moral foundations theory is used in this study uses a lexicon to identify the moral stances in text data, which, in our case, is the Facebook posts of all house and congressional candidates for the 2020 presidential election. The study identifies and investigates five dimensions of psychological morality components as vices and virtues: (i) Harm/Care dimension that is related to protection of self and others from danger and harm, (ii) Subversion/Authority dimension which is about respect and subordination towards the authority, (iii) Cheating/Fairness dimension that is concerned about justice, reciprocity in cooperative actions, and the prevention of dishonesty in general, (iv) Betrayal/Loyalty dimension that identifies expressions related to self-sacrifice, (v) Degradation/Purity dimension that is related to expressing a strong dislike towards disgusting actions or things. We use these moral dimensions to extract the moral stances of political candidates from their own Facebook posts, and then study the interactions between different morality dimensions that we identify. The study contributes to the body of knowledge by identifying the moral stances of political candidates before the upcoming election, which no study has addressed before. While there are studies that investigate the moral dimensions of voters and non-political figures by applying the moral dimensions survey to self-proclaimed liberals and conservatives , no study has examined the moral stances of political candidates or elected officials using a big-data approach. Furthermore, extant studies investigate moral dimensions in a rather static approach, by considering only the average of the morality loadings and ignoring the time variance of morality dimensions. We contribute to the literature by examining co-existing morality dimensions as time-series data with covariance between them.

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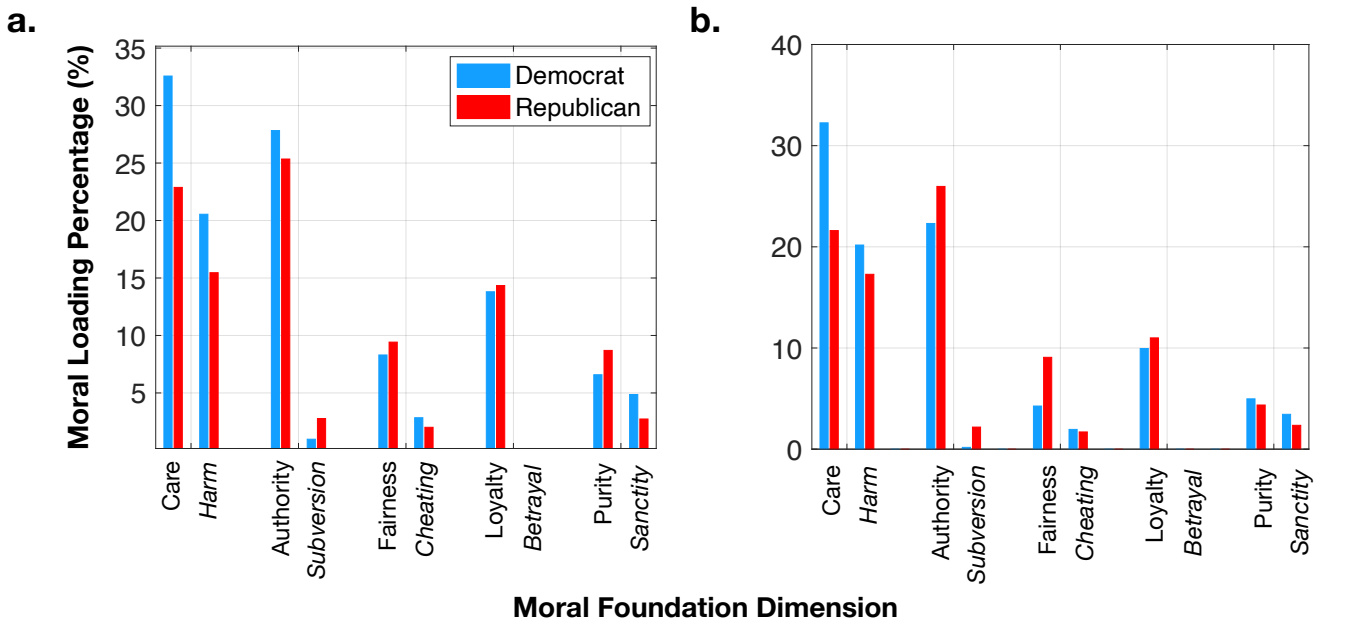

Figure 1: Moral loading percentages of Facebook contents of a. House, b. Senate candidates in 2020 election. Blue bars represents those for liberals while red bars do for Conservatives. Pairs demonstrate the loading in virtues(*vices*) in a sorted order.

2 METHOD

2.1 Calculation of Moral Loadings in Textual Data

Inspired by social psychology literature, we utilized the Moral Foundations Theory (MFT) [5, 7, 10] to capture the morality dimensions in our research. The *morality dimension* can be defined as the linguistic component for expressing various moral concerns by taking a moral stance towards an issue [14]; while *moral loading* denotes the quantified score of moral values using existing dictionaries. To quantify the moral foundations in Facebook text data, we compared the accuracies of the three most common dictionaries, i.e., the original Moral Foundations Dictionary (MFD)[1], its enlarged (MFD 2.0)[4] and extended (eMFD) [11] versions. Results indicate that MFD 2.0 is the superior dictionary, with higher similarity between human-annotated social media posts and dictionary labels; therefore, we used MFD 2.0 to analyze the moral loadings in our dataset. This dictionary has been built based on WordNet syn-sets and includes more than 1000 lemmas.

To obtain the proximity measure between moral words in MFD 2.0 and Facebook posts in our dataset, we used (i) term frequency-inverse document frequency (tf-idf) [15], and (ii) distributed bag-of-words paragraph vectors model based on Doc2vec [12] to generate feature vector representations. Suppose that $C^{i,t}$ is the i^{th} content in data set generated at time t. We converted each content to a vector in the semantic space using the Doc2vec model by forming a vector $r^{i,t} = (r_1^{i,t}, \ldots, r_v^{i,t})'$. For each of the five moral foundations in vice and virtue spectrum, we formed another vector $f_d^i = (f_{d1}^i, \ldots, f_{dv}^i)'$ by using the corresponding lexicons in MFT 2.0, where d represents the corresponding morality dimension, i.e. Harm, Care, ..., Sanctity. The cosine similarity between these two vectors $r^{i,t}$ and f_d^i gives us the moral loading scores for the relative content.

$$L_d^{i,t} = \frac{r^{i,t} * f_d^i}{|r^{i,t}| * |f_d^i|} \tag{1}$$

where $L_d^{i,t}$ is the moral score of i^{th} content generated at time t in the d moral foundations dimension. Recall that each content may have moral loading in more than one dimension and loading scores are determined according to the similarity between lexicons in the content and those in MFT 2.0 in each dimension. In the existence of any moral world in a content, the sum of moral loadings in each dimension equals to 1, i.e., $\sum_d L_d^{i,t} = 1$; otherwise, moral loadings would be equal to 0 in each dimension, i.e., $\forall L_d^{i,t} = 0$ for the i^{th} content.

Table 1: Data Set Description

Factor	Number of Users	Text	Image Text
House liberals	481	9602	398
House Conservatives	498	9383	618
Senate liberals	37	2702	121
Senate conservative	40	2158	143

2.2 Dataset Description

We used *"2020 US House liberals Candidates", "2020 US House conservative Candidates", "2020 US Senate liberal Candidates", "2020 US*

[1]https://moralfoundations.org

Table 2: Pearson correlation coefficients between moral dimensions of liberal candidates' posts, obtained from the time-series of moral loading scores.

	Care	Authority	Fairness	Loyalty	Purity		Harm	Subversion	Cheating	Betrayal	Degredation
Care	1.00					Harm	1.00				
Authority	0.66	1.00				Subversion	0.46	1.00			
Fairness	0.77	0.74	1.00			Cheating	0.09	0.68	1.00		
Loyalty	0.50	0.54	0.50	1.00		Betrayal	0.26	0.74	0.79	1.00	
Purity	0.73	0.85	0.82	0.62	1.00	Degredation	0.26	0.39	0.35	0.25	1.00

Table 3: Pearson correlation coefficients between moral dimensions of conservative candidates' posts, obtained from the time-series of moral loading scores.

	Care	Authority	Fairness	Loyalty	Purity		Harm	Subversion	Cheating	Betrayal	Degredation
Care	1.00					Harm	1.00				
Authority	0.26	1.00				Subversion	0.56	1.00			
Fairness	0.16	0.60	1.00			Cheating	0.39	0.32	1.00		
Loyalty	0.15	0.23	-0.02	1.00		Betrayal	-0.08	-0.13	0.05	1.00	
Purity	0.19	-0.08	-0.25	-0.05	1.00	Degredation	0.30	0.06	0.02	0.09	1.00

Senate conservative Candidates" Facebook posts which is provided by CrowdTangle platform [2]. CrowdTangle tracks the Facebook uploads of verified users, profiles, and accounts like celebrities and public figures. In these four collections, post content may include textual content directly, or images from which textual content need to be extracted.

Table 1 shows the number of verified users in each data collection segment, number of posts that include text, and the number of posts with textual data extracted from images, for the time range of August 28th, 2020 to September 28th, 2020. For the coexistence of textual content and an image that includes textual information, we aggregated both. Before calculating the moral loadings, each content is tokenized, stop-words and punctuation are deleted.

3 RESULTS

The primary goal of this study is to compare the moral loadings of Facebook posts of liberal and conservative candidates of the United States House of Representatives and the United States Congress for the 2020 election. For this purpose, we used MFD 2.0 to quantify the latent moral loadings in the aforementioned data collection segments. To ensure that our moral foundations analysis provide meaningful results, we measured the percentage of content that include non-zero loading scores in each dimension. Let $\mathbb{L}_d = \{L_d^{1,t_1}, L_d^{2,t_2}, ..., L_d^{n,t_n}\}$ where n represents the sample size, i.e. the number of posts in each collection segment. Moral loading percentages are calculated by $\frac{\sum_i \lceil L_d^{i,t_i} \rceil}{n}$, where $\lceil . \rceil$ denotes the ceiling function.

Figure 1 shows the moral loading percentages of the Facebook posts of both liberal an conservative candidates for the House of Representatives and the Senate, for all of the five virtue and vice dimensions of MFT. Although these results do not provide any information about the time-dependent dynamics or co-variability, it may provide a general perspective to understand the differences in moral values of liberals and Conservatives. Results show that Facebook posts of House candidates contain a greater amount of moral loading than Senate candidates, indicating that House candidates are more likely to share content that has a moral value in it. In all morality dimensions for both House and Senate candidates, virtues seem to be more dominant than vices. By moral loading percentages, posts of all candidates include more Care/Harm related rhetoric, followed by Authority. Among the House candidates, liberals' posts include more Care, Harm and Authority rhetoric than Conservatives. However, for the Senate candidates, conservative posts include more of the Authority rhetoric, compared liberal candidates ($p > 0.006$, Mann-Whitney U test).

Table 2 and Table 3 display the results for morality dimensions in terms of their time-dependency, coexistance, and the covariation. In the analysis, we daily-averaged the non-zero moral loading scores in each dimension, and have considered the conservative and liberal posts separately for the 30-day period. Pearson correlation was applied to understand if coexisting moral values move together in the time-series. Table 2 indicates that for liberal candidates, there is a high degree of coexistance in almost all morality dimensions, meaning that posts of liberal candidates include multidimensional moral rhetoric, i.e., a single post may include any combination of Care, Authority, Fairness, Loyalty and Purity dimensions. On the other hand, either very low or negative correlations are observed among different moral dimensions of conservative posts, meaning that conservative posts include, generally, one of Care, Authority, Fairness, Loyalty and Purity dimensions. All these correlations are found more significant in the virtue category for both liberals and Conservatives.

[2]https://www.crowdtangle.com

4 CONCLUSION

Expression of moral values and judgment can be a crucial in deciding the fate of elections. In this study, moral values of conservative and liberal candidates for the House of Representatives and the Senate are investigated. Moral Foundations Theory and the MFD 2.0 has been used to quantify and measure the morality dimensions in the Facebook posts of the candidates. The results indicate that for the House candidates, liberals express moral values more than Conservatives do; and among those posts with moral values and judgments in them, moral values related to Care, Harm and Authority are the most dominant moral dimensions. Similar results were obtained for Senate candidates, with the exception of Conservatives surpassing liberals by having more posts with Authority dimension. Also, Conservatives have been found to usually have only one moral rhetoric in their messages, whereas liberals express multiple and more diverse moral values and rhetoric in theirs. This can be due to the the more diverse demographic base of voters for the Democratic Party [1], which would necessitate the use of a more diverse moral rhetoric.

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