MINORITIES, DISCRIMINATION (b), and POLITICAL SPHERE (c) topics. The scatter plots display, for each semester in Trump Era, a red dot for the most Pro-Trump users, a blue dot for the Anti-Trump ones, and a green dot for the Neutral majority. We further investigate political ideology, the political sphere, and the political arena, among other topics, and we find that the Pro-Trump and Anti-Trump communities have distinct patterns. On the one hand, we see the highest rate of Pro-Trump users in the first semester, while Anti-Trump users have the lowest rate in the first semester. On the other hand, we see the highest rate of Neutral users in the last semester, which indicates a shift in the political environment. Additionally, we also observe that the Pro-Trump community is more polarized than the Anti-Trump community, with a higher percentage of Pro-Trump users in the last semester. This suggests that the political environment has changed, with a shift towards more polarized views.

Further, we found that the Pro-Trump community is more active on social media compared to the Anti-Trump community. The Pro-Trump community also engages more frequently with the Neutral community, suggesting a greater alignment with the Neutral community. On the other hand, the Anti-Trump community engages more frequently with other Anti-Trump users, indicating a stronger sense of community and solidarity.

In conclusion, our findings suggest that the political environment has shifted towards more polarized views, with a higher percentage of Pro-Trump users in the last semester. The Pro-Trump community is also more active on social media and engages more frequently with the Neutral community. The Anti-Trump community, on the other hand, engages more frequently with other Anti-Trump users, indicating a stronger sense of community and solidarity.
The horizontal red line marks the Purity threshold (0.7). Thus, the communities lying above it can be classified as strong echo chambers. Note that here, we are just highlighting three communities that satisfy the Condorcet criterion: (A, B, C). For each topic, transition probabilities of users' ideology over contiguous semesters. A stands for Anti-Trump users, P for Pro-Trump users, and N for Neutral. For each topic, transition probabilities of users' ideology over contiguous semesters. A stands for Anti-Trump users, P for Pro-Trump users, and N for Neutral.

Figure 4. For each topic, transition probabilities of users' ideology over contiguous semesters. A stands for Anti-Trump users, P for Pro-Trump users, and N for Neutral.

Figure 5. MINORITY DISCRIMINATION (a) and POLITICAL SPHERE (b) transition probabilities for echo chamber (EC) and community (C) over contiguous semesters. For each topic, transition probabilities of users' ideology over contiguous semesters. A stands for Anti-Trump users, P for Pro-Trump users, and N for Neutral.

Table 1. Summary of related works for echo chamber detection on online social networks. Paper: Network: Content: Micro-Scale: ECMeso-Scale: ECMacro-Scale: EC

Table 2. Description of the datasets. Dataset: # of subreddits: # of posts: # of users: # of comments: # of votes.

Table 3. BERT performance (accuracy) for each topic.

Table 4. For each topic, network statistics averaged across semesters: size of the network in terms of nodes and edges, network density, number of users with a Pro-Trump, Anti-Trump, or Neutral leaning score.

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