

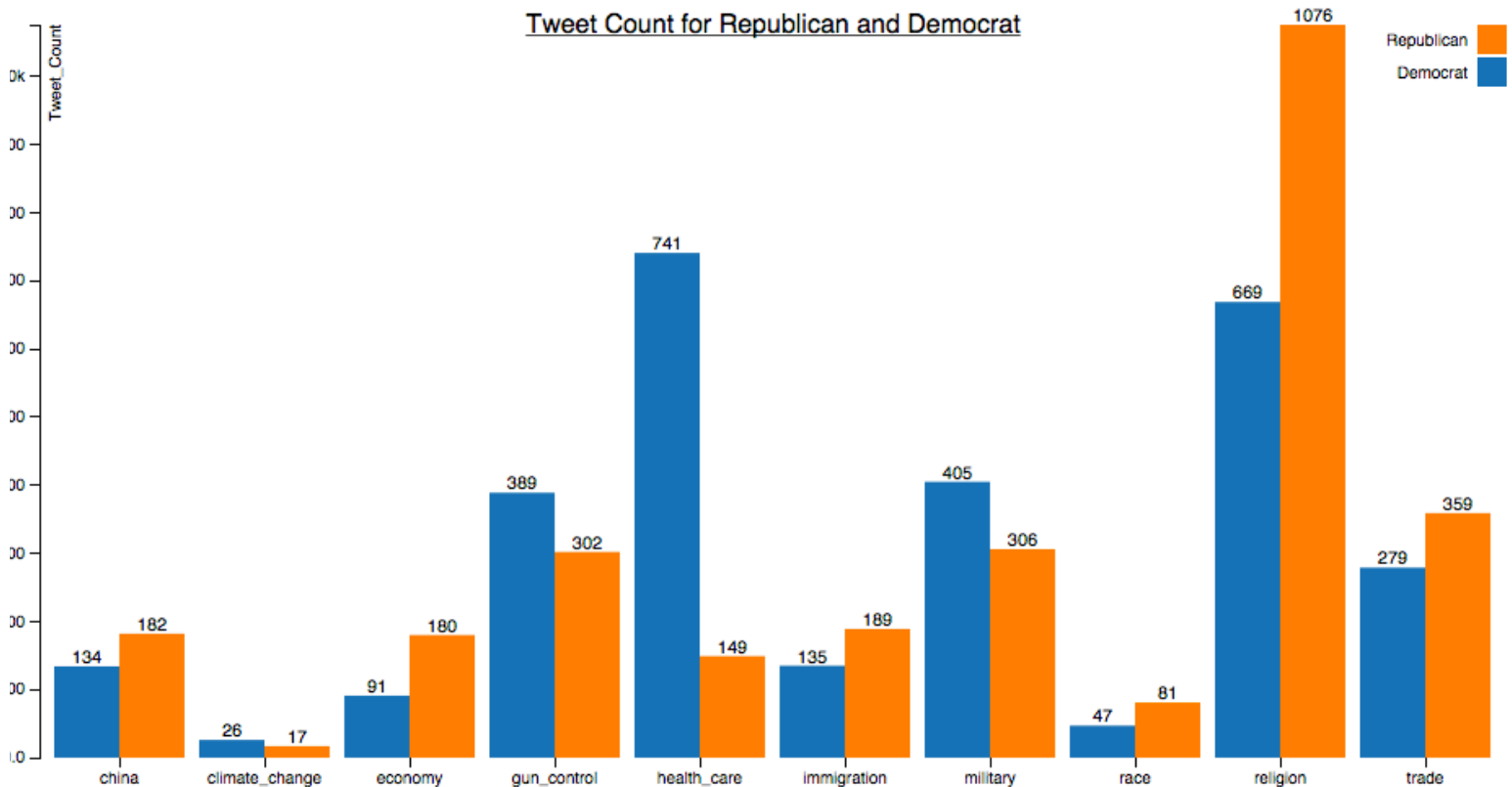
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Assignment 4 G4063

Due 04/07/2016

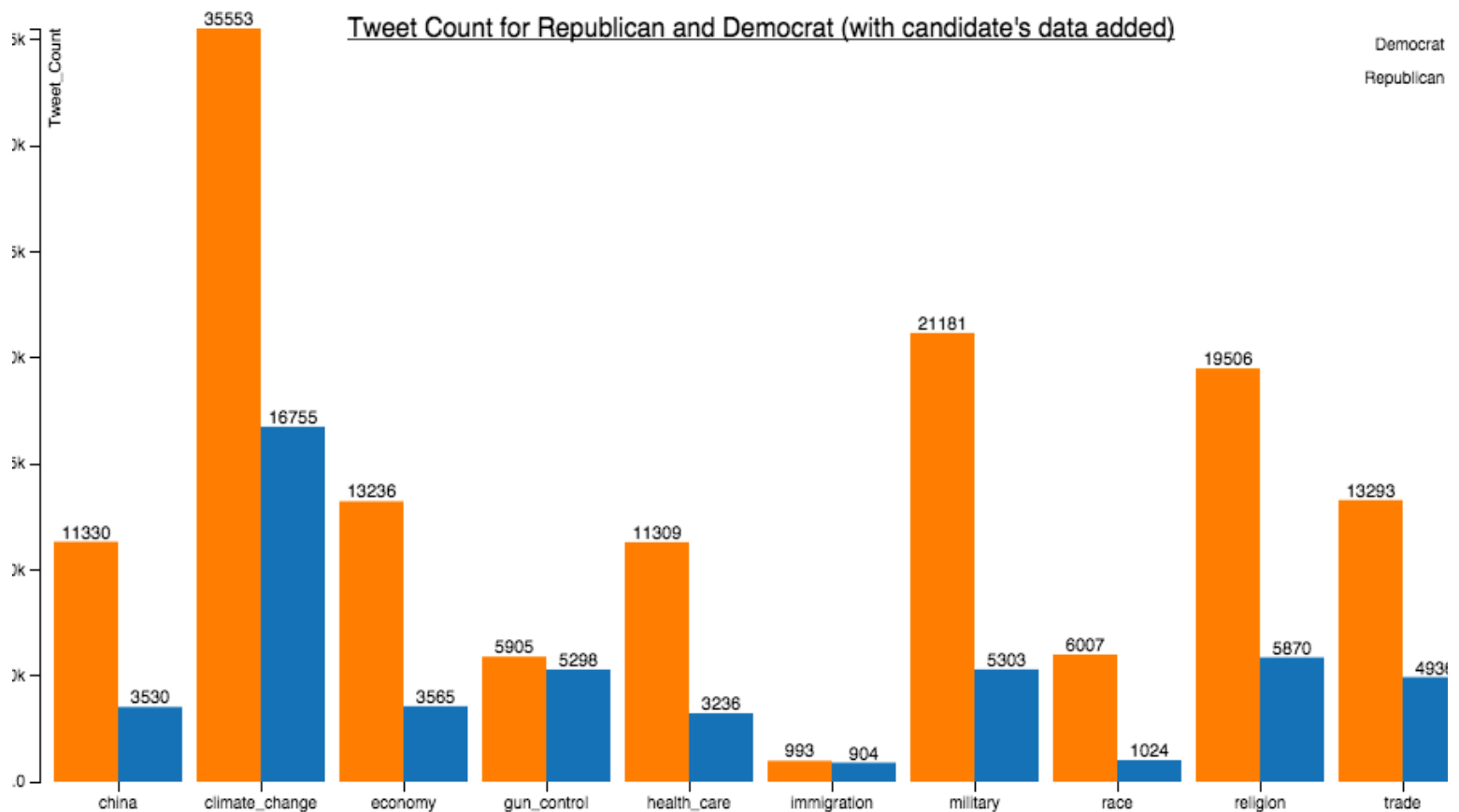
Part 1

1). For the parties, I initially grouped the tweets by the keyword “democrat” and “republican” only but the result did not contain many counts. As shown by the graph, the maximum count is only 1076. Republican received most discussion on religion and Democrat received most discussion on health care.



Then I also incorporate the keywords of candidates from both parties to parse out the tweets. In this way, more counts are captured and the result is as

follows. The overall patterns changes greatly and the mostly discussed topic is climate change for both parties. The lexicon for climate change includes “environment”, “occur”, “temperature”, “fuel” and “earth” and I’m surprised to see that people are mostly concerned with living condition and energy preservation during this period of the election campaign.

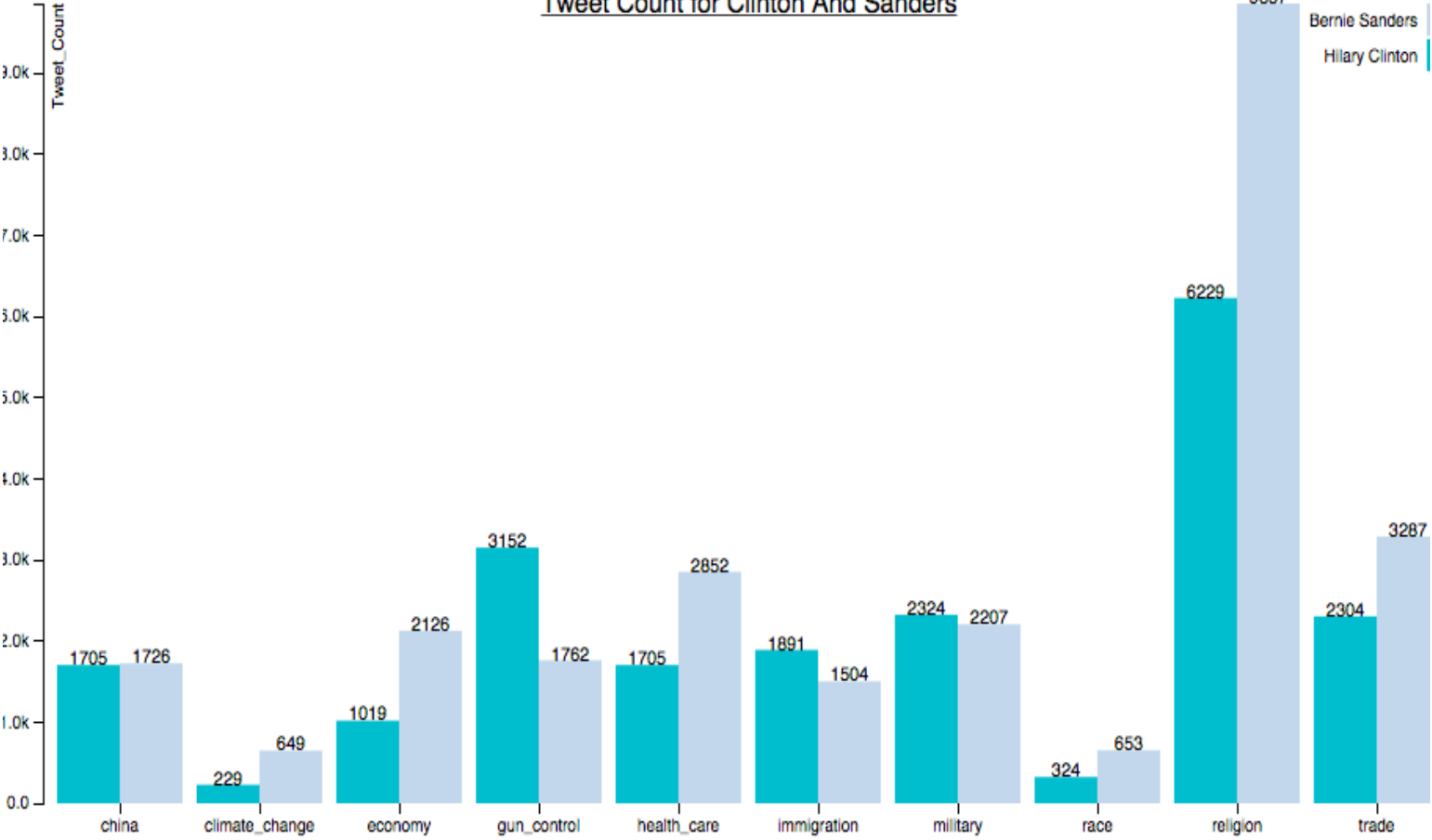


It not hard to observe that Republican party receives much more attention on Twitter than Democrat party. Considering Trump is included in the Republican tweets partition, who is the mostly discussed candidate in all social media platform, the difference in tweet counts is justifiable. Military and region are also high discussed issues among both parties. Gun control is a popular topic in Democrat whereas it only ranks eight out of ten in Republican

party. This may imply that Democrat party addresses more of gun control in election.

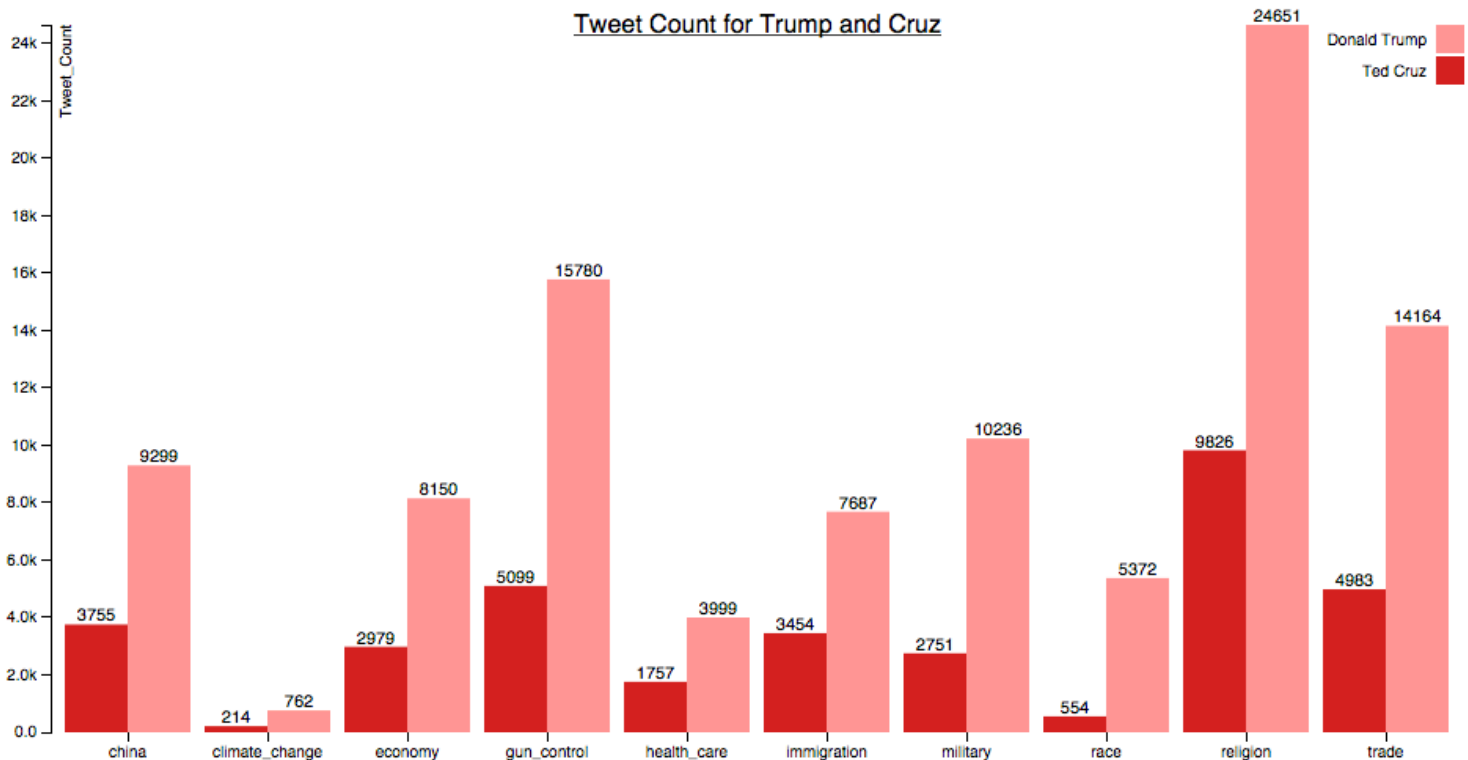
2). Comparing the visualizations for the two democrat candidates, Bernie Sanders has more counts than Hilary Clinton overall. The most popular topic is the same for both candidates, which is region. Both candidates make some effort in addressing ethnicity and regional effect. The second popular topic for Sanders is trade, which is characterized by “fair”, “goods”, “export”, “import” and “agreement”. Trade is also a relatively highly discussed topic in Clinton tweets which may imply that global economics and business corporation are attained with high importance. The second popular topic for Clinton is gun control and this is also one of the few topics that Clinton has more counts than Sanders. By focusing on this fact only, it reveals an insight that Clinton devotes much attention on the reasonable use of gun. Speaking of gun, military is an important protection of nation security, on which the tweet counts for both candidates are significant. Climate change receives little attention in this graph, which is opposite to what has just been discussed in the whole picture. The tweets for two candidates share similar amount of attention on topics “china” and “immigration”. The pattern of the visualization resembles more to the first graph in the previous question, which is the graph produced by using fewer keywords.

Tweet Count for Clinton And Sanders



3). The visualization for the Republican candidates is similar in pattern compared to the Democrat party bar chart. Climate change and race are less discussed issues whereas region, gun control and trade are popular topics. Donald Trump has significantly more tweet counts than Ted Cruz as expected. Region is the most popular topic for both candidates. The second popular topic for Trump is gun control which is characterized by the lexicons “shoot”, “security”, “violence”, “spend” and “check”. The following popular topic is trade. Cruz’s tweets address more of gun control than trades.

I expect economy, trade and china to be the highly discussed topics



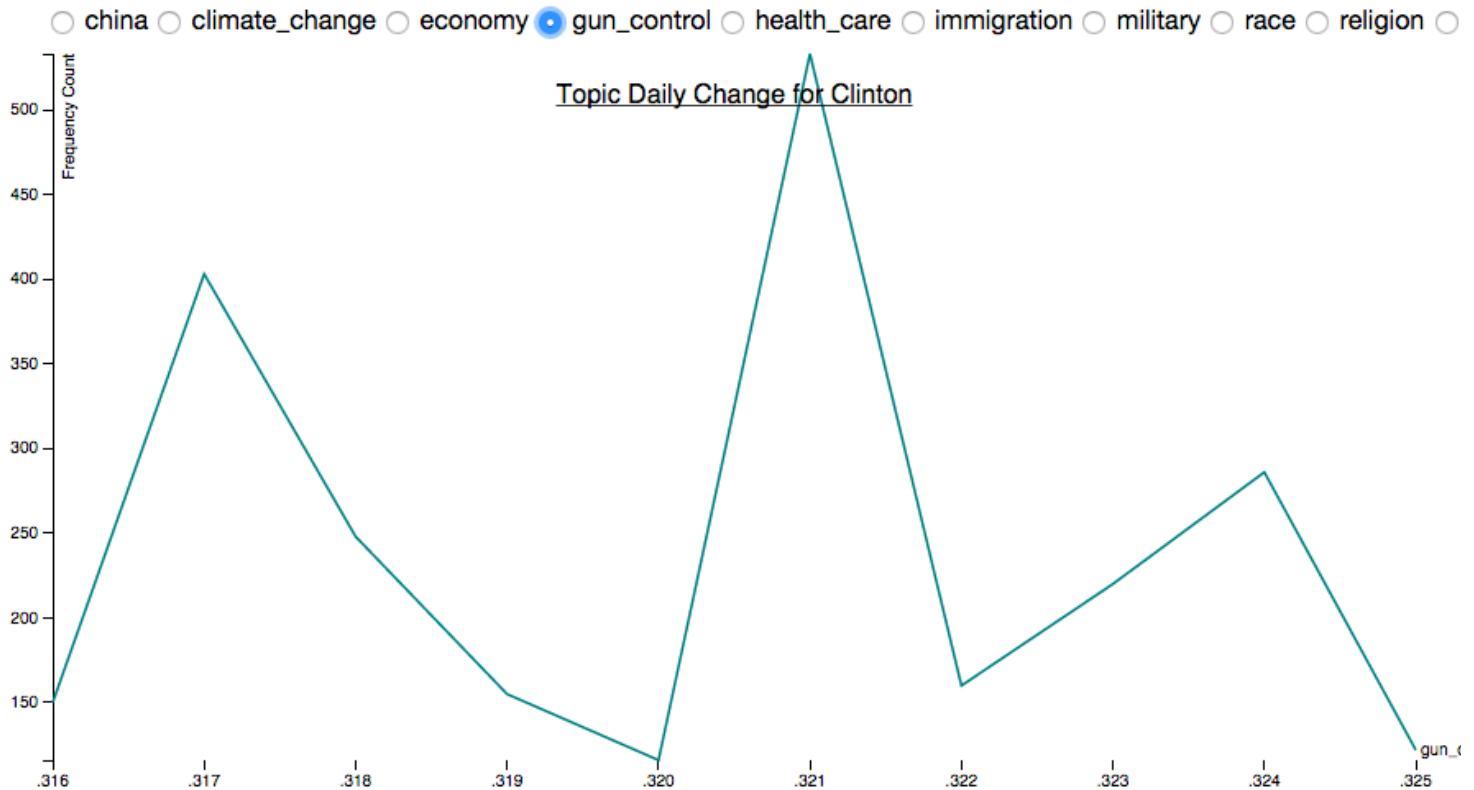
considering the current economic market and global development. And the result mostly corresponds with my expectation. However, I assume immigration and race to be widely tweeted in Trump’s tweets, which is not the case show by the graph. I may need to optimize my keyword lexicon by developing an keyword detection formula to obtain more accurate result.

Part 2:

By using d3, I create line chart to demonstrate the sequence of chained transition in topics within the time period of March, 16 to March, 25. Y-axis is the date and x-axis shows the usage of the topic by count. Upon clicking on the radio buttons at the top, the line transitions to another topic and the y-axis also rescales to fit the data. I have not figured out a good way to display the line charts of four candidates and two parties on one webpage, so I include the separate html files for each visualization. Please refer to the submitted file for the six visualization.

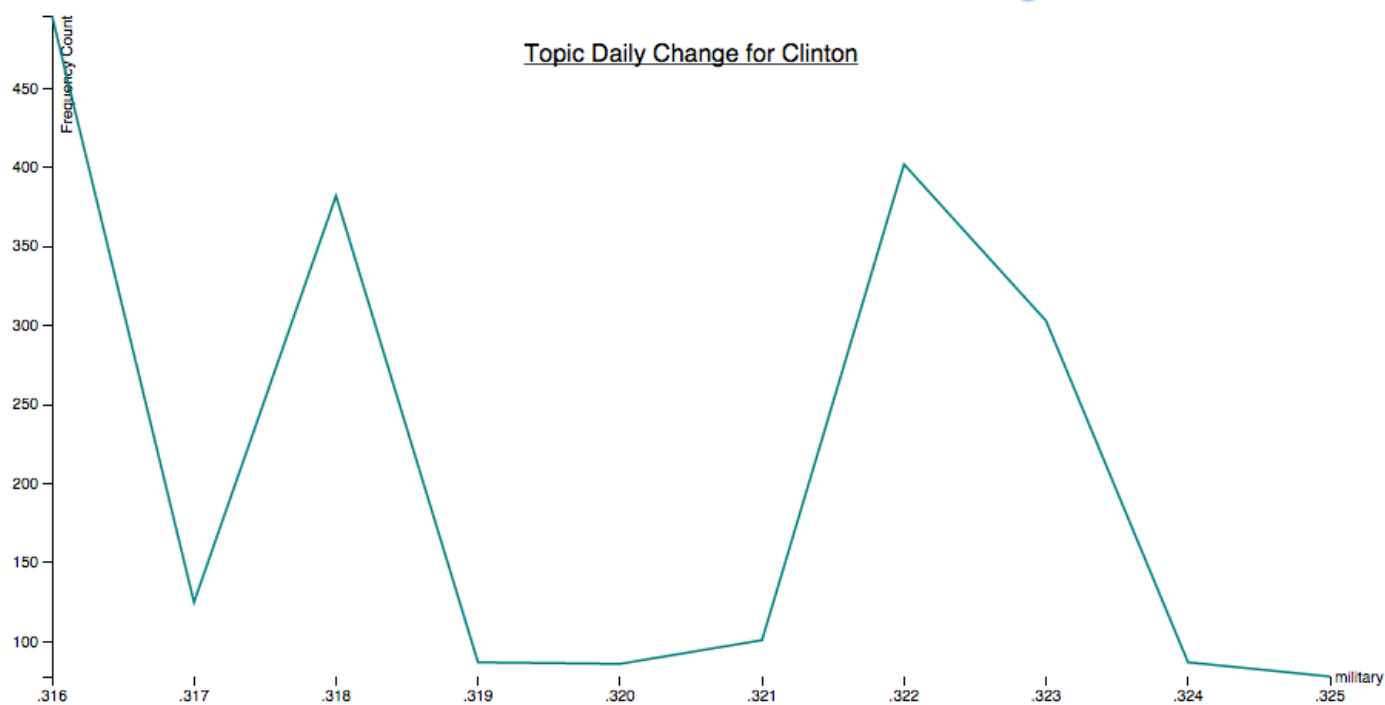
In Clinton's graph, the mentions of gun control increases significantly from 03/20 to 03/21. Military is more often discussed on 03/16 and constantly drops until 03/25. For Sanders, the topic religion is highly discussed on 03/16 and 03/21 and its change is dramatic as illustrated by the larger scale of the y-axis. Immigration is highly discussed around 03/22. In the topic count for Cruz, religion and gun control have the higher frequency and exhibit greater changes. As in the previous assignments, Trump is the mostly discussed candidate in Twitter and he has more frequency counts for each topic. The scale of his y-axis is almost three times of the other candidates'. Especially, the topics gun control, immigration, religion, race and trade exhibit noticeable

transition in the line chart. The discussion for immigration and race peaked around 03/21.



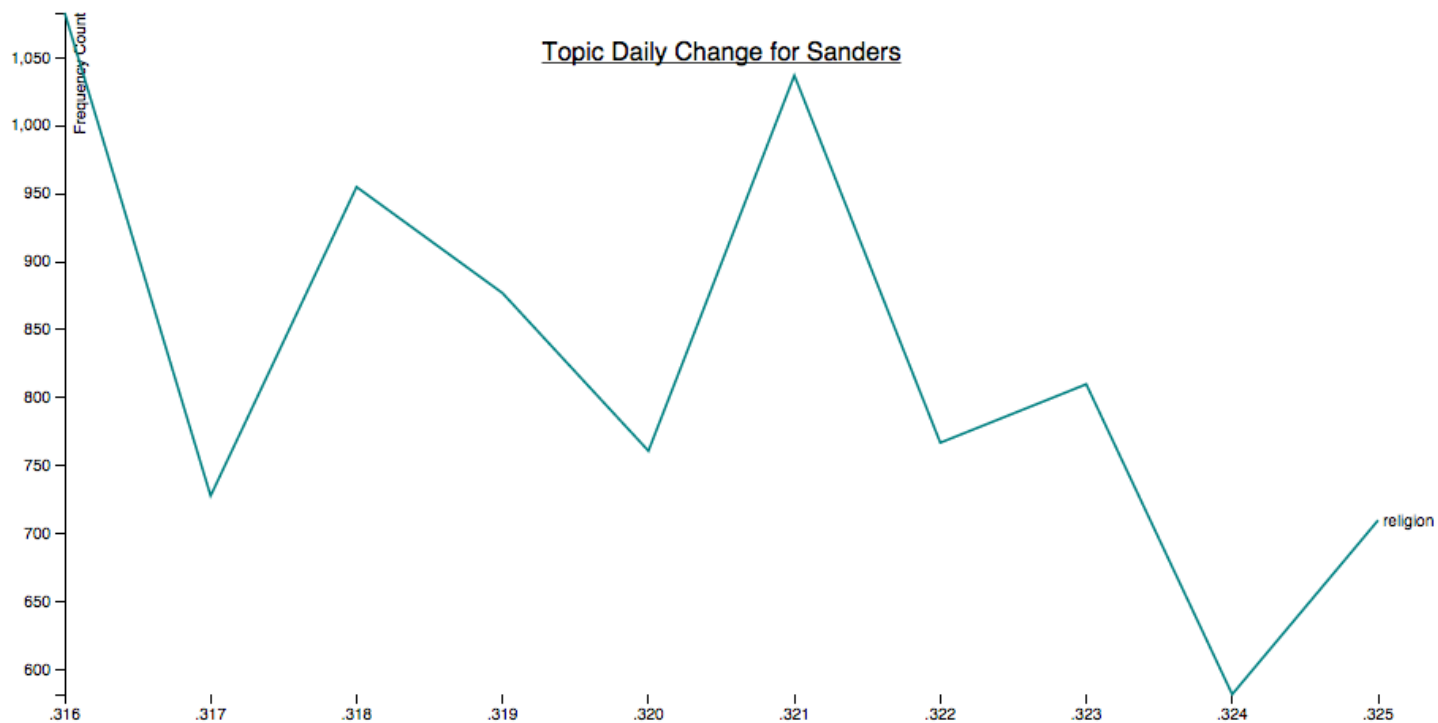
☐ china ☐ climate_change ☐ economy ☐ gun_control ☐ health_care ☐ immigration ☒ military ☐ race ☐ religion ☐ trade

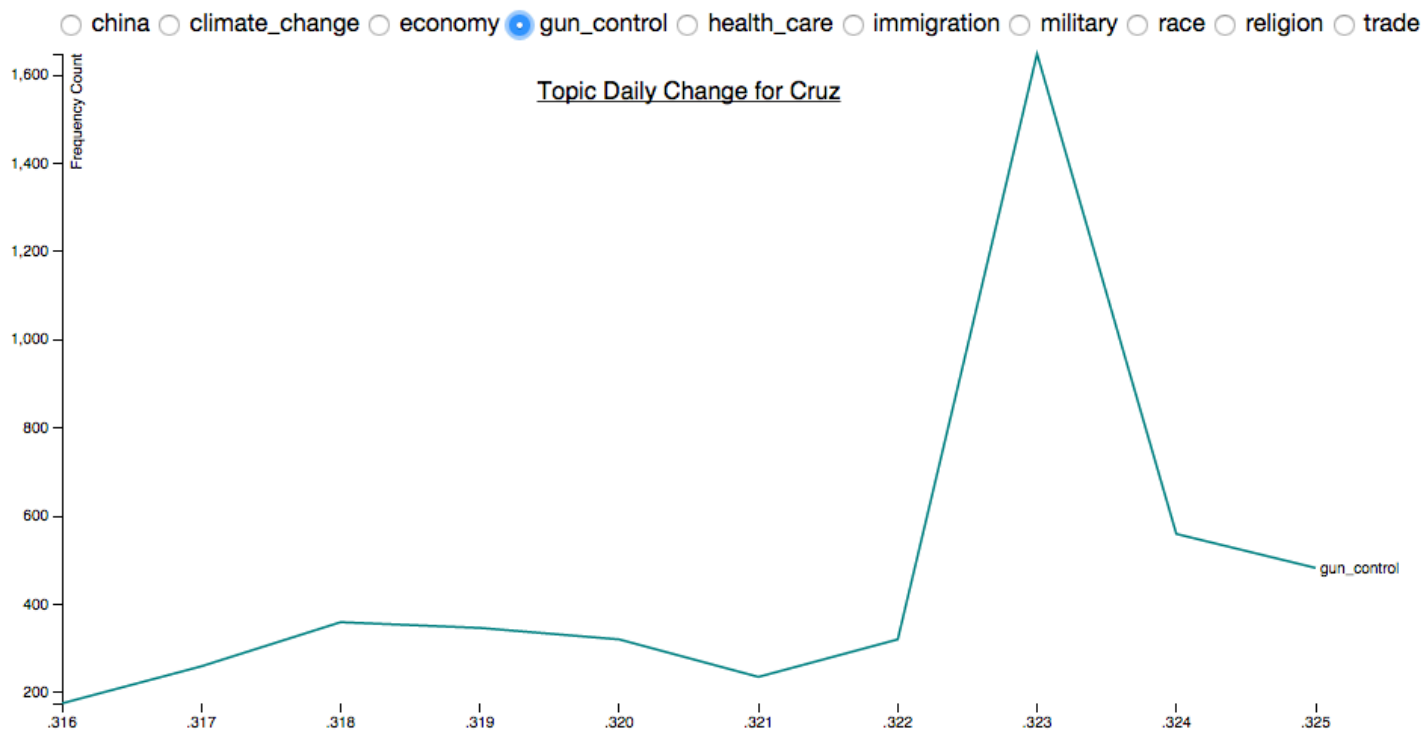
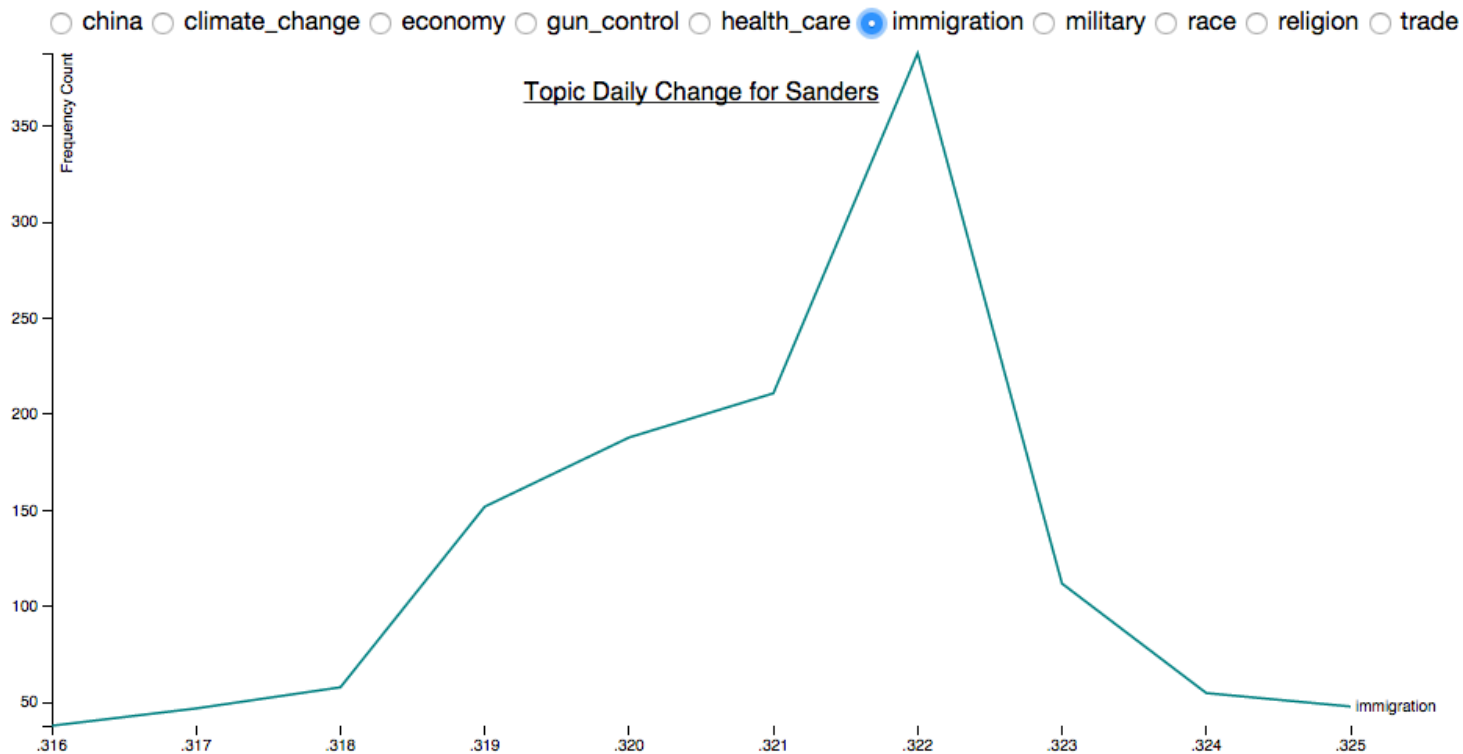
Topic Daily Change for Clinton

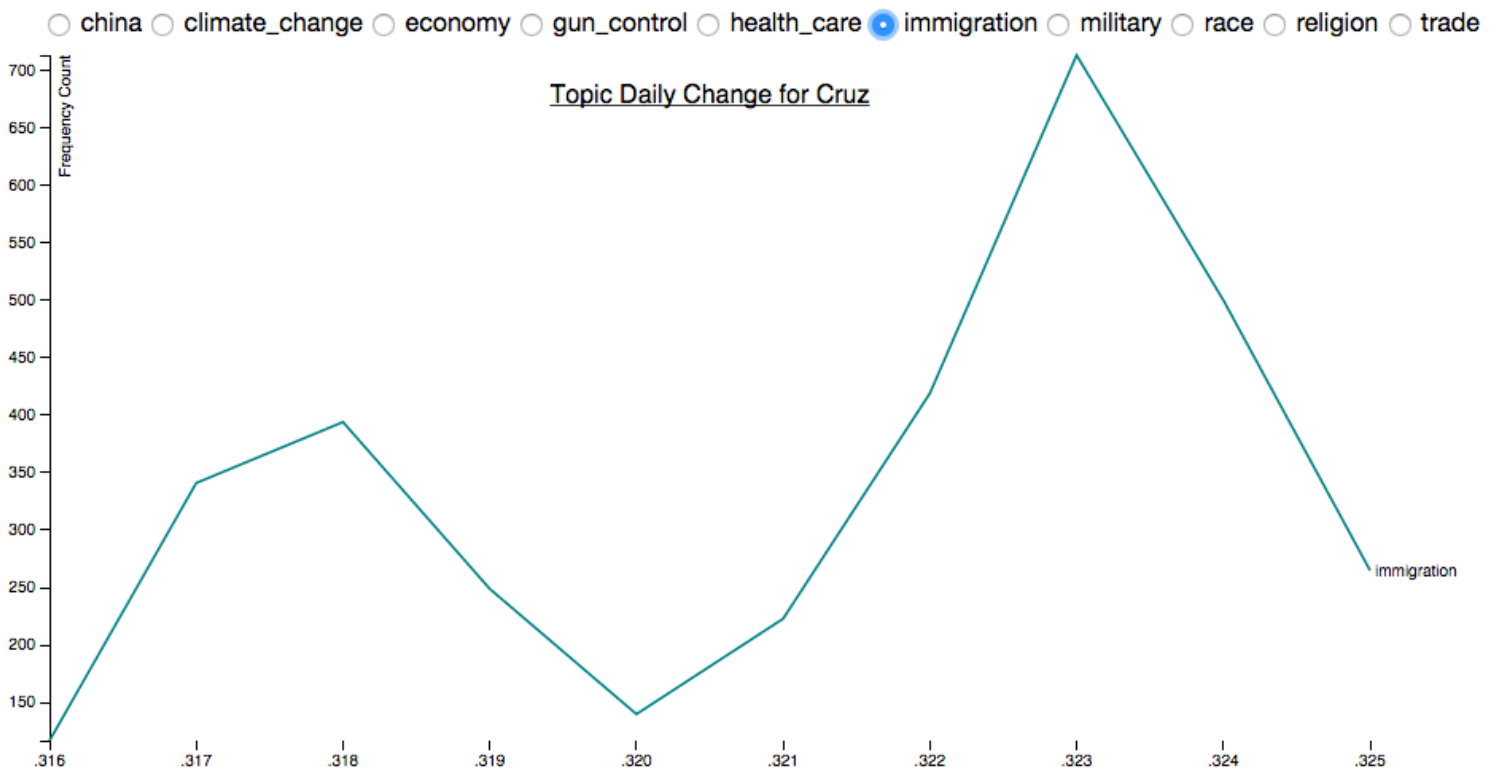
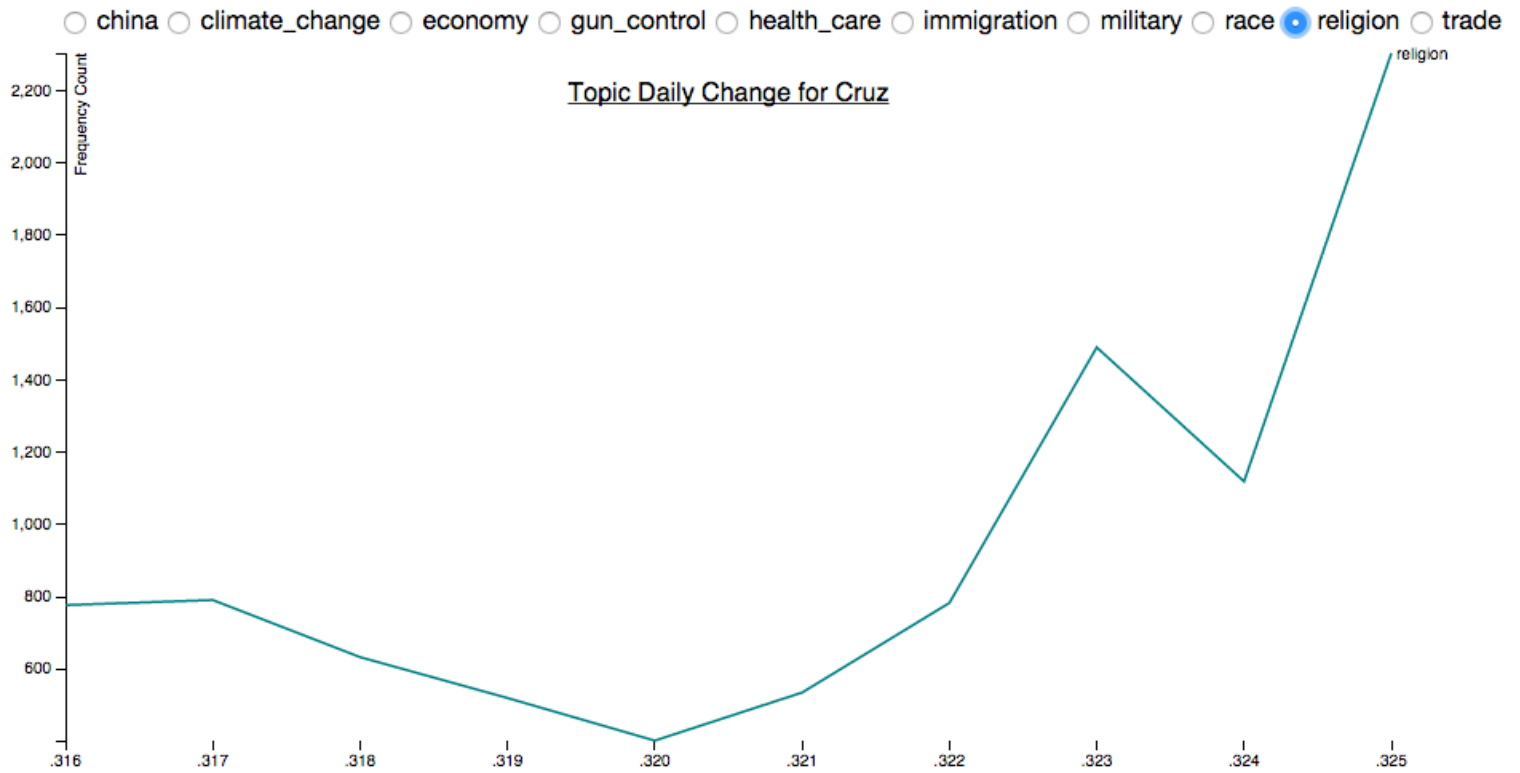


☐ china ☐ climate_change ☐ economy ☐ gun_control ☐ health_care ☐ immigration ☐ military ☐ race ☒ religion ☐ trade

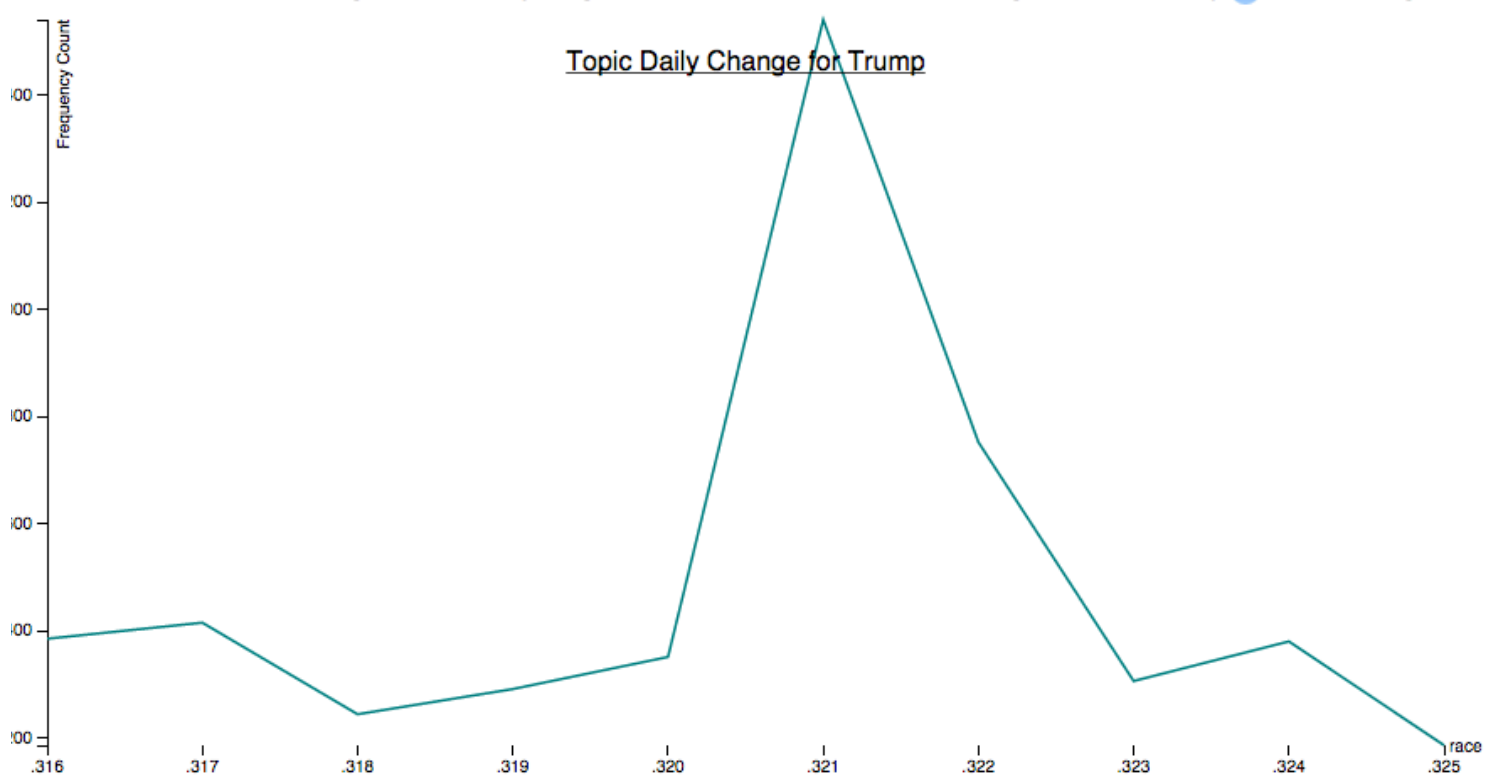
Topic Daily Change for Sanders



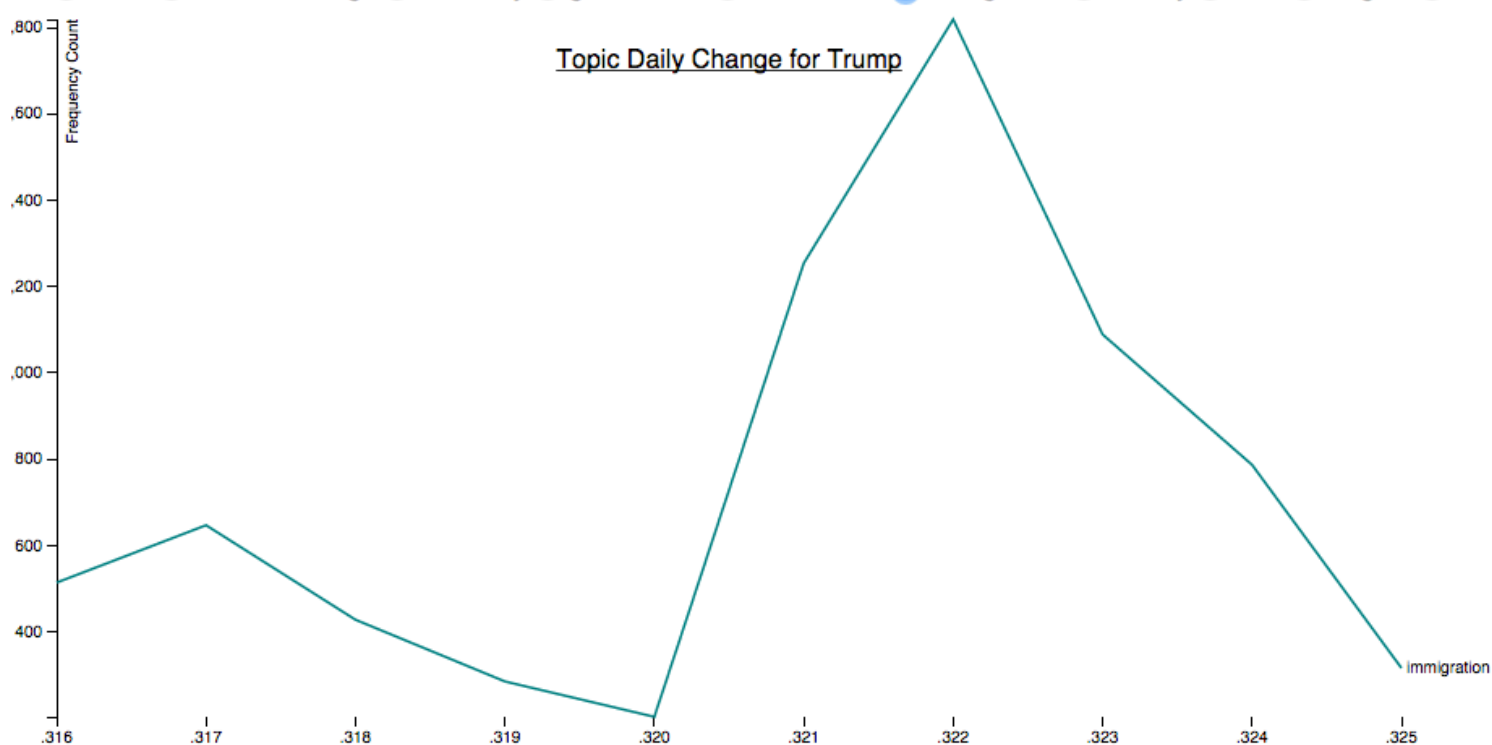




☐ china
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 ☐ race
 ☐ religion
 ☐ trade



To count the usage of topic for political party, I use “Clinton”, “Sanders” and “Democrat” to sort for Democrat; “Trump”, “Cruz”, and “Republican” to sort for Republican. For Democrat, topics that show a decreasing trends during the ten-day period are trade and military. China, immigration and health care receive the maximum discussion on March, 22.

For Republican party, similarly, military and trade exhibit decreasing trends overall. China and immigration are also the highly discussed topic and displays unimodal pattern. Topics on climate change, race and economy did not receive much attention compared to immigration, race and gun control. By examining the keywords that I used to represent the topics, the focus of the election discussion is more on social and political aspects than economics. The graphs below are from both parties and are on the same topic “immigration” and “china”. On each topic, Democrat and Republican display very similar patterns. Immigration was widely tweeted on March, 22 and this fact holds even when I consider the individual effect of each candidate. Relating to the social events for the period 03/16 – 03/25, the focus of election shifted to Arizona, which is the home to the most contradictory immigration debates. This may explain the increasing attention on immigration.

Figure 1 On Topic Immigration

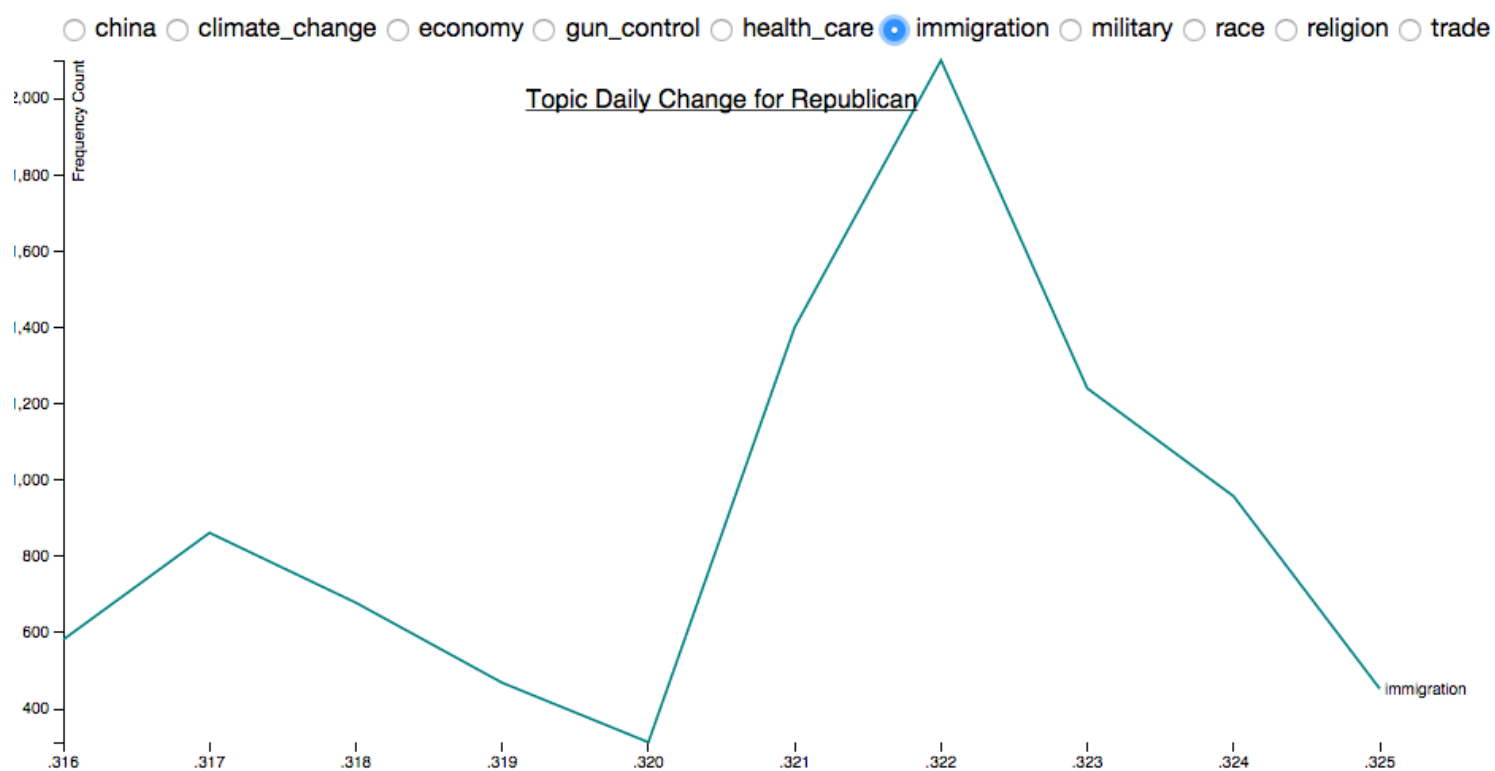
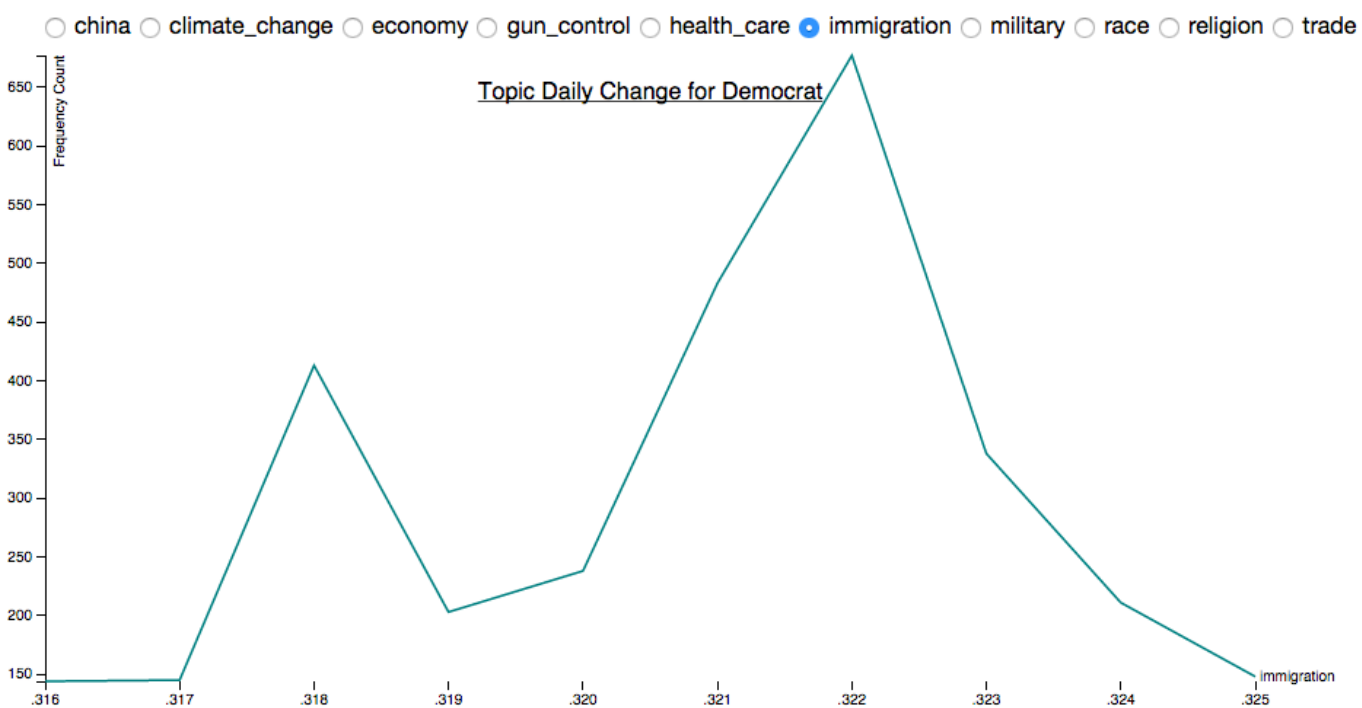


Figure 2 On Topic China

