Summary:

      Book banning has historically been a topic of political contention, but in recent years, it has re-emerged in mainstream politics. The American Library Association (ALA) reported a record-breaking challenge against over 2,570 unique titles in 2022, predominantly revolving around race, gender identity, sexuality, and reproductive health (Cohen & Barjas, 2023). This number is a dramatic rise from 2021 and the highest since the ALA began its documentation two decades ago (Itelie, 2023). Efforts to ban books have been notably prevalent in states with strong Republican influence. For instance, in 2022, Texas alone reported 93 book restriction attempts (Cohen & Barjas, 2023). The recurrent themes in these challenged books often touch on issues that traditionally align with conservative skepticism.

      This raised the question: Would book-banning dynamics shift if the contentious content was more in line with liberal views? Consequently, our primary research inquiry became: From 2008 to 2022, how have political affiliations shaped opinions on removing books from public libraries, especially those touching on topics like racist views against Blacks, anti-US sentiments from Islamic leaders, and broader anti-religious stances?

      Using the General Social Survey (GSS), we examined responses to three specific questions: the stance on removing a book suggesting Black people's inferiority, a book by an Islamic leader denouncing the USA, and one by an anti-religious author criticizing all religions. Our analysis compared responses from Republicans, Democrats, and Independents, while also tracking trends since 2008.

      Through visualizations like line graphs, histograms, and color-differentiated bar charts, we traced how opinions about book banning evolved over time and differed among political parties. Our findings highlighted a general preference among all parties in favor of keeping the books, although there were a couple of instances where over 50% of a party leaned towards banning. However, the amount of support for book banning did vary by party based on the topic of the book. The data revealed that banning the anti-American book received the most support across all parties; but, while Democratic and Independent groups saw diminishing support for such bans over time, Republican support remained more consistent. On the other hand, both Democrats and Independents increasingly backed the removal of racially offensive books, whereas Republican support declined. Support for banning anti-religious books was the lowest among all parties and generally declined over the years, with a recent exception in the Republican group.

      The research indicates that an individual's political beliefs can influence their stance on the banning of specific books based on it's content. Depending on the book's subject, people from various political perspectives might either agree or disagree on its removal.

Data:

      In the analysis, data from the General Social Survey (GSS) was utilized to explore public sentiments regarding removing controversial books from public libraries, and how these sentiments correlate with political affiliations. The data was initially sourced from 37 distinct CSV files on GitHub and combined into one data frame.

The variables of interest were:
- "Librac" and "libracy": These questions assessed the respondent's stance on whether a book written by someone suggesting Black people are inferior should be removed from a public library.

- "Libmslm" and "libmsly": This question asked whether a book written by an Islamic religious leader preaching hatred of the U.S. should be removed from a public library.
- "Libath" and "libathy": These variables explored if respondents would support the removal of a book against churches and religion from a public library.
- In the data set, variables ending with a "y" are the gender-neutral versions of the corresponding variables without the "y" at the end. For example, while "librac" was the original wording, "libracy" provided a gender-neutral version.
- "Partyid": This variable captured respondents' political affiliations.
- "Year": This variable recorded the year that the information was surveyed.

A primary challenge encountered during the data cleaning process revolved around handling missing values, particularly in the columns "librac," "libmslm," and "libath." To address this issue, we merged the original variables with their gender-neutral equivalents. For example, when "librac" had missing data, the corresponding "libracy" entry was used as a substitution. As a result, there was an increase in the number of data points for 2021 and 2022 relative to other years, as these years marked the introduction of gender-neutral variables.

Before conducting the variable merger, we performed an analysis to assess the potential impact of using gender-neutral phrasing on respondents' answers. The preliminary analysis indicated that gender-neutral phrasing did indeed influence responses. Specifically, the gender-neutral race question showed a 5.51% increase in support for removal, while the anti-US and anti-church topics observed decreases of 3.13% and 13.95%, respectively. However, given the overall consistency in responses regardless of question phrasing, we decided to integrate the two sets to help maintain the size of the dataset.

Before conducting the variable merger, we analyzed the potential influence of gender-neutral phrasing on respondents' answers. The analysis revealed that gender-neutral phrasing influenced responses. The gender-neutral race question saw a 5.51% uptick in removal support, while anti-US and anti-church queries noted decreases of 3.13% and 13.95%, respectively. However, due to overall consistency in responses regardless of question phrasing, we decided to integrate the two sets for a comprehensive dataset.

Despite the merging technique, significant amounts of data were still missing. To preserve the dataset's accuracy, we systematically removed these gaps. This process reduced the dataset from its original 72,390 entries down to 13,439. One major factor contributing to this reduction was the "libmslm" variable, which alone was responsible for a decline of 26,293 entries. This is because unlike "librac" (recorded since 1976) and "libath" (since 1972), recording for "libmslm" began only in 2008. However, we considered it essential to retain this variable despite the substantial reduction in the dataset because it pertained to a topic with more moderate political undertones.

The "partyid" variable originally had multiple categories, which we simplified for clarity in visualizations and analysis. We created a mapping that grouped these categories into three broader buckets: "independent/other party," "democrat," and "republican." To streamline the data, categories like "independent, close to democrat," and "independent, close to republican" were combined under "independent/other party." Similarly, 'strong democrat' and 'strong republican' were included within "democrat" and "republican" respectively. This decision was based on a cross-tabulation analysis, which revealed similar response patterns across these categories. Overall, this restructuring ensured that the dataset remained comprehensible and largely consistent with its original patterns.

The original question column names ("librac", "libmslm", and "libath") were also changed to different names for increased readability. The new names are now: AntiBlackBook, AntiUSABook, and AntiChurchBook. This was to make the analysis and subsequent explanations easier to type and comprehend at first glance with more intuitive column names.

Results:

For our exploratory data analysis and visualization, we created several interpretive graphs with key variables to answer our research question.

Figure 1: Total Number of Responses Over Years 2008 – 2022.
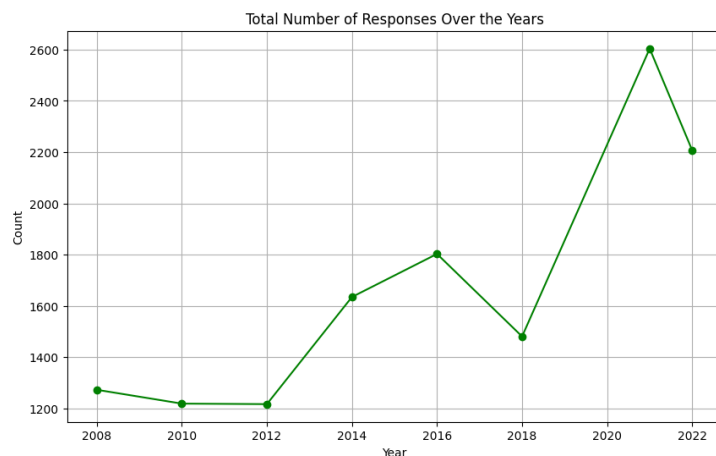
In general, the total number of responses increases as years progress, with peak responses in 2021, and the least responses in 2012. This simply may be due to voting accessibility and awareness, and increased involvement in social issues in later years.

Figure 2: Number of Responses Over Years 2008 – 2022 For Each Political Party
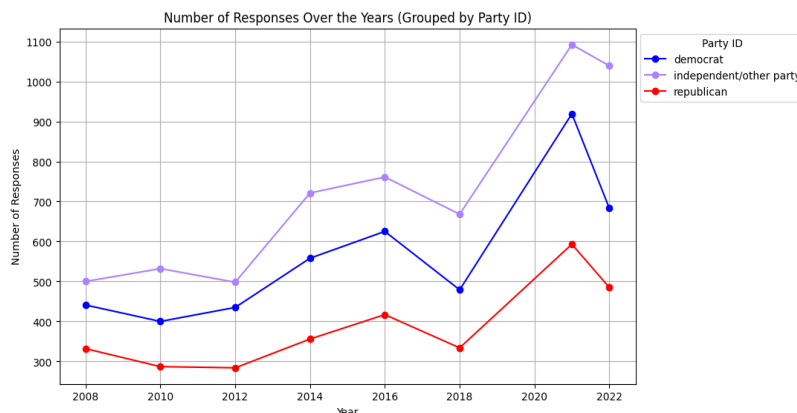
Across all political parties, the number of responses generally increases as the years progress. Through the years 2008-2022, the highest number of responses identified as Independent, and the lowest number of responses identified as Republican. All parties had their peak response count in 2021.

Figure 3: Summary of Responses for Each Question and Political Party

```
Summary of responses for each question:
        AntiBlackBook AntiUSABook AntiChurchBook
count           13439       13439          13439
unique              2           2              2
top        not remove  not remove     not remove
freq             8501        7012          10631

Number of people within each party:
independent/other party    5811
democrat                   4540
republican                 3088
Name: party_grouped, dtype: int64
```

This summary table provides a deeper look into the counts of each variable of interest. There were a total of 13,439 responses to the questions about book removal opinions across the years 2008

to 2022. There were two unique responses for each (after cleaning): not remove and remove. "Not remove" was the most common response for every question. The Anti USA book question (libmslm) had the lowest number of "not remove" responses compared to the other two books. This summary also shows the number of people who identify as a specific party across all years from 2008 to 2022. The greatest number of people identified as independent/other party, and the least number of people identified as Republican.

Figure 4: Histograms of Responses for Each Book Question Grouped Political Party

i)

ii)

iii)
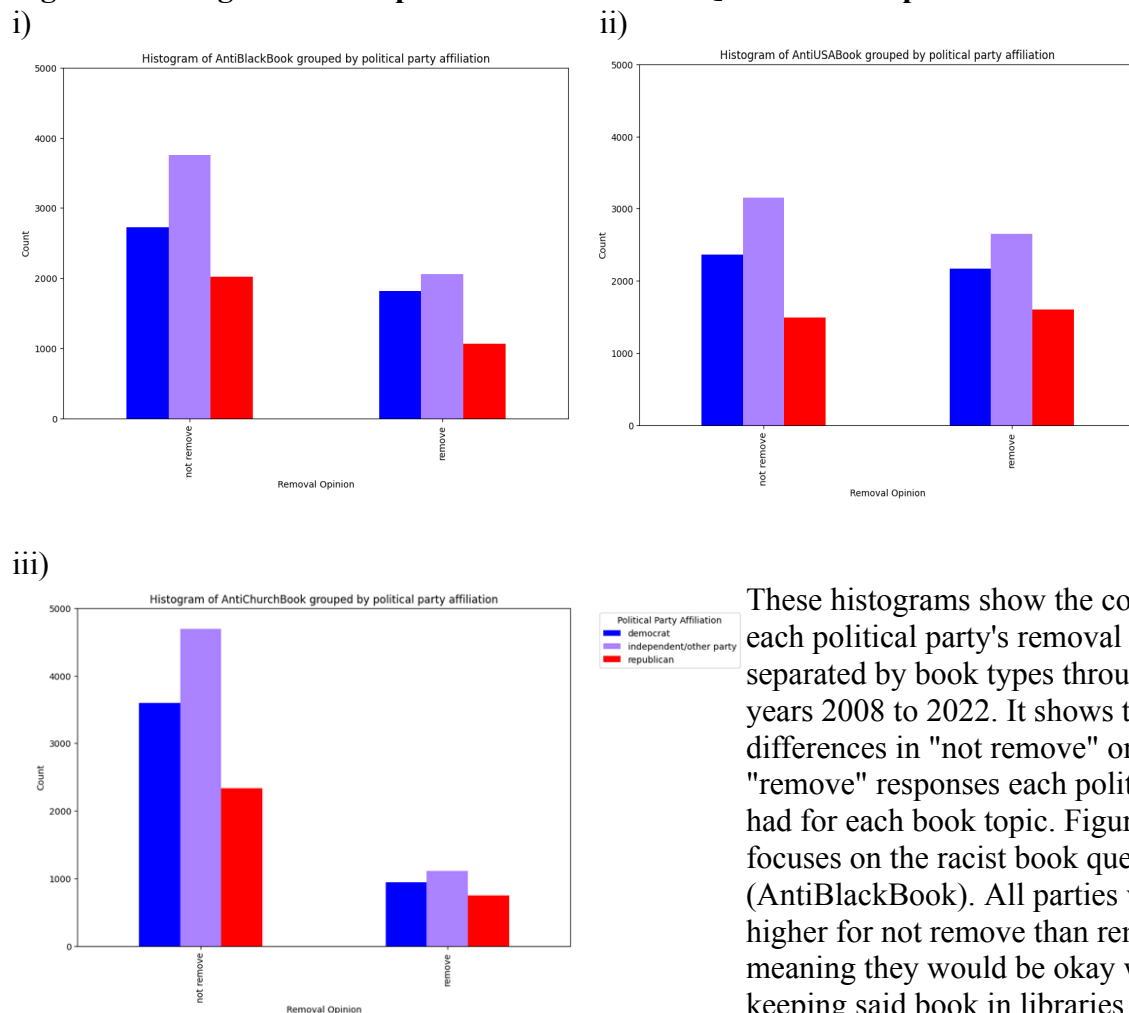
These histograms show the count of each political party's removal opinions separated by book types throughout the years 2008 to 2022. It shows the overall differences in "not remove" or "remove" responses each political party had for each book topic. Figure 4i focuses on the racist book question (AntiBlackBook). All parties voted higher for not remove than remove, meaning they would be okay with keeping said book in libraries. Figure 4ii focuses on the book about a Muslim leader preaching hate for America (AntiUSABook). The distribution is much more comparable within "not remove" and "remove" responses. This means that there was a relatively even split among people who wanted to keep and remove an anti-American book even within the parties. Overall, more Republicans voted to remove the book than not remove it. Figure 4iii focuses on the book about going against Christianity and religion. This histogram has a clear difference in distribution between the two removal opinions. Across all political parties, more responses were for not removing the book. Since these plots display counts on the y-axis, it is consistent with the nature of the data, where independent voters had the highest response count, while republican voters had the least.

Figure 5: Proportions of Responses for Each Book Type Across All Years 2008-2022

```
Summary for AntiBlackBook:
not remove    0.632562
remove        0.367438
Name: AntiBlackBook, dtype: float64

Summary for AntiUSABook:
not remove    0.521765
remove        0.478235
Name: AntiUSABook, dtype: float64

Summary for AntiChurchBook:
not remove    0.791056
remove        0.208944
Name: AntiChurchBook, dtype: float64
```
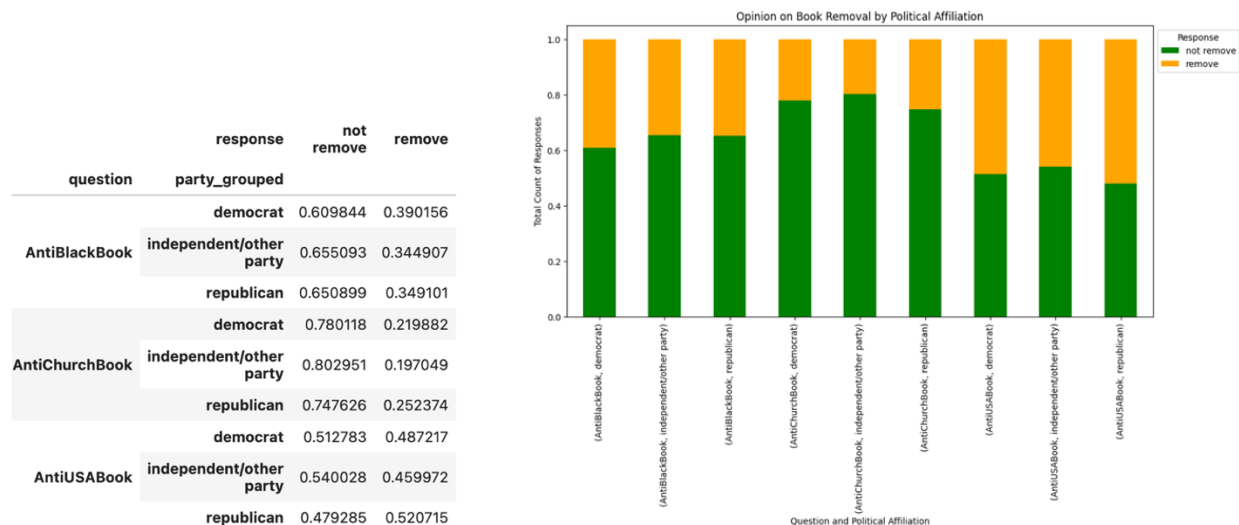
This figure is a summary of the proportion of removal opinions for each book type across all years and all political parties. The proportion of people who have voted for the removal of these books is lower than non-removal votes for all book types. The biggest difference in proportions is for the AntiChurchBook, where nearly 60% more people voted for not removing anti-religious books from 2008-2002. The difference between "not remove" and "remove" for the Anti-black racist book is around 26%, which means 26% more people voted to keep the book in libraries.

The difference in the proportion of people who voted is lowest for the Anti-USA book, at just over 4%. This means that the number of people who voted to remove the book and keep the book in libraries was roughly the same across all years and within all political parties.

Figure 6 and 7: Proportions of Book Removal Opinions For Each Political Party Across All Years 2008-2022

| question	party_grouped	not remove	remove
AntiBlackBook	democrat	0.609844	0.390156
	independent/other party	0.655093	0.344907
	republican	0.650899	0.349101
AntiChurchBook	democrat	0.780118	0.219882
	independent/other party	0.802951	0.197049
	republican	0.747626	0.252374
AntiUSABook	democrat	0.512783	0.487217
	independent/other party	0.540028	0.459972
	republican	0.479285	0.520715

The pivot table and stacked bar graph show the proportion of political parties who voted for either "not remove" or "remove" based on the book type (question). In general, most political parties voted to not remove the book across all book types except Republicans for the Anti-USA book type, which voted for its removal. For AntiBlackBook and AntiChurchBook, the difference in proportions is big, with a preference for not removing these books. The difference in proportions for "remove" and "not remove" for AntiUSABook is slim and even between parties.
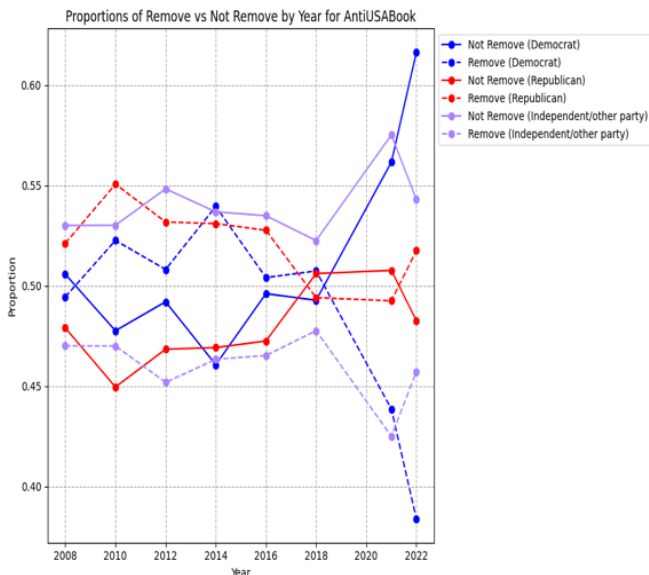
Figure 8: Line Graphs of Proportion of Responses for Each Political Party in Every Year

Proportions of Remove vs Not Remove by Year for AntiBlackBook
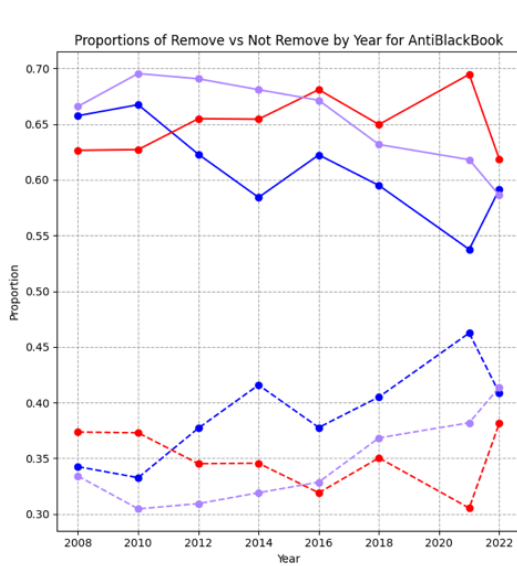
i)
The "Remove (Democrat)" line began at just under 35% in 2008. The percentage increased consistently, with a minor dip in 2016, reaching its peak in 2021 when over 45% of Democrats endorsed the removal of the racially offensive book. This could be attributed to the Black Lives Matter protests of 2020 that saw more support from left-leaning people. By 2022, the support slightly declined, aligning closely with the Independent group's stance. The "Remove (Independent/other party)" trend, which began at around 43% in 2008, paralleled the Democratic trajectory. By 2022, an estimated 41% of this group were in favor of removing the controversial book. In 2008, the "Remove (Republican)" line was the highest among all parties by 5%. However, it experienced a steady decrease over the years, reaching its lowest in 2021 at 30%.

Proportions of Remove vs Not Remove by Year for AntiChurchBook
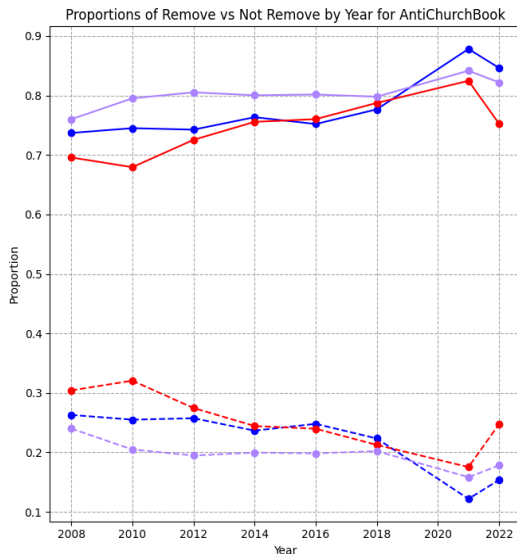
ii)
 Across all parties, there is limited support for the banning of the anti-religious book, with the Republican party consistently showing the highest percentages, peaking slightly above 30% in 2010. Over the years, support for the ban has generally declined, with the Democratic group consistently indicating the least approval, hovering around 10%. Notably, in 2021, there was a slight uptick in support across all parties, with the Republican party's approval for the ban increasing to 28%.

Proportions of Remove vs Not Remove by Year for AntiUSABook

Legend:
- Not Remove (Democrat)
- Remove (Democrat)
- Not Remove (Republican)
- Remove (Republican)
- Not Remove (Independent/other party)
- Remove (Independent/other party)

iii)
Approval for the ban on anti-American books is predominant across all parties, with the most significant support coming from Republicans, with a peak of 55% support in 2010. Over time, Republican support for such a ban decreased, but there was a small increase in 2021, settling at 52%. Democratic backing peaked in 2014 at just under 55% before retracting to below 40% by 2022. The Independent group's stance on banning these books decreased by about 2% from 2008 to 2022, with its lowest peak in 2021 at approximately 43% approval.

For this chi-square test, we aggregated votes across political parties since 2008 to discern trends in attitudes toward banning books based on political affiliation. The aggregate analysis across political parties for the three book topics shows a statistically significant association with voters' political affiliations in their opinions on whether to remove or not remove books. Each book topic's p-value falls below the 0.05 threshold, suggesting a substantial correlation between political leanings and viewpoints on book censorship or freedom. These aggregated results may better reflect enduring, long-term societal and political attitudes towards the subject matter of these books, in contrast to year-by-year data that might be influenced by transient, short-term events or trends (Appendix B). While the chi-square test indicates the presence of an association, it does not reveal the cause of this relationship. The drivers behind these associations remain topics for further investigation. Additionally, it would be insightful to use a measure like Cramer's V test to assess the strength of the association found by the chi-square test. This would help in quantifying the extent to which political affiliation correlates with opinions on book removal. By considering these findings in the context of broader societal and political dynamics, and acknowledging the chi-square test's limitations in explaining causation, we can gain a deeper understanding of public opinion formation and its potential drivers.

```
For this chi square test, we are not going by year, but simply looking at the aggregate votes across
political parties for removing/not removing books. For a given book topic, if the p-value calculated
is below the significance level of 0.05, this indicates that there is a significant association between
the voters' political affiliation and their response to remove or not remove books of this type.

Book topic 'AntiBlackBook':
Chi2 val: 30.984997255051567
P-val: 1.8693616770687949e-07
Expected frequencies:
[[2871.83123744 1668.16876256]
 [3675.81747154 2135.18252846]
 [1953.35129102 1134.64870898]]

P-value of 1.8693616770687949e-07 is below an alpha of 0.05, suggesting a significant association.

Book topic 'AntiUSABook':
Chi2 val: 29.821450760468146
P-val: 3.344677481096209e-07
Expected frequencies:
[[2368.81315574 2171.18684426]
 [3031.97648635 2779.02351365]
 [1611.21035791 1476.78964209]]

P-value of 3.344677481096209e-07 is below an alpha of 0.05, suggesting a significant association.

Book topic 'AntiChurchBook':
Chi2 val: 33.28457121704045
P-val: 5.920347434489215e-08
Expected frequencies:
[[3591.39370489  948.60629511]
 [4596.82573108 1214.17426892]
 [2442.78056403  645.21943597]]

P-value of 5.920347434489215e-08 is below an alpha of 0.05, suggesting a significant association.
```

Summary of Results:

   Our visualizations and chi-square analysis provided some interesting findings. Figure 8 shows that the biggest differences were in the Anti-Black book question and the Anti-USA book question. Across all years, democrats had the highest "remove" response rates for the Anti-Black book compared to the other political parties. Until 2021, there was an increasing trend of "remove" rates among Democrats, while Republicans saw a decreasing trend of the same response. This shows how over the past decade and a half, political opinions may be getting stronger in their impact on the question of book-banning. The plot for the Anti-USA book shows a situation where all political parties have similar opinions. Until 2018, all the political parties had similar rates of "not remove" and "remove" opinions. After 2018, Democrat responses increased significantly in favor of not banning books with anti-American sentiments, while Republicans had a relative decrease. The aggregate chi-square analysis from 2008 to 2022 also underlines a significant correlation between voters' political affiliations and their opinions on book removal across all three topics, indicating entrenched political and societal attitudes toward these sensitive contents. Particularly revealing were the pronounced correlations in later years, suggesting responses to specific societal or political events (Appendix B).

Conclusion:

Our analysis explored how political affiliations influenced public opinions on the removal of controversial books from public libraries. It examined responses from 2008 to 2022, focusing on contentious topics such as racist views against Black individuals, anti-US sentiments from Islamic leaders, and broader anti-religious stances. The dataset was derived from the General Social Survey (GSS) and underwent rigorous cleaning, including the merging of gender-neutral variables and addressing missing data issues. Through analysis and visualizations, this study aimed to shed light on the evolving nature of book-banning debates and the role of political affiliations in shaping these opinions.

To accomplish this, we generated a series of bar and line graphs grouped by both political affiliation and voting preferences and calculated the proportion of "not remove" and "remove" responses within each party grouping. Several trends emerged from the analysis:

1. Across a majority of the book categories, there was an overarching preference against removal, no matter the political party. The only exception was in books containing anti-USA content, where Republicans had a constant preference for banning that Democrats shared until 2018.
2. The amount of support for banning books differed among parties based on the topic.
   a. For books suggesting Black inferiority support for their removal among Democrats and Independents has been on the rise, especially post-2020, while, Republicans showed a declining trend.
   b. For the topic of anti-American books, while all parties initially showed high support for banning, Democrats and Independents have shown a decrease over the years, with Republicans maintaining consistent levels of support.
   c. In regards to anti-religious books, support for banning was lowest among all categories and declined over time. However, there was a noticeable uptick in 2021 across all parties, especially Republicans.

These findings indicate that although all parties generally advocate for retaining books, the degree of support for book banning differs based on the subject matter. Topics resonating with particular political beliefs can sway opinions on book banning across the board. For issues that counter liberal perspectives (racism against the black community), Democrats tend to show more support for book bans. When a topic is at odds with conservative views (anti-religious issues), Republicans are more inclined to endorse book banning. For moderate subjects that both ideologies find contentious (anti-American sentiment), there's a merger in party views on potentially removing a book. This counters the current notion that book banning is predominantly a Republican issue. The trend of having a higher correlation between voters' political affiliations and their opinions on book removal across all three topics, alongside the varied annual outcomes, highlights the dynamic interplay between public opinion and the prevailing sociopolitical context. Such insights lay the groundwork for further investigation into how shifts in public policy and media narratives might influence opinions and behaviors regarding content censorship.

One potential criticism could be the decision to merge gender-neutral questions with their original counterparts. While there were differences in responses due to phrasing, the overall consistency allowed for an integration to maintain dataset size. Critics may also argue that our sample size was insufficient as the inclusion of the anti-religious book variable removed a large portion of the historical data. However, the addition of this variable provided a moderate issue
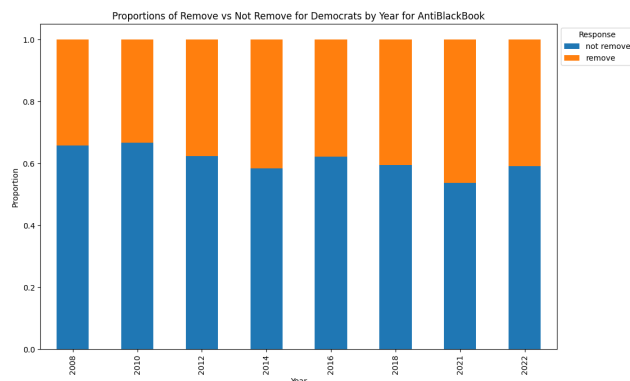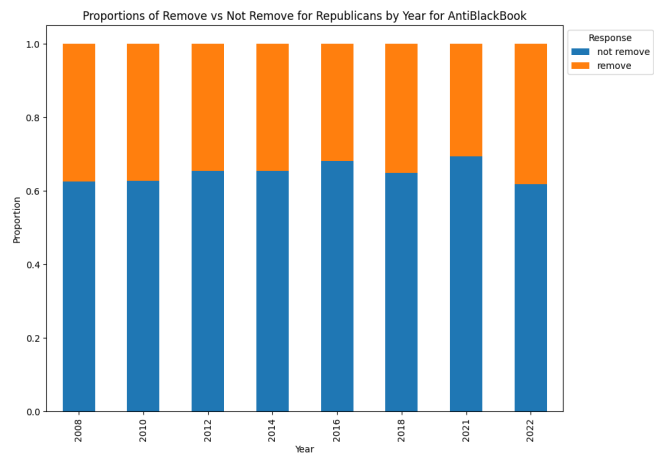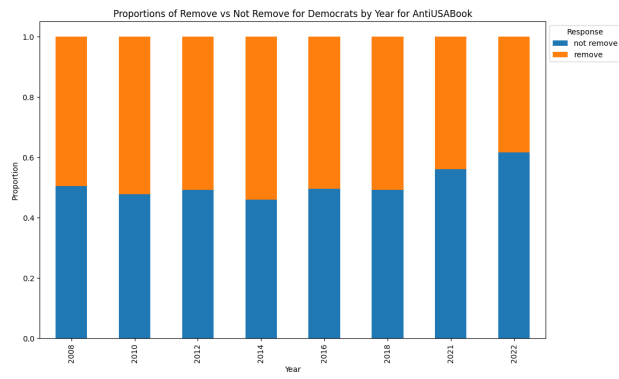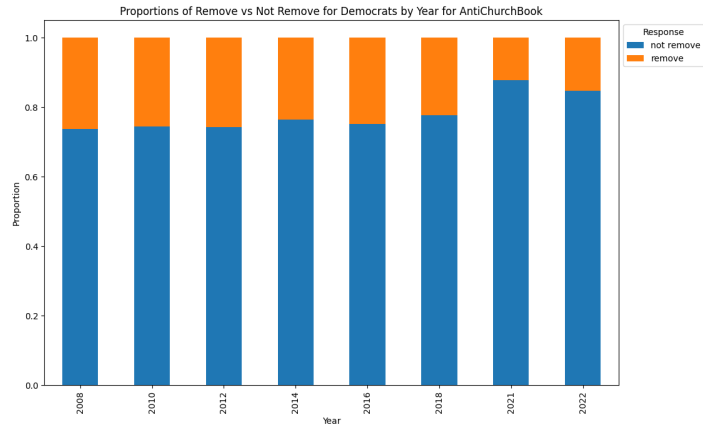
that revealed a very interesting insight into where parties agree on book banning. Additionally, our results are arguably more concise and relevant to the current political climate, given that our data starts in 2008, which is only 15 years ago.
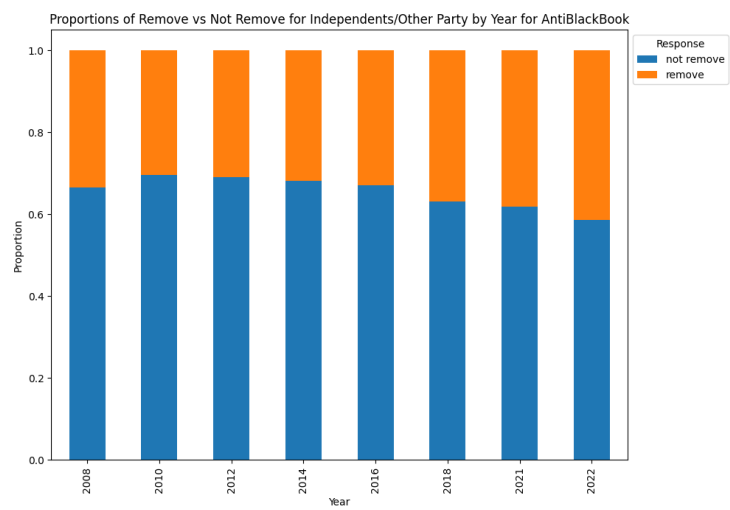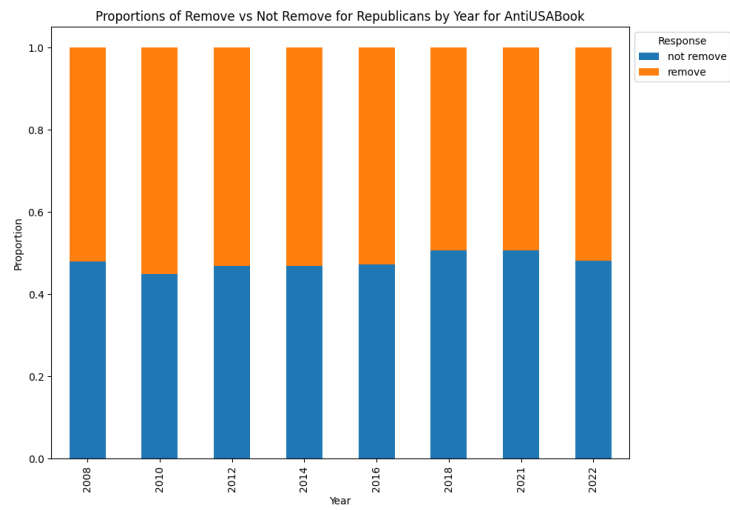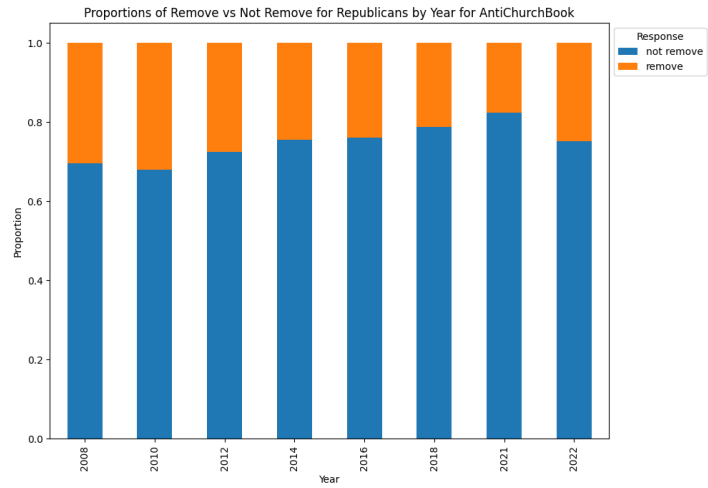
Overall, the plots and statistics we have created throughout this project support our conclusions well. We were able to pick out trends from the graphs we made (after some trial and error with proportions) and ended up learning some interesting lessons from the data we were provided with. We think that we implemented our research strategy of taking the data and filtering by part and year correctly - by focusing on these two factors, we were able to keep things relatively simple and achieve the goals we set out to accomplish upon starting this project - to see whether these political party affiliations affect people's opinions on book removals. One flaw with our research strategy is that we focused primarily on categorical variables. To see trends and patterns, we had to focus on proportions and counts.

For future studies, we recommend conducting research on demographic and regional variations to determine their influence on political affiliations and voting opinions. Factors such as age, education, urban versus rural residence, and other variables may be examined for their roles in shaping the association between political affiliation and views on book removal. Additionally, exploring the intersectionality of political affiliation with other social factors, such as race, gender, and religious beliefs, can offer deeper insights into the complex interplay of multiple identities in shaping opinions on controversial content.

Appendix A:
Stacked Bar Graphs of Proportions of Responses for Each Book and Each Political Party

Proportions of Remove vs Not Remove for Democrats by Year for AntiChurchBook

Proportions of Remove vs Not Remove for Democrats by Year for AntiUSABook

Proportions of Remove vs Not Remove for Republicans by Year for AntiBlackBook

Proportions of Remove vs Not Remove for Republicans by Year for AntiChurchBook

Proportions of Remove vs Not Remove for Republicans by Year for AntiUSABook

Proportions of Remove vs Not Remove for Independents/Other Party by Year for AntiBlackBook

Proportions of Remove vs Not Remove for Independents/Other Party by Year for AntiChurchBook

Proportions of Remove vs Not Remove for Independents/Other Party by Year for AntiUSABook

Appendix B:
Year By Year Chi-square Analysis

```
We are not conducting a chi squared test for each year since 2008. The resources are commented in this code chunk
Based on how we constructed this test, here is the interpretation: If we find a significant association
it indicates that the observed distribution of votes across the 3 grouped parties is sufficiently different
from what we'd expect if there were no association [the null hypothesis] between party affiliation
and voting decision

Year = 2008--------------------------------------------------------------------------------
Year: 2008, Book Type: AntiBlackBook
Chi2 Value: 1.441839472630038
P-Value: 0.4863047780461356
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
------

Year: 2008, Book Type: AntiUSABook
Chi2 Value: 2.101196828030022
P-Value: 0.34972840410144695
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
------

Year: 2008, Book Type: AntiChurchBook
Chi2 Value: 4.2369234496565245
P-Value: 0.12021641227311783
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
------
```

```
Year = 2010————————————————————————————————————————————————————————————————————————
Year: 2010, Book Type: AntiBlackBook
Chi2 Value: 3.9559087808902618
P-Value: 0.13835196213568202
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2010, Book Type: AntiUSABook
Chi2 Value: 5.481378071086624
P-Value: 0.06452587095362636
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2010, Book Type: AntiChurchBook
Chi2 Value: 13.486357238839261
P-Value: 0.0011788939395813499
The p-value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————




Year = 2012————————————————————————————————————————————————————————————————————————
Year: 2012, Book Type: AntiBlackBook
Chi2 Value: 4.7578668255858565
P-Value: 0.09264934343419523
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2012, Book Type: AntiUSABook
Chi2 Value: 5.447264938856653
P-Value: 0.06563590047232999
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2012, Book Type: AntiChurchBook
Chi2 Value: 8.161977267812112
P-Value: 0.016890758618826406
The p-value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————


Year = 2014————————————————————————————————————————————————————————————————————————
Year: 2014, Book Type: AntiBlackBook
Chi2 Value: 13.118559641750927
P-Value: 0.0014169057689464896
The p-value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year: 2014, Book Type: AntiUSABook
Chi2 Value: 8.622243600300417
P-Value: 0.013418488285761192
The p-value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year: 2014, Book Type: AntiChurchBook
Chi2 Value: 3.7888712253033883
P-Value: 0.1504031967581045
The p-value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————
```

```
Year = 2016——————————————————————————————————————————————————————————————
Year: 2016, Book Type: AntiBlackBook
Chi2 Value: 5.096503074562984
P—Value: 0.07821830830533148
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2016, Book Type: AntiUSABook
Chi2 Value: 4.6540312287545245
P—Value: 0.09758654883473718
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2016, Book Type: AntiChurchBook
Chi2 Value: 5.499520953469998
P—Value: 0.0639431752507105
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year = 2018——————————————————————————————————————————————————————————————
Year: 2018, Book Type: AntiBlackBook
Chi2 Value: 2.828539208087055
P—Value: 0.24310311014807393
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2018, Book Type: AntiUSABook
Chi2 Value: 1.0056052850483557
P—Value: 0.6048331509597464
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2018, Book Type: AntiChurchBook
Chi2 Value: 0.7622711876169013
P—Value: 0.6830852612080582
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year = 2021——————————————————————————————————————————————————————————————
Year: 2021, Book Type: AntiBlackBook
Chi2 Value: 38.30916369073682
P—Value: 4.80032676470987e—09
The p—value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year: 2021, Book Type: AntiUSABook
Chi2 Value: 7.337922661305932
P—Value: 0.0255029453222856
The p—value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year: 2021, Book Type: AntiChurchBook
Chi2 Value: 9.330369895726951
P—Value: 0.009417506314761737
The p—value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year = 2022——————————————————————————————————————————————————————————————
Year: 2022, Book Type: AntiBlackBook
Chi2 Value: 1.4897048700548845
P—Value: 0.4748043592628792
The p—value suggests no significant association between party affiliation and voting decision for this year and boo
k type.
——————

Year: 2022, Book Type: AntiUSABook
Chi2 Value: 21.289352984868696
P—Value: 2.3827349641807874e—05
The p—value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————

Year: 2022, Book Type: AntiChurchBook
Chi2 Value: 17.230650326343792
P—Value: 0.00018130585192026506
The p—value suggests a significant association between party affiliation and voting decision for this year and book
type.
——————
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Significant Results:

     Year        Book Type
0    2010    AntiChurchBook
1    2012    AntiChurchBook
2    2014     AntiBlackBook
3    2014       AntiUSABook
4    2021     AntiBlackBook
5    2021       AntiUSABook
6    2021    AntiChurchBook
7    2022       AntiUSABook
8    2022    AntiChurchBook

Non-Significant Results:

     Year        Book Type
0    2008     AntiBlackBook
1    2008       AntiUSABook
2    2008    AntiChurchBook
3    2010     AntiBlackBook
4    2010       AntiUSABook
5    2012     AntiBlackBook
6    2012       AntiUSABook
7    2014    AntiChurchBook
8    2016     AntiBlackBook
9    2016       AntiUSABook
10   2016    AntiChurchBook
11   2018     AntiBlackBook
12   2018       AntiUSABook
13   2018    AntiChurchBook
14   2022     AntiBlackBook
```

Discussion of the By-Year Chi Square Analysis: In the conducted analysis, a chi-square test was applied yearly for each book type. This approach helped determine if there was a significant association between voters' political affiliations and their opinions on whether to remove or not remove each of the three book types. We used a significance level (alpha) of 0.05.

The test outcomes varied: 9 book-year combinations were significant at the 0.05 level, indicating a notable association in these cases, while 15 combinations did not show a significant association. It's crucial to note that the lack of significant findings in some year-book

combinations doesn't necessarily imply the absence of any association; it might also reflect limitations like smaller sample sizes or the inherent variability in annual data.

Interestingly, there wasn't a clear pattern of any specific book type being consistently associated with political opinions across different years. This lack of a consistent trend may suggest that voters' opinions on book removal are influenced by factors that vary from year to year, possibly reflecting changing cultural, social, or political contexts.

One of the limitations of this by-year analysis is the reduced sample size for each specific year, compared to an aggregate analysis over a longer period. This smaller sample size might lower the statistical power to detect true associations. Moreover, while the yearly breakdown can provide valuable insights into how opinions might shift due to short-term events or changes, it could also obscure more stable, long-term trends.

The year 2021 stood out with political affiliation correlating with opinions on all three book types. The exact reasons behind this pattern are not clear from the chi-square analysis alone and would warrant further investigation. Potential factors could range from the impact of the COVID-19 pandemic to shifts in media consumption or political discourse. Advanced analyses, such as regression models that incorporate various cultural and economic factors, could offer a more comprehensive understanding of these dynamics.

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