

A Textual Analysis of Parliamentary Discourse in Brazil's Abolitionist Movement

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Introduction

- In May 1888, Brazil became the last country in the Western Hemisphere to abolish slavery. Despite widespread moral and philosophical opposition, slavery endured primarily because of its deep economic significance.¹
- During this period, Brazilian Parliament had extensive discussions concerning abolition and other surrounding policies. Thanks to the detailed records preserved in the parliamentary annals, we have had the liberty of exploring the identities and contributions of each legislator in these sessions.

Methods

- All documents were gathered from Annals of the Chamber of Deputies in Brazil from 1881-1882.
- The GPT 4o-mini model was run on the OCR data of these texts to match each parliamentary statement to the legislators who made them.
- From there, a dictionary was composed of key words that relate to slavery. This was compared to the original text, and counts of each word were gathered.
- Through the Structured Topic Model (stm) package in R, 20 topics were generated to describe the data.
 - STM is a standard topic modelling tool that uses metadata (information about the data we have) to form topics and their correlations.
- These topics were then mapped back to each legislator to observe each one's "topic share" - the percentage of their language content that is estimated to relate to our topics of interest (Topic 14 - Slavery and Topic 13 - Produce)
- Topic 14: escravo, gado, libertad, comercio, art, aquella, apoiado
- Topic 13: imposto, provincia, café, genero, tarifa, paiz, producto

Slavery Mentions and Share of Slaves over Brazilian Provinces and Electoral Districts

Fig. 1

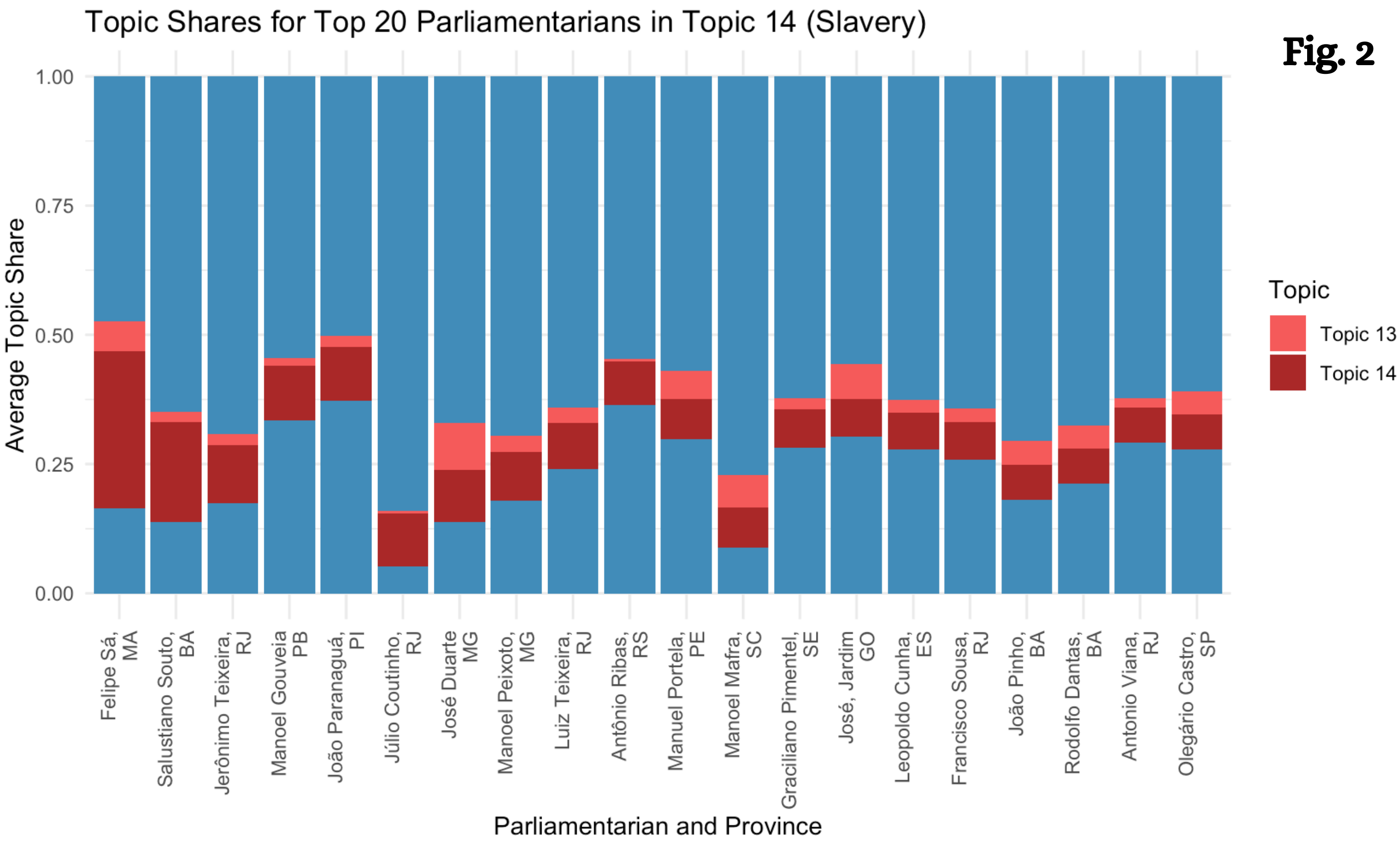
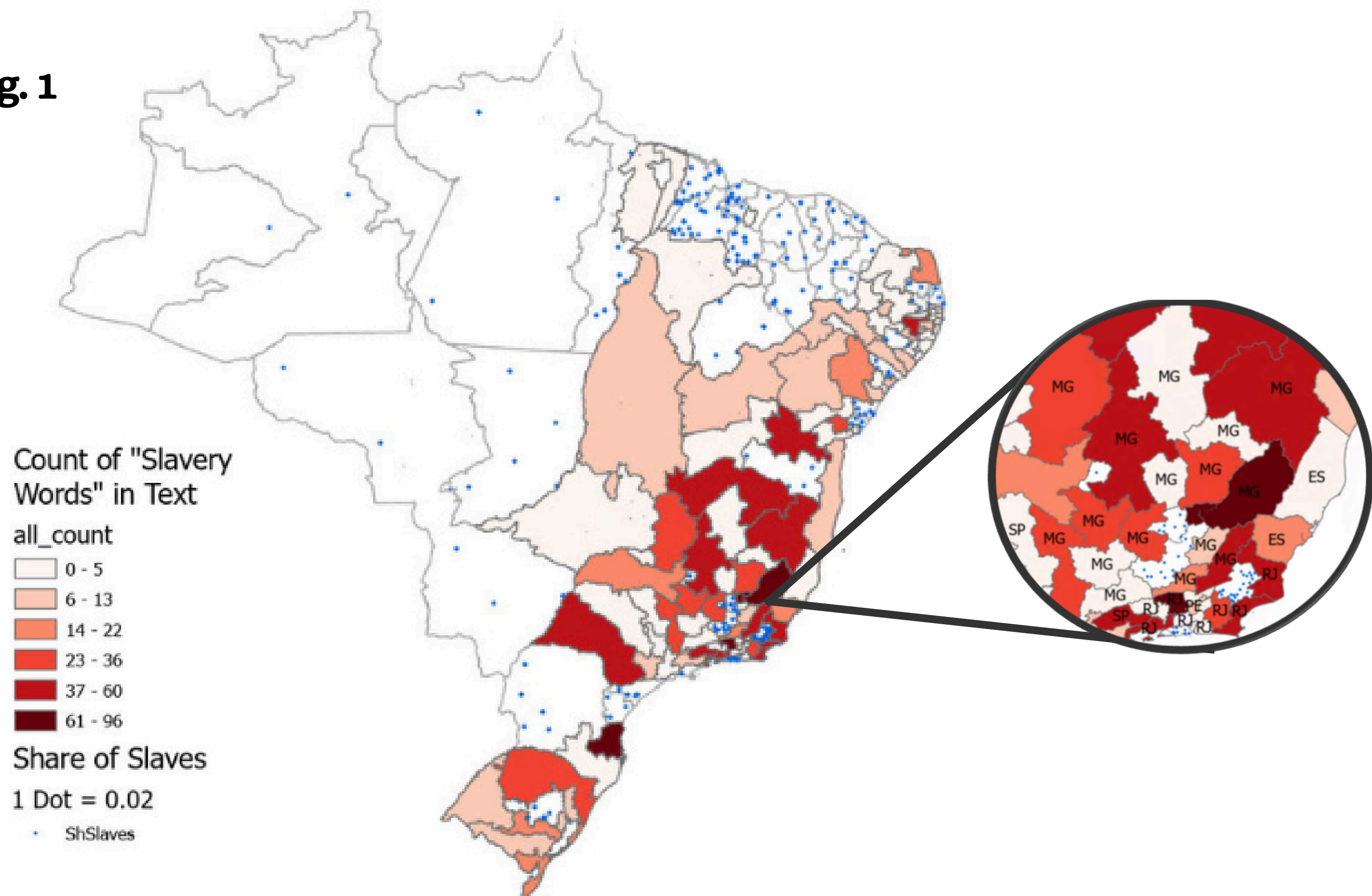


Fig. 2

Discussion

- The effect of the share of slavery variable on mentions of slavery (Fig. 1) is statistically significant ($p < 0.05$, $R^2 = 0.121$). It's spatial pattern does not fully align with those observed in the choropleth map. This discrepancy may be attributed to missing values and the decade-long difference between when the slavery shares and slavery counts are recorded.
- Time (Fig. 3) also significantly affects slavery mentions ($p < 0.05$, $R^2 = 0.072$) with peaks between July and October. This may reflect rising tensions as abolition neared or seasonal factors, such as the harvest period, increasing the demand for slave labor and debate.
- An initial look at the provinces most closely associated with Topic 14 in Fig 2. demonstrates some similarities with the highest slavery mentions in Fig 3.

Slavery Word Counts in 1882

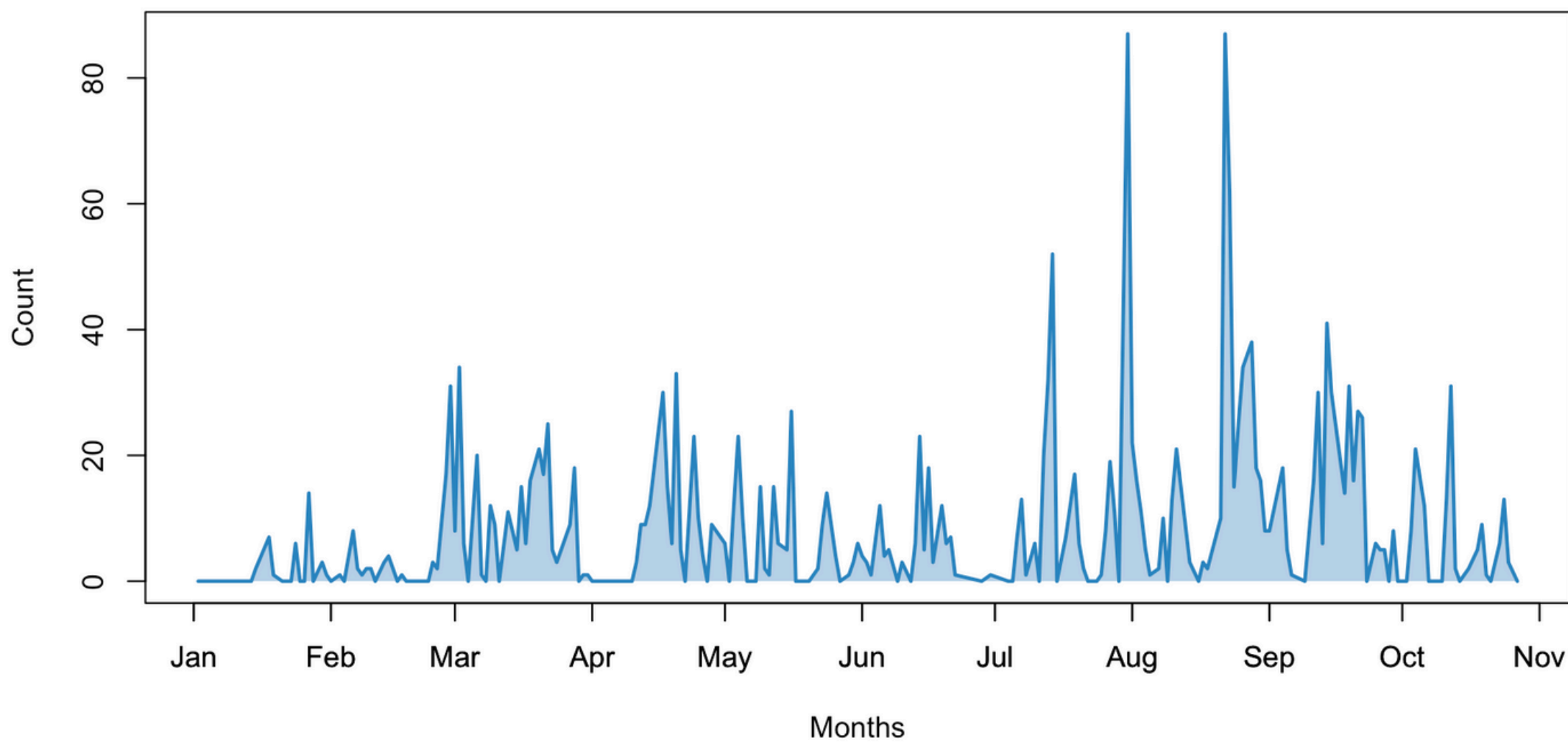


Fig. 3

Next Steps

- Expanding the dataset to include additional years would allow for a much deeper analysis of these patterns.
- Additionally testing it against other topic modelling algorithms such as LDA would allow for a more comprehensive and nuanced understanding of the text and legislator's themselves.

¹Conrad, Robert. The Destruction of Brazilian Slavery 1850 - 1888, Berkeley: University of California Press, 2024.

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