Silenced in the Chamber: Analyzing Gendered Speech Interruptions in the Australian Parliament (1998–2022)*

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First sentence. Second sentence. Third sentence. Fourth sentence.

1 Introduction

Although interjections are officially prohibited during a member's speech in the Australian Parliament, interruptions still occur frequently, particularly during heated debates often fueled by political disagreements ("Interruptions to Members Speaking" 2025). This raises crucial questions about gender dynamics within the context of parliamentary debates in Australia. Concerns are growing regarding whether women are disproportionately interrupted compared to men, highlighting potential underlying biases that could influence the effectiveness and fairness of parliamentary proceedings.

There has been considerable research on speech patterns and gender-based interruptions in government speeches across various countries. For instance, during U.S. Supreme Court confirmation hearings, female and minority nominees are interrupted more frequently than their male and white counterparts (Boyd, Collins, and Ringhand 2024). Additionally, in the US Congress, women also experienced more interruptions than men, especially during discussions of women's issues, where women are more than twice as likely to be interrupted compared to non-gendered topics (Miller and Sutherland 2022). In the Ecuadorian Congress, female legislators not only deliver fewer speeches but also speak for shorter durations compared to their male peers. Furthermore, women often wait longer to regain the floor after interruptions, leading them to strategically shorten their speeches to minimize further disruptions. However, women in authoritative positions can mitigate some of these interruption-related penalties, with senior

*Code and data are available at: https://github.com/hannahyu07/Hansard_Interruptions

women's speeches often exceeding those of men in length when they achieve comparable levels of experience or hold significant roles (Vera and Vidal 2021).

Contrastingly, studies of the Australian High Court reveal a different dynamic (Jacobi, Robinson, and Leslie n.d.). The result suggested that contrary to the U.S. Supreme Court, there is no significant difference between female and male justices regarding interruptions. Although women experience a higher rate of interruptions relative to their speaking time, the subtlety of this effect suggests that gender dynamics within the Australian court might be more balanced compared to the U.S. Supreme Court. This highlights the differences in how judicial interactions are influenced by gender across different legal systems.

Building on existing literature suggesting that the Australian High Court may exhibit better gender dynamics than its counterparts in the US, we aim to delve deeper into the issue of gender-based interruptions within the Australian Parliament. Utilizing the Australian Hansard, the official written record of parliamentary debates which has been digitized by Lindsay Katz and Rohan Alexander, we have access to comprehensive records of all parliamentary proceedings from 1998 to 2022 (Katz and Alexander 2023). From the dataset, we aim to analyze the frequency and context of interruptions based on gender. Specifically, our study will focus on comparing the rates at which male and female parliamentarians are interrupted during their speeches.

The remainder of this paper is structured as follows: Section 2 demonstrates the data used for this paper, Section 3 describes, justifies, and explains my model, Section 4 highlights the results of the predictions using tables and graphs, and Section 5 contains important implications and conclusions based on the findings.

2 Data

3 Model

4 Results

Table 1: Gender-Based Interruption Analysis in Parliamentary Speeches

Proportion of Interruptions by Gender

Gender	Total Interruptions	Total Speeches	Interruption Proportion
Female	15183	83023	18.00%
Male	70794	338142	21.00%
Unknown	18259	165665	11.00%
All	104236	586830	18.00%

Table 1 provides a clear view of the proportion of interruptions by gender across all speeches in the dataset. The results show that male speakers were interrupted more frequently (21% of speeches) compared to female speakers (18% of speeches). Interestingly, the interruption proportion for unknown gender speakers is significantly lower, at only 11%. Overall, considering all speeches regardless of gender, the interruption proportion stands at 18%. This data suggests that gender may play a role in how frequently speakers are interrupted during parliamentary sessions, with male speakers facing a higher rate of interruption. This could reflect broader dynamics of gender interaction within the parliamentary setting.

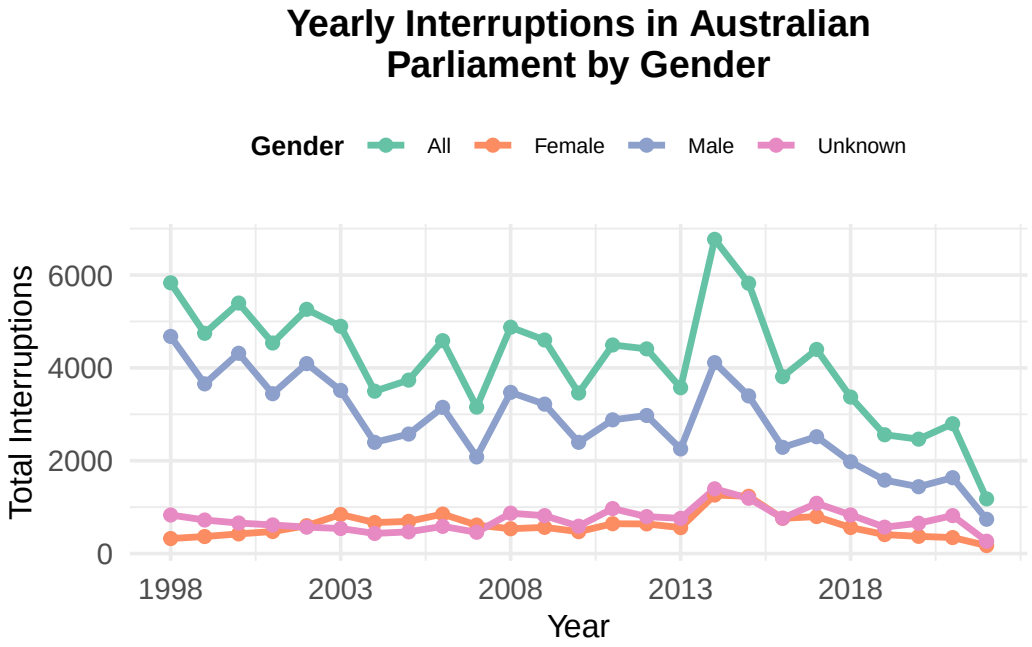


Figure 1: Yearly Interruptions in Australian Parliament by Gender

Figure 1 illustrates interruptions in the Australian Parliament from 1998 to 2022, categorized by gender. Notably, male speakers consistently faced more interruptions than females, with a peak in 2011 and a subsequent decline. Female speakers experienced fewer interruptions, with relatively stable figures across the years. The "Unknown" category, consistently low, suggests either minimal occurrence or documentation of such interruptions.

To provide a fair comparison of interruptions across different genders within the Australian Parliament, we normalize the data by calculating proportions. This method addresses the gender imbalance in parliament, ensuring that the analysis reflects the frequency of interruptions relative to each gender's representation. Figure 2 presents the proportions of speeches interrupted by gender. It indicates that male speakers had a higher proportion of their speeches interrupted, especially during the mid-2000s to early 2010s, though the gap between genders has narrowed over time. The proportion of interruptions for female speakers generally mir-

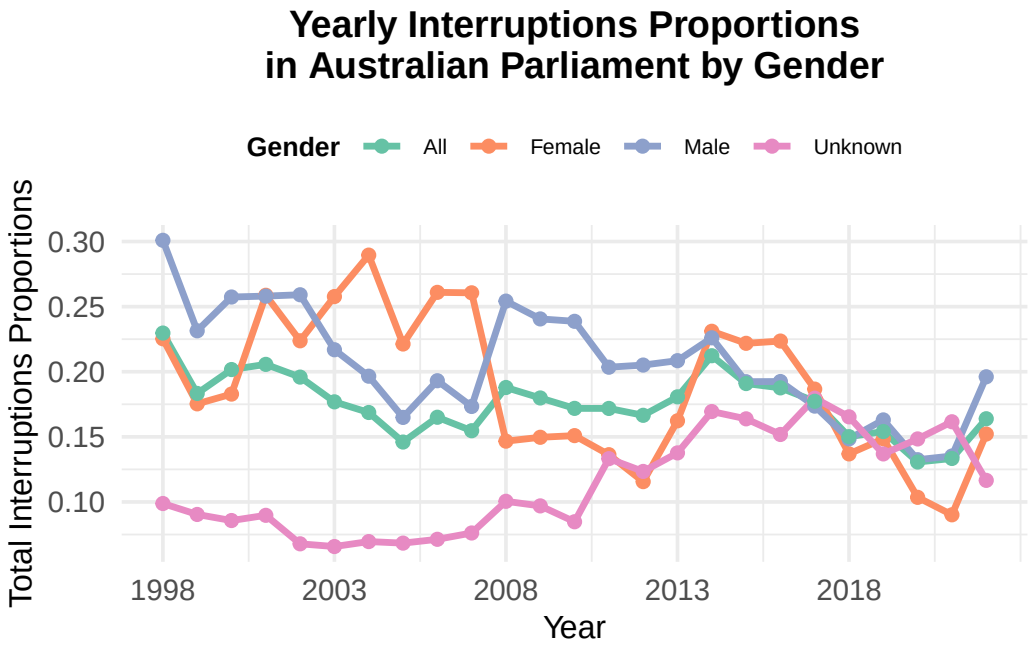


Figure 2: Yearly Interruptions Proportions in Australian Parliament by Gender

rors these fluctuations, implying that specific topics or periods may have incited more active parliamentary interactions. The "Unknown" gender shows minimal changes, highlighting its limited data representation. This analysis points out both the consistency and evolution of gender dynamics within parliamentary debates over the years.

Table 2: Gender Interruption Proportions Annual Comparison Across General and Chamber

Year	More Interrupted Gender All	More Interrupted Gender Chamber
1998	Male	Male
1999	Male	Male
2000	Male	Male
2001	Female	Female
2002	Male	Male
2003	Female	Female
2004	Female	Female
2005	Female	Female
2006	Female	Female
2007	Female	Female
2008	Male	Male
2009	Male	Male
2010	Male	Male

2011	Male	Male
2012	Male	Male
2013	Male	Male
2014	Female	Female
2015	Female	Female
2016	Female	Female
2017	Female	Female
2018	Male	Female
2019	Male	Female
2020	Male	Male
2021	Male	Male
2022	Male	Male

Only analyzing Chamber members, Figure 3 again illustrates interruptions in the Australian Parliament from 1998 to 2022, categorized by gender. To distinguish the differences across the two figures, Figure 4 contains both the interruptions for all data and Chamber member data. While the interruption patterns in the chamber-only data in Figure 3 largely mirror those observed in the comprehensive dataset Figure 2, there are slight increases in the interruption proportions for women, indicating a potentially heightened level of disruption experienced by female members in non-federal chambers.

Table 2 displays the more interrupted gender every year in the parliament and compares all members and only chamber members. While most years are the same, there is a notable shift in the gender experiencing more frequent interruptions from 2018 to 2020. In the broader dataset, males were more frequently interrupted; however, this pattern shifts in the non-federal chamber data, where females became the more interrupted gender during these years. This change highlights the variability in gender dynamics within different parliamentary environments and suggests that factors specific to non-federal chamber settings may influence these interaction patterns more significantly for female members.

Figure 5 focuses on the Liberal Party (LP) and the Australian Labor Party (ALP), the two major parties in Australian politics, to analyze interruptions by gender. Since these parties dominate parliamentary proceedings, they provide a significant sample of gender interaction dynamics. The total interruptions are higher in the ALP compared to the LP, with male members experiencing more interruptions than female members in both parties. We use proportions to normalize the data, accounting for differences in gender representation within these parties. This approach helps us understand the rate at which female and male members are interrupted relative to their participation, offering a clearer insight into the parliamentary discourse dynamics.

Table 3: Interruption Summary by Government Status (All)

Government Status	Interruption	Count

In Opposition	Yes	4
In Opposition	No	50980
In Government	Yes	22
In Government	No	69392
NA	Yes	104210
NA	No	362222

Table 4: Interruption Summary by Government Status in Non-Federal Chamber Sessions

Government Status	Interruption	Count
In Opposition	Yes	4
In Opposition	No	42920
In Government	Yes	22
In Government	No	61244
NA	Yes	94967
NA	No	306837

Table 3, Table 4, and Figure 6 offer a detailed look at interruptions during parliamentary sessions, categorized by members' government status and gender. Notably, interruptions are extremely rare for members with clearly identified status. This indicates a potential correlation between established government status and more orderly interactions, highlighting the importance of role clarity in maintaining decorum.

However, the significant amount of missing data makes reliable inferences about the true nature of interruptions and their correlation with member status challenging. The vast majority of interruptions occur when the government status of the speaker is unknown. This trend is consistent across both the comprehensive dataset and the subset limited to non-federal chamber sessions. Interruptions are exceedingly rare for members whose government status is known, with only 22 interruptions for those "In Government" and an even fewer 4 for those "In Opposition" across all data. Due to this substantial amount of missing information, it is very difficult to firmly conclude whether our observed patterns hold true.

Table 5: Summary of Parliamentary Session Activities and Interruptions

Questions	Answers	Total Interruptions	Question Interrupted	Answer Interrupted
30040	30130	104236	0	0

Figure 7 shows word counts in speeches divided into two categories: speeches where an interjection occurred and those without any interruptions. We can see that speeches without interruptions (blue bars) are more frequent across all word count ranges, especially as the

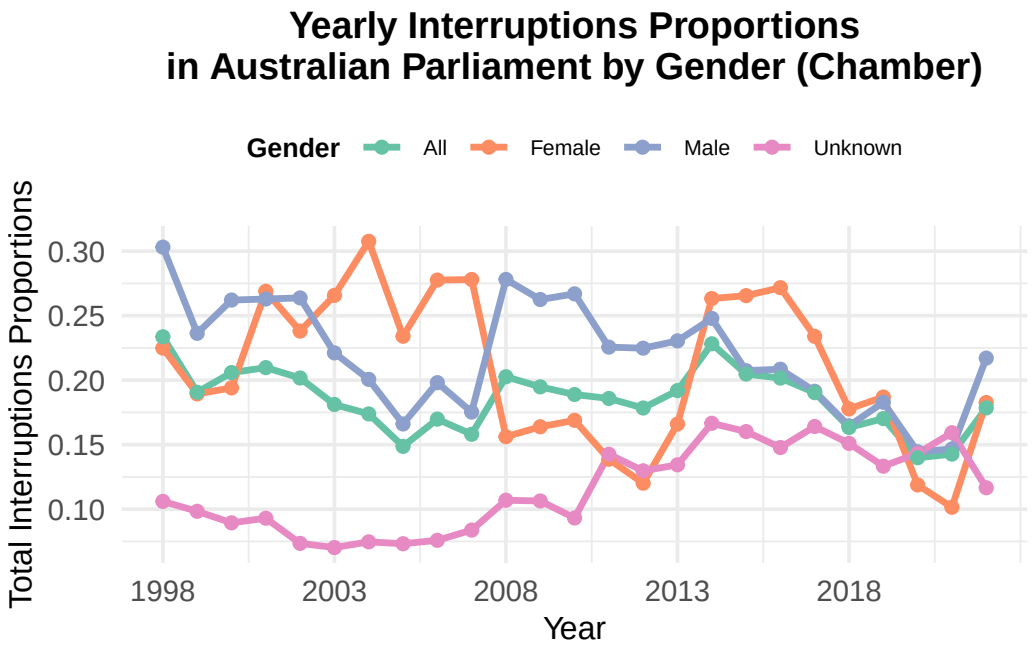


Figure 3: Yearly Interruptions Proportions in Australian Parliament by Gender (Chamber)

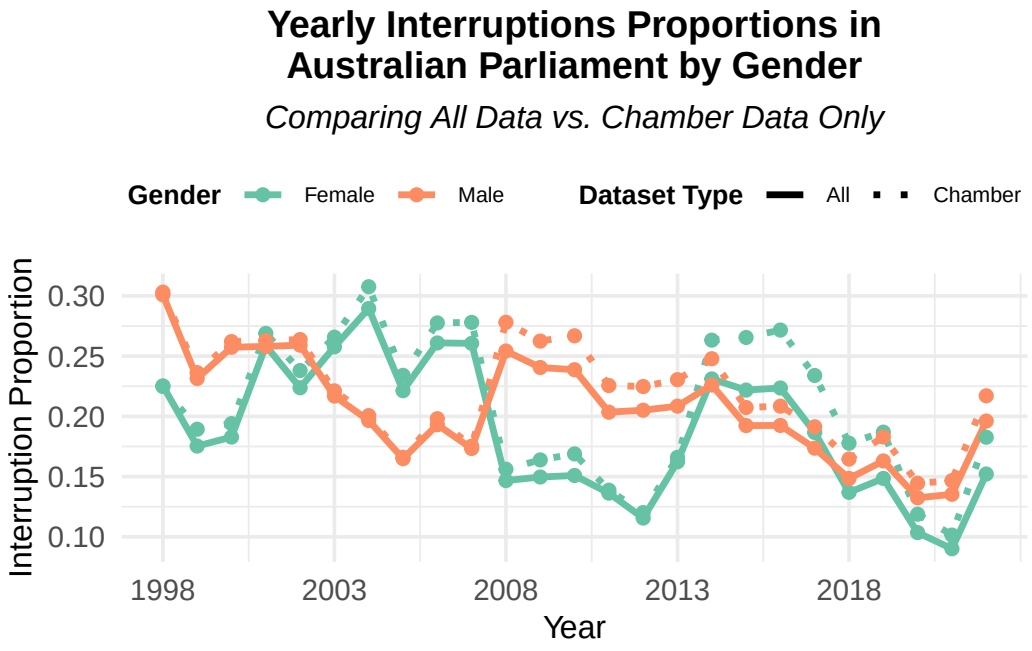


Figure 4: Yearly Interruptions Proportions in Australian Parliament by Gender

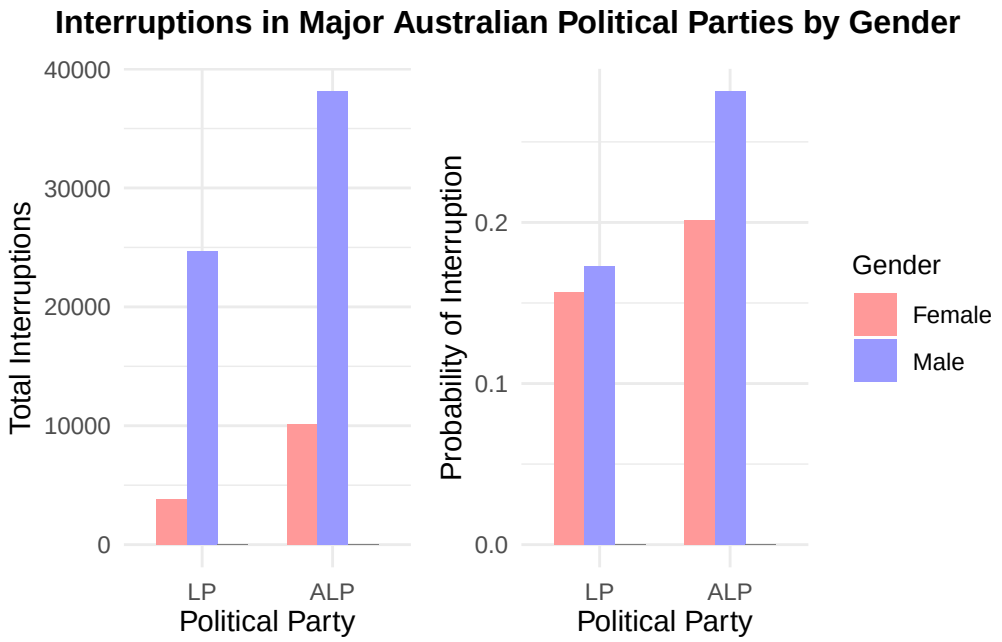


Figure 5: Interruptions in Major Australian Political Parties by Gender

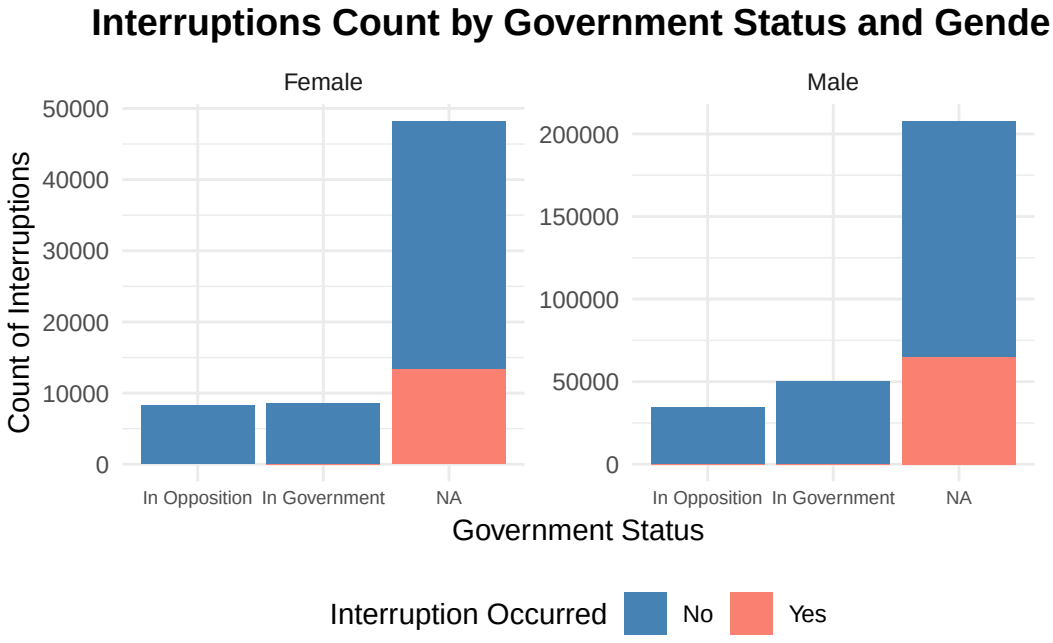


Figure 6: Count of Interruptions by Government Status and Gender

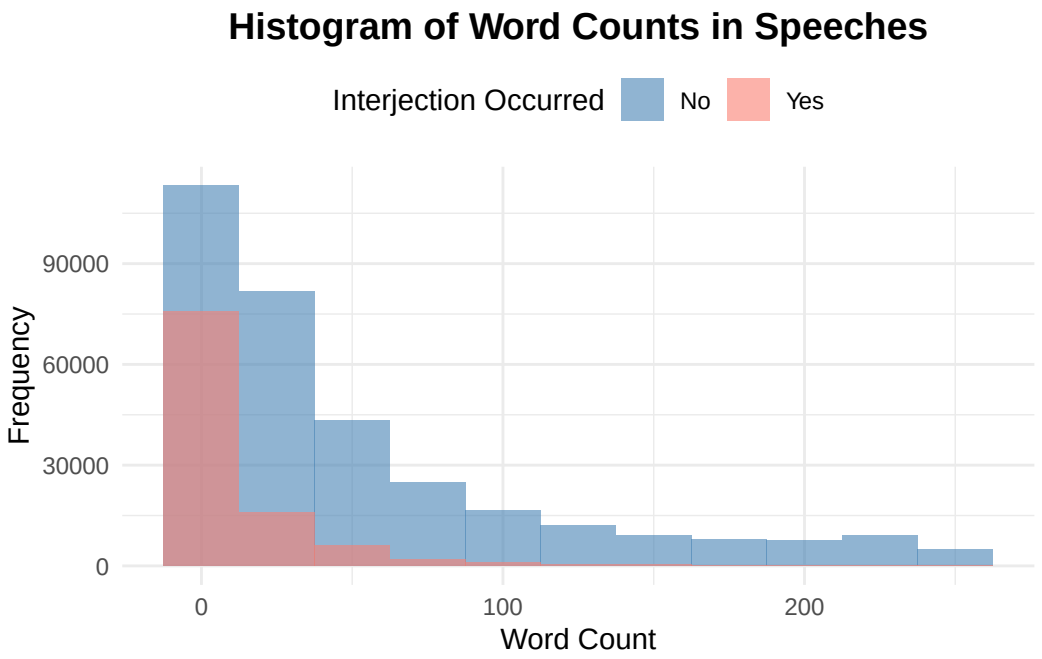
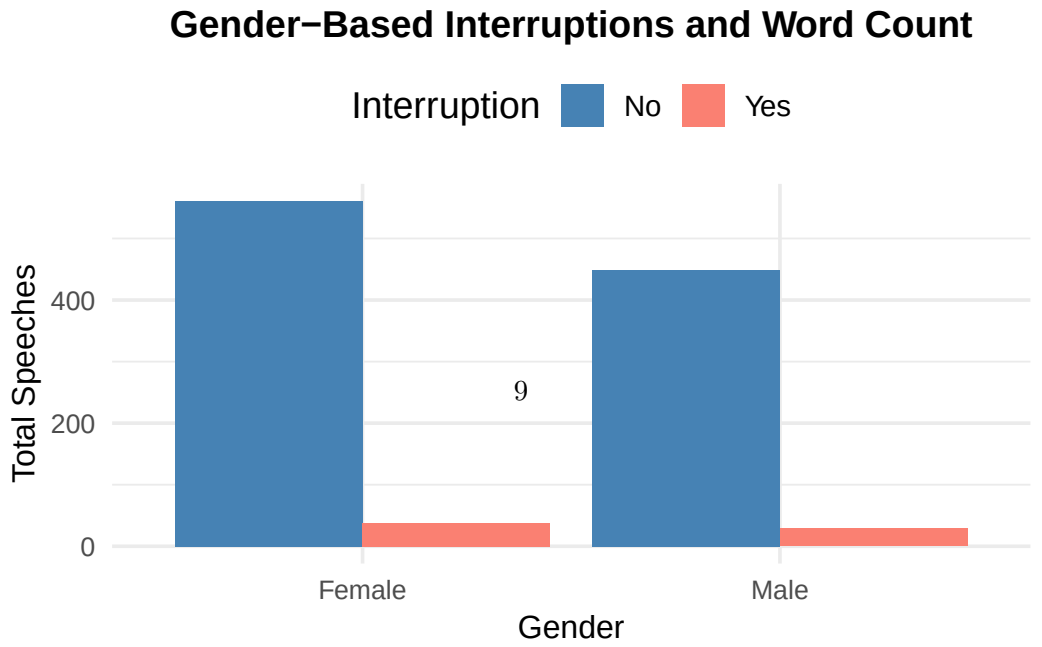


Figure 7: Histogram of Word Counts in Speeches (Up to 250 Words)

number of words increases. Conversely, interrupted speeches (red bars) are less frequent and generally shorter. This trend suggests that interruptions tend to happen in shorter speeches or possibly cause speakers to shorten their remarks. This graph gives a clear visual indication of how interruptions might disrupt or influence the length of parliamentary speeches.

Table 6: Gender-Based Interruptions and Word Count

Gender	Interruption	Total Speeches	Average Words	Min Words	Max Words
Female	0	67840	560.72355	1	28893
Female	1	15183	37.76230	1	12762
Male	0	267348	448.66811	0	55752
Male	1	70794	28.76437	1	26098



relative to their uninterrupted averages. This pattern indicates that while females often manage to speak at greater length initially, interruptions disproportionately diminish their overall speaking opportunities.

5 Discussion

5.1 Overview

5.2 Measurement

Some paragraphs about how we go from a phenomena in the world to an entry in the dataset.

5.3 Outcome variables

Add graphs, tables and text. Use sub-sub-headings for each outcome variable or update the subheading to be singular.

Talk way more about it.

5.4 Predictor variables

Add graphs, tables and text.

Use sub-sub-headings for each outcome variable and feel free to combine a few into one if they go together naturally.

6 Model

6.1 Model set-up

Define y_i as the number of seconds that the plane remained aloft. Then β_i is the wing width and γ_i is the wing length, both measured in millimeters.

$$y_i|\mu_i, \sigma \sim \text{Normal}(\mu_i, \sigma) \tag{1}$$
$$\mu_i = \alpha + \beta_i + \gamma_i \tag{2}$$
$$\alpha \sim \text{Normal}(0, 2.5) \tag{3}$$
$$\beta \sim \text{Normal}(0, 2.5) \tag{4}$$
$$\gamma \sim \text{Normal}(0, 2.5) \tag{5}$$
$$\sigma \sim \text{Exponential}(1) \tag{6}$$

6.1.1 Model justification

We expect a positive relationship between the size of the wings and time spent aloft. In particular...

We can use maths by including latex between dollar signs, for instance θ.

7 Discussion

7.1 First discussion point

If my paper were 10 pages, then should be be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

7.2 Second discussion point

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7.3 Third discussion point

7.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

Appendix

A Additional data details

B Model details

B.1 Posterior predictive check

B.2 Diagnostics

References

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