

Pre- and post-election EDA

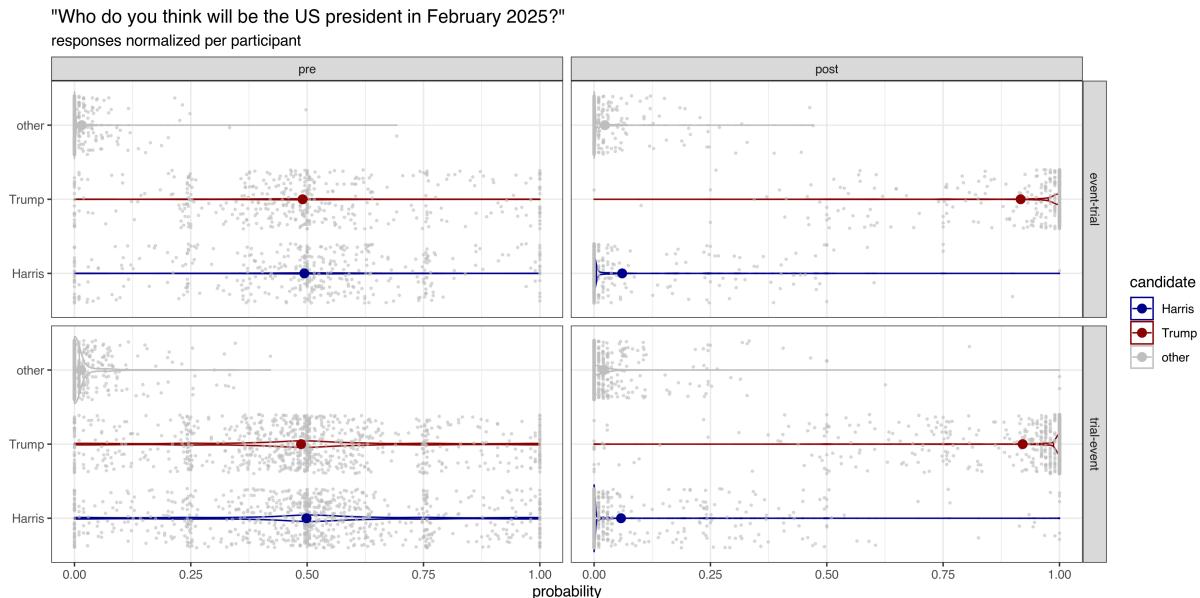
Exploratory data analysis

Number of participants per task pre- and post- election.

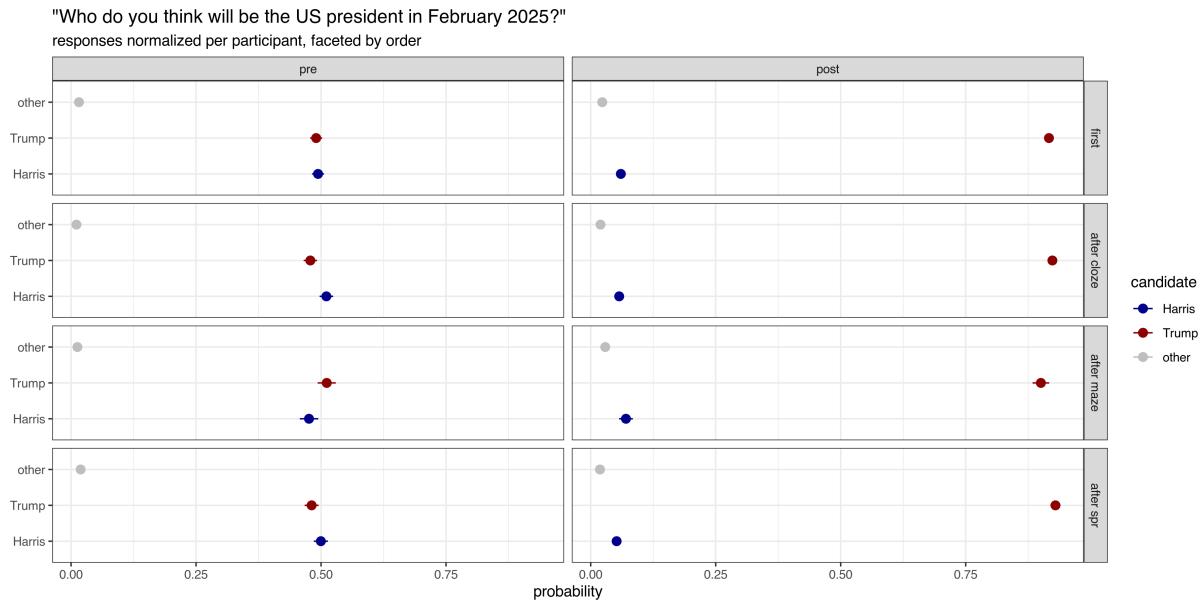
	batch	cloze	maze	spr	total
pre		485	244	445	1174
post		497	235	432	1164

Expectations

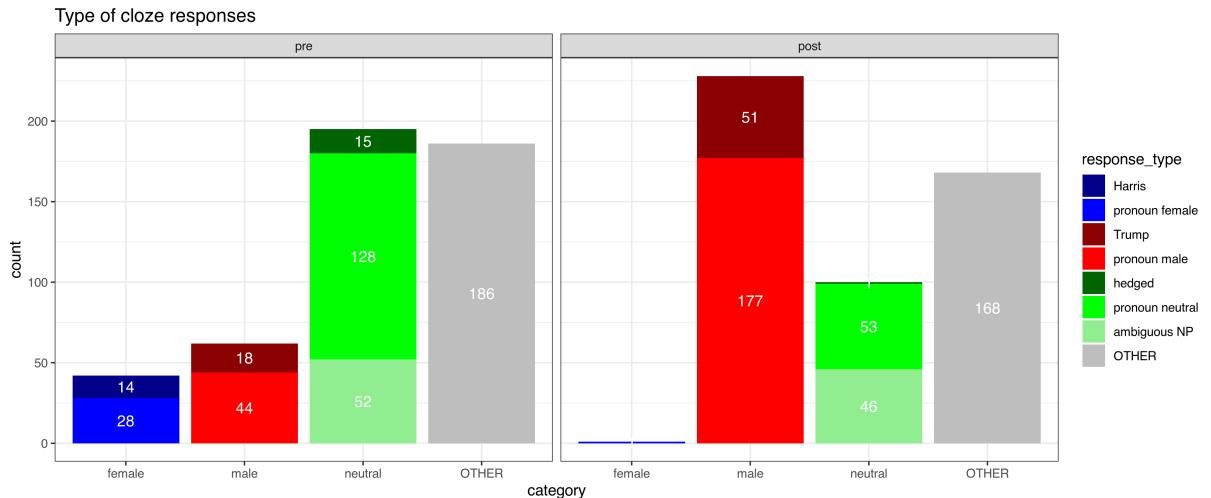
Check for order effect on belief estimation results, in pre- and post- election data.



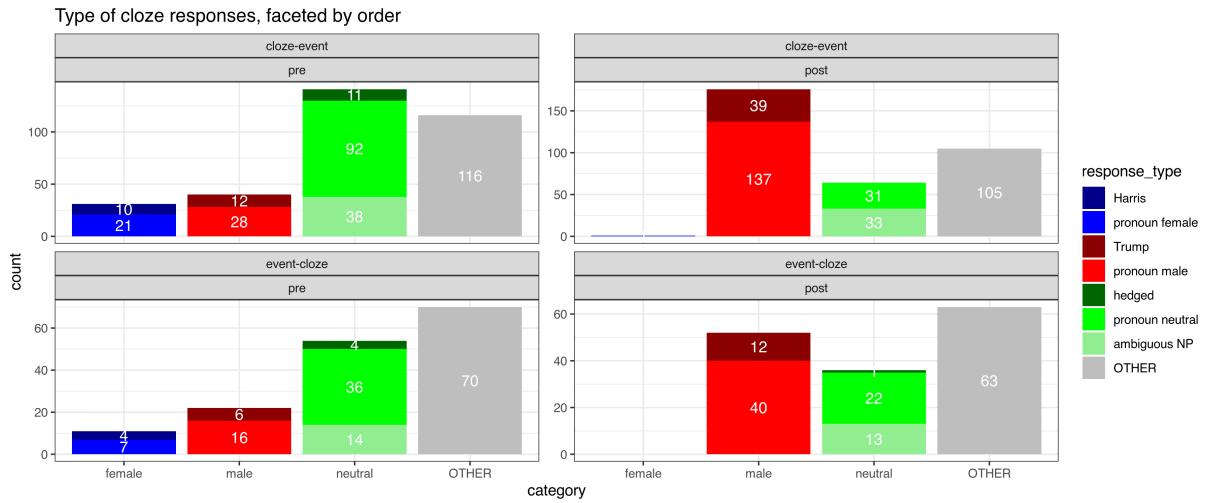
Looking for order effects, (combining all orders that start with “event” to one, for this plot, since all are identical wrt this data)



Cloze

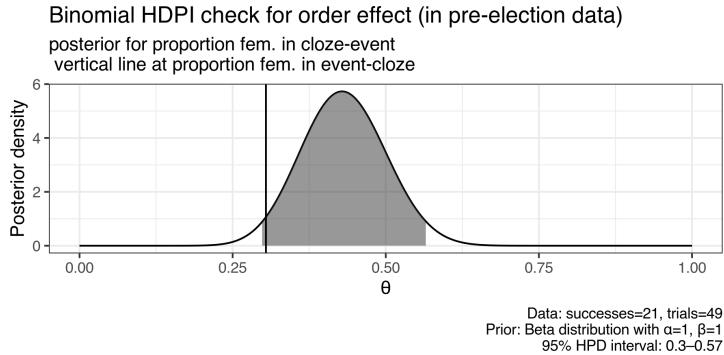


Faceting by order:

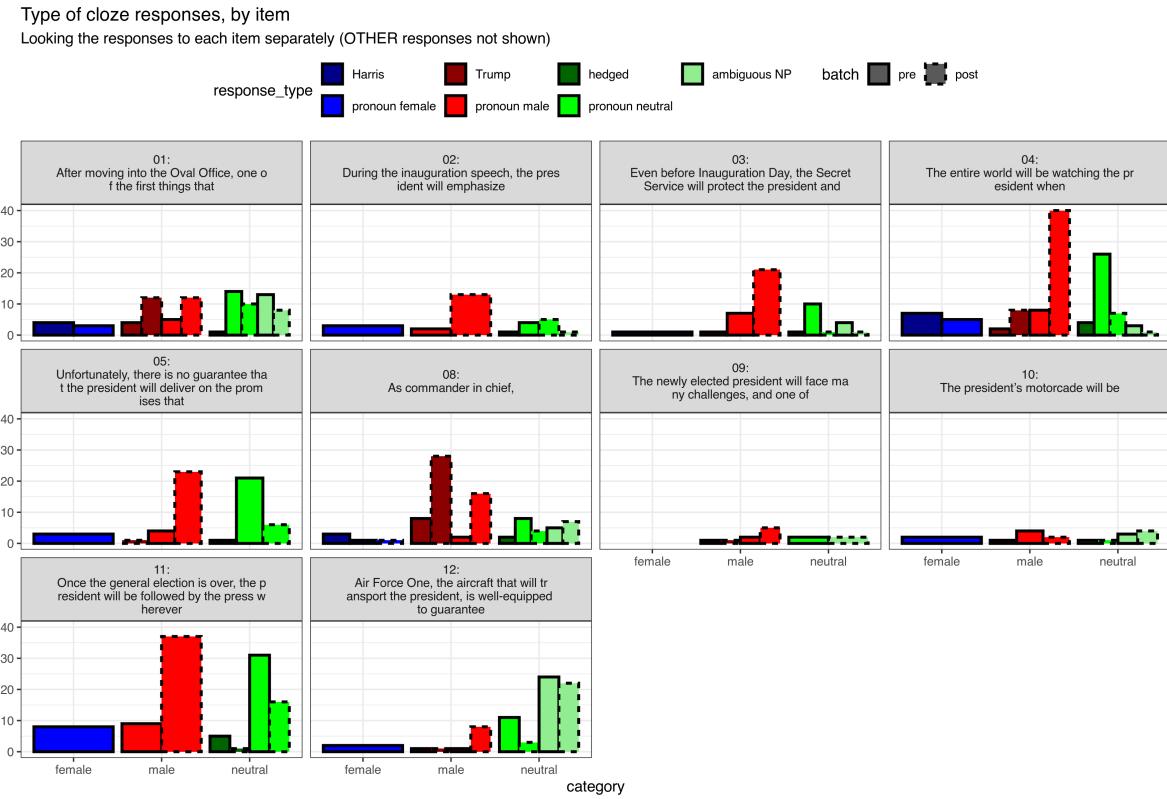


In the event-cloze order there seems to be a somewhat larger bias toward producing male pronouns or male referents/Trump.

But it seems the difference between orders here is actually not significant, per Titus' binomial 95%-HPDI test:

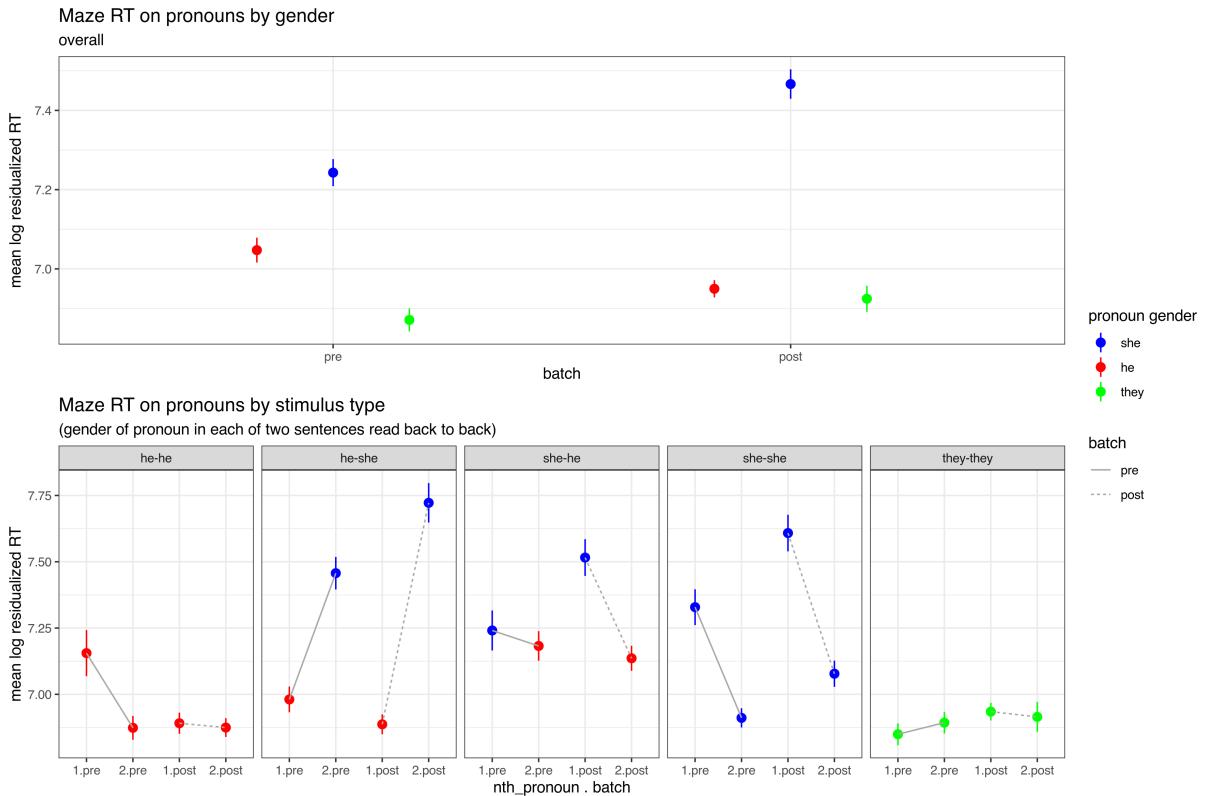


By item cloze breakdown

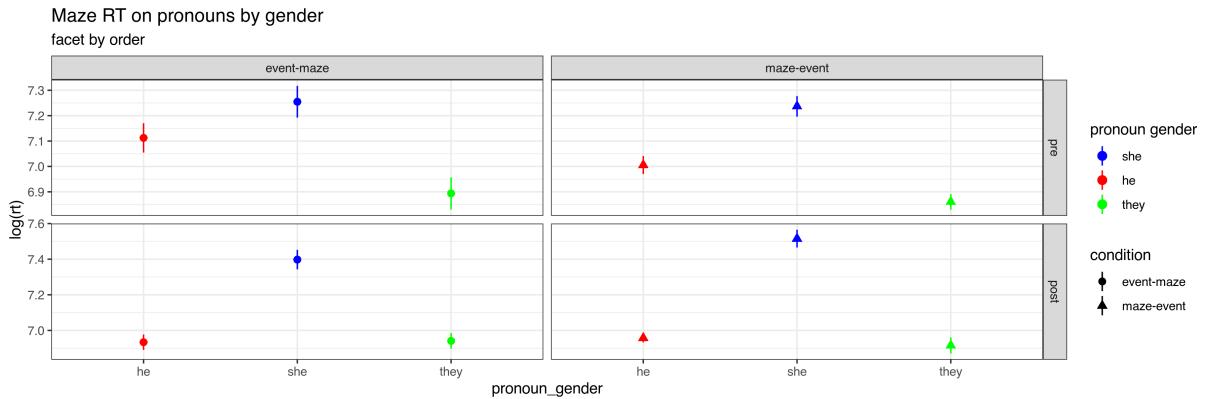


Maze

Look at average Maze RT by gender of pronoun, and for each condition of two sentences presented. Shows an effect of gender (male pronoun is read faster than female, neutral is perhaps even faster than male). These Maze RTs are residualized as with the SPR (control for participant mean reading speed and eg word length, punctuation, and by item effects).

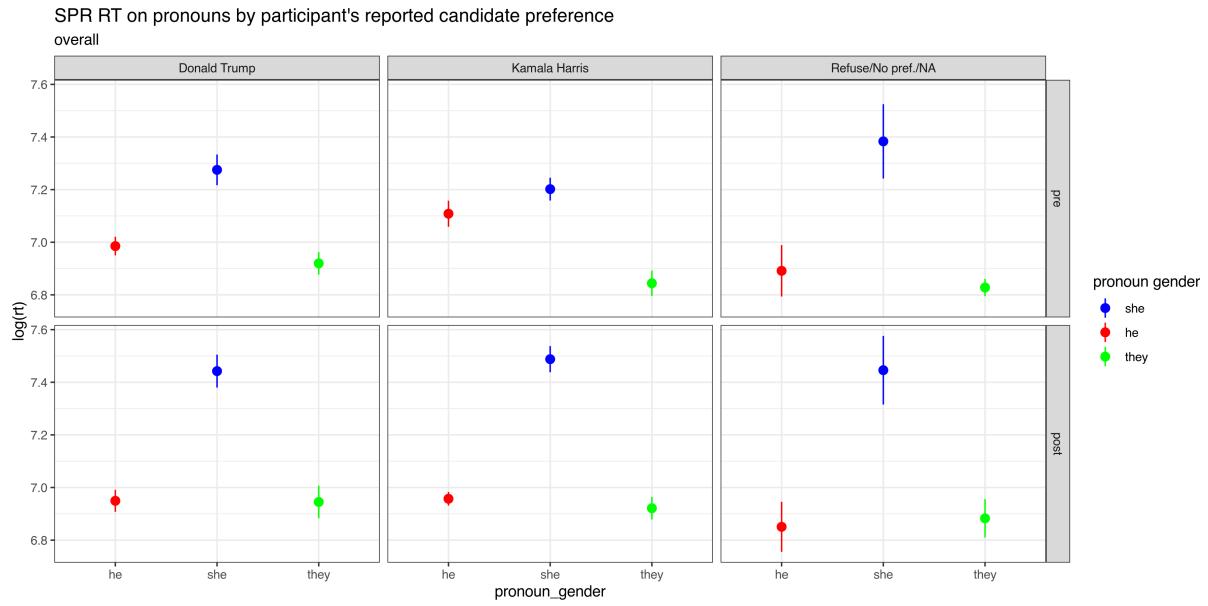


Faceting by order



^ In the pre-election data (top facets above), there may be a slightly less clear male pronoun bias for participants who did the maze task following the event estimation (event-maze) versus before (maze-event). In the post-election data, the bias was strong in either order.

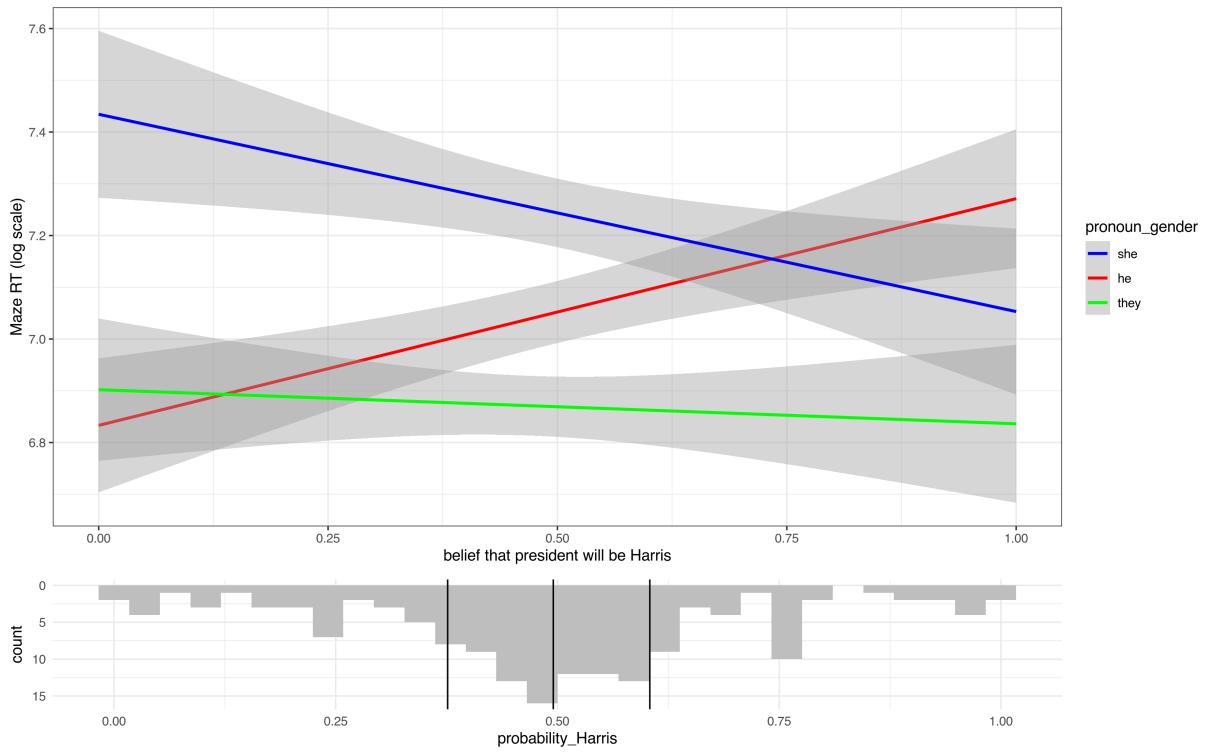
And broken down by participant reported preference



^ The pre-election bias is least strong among participants whose preferred candidate was Harris.

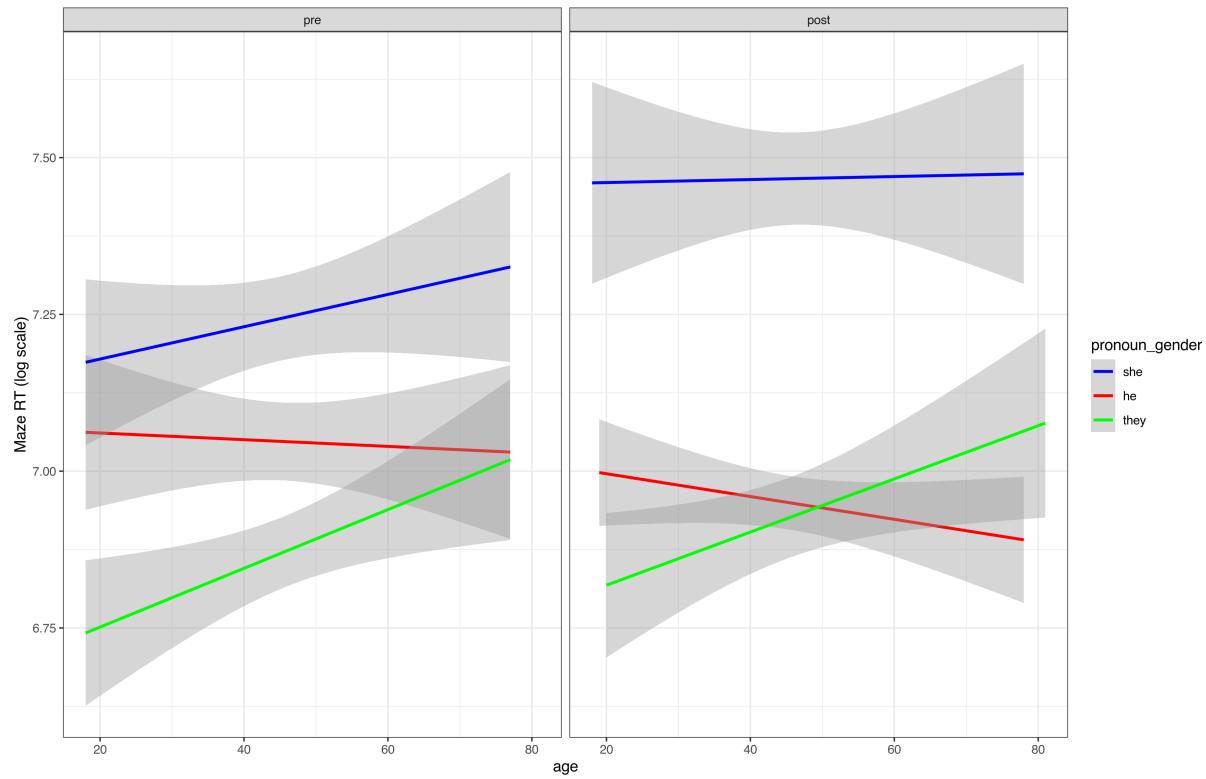
We could look at a related effect as a continuous interaction plotting event-probability (who the participant thinks will be president) on the x-axis versus RT on the y-axis:

Maze RT on pronouns, plotted against probability of female president
only pre-election data



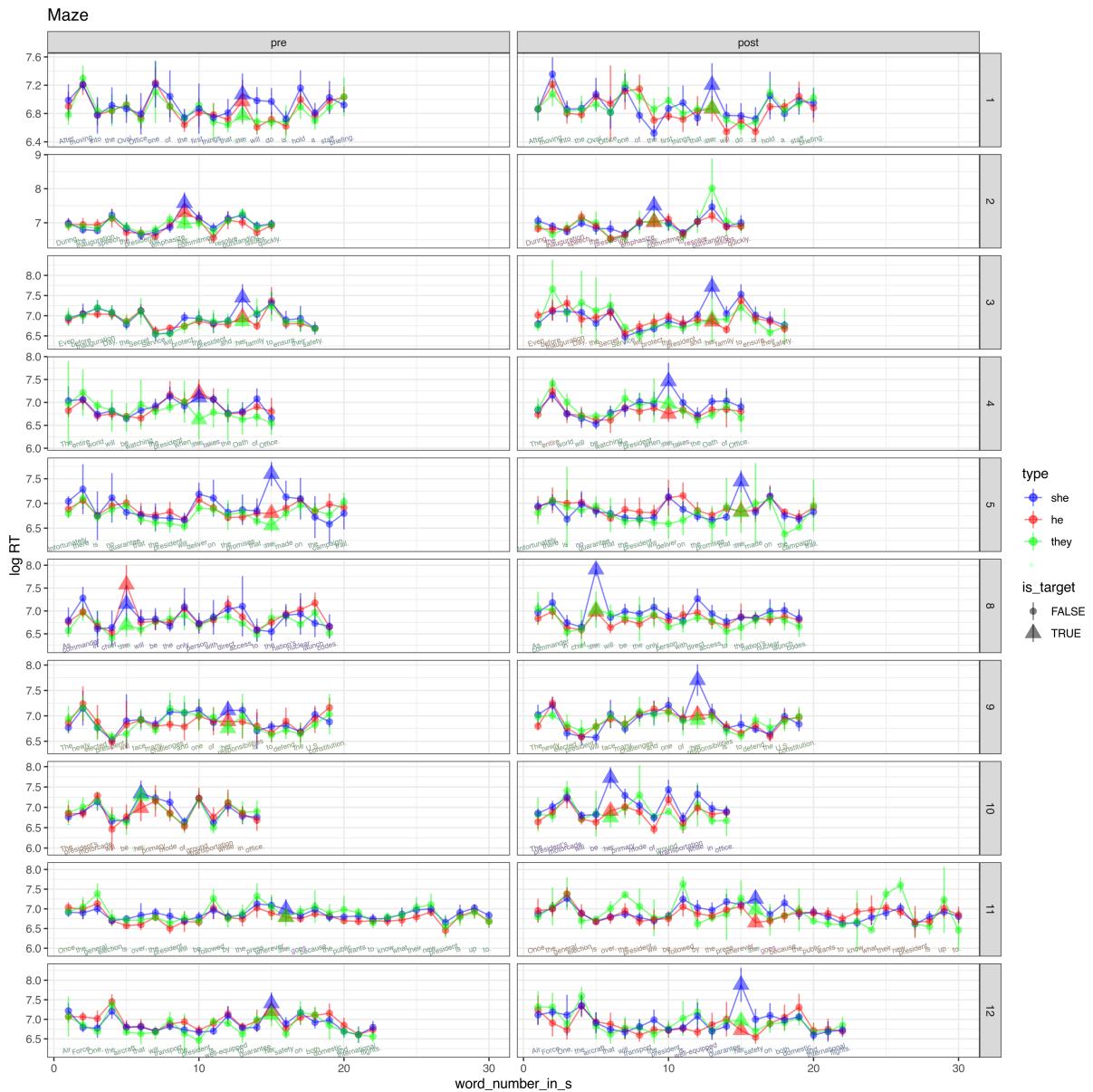
^ It looks like the male-pronoun processing bias (/ female-pronoun processing penalty) gets smaller as belief that the president would be female is higher. But note the majority of participants are in the middle of the distribution.

Maze RT on pronouns, plotted against participant age



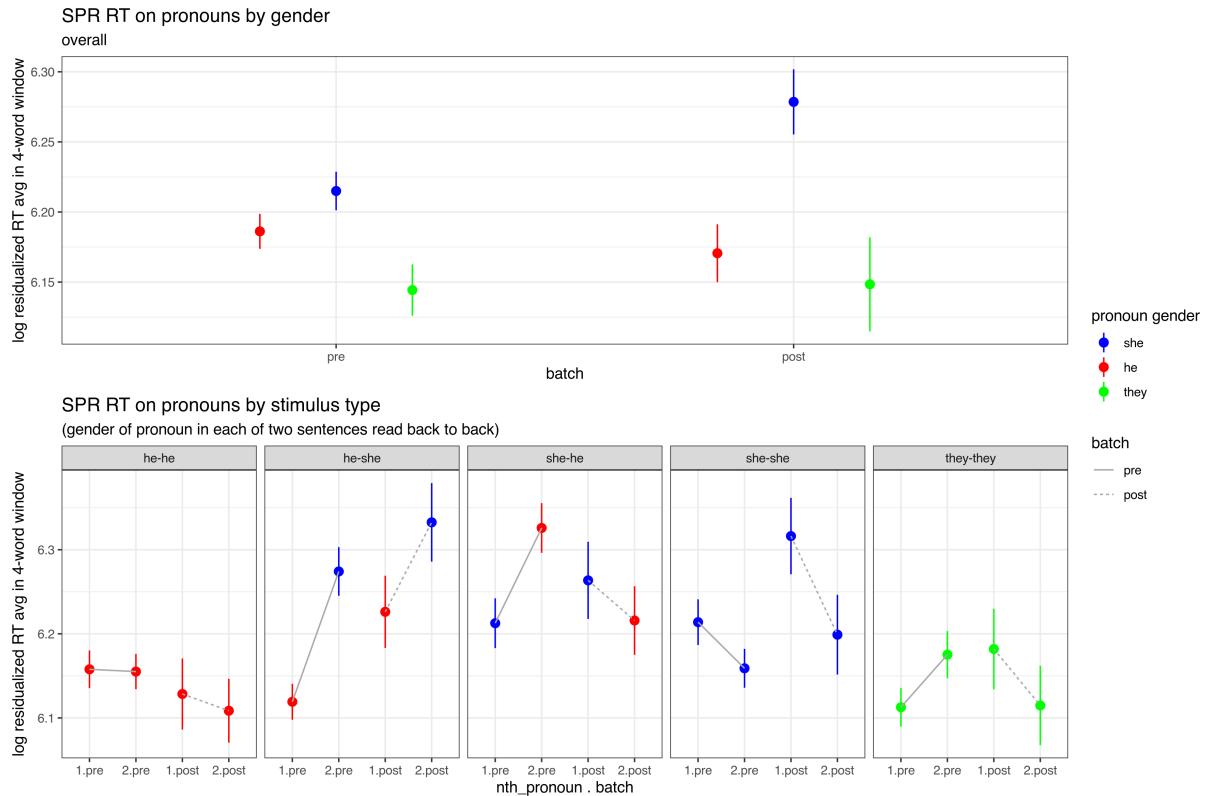
^Looking at participant age, there also could be something interesting going on, at least with the decreasing processing cost of the neutral pronoun for younger readers.

Maze reading time tracks on each of the target sentences:

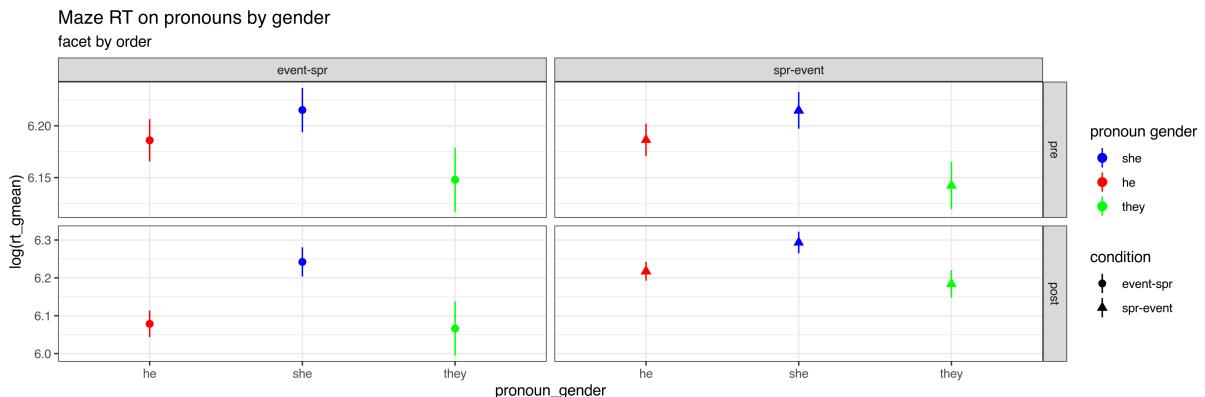


SPR

Likewise look at average SPR RT by gender of pronoun, and for each condition of two sentences presented. These RTs are residualized.



Faceting by order

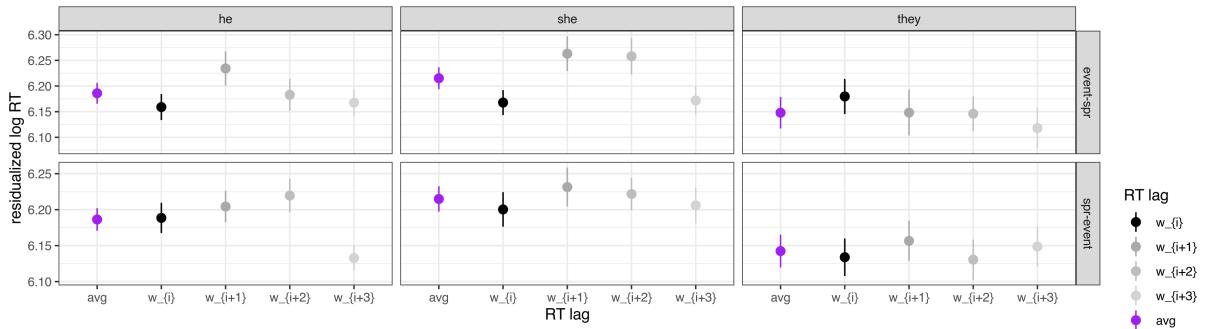


^ Probably not enough power to detect, but it may be true that the bias is stronger in the spr-event order, as with Maze data.

Pre-election data

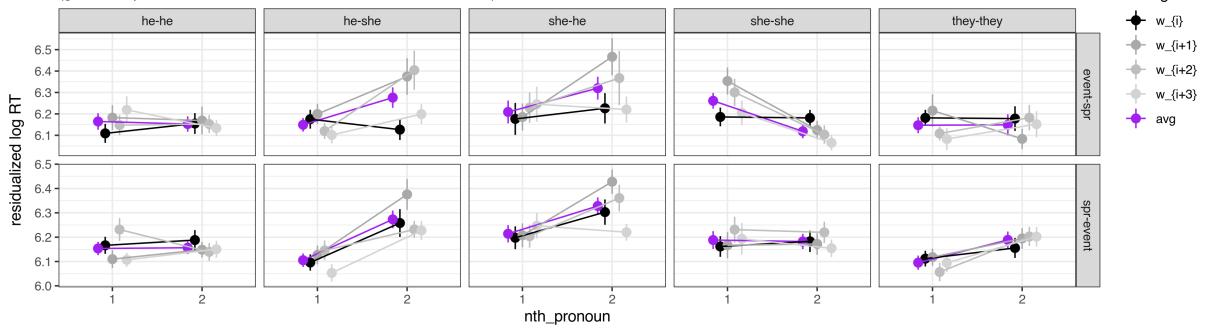
SPR by gender

Looking at RT with different lags w_{-i+n} , where w_{-i} = target pronoun.
Also showing geometric_mean(w_{-i+n}) for $n = \{0, \dots, 3\}$



Maze RT on pronouns by stimulus type

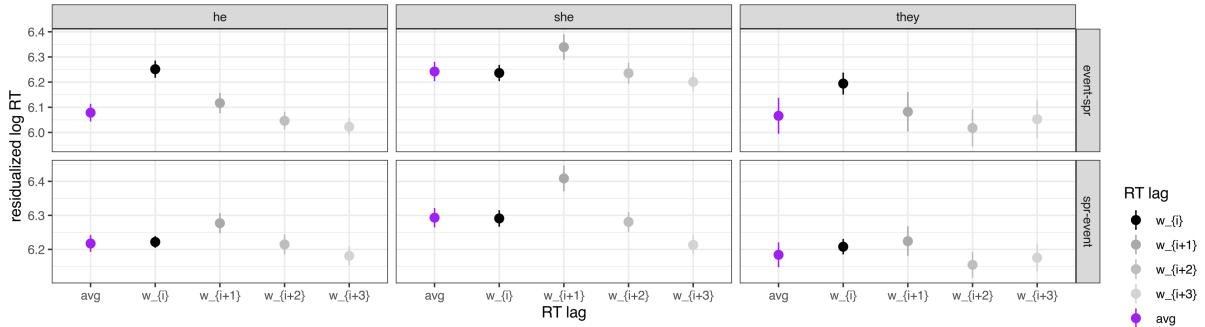
(gender of pronoun in each of two sentences read back to back)



Post-election data

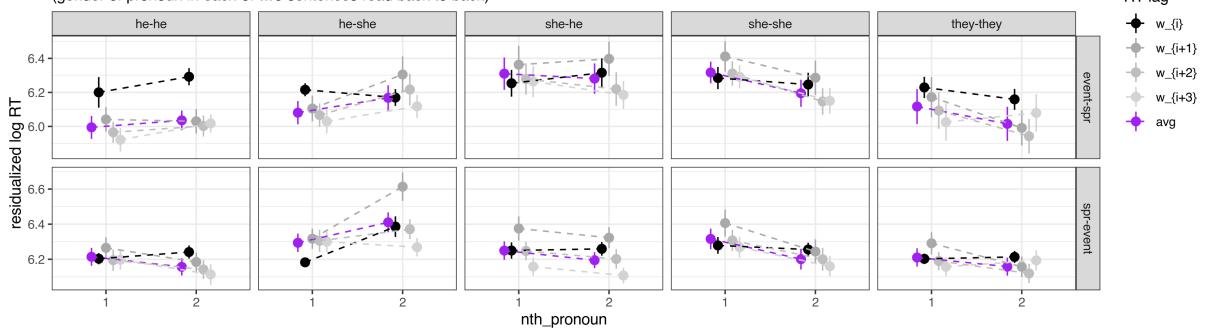
SPR by gender

Looking at RT with different lags $w_{\{i+n\}}$, where w_i = target pronoun.
Also showing geometric_mean($w_{\{i+n\}}$) for $n = \{0, \dots, 3\}$

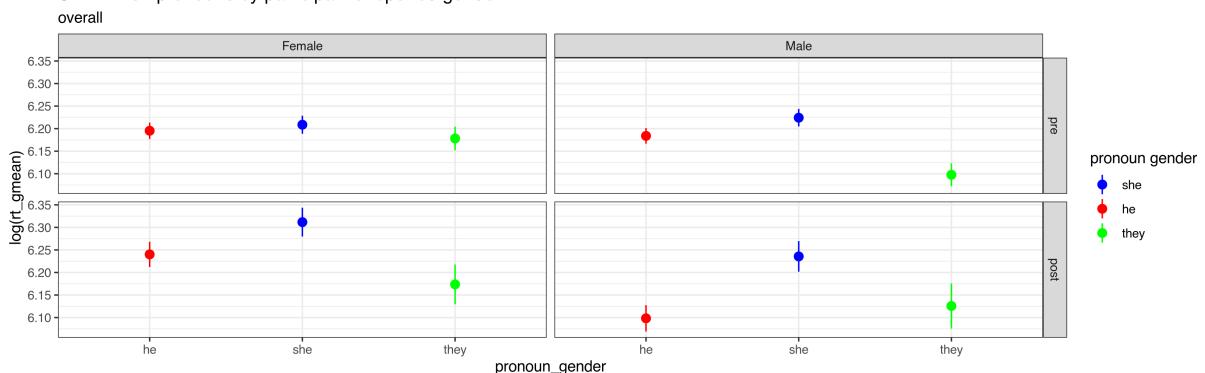


Maze RT on pronouns by stimulus type

(gender of pronoun in each of two sentences read back to back)

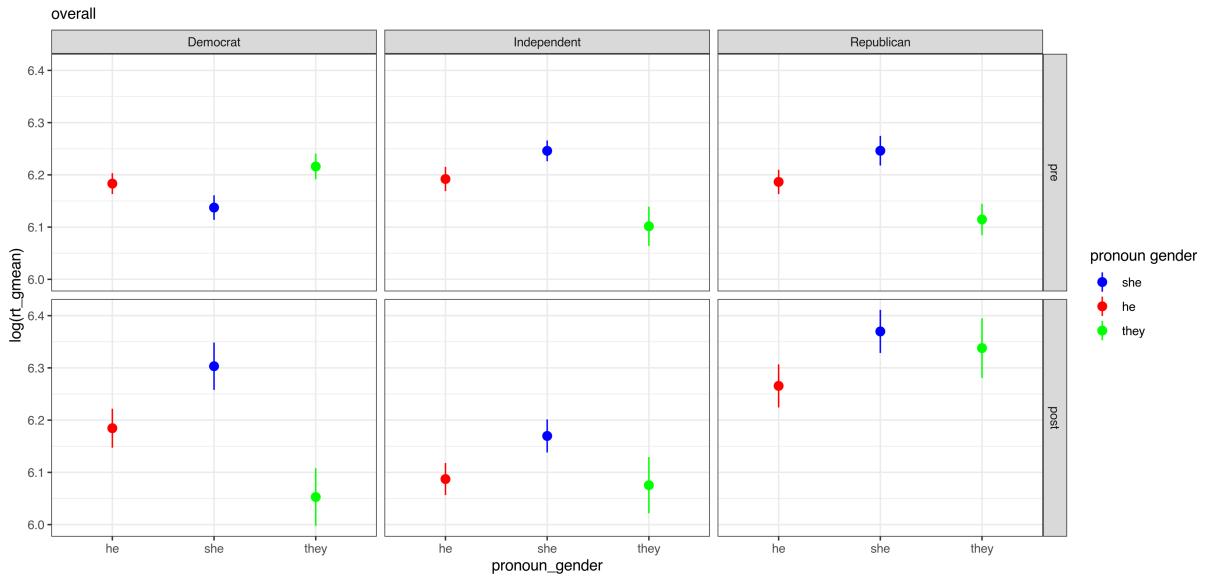


SPR RT on pronouns by participant's reported gender overall

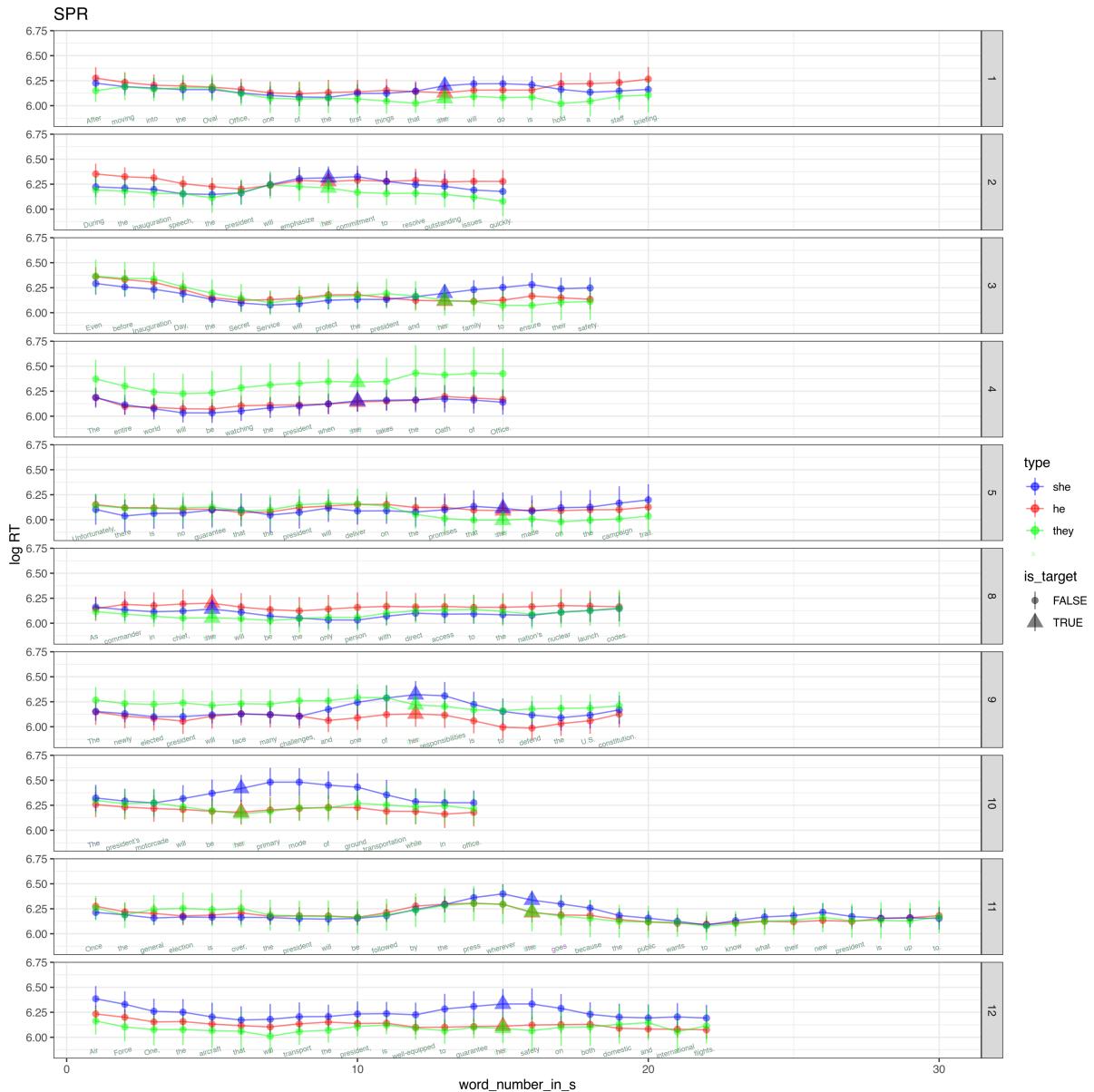


^ SPR averages broken down by participant gender may be useful if we're interested in the difference that shows up in Maze as well: bias seems larger in males.

SPR RT on pronouns by participant's reported political affiliation.



^ SPR averages broken down by participant political affiliation, as with Maze above.



SPR tracks on each of the target sentences:

