

# Bias against “she” pronouns can be rapidly overcome by changing event expectations



Till Poppels  
*Université de Paris*



Veronica Boyce  
*Stanford University*



Chelsea Ajunwa  
*MIT*



Titus von der Malsburg  
*University of Potsdam*



Roger Levy  
*MIT*

# Bias against “she” pronouns

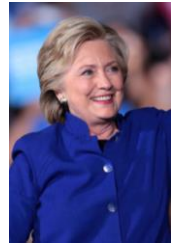
July 2016

“Who will be the next US president?”

# Bias against “she” pronouns

July 2016

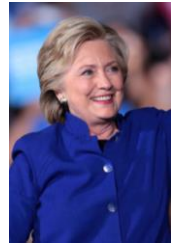
“Who will be the next US president?”



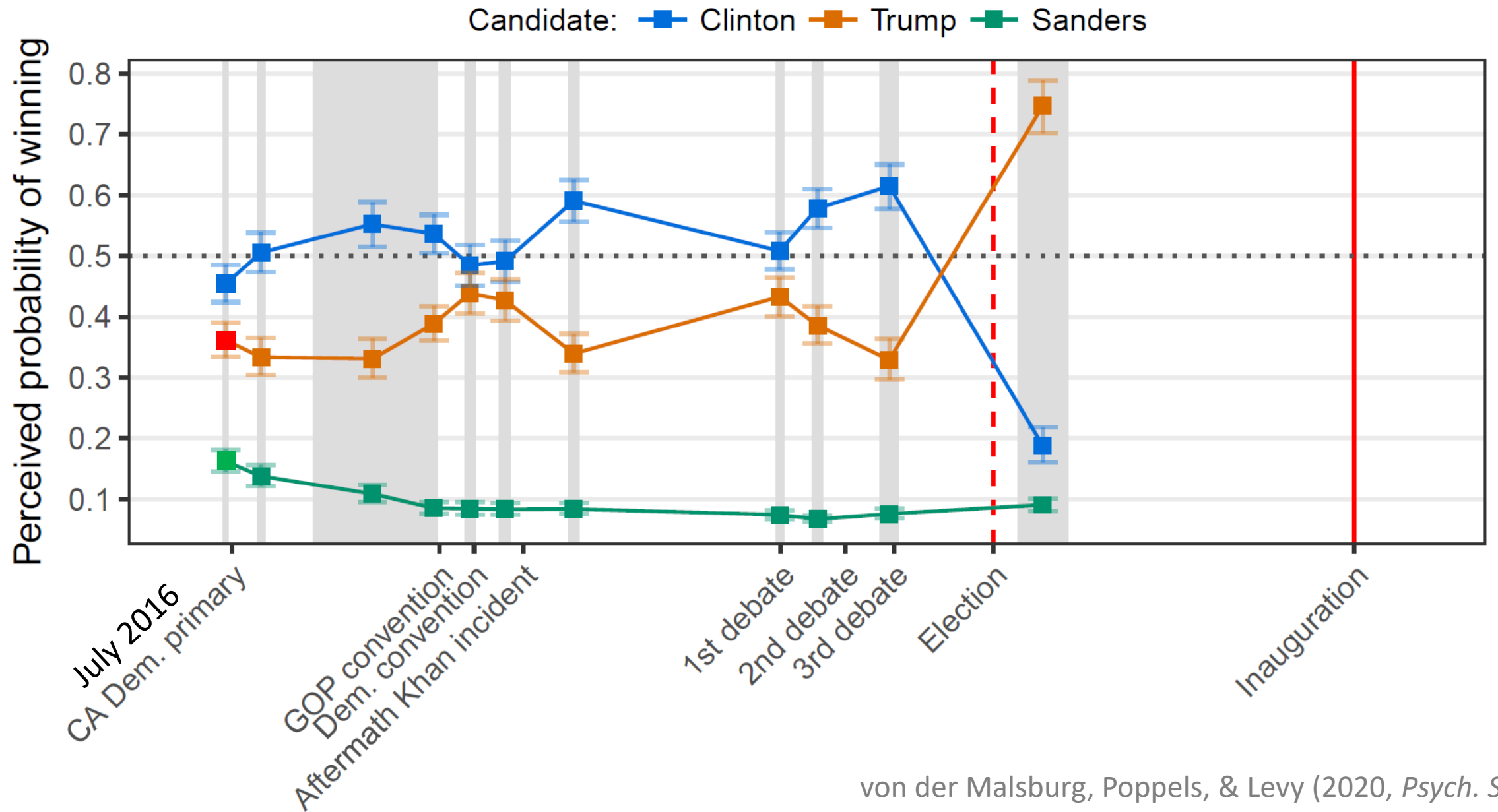
# Bias against “she” pronouns

July 2016

“Who will be the next US president?”



# “Who will be the next US president?”



# Bias against “she” pronouns

## Production

The next US president will be sworn into office in January 2017. After moving into the Oval Office, one of the first things that [\_\_\_\_\_].

## Comprehension

\_\_\_\_\_

\_\_\_\_\_

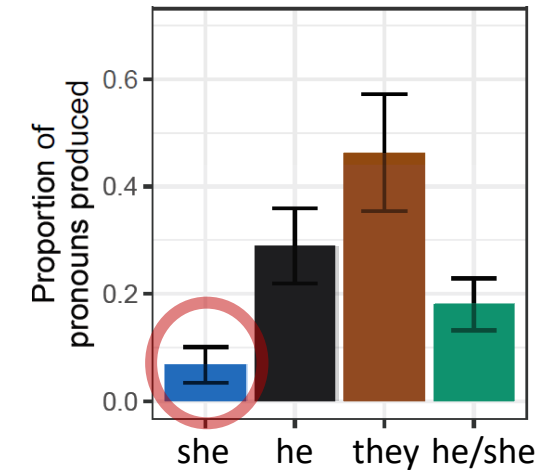
\_\_\_\_\_

she

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## Production

The next US president will be sworn into office in January 2017. After moving into the Oval Office, one of the first things that [\_\_\_\_\_].

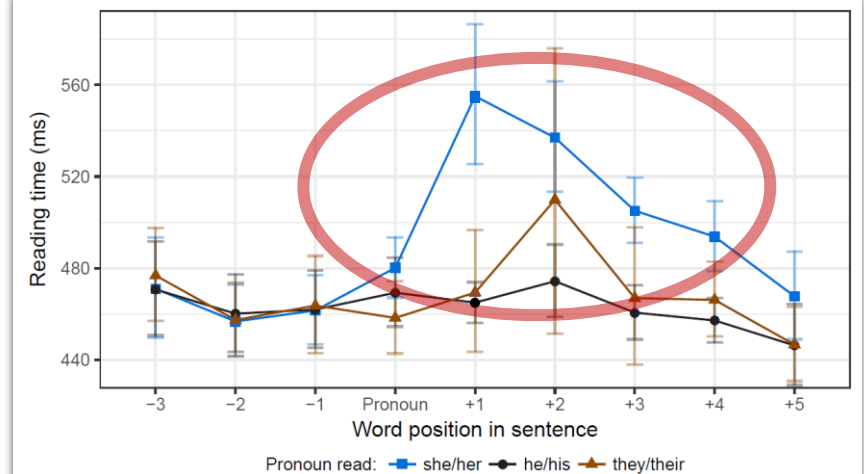


## Comprehension

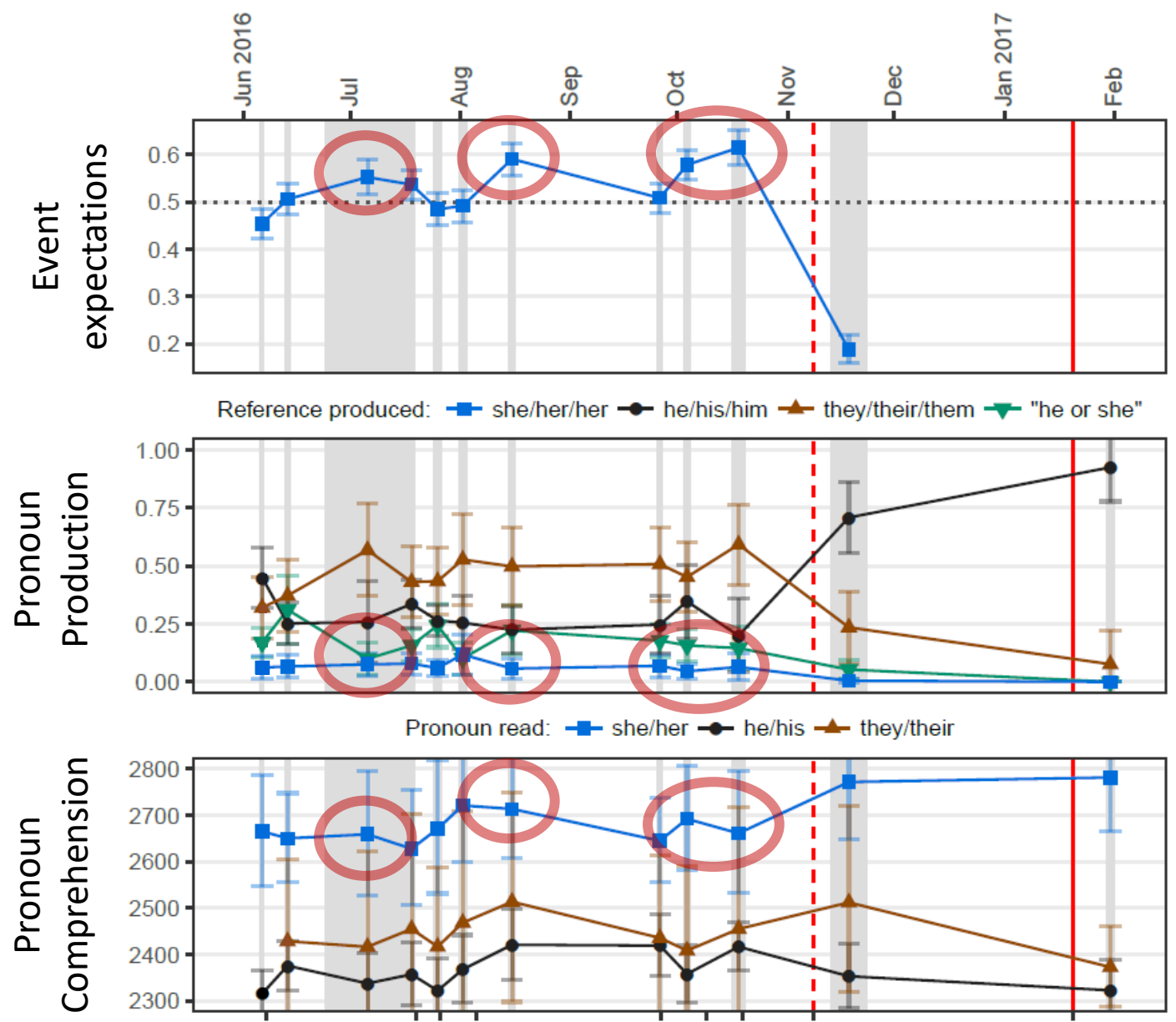
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ she \_\_\_\_\_



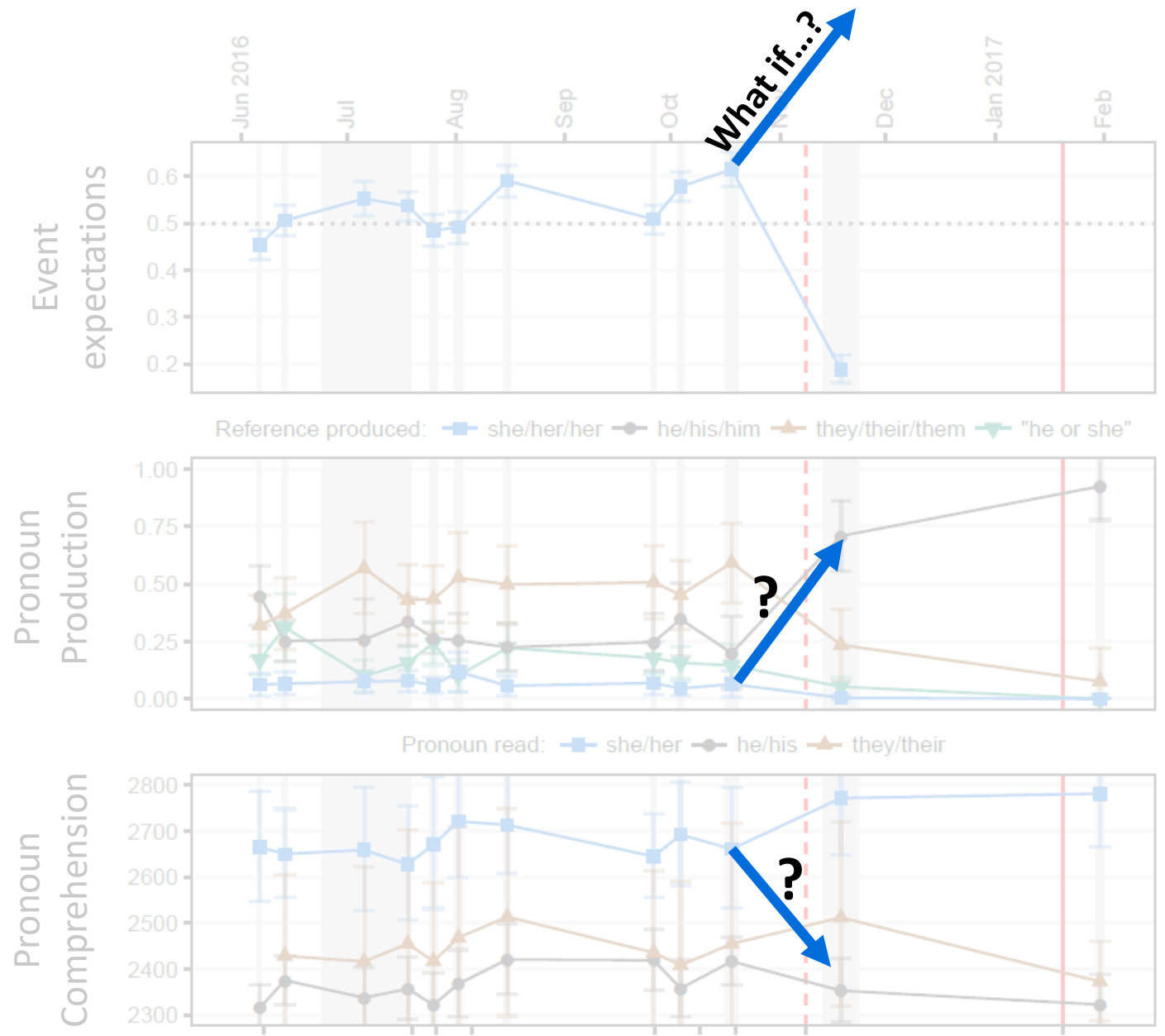
# Bias against “she” pronouns



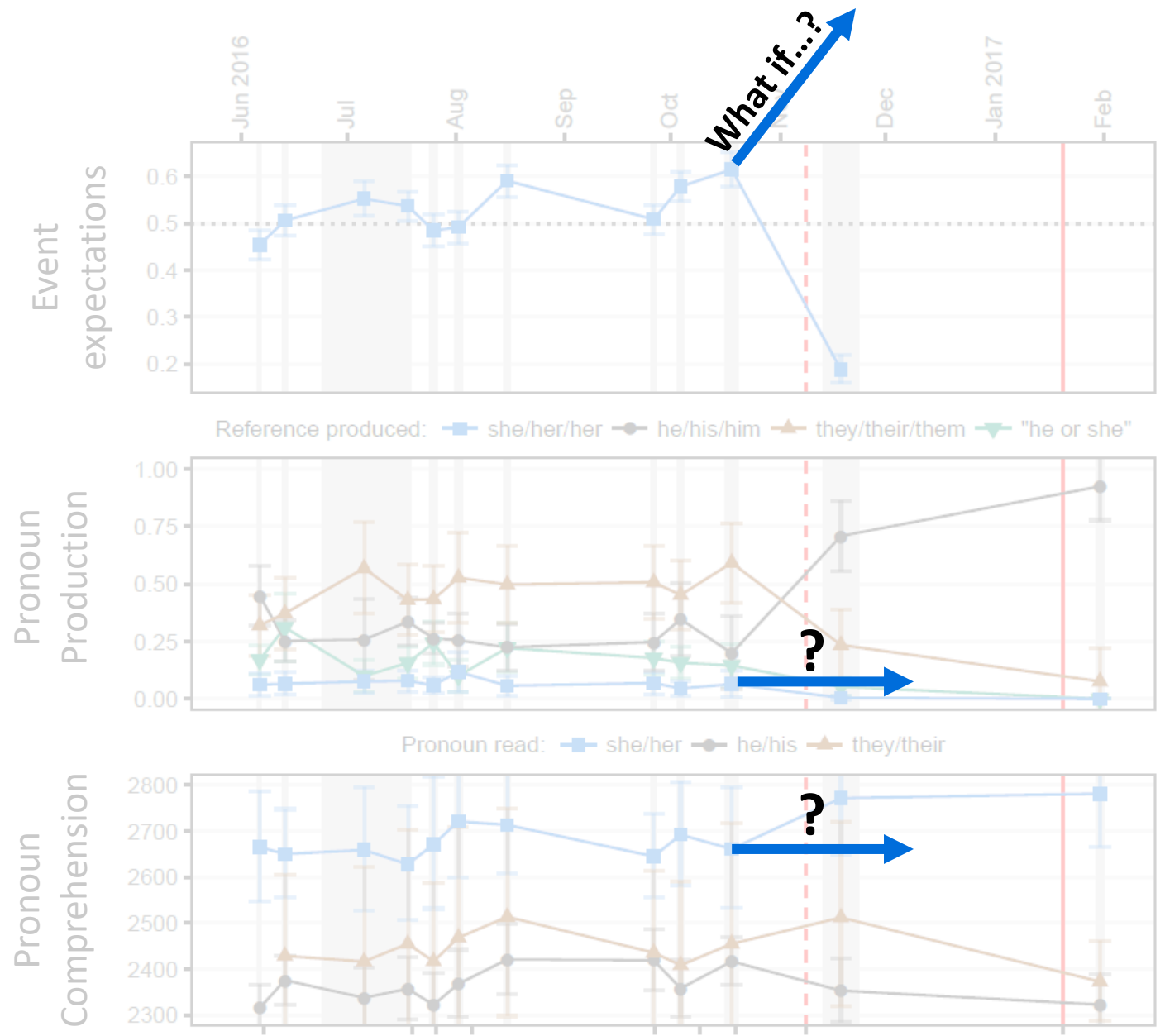
von der Malsburg, Poppels, & Levy (2020, *Psych. Science*)



# Bias against "she" pronouns



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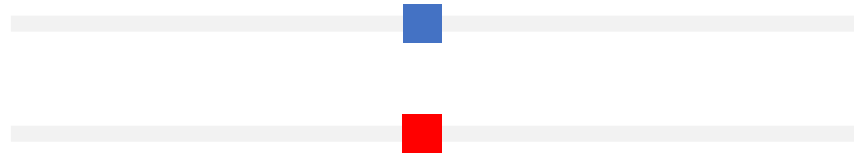


Bias against “she” pronouns  
**can be rapidly overcome**  
by changing event expectations



# 2 experiments ( $N = 2196$ ): pre- and post-election

## Event expectation task



## Production

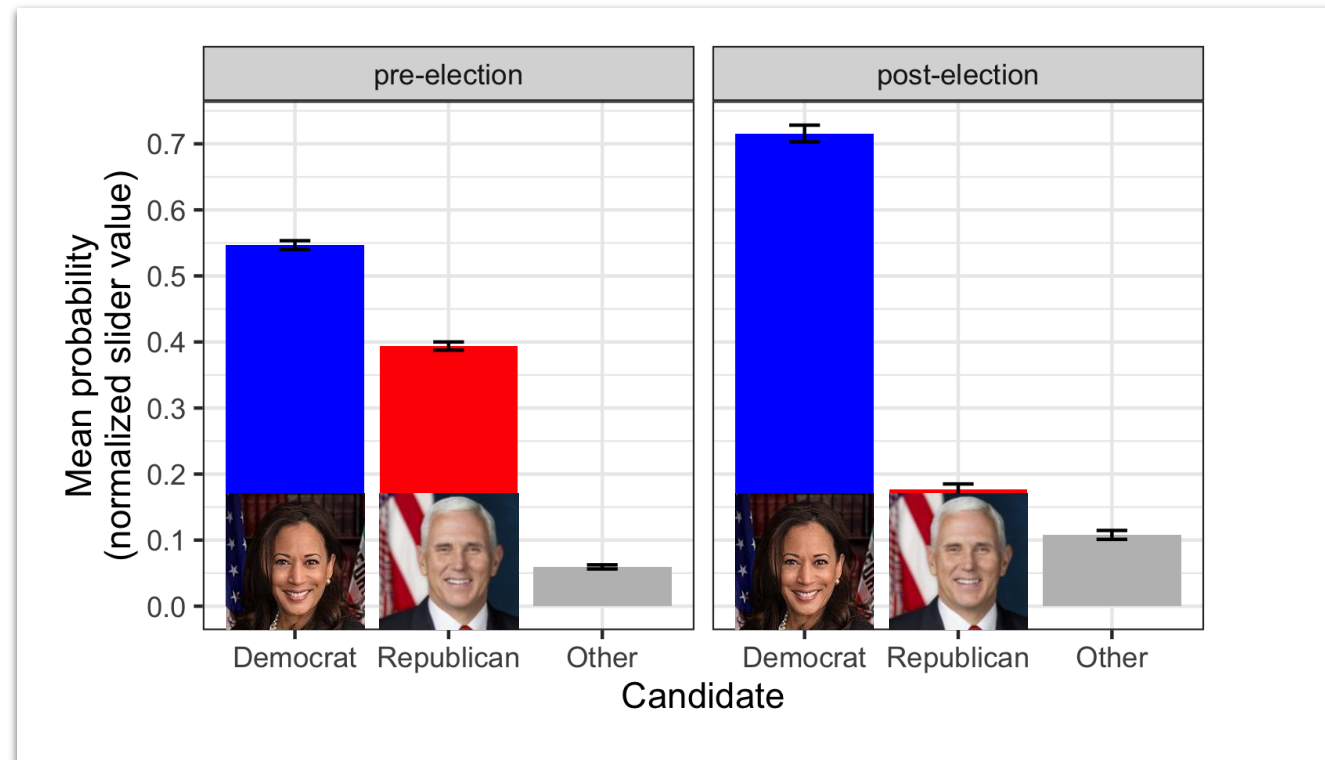
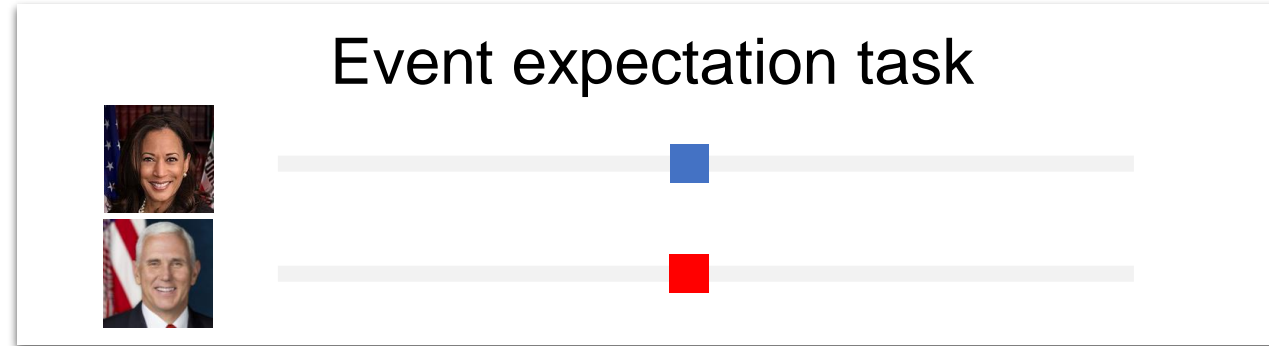
January 20, 2021, is the start of the next presidential and vice-presidential term in the United States. Because the vice president breaks ties in the US Senate, if there is a 50–50 party split in 2021 then [\_\_\_\_\_].

## Comprehension: A-Maze RTs

walks

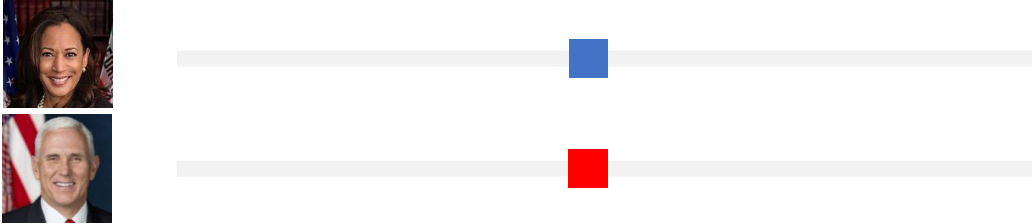
she

# 2 experiments ( $N = 2196$ ): pre- and post-election

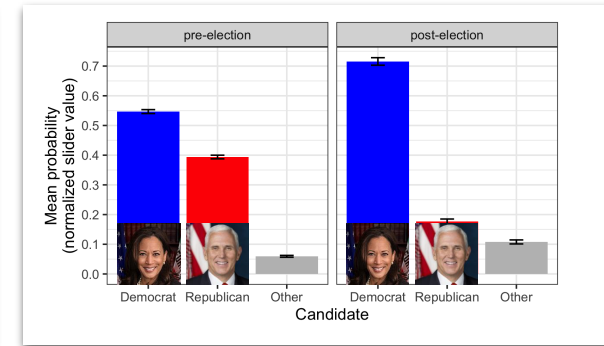


# 2 experiments ( $N = 2196$ ): pre- and post-election

## Event expectation task



The interface shows two horizontal sliders. The top slider has a blue square marker, and the bottom slider has a red square marker. To the left of the sliders are two portrait photos: the top one is of Kamala Harris and the bottom one is of Mike Pence.



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## Comprehension: A-Maze RTs

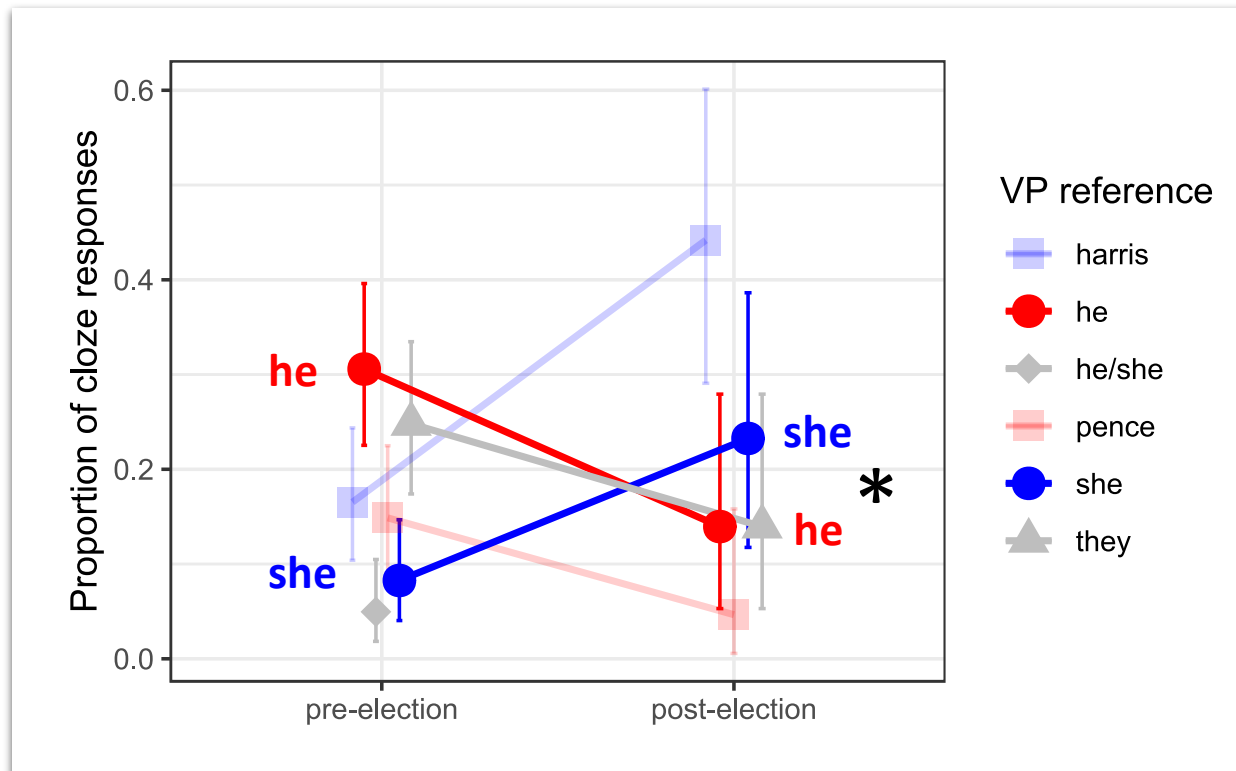
walks

she

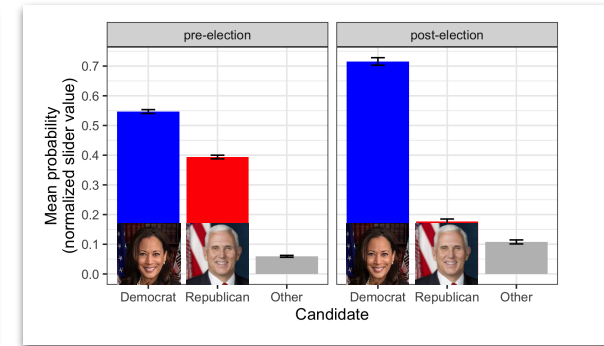
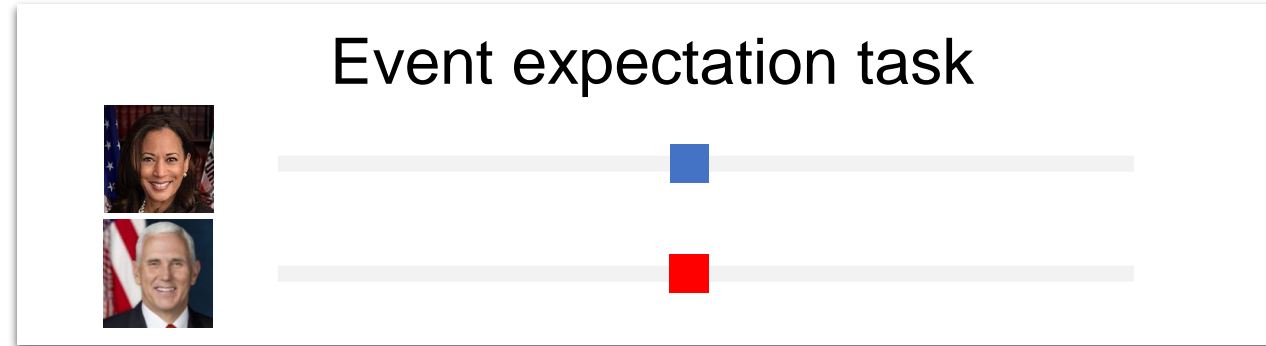
# 2 experiments ( $N = 2196$ ): pre- and post-election

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January 20, 2021, is the start of the next presidential and vice-presidential term in the United States. Because the vice president breaks ties in the US Senate, if there is a 50–50 party split in 2021 then [\_\_\_\_\_].

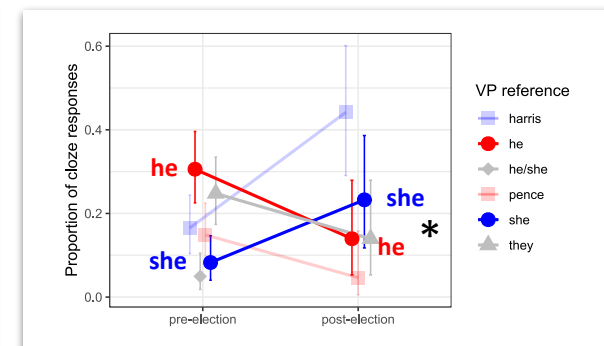


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January 20, 2021, is the start of the next presidential and vice-presidential term in the United States. Because the vice president breaks ties in the US Senate, if there is a 50–50 party split in 2021 then [\_\_\_\_\_].



## Comprehension: A-Maze RTs

walks she

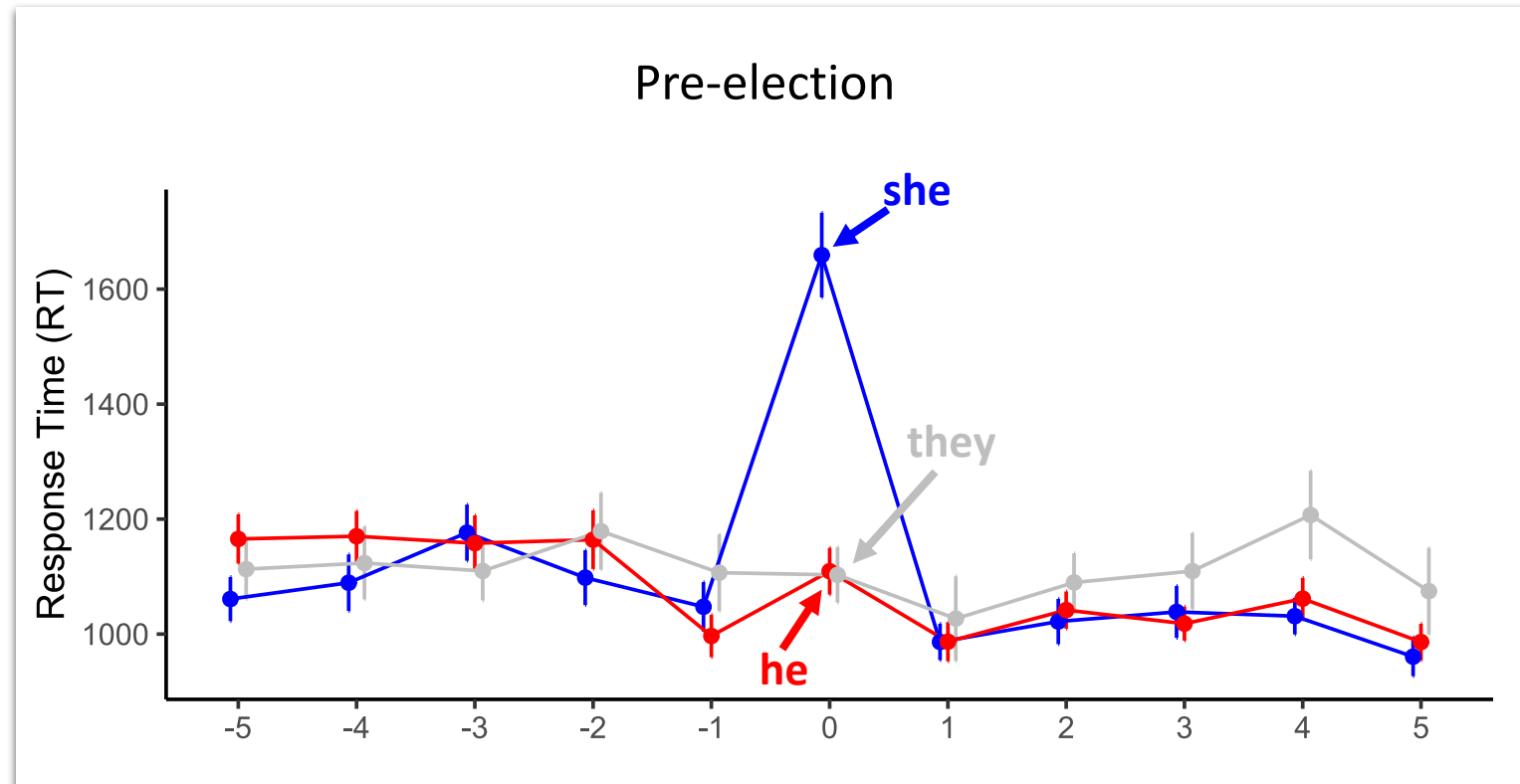


# 2 experiments ( $N = 2196$ ): pre- and post-election

Comprehension:  
A-Maze RTs

walks

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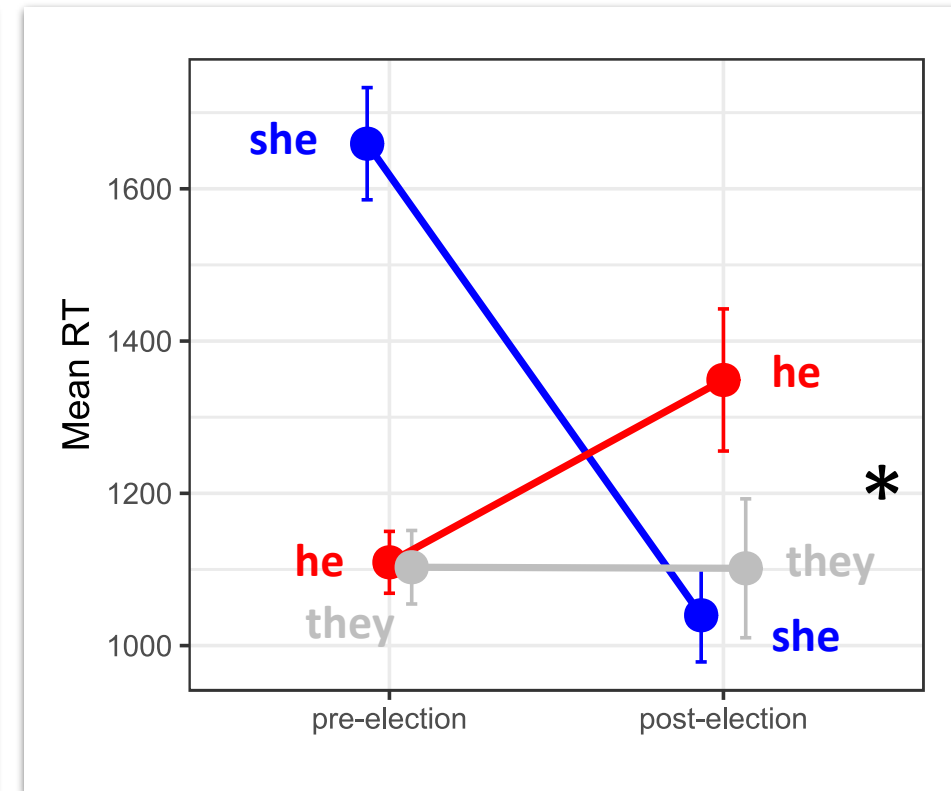
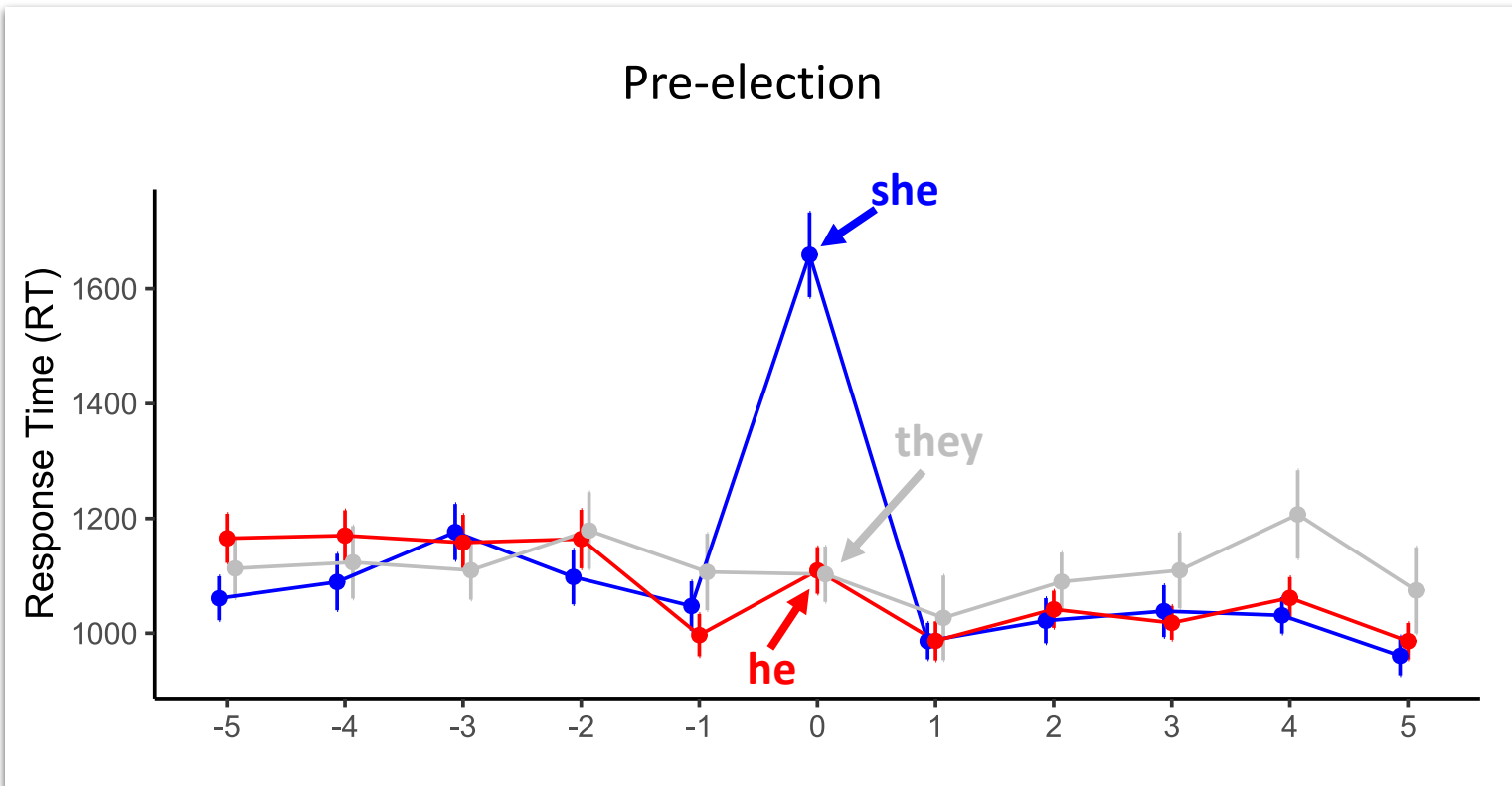


# 2 experiments ( $N = 2196$ ): pre- and post-election

Comprehension:  
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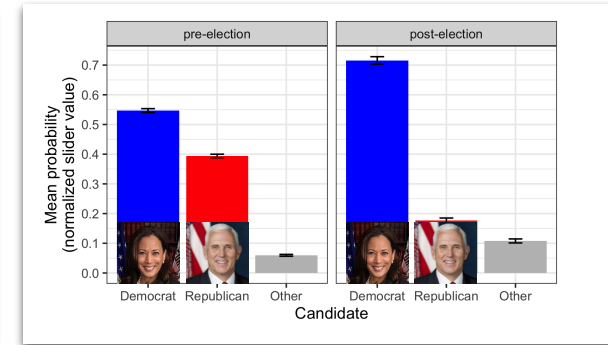
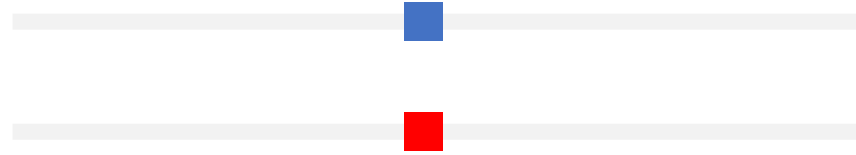
walks

she



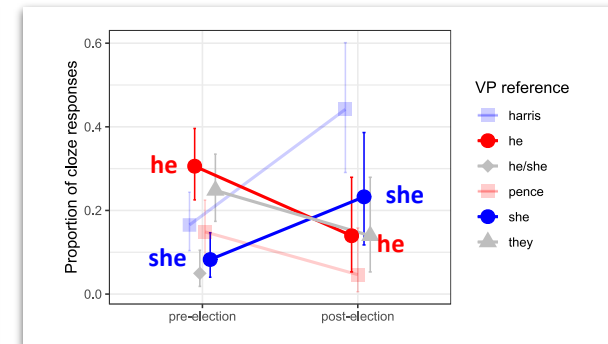
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## Event expectation task



## Production

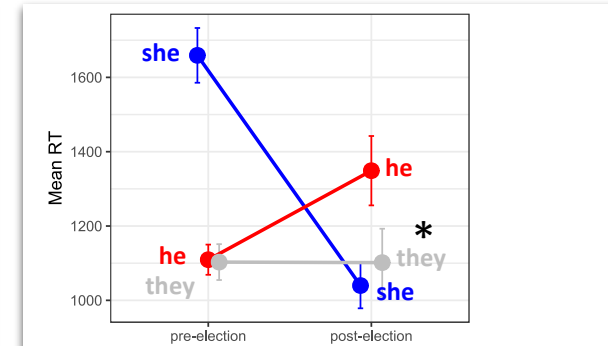
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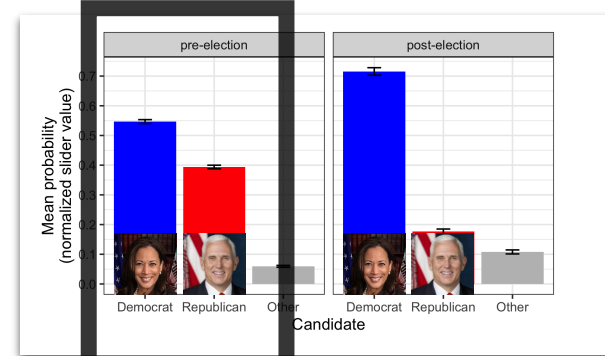
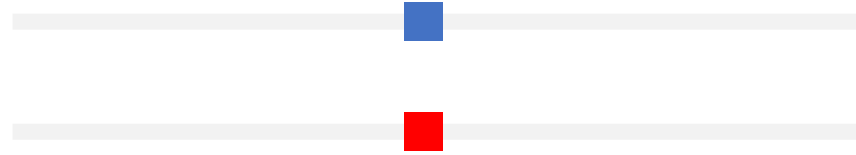
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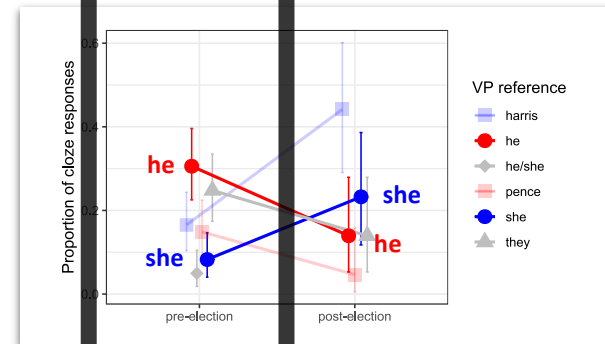
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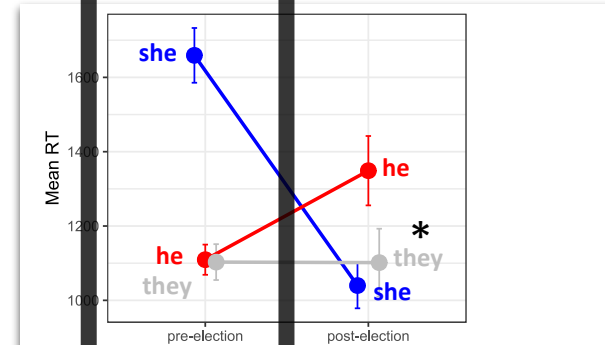
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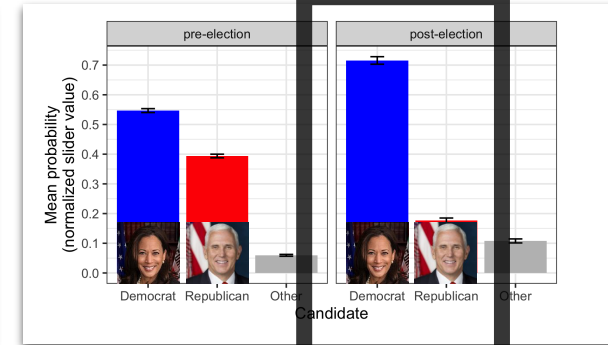
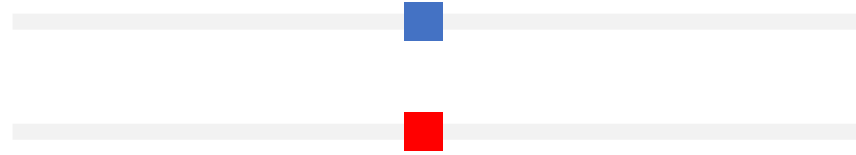
walks

she



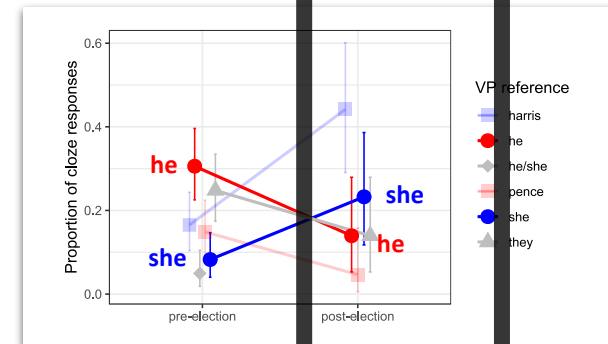
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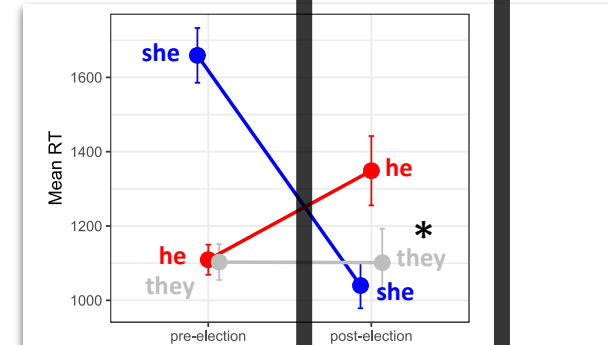
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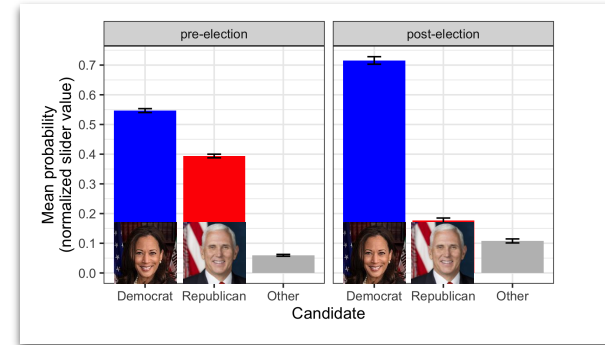
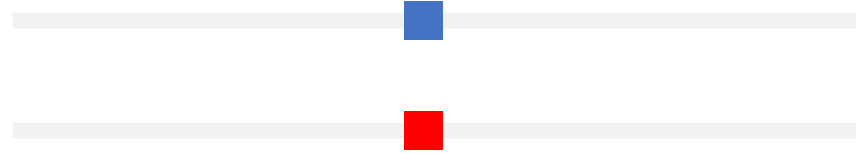
walks

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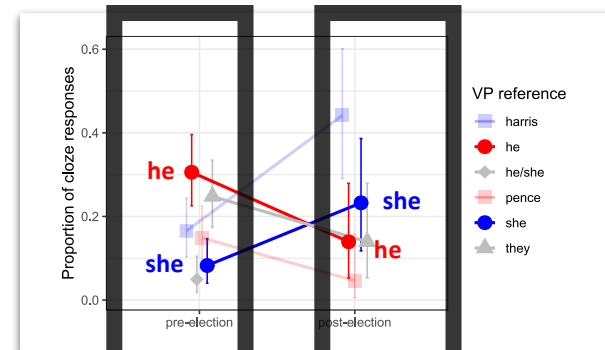
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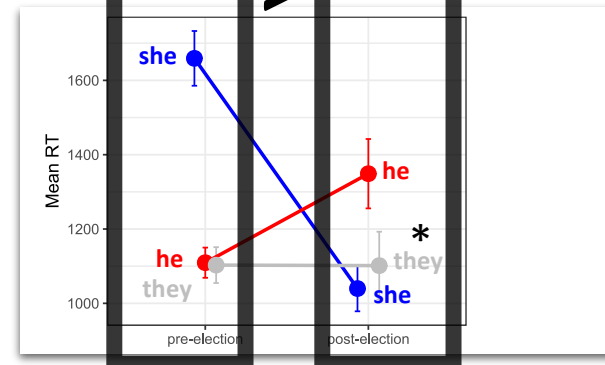
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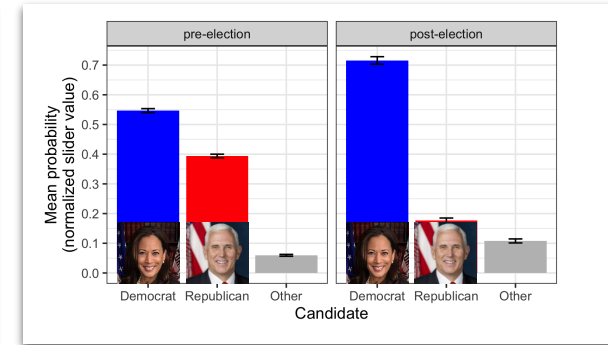
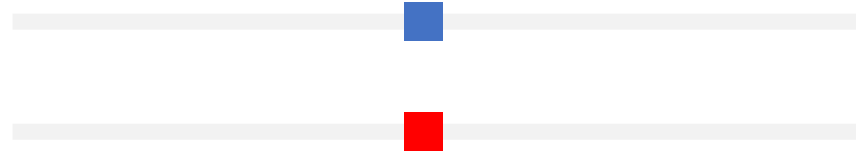
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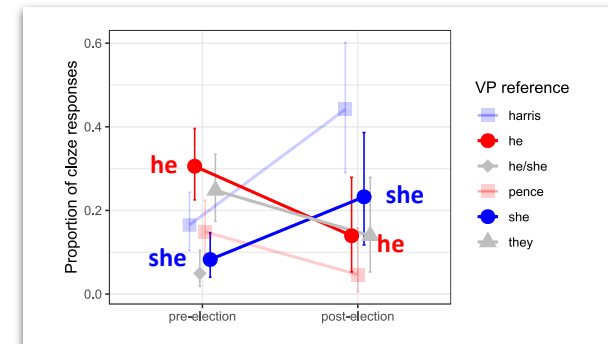
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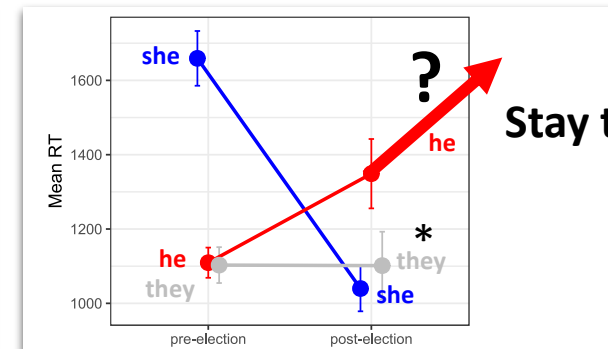
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# Thank you.



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