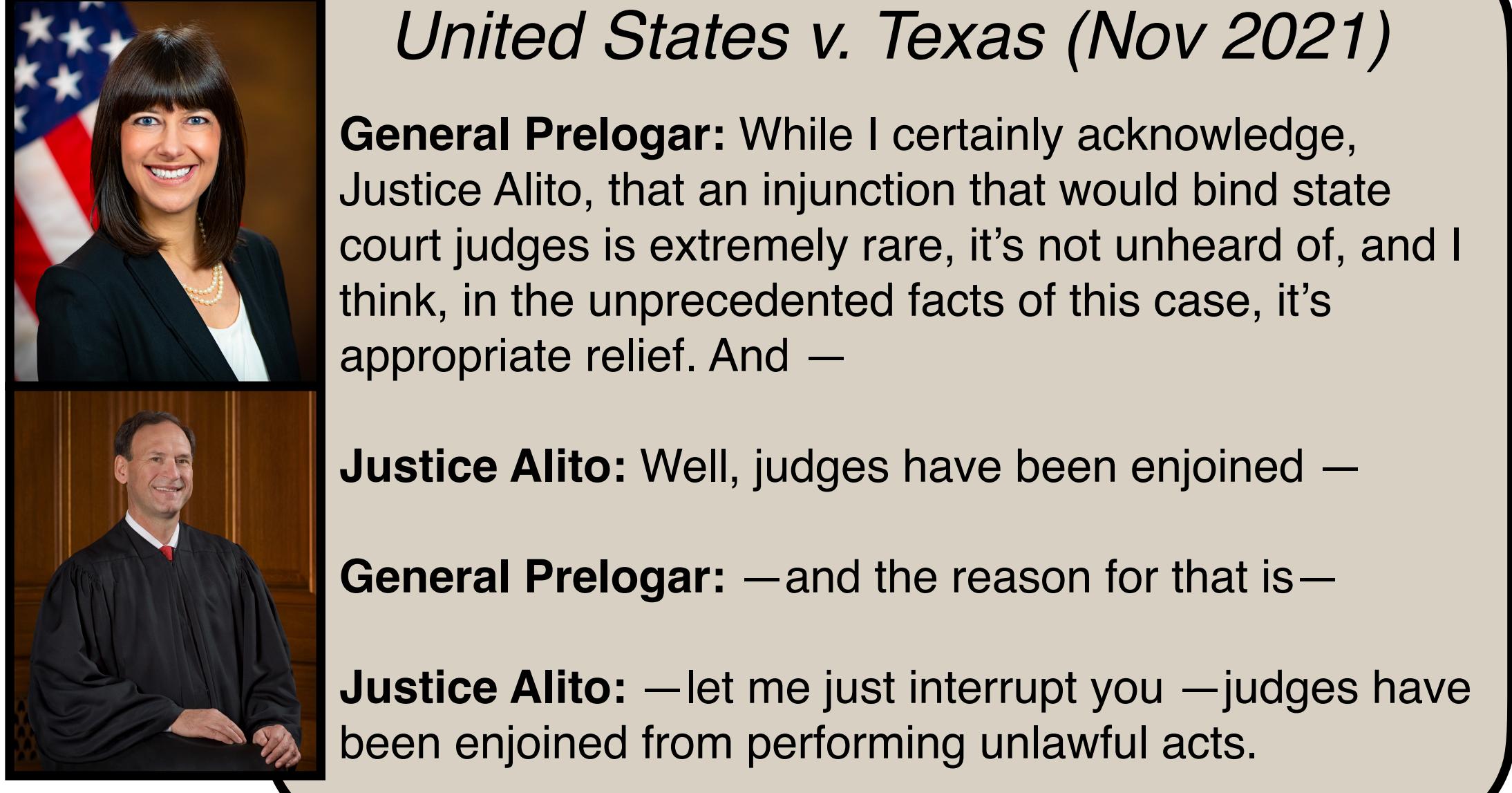


# Quantifying the Effect of Gender on Interruptions in Supreme Court Oral Arguments

Katherine A. Keith, Erica Cai,  
Ankita Gupta, Brendan O'Connor,  
Douglas Rice

## MOTIVATING EXAMPLE



## CAUSALLY-MOTIVATED RESEARCH DESIGN

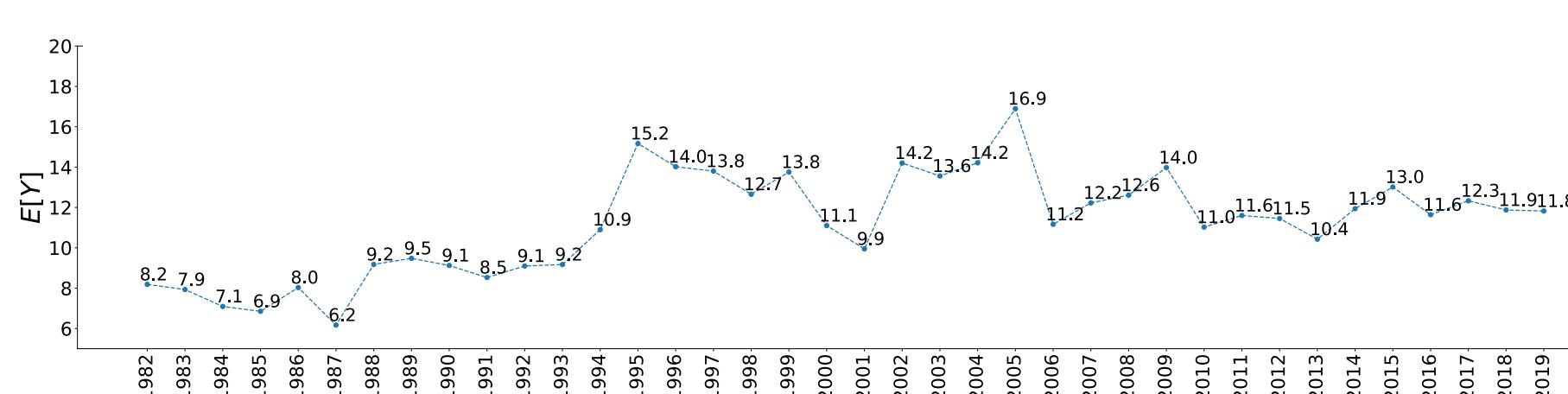
- Idealized counterfactual experiment** (clearly infeasible): Hire actors of different gender as advocates in a Supreme Court case and observe differences in interruptions
- Unit of analysis:** (Chunk, Justice, Advocate) where a valid chunk is 4+ contiguous utterances in an oral argument between only two speakers, one justice and one advocate
- Variable operationalization**
  - Advocate gender:** norm that the Chief Justice introduces advocate as Mr. or Ms.; first-name gender dictionary look-up
  - Justice ideology:** composite Martin-Quinn scores
  - Advocate ideology:** SCDB coding decision direction
  - Token-normalized interruption rate (Y):** Per chunk, number of advocate utterances interrupted by justices per 1000 tokens
- Assumptions:**
  - Markov assumption over conversational chunks
  - No unmeasured confounding
- Theoretical estimand:** absolute ratio of gender effects to ideological alignment effects with

$$\tau_{\text{Gender}} = E[Y | \text{Gender} = F] - E[Y | \text{Gender} = \text{Male}]$$

$$\tau_{\text{ideological Alignment}} = E[Y | \text{Ideological Alignment} = \text{Yes}] - E[Y | \text{Ideological Alignment} = \text{No}]$$

## DATA OVERVIEW

Token-normalized interruption rates, averaged over all chunks per year



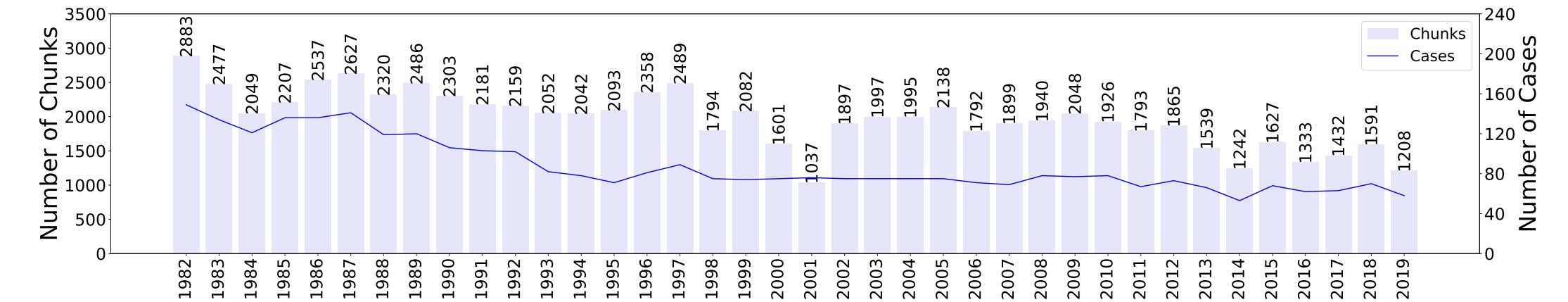
## MAIN AGGREGATED RESULTS

$\tau_{\text{Gender}}$	$\tau_{\text{ideological Alignment}}$	$ \tau_{\text{Gender}}/\tau_{\text{ideological Alignment}} $
0.78 ± 0.33	-0.15 ± 0.24	5.2

# U.S. Supreme Court justices interrupt female advocates more during oral arguments, over 5x the difference in interruption rates due to ideological alignment.

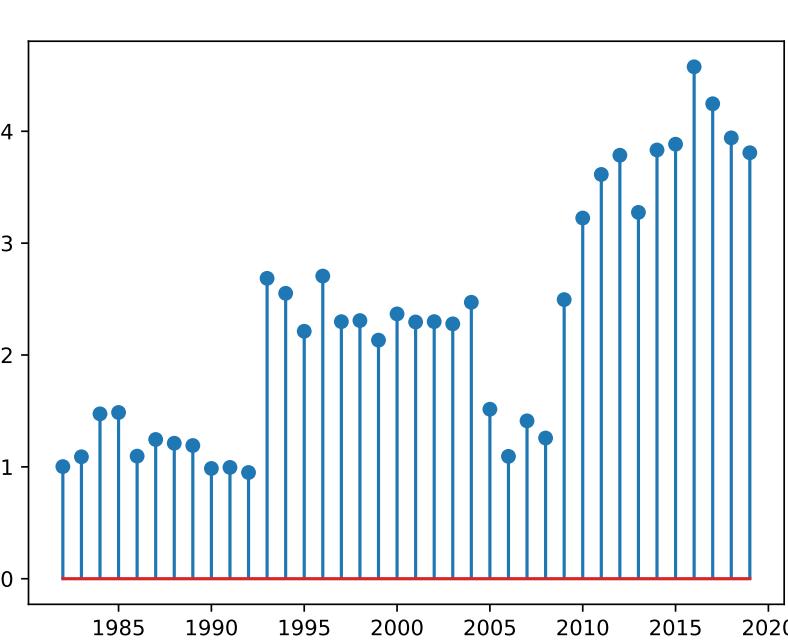
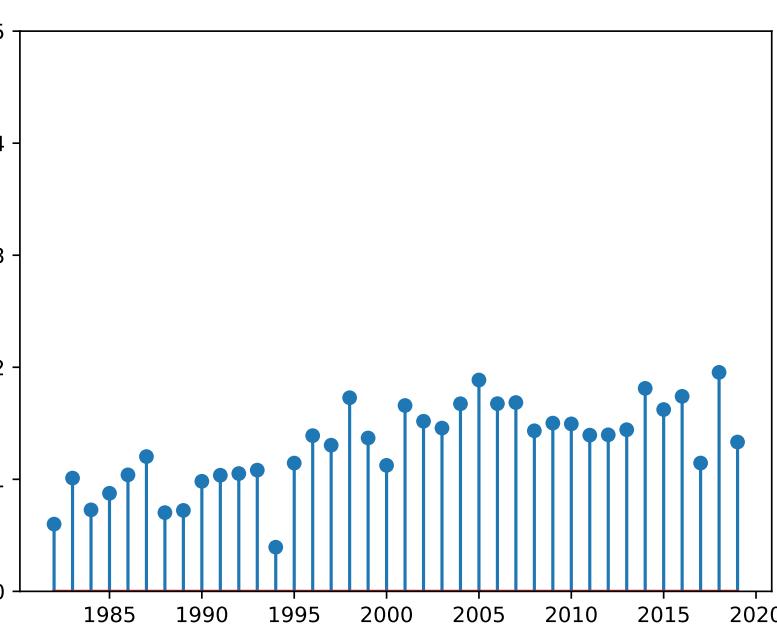
## MORE ABOUT THE DATA

Years	1982-2019
Cases	3,424
Unique advocates	4,025
Unique female advocates	554
Valid chunks	75,039
Tokens (valid chunks)	265,362
Utterances (valid chunks)	591,241
Utterances (all chunks)	776,193
Prop. Advocate Utterances Interrupted (all chunks)	0.25

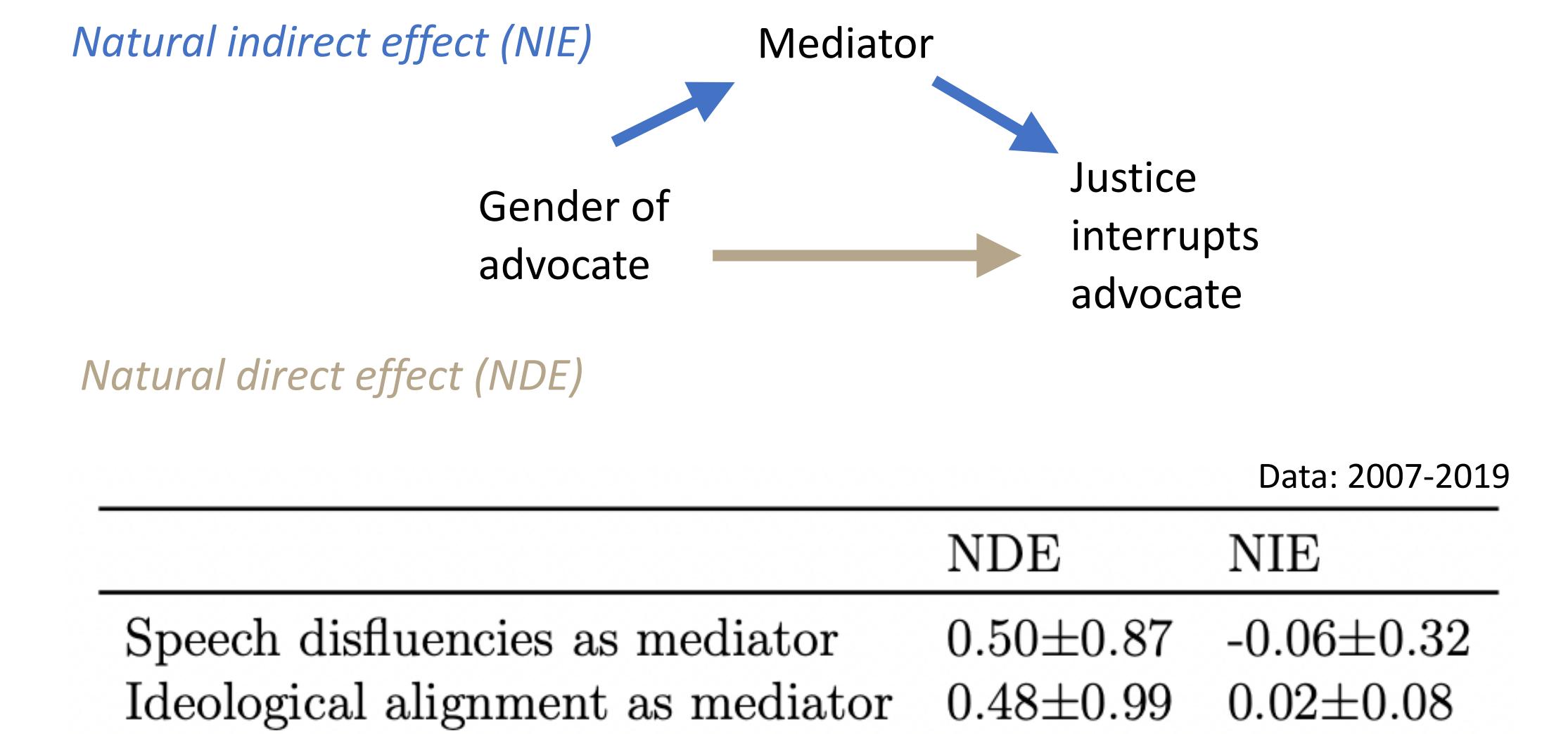


Proportion of chunks with a female advocate

Proportion of chunks with a female justice



## RESULTS FROM ALTERNATIVE HYPOTHESES



## RELATED WORK

- Oral argument is important.** Behavior and performance at oral argument predicts justice votes (Johnson, Wahlbeck, & Spriggs 2006; Jacobi & Rozema 2018; Dietrich, Enos, & Sen 2019)
- What influences oral argument?** Interruptions have increased, may relate to quality & ideology, and may relate to the gender of the advocate (Jacobi & Schweers 2017; Patton & Smith 2017; Jacobi & Sag 2019)
- What motivates interruptions?** Disentangling different oral argument signals is difficult (Black et al 2011)
- Causal frameworks can help clarify assumptions in quantitative work.** (Lundberg et al. 2021; Keith et al. 2021)

## FUTURE WORK

- Classifier for the types of interruption (e.g. friendly or not)
- Heterogenous effects via conditioning on topic categories of cases
- Panel data via conditioning on gender composition of the justices on the Supreme Court

