

# Identity-Based Elections

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# Political identity and motivated reasoning

"More often than not, citizens do not choose which party to support based on policy opinion; they alter their policy opinion according to which party they support."

Liliana Mason, Uncivil Agreement (2018)



## Political identity and motivated reasoning

"Most people's ideological commitments are extraordinarily soft. What they think of as a belief is often a post-hoc rationalisation of a group loyalty. Crucially, this is more true, not less, of degree-holding, "high-information" voters."

Janan Ganesh, Financial Times article (July 2022)

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## Rich new media environment

#### 1.25 million news articles from 25,000 outlets shared on Twitter



Source: Benkler et al. (2017)

# Asymmetric trust in mass media

#### Americans' Trust in Mass Media, by Political Party

In general, how much trust and confidence do you have in the mass media -- such as newspapers. TV and radio -- when it comes to reporting the news fully, accurately and fairly -- a great deal, a fair amount, not very much or none at all?

% Great deal/Fair amount

- Republicans - Independents - Democrats



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# Asymmetric trust in mass media

"one of the clearest differences between Americans on opposing sides of the political aisle is that large portions of Democrats express trust in a far greater number of news sources"

Jurkowitz et al. (2020), Pew Research Center report



# Dichotomy of info sources

#### Inside

• Chosen by agent from rich environment

Outside

- Mainstream media landscape
- Variation in bias, precision, and beliefs thereof
- Information the agent is inadvertently hit with



# Ingredients

#### • Political identity is important

- The choice set of news outlets has become rich
- Individuals consume news from selected outlets
- *Something* motivates the choice of outlets:
  - Political faith preservation
- Individuals are also exposed to news from the outside
- In the US, trust in mass media is related to political affiliation



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# Basic setup

- Two parties (R and L)
- Two states:  $\omega \in \{R, L\}$ 
  - Common priors  $w := \mathbb{P}[\omega = R] = \frac{1}{2}$
- Agents have two types (R and L)
  - Half of each type



# Agent's decision problem

Choose what Inside media to consume

- Objective: to hold belief that own party is better
- Given: Exogenous Outside media structure
- Constraint: Bayes plausibility

#### Wannabe partisans:

· Agents want to be partisan, but need to convince themselves

Each agent forms beliefs after observing In and Out signals

Aggregate beliefs  $\rightarrow$  Sincere voting  $\rightarrow$  Electoral outcomes

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## Research Questions

Our model: Information choice and voting by *wannabe* partisans in the presence of outside information

- How is the nature of chosen media related to the nature of (and belief in) mass media as a whole?
- Can the wrong party win? Under what circumstances?
- Do politicians have an incentive to sow distrust in mass media?
- Does propaganda work? Under what circumstances?



#### Literature - not exhaustive

Behavioral Info-Processing  $\rightarrow$  Electoral Outcomes:

- Levy & Razin (2015), Ortoleva & Snowberg (2015) Belief-based utility:
  - Köszegi (2006), Akerlof & Dickens (1982)

Bayesian Persuasion (distill & aggregate):

 Kamenica & Gentzkow (2011), Kolotilin (2018), Lipnowski & Mathevet (2018)

Media Bias/Slant (Strategic Media):

 Perego & Yuksel (2022), Gitmez & Molavi (2022) Mullainathan & Shleifer (2005), Gentzkow & Shapiro (2006), Gentzkow et al. (2021)



# Overview of Setup

Model of information acquisition followed by voting:

- Infinite agents of two types (R and L), half of each type
- Two states, two parties

Each agent receives two signals

- 1. Inside (S): Chosen signal structure (rich choice set)
- 2. Outside (s): Exogenous signal structure (many variants)

Objective: preserve political faith

• Maximize the likelihood that after the two signals are received, she believes that the state more likely matches her type



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# Equivalent alternative

#### Two selves

- Heart:
  - Has a political identity
  - Chooses which media to consume
  - Gains utility if Mind votes for Heart's preferred party
- Mind:
  - Observes Inside and Outside signals
  - Updates rationally
  - Votes according to beliefs



- 1. Agent chooses a signal structure
- 2. State is realized
- 3. Signals (Inside and Outside) are realized i.i.d.
- 4. Belief updated political faith may or may not be preserved
- 5. Sincere voting  $\rightarrow$  Electoral outcome



## Variants of Outside signal

Outside signal structure:  $s \in \{r, I\}$ 

$$\mathbb{P}[s = I | \omega = L] = k, \qquad \mathbb{P}[s = r | \omega = R] = m$$

Variants:

- Asymmetric Exposure: It is less precise for type-*R* agents
- **Distrust 1:** Type-*R* agents incorrectly believe it to be less precise
- **Distrust 2:** Type-*R* agents incorrectly believe it to be biased in favor of *L*
- **Propaganda:** It is biased in favor of party *L* and is known to be so
- **Surreptitious Propaganda:** It is biased in favor of party *L* and is not known to be so



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# Type-R agent's problem

The utility function of an agent of type R is:

$$U_{R} = \begin{cases} 1 \text{ , if } \mathbb{P}[\omega = R | S, s] \ge 0.5 \\ 0 \text{ , otherwise} \end{cases}$$
$$\mathbb{E}[U_{R}] = \mathbb{P}\left[\mathbb{P}[\omega = R | S, s] \ge 0.5\right] \tag{1}$$

The agent chooses the Inside signal structure to maximize (1)



## Inside media: Our approach

- Curated outlets  $\rightarrow$  signal structure
- Sender with commitment
- Rational updating, Bayes plausibility
- Sufficient: binary signal structure
- Choice of media  $\equiv$  choice of bias



# Expected utility depends on interim posteriors



where interim posteriors are formed after observing Inside signal before observing Outside signal

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# Inside signals



T is Terrible news: agent is sure that the state does not match her type



# Inside signals



B is Bad news: not bad enough to overcome favorable Outside signal

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# Inside signals



G is Good news: enough to overcome any Outside signal

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# Lower precision Outside signal



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# Higher precision Outside signal



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# GT

- One-sided
  - In the favorable state ( $\omega = R$ ), G always
  - In the unfavorable state ( $\omega = L$ ), G sometimes
- Examples: Fox News for Trump, MSNBC for Biden

GB

- Two-sided
  - In the favorable state ( $\omega = R$ ), G sometimes
  - In the unfavorable state ( $\omega = L$ ), G sometimes
- Examples: New York Times, Wall Street Journal (or whatever you think is more balanced)

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# GT versus GB - continued



Choice of Inside signal structure reflects agent's beliefs (correct or incorrect) about Outside signal structure

# Conditional chance of political faith preservation



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# Key example - information aggregation failure

Suppose:  $k_R = m_R = 0.51$ 



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#### Key example - information aggregation failure

Suppose:  $k_R = m_R = 0.51$ 

Suppose:  $k_L = m_L = 0.75$ 



# on Model Solution Results Conclusion Appendix

# Some takeaways

- 1. R has a winning margin advantage
- 2. *R* can win even in state  $L \Rightarrow$  Info Agg. Failure
- 3. Not knife-edge



# More takeaways

1. On aggregate: Political faith preservation  $\equiv$  Maximizing ex-ante expected vote share

Results

- 2. Ex-ante optimal  $\rightarrow$  ex-post suboptimal
- 3. Tragedy of science communication commons Kahan (2012)



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No information misaggregation without Inside signal

Without Inside signal:

- Recall: prior  $\mathbb{P}[\omega = R] = 0.5$
- Outside signal determines beliefs and votes
- Correct party always wins

Suppose: 
$$k_R = m_R = 0.51$$
 Suppose:  $k_L = m_L = 0.75$ 

	Ex-Ante	$\omega = R$	$\omega = L$
R Win Margin	0%	+26%	<b>-26%</b>
R Win Prob	50%	100%	0%

## Non-common priors

Results

Heterogeneous priors in favor of own party expands the region of information aggregation failure ( $w_R = 0.6$  and  $w_L = 0.4$ ):





#### Distrust in mass media's precision



Same as asymmetric exposure



#### Distrust in mass media's unbiasedness

Media distrust  $\rightarrow$  incorrect belief that Outside signal is biased

Outside signal structure:  $s \in \{r, l\}$ 

 $\mathbb{P}\left[s=I|\omega=L\right]=k,\qquad\qquad\mathbb{P}\left[s=r|\omega=R\right]=m$ 

Bias in favor of party  $L \Rightarrow k > m$ 



#### Distrust in mass media's unbiasedness



Politicians have an incentive to sow distrust in mass media



# Taking stock

Model features

- Agents are *wannabe* partisans
  - Want to vote for preferred party, but must convince themselves
  - A novel formalization of partisanship
- Dichotomization of media

Model results:

- Media choice reflects beliefs about media landscape
- Info aggregation failure with combination of:
  - Low exposure and Moderate exposure
  - Low trust and Moderate trust



Suppose Putin (L) in Russia influences the media landscape:

- More pro-Putin and less anti-Putin news is realized
- Biases the Outside signal

- Pro-Putin Outside signal is not very informative
- Type *R* citizens can preserve political faith more easily

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# Propaganda backfires



Freely available Inside media makes propaganda fail



# Propaganda with censorship



Possible explanation why authoritarian regimes employ both propaganda, and censorship

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# Surreptitious Propaganda



May explain why propaganda outlets try to seem unbiased



# Conclusion

- 1. Agent's choice of Inside signal structure reflects her beliefs about Outside signal structure
  - Belief that the Outside signal is imprecise or biased against her  $\rightarrow$  One-sided Inside signal structure
- 2. Less exposed side can win always (for some parameters)
- 3. Sowing distrust about mass media can be advantageous
- 4. Propaganda backfires without censorship or surreptitiousness
- 5. Results survive extensions (with nuances): heterogeneous priors, gain from learning truth, gain from more favorable posteriors, abstention, etc.
- 6. Results aren't knife-edge

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#### Happy Diwali!

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## Impact on Elections - continued

Result holds for a range of  $t_R$  and  $t_L$ Fix  $t_R = 0.51$ , and suppose  $\omega = L$ Consider the winning margin for party L



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#### Impact on Elections - continued

This is not knife-edge. The result is robust to:

- More type *L* agents than *R*
- Common prior being slightly more favorable to L
- Small amount of correlation between signals

# References

References

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#### Akerlof, G. A., & Dickens, W. T. (1982). The economic consequences of cognitive dissonance. *The American economic review*, 72(3), 307–319.

Benkler, Y., Faris, R., Roberts, H., & Zuckerman, E. (2017). Study: Breitbart-led right-wing media ecosystem altered broader media agenda. *Columbia Journalism Review*. Retrieved from https://www.cjr.org/analysis/

 $\verb+breitbart-media-trump-harvard-study.php$ 

Gentzkow, M., & Shapiro, J. M. (2006). Media bias and reputation. Journal of political Economy, 114(2), 280–316.
Gentzkow, M., Wong, M. B., & Zhang, A. T. (2021). Ideological bias and trust in information sources. Unpublished manuscript.
Gitmez, A. A., & Molavi, P. (2022). Polarization and media bias. arXiv preprint arXiv:2203.12698.

Jurkowitz, M., Mitchell, A., Shearer, E., & Walker, M. (2020). U.s. media polarization and the 2020 election: A nation divided. *Pew Research Center, Washington, D.C.*. Retrieved from