Identity-Based Elections

Helios Herrera (University of Warwick & CEPR)
Ravideep Sethi (David Eccles School of Business, U of Utah)

ASSA
January 2023
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.”

“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)
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

Data from 1972, 1974 and 1976 not shown

GALLUP
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
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
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
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
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
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
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
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 → Sincere voting → Electoral outcomes
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 → Electoral Outcomes:

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
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
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
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
Timing

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 → Electoral outcome
Variants of Outside signal

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

\[
P[s = l | \omega = L] = k, \quad P[s = r | \omega = R] = m
\]

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
Variants of Outside signal

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

\[
\mathbb{P} [s = l|\omega = L] = k, \quad \mathbb{P} [s = r|\omega = R] = m
\]

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
Type-$R$ agent’s problem

The utility function of an agent of type $R$ is:

$$U_R = \begin{cases} 1, & \text{if } P[\omega = R|S, s] \geq 0.5 \\ 0, & \text{otherwise} \end{cases}$$

$$E[U_R] = P \left[ P[\omega = R|S, s] \geq 0.5 \right]$$

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
**Inside signals**

\[ k = m = 0.75 \]

where
\[ k := \text{Outside signal is } 1 \text{ in state } L \]
\[ m := \text{Outside signal is } r \text{ in state } R \]

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

\[ k = m = 0.75 \]

where
\[ k := \text{Outside signal is } l \text{ in state } L \]
\[ m := \text{Outside signal is } r \text{ in state } R \]

![Graph showing expected utility with k = m = 0.75 and prior w = 0.5](image)

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

\[ k = m = 0.75 \]

where
\[ k: \text{Outside signal is } l \text{ in state } L \]
\[ m: \text{Outside signal is } r \text{ in state } R \]

\[ \text{Prior: } w = 0.5 \]

\text{G is Good news: enough to overcome any Outside signal}
Lower precision Outside signal

\[ k = m = 0.6 \]

\[ \rightarrow \text{Prior: } w = 0.5 \]
Higher precision Outside signal

\[ k = m = 0.8 \]

Prior: \( w = 0.5 \)
GT versus GB (for a type-\(R\) agent)

**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)
Choice of Inside signal structure reflects agent’s beliefs (correct or incorrect) about Outside signal structure.
Conditional chance of political faith preservation
Key example - information aggregation failure

Suppose: $k_R = m_R = 0.51$
Key example - information aggregation failure

Suppose: $k_R = m_R = 0.51$  
Suppose: $k_L = m_L = 0.75$
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
2. Ex-ante optimal $\rightarrow$ ex-post suboptimal
Regions

Type-R's exposure to Outside signal:

Relative precision of type-R’s Outside signal:

Preciseion of type-L’s Outside signal:

GB_R GB_L

GT_R GT_L

R wins always
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: $k_R = m_R = 0.51$

<table>
<thead>
<tr>
<th></th>
<th>Ex-Ante</th>
<th>$\omega = R$</th>
<th>$\omega = L$</th>
</tr>
</thead>
<tbody>
<tr>
<td>R Win Margin</td>
<td>0%</td>
<td>+26%</td>
<td>−26%</td>
</tr>
<tr>
<td>R Win Prob</td>
<td>50%</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Suppose: $k_L = m_L = 0.75$
Non-common priors

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: $s \in \{r, l\}$

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

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
Propaganda backfires

Freely available Inside media makes propaganda fail
Propaganda with censorship

Possible explanation why authoritarian regimes employ both propaganda, and censorship
Surreptitious Propaganda

May explain why propaganda outlets try to seem unbiased
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
     → 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
Thank you

and

Happy Diwali!
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 $L$
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


