

# Voter Alienation, Policy Extremism and Negative Advertising

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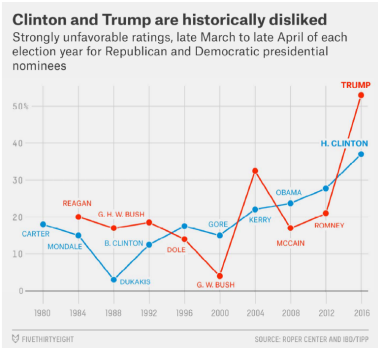
Boğaziçi University

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# Introduction

- In 2016 presidential election, candidates **themselves** elicited strong negative, often visceral reactions from different parts of the electorate ..... which was observed in whether voters who supported a given candidate were motivated by voting *for* that candidate or *against* his or her opponent



**'Negative voting' more widespread than during 2008 campaign**

Would you say your choice is more a vote FOR \_\_\_\_\_ or AGAINST \_\_\_\_\_?

Among Republican candidate supporters

	Against Clinton	For Trump
2016	53	44
2008	35	59

Among Democratic candidate supporters

	Against Trump	For Clinton
2016	46	53
2008	25	68

Notes: Based on registered voters. Other/Don't know responses not shown. Question only asked of those who named Trump or Clinton in Q13/13a, Q14c/d. Source: Surveys conducted Aug. 9-16, 2016, and July 23-27, 2008. PEW RESEARCH CENTER

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- However, even if one candidate is preferred to the other in a relative sense, this candidate may be seen as insufficiently attractive to induce the voter to vote for her, even by her supposed “base”, who then may abstain
  - ▶ “Alienation.” .. if one’s most preferred candidate supports policies very different from what one would like, then the private incentive to vote diminishes.” (Riker and Ordeshook, 1973, p. 324)
    - ★ Voters with extreme positions may abstain not because candidates are too close to one another, but because neither candidate’s position satisfies them
- Voter alienation implying abstention is largely absent from models

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  - ▶ candidate dislikability as a cause of candidate extremism
    - ★ Policy extremism to motivate voters who may not vote because of candidate dislikability (even with no direct cost of voting)
    - ★ a highly disliked opponent does not mean that moderate policy positions will win the election

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- **Only** equilibrium may be one in which office-motivated candidates go to opposite extreme policy positions in a campaign
  - ▶ target groups with dispersed (rather than concentrated) preferences
- Positive advertising does not lead to policy moderation
  - ▶ divergent extremist equilibria require negative advertising
  - ▶ negative advertising may be the only type consistent with equilibrium



# A Simple Model of Polarized Voters

- Candidates  $X$  and  $Y$  who choose a platform  $\omega \in (0, 1)$  she will adopt after the election
  - ▶ whether candidates can commit is not central to the result, but rather to which policy to commit
- Policy issue where voters are very polarized (distribution of a government-provided good; contours of tax reform)
  - ▶ Group  $A$  prefers  $\omega = 1$  and  $B$  prefers  $\omega = 0$
  - ▶ utilities if politician  $P = X, Y$  is elected:

$$u_A^i(\omega; P) = \ln \omega^P + \pi_P^i \quad u_B^i(\omega; P) = \ln(1 - \omega^P) + \pi_P^i$$

- $\pi_P^i$ : voter  $i$ 's candidate-specific or “partisan” preference for politician  $P$  independent of  $\omega$  with distribution in each group (immutable candidate characteristic)
  - ▶ mean  $\bar{\pi}_P^h$  and dispersion of preferences in group  $h$

## Abstention Due to Indifference

- Suppose there is a cost of voting  $\gamma$ 
  - ▶ we simply assume that an individual abstains when his voting cost outweighs the difference in utility expected from the two candidates
- A voter  $i$  in group  $A$  votes for  $X$  if the utility gain from having the  $X$  rather than  $Y$  elected is at least as large as the cost of voting:

$$\ln \omega^X - \ln \omega^Y - \lambda_A^i \geq \gamma$$

where  $\lambda^{Ai} \equiv \pi_Y^{Ai} - \pi_X^{Ai}$ , the relative candidate-specific preference for  $Y$  (“*relative likability*”)

- Similarly, he votes for  $Y$  if the expected utility gain from having  $Y$  rather than  $X$  elected is at least as great as the cost of voting:

$$\ln \omega^Y - \ln \omega^X + \lambda_A^i \geq \gamma$$

and abstains otherwise

- Analogous equations hold for members of group  $B$  but with  $\ln(1 - \omega)$  replacing  $\ln \omega$

# Candidate Strategies and Electoral Equilibrium

- Total votes for  $X$  (analogous for  $Y$ ) with  $\gamma = 0$ :

$$V^X(\omega^X, \omega^Y) = G^A(\ln \omega^X - \ln \omega^Y) + G^B(\ln(1 - \omega^X) - \ln(1 - \omega^Y))$$

where  $G^h(\cdot)$  is the CDF of  $\lambda^{hi} \equiv \pi_Y^{hi} - \pi_X^{hi}$  derived from distributions of  $\pi_Y^{hi}$  and  $\pi_X^{hi}$

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- Look for Nash equilibria in  $(\omega^X, \omega^Y)$

# The Effects of Indifference Abstention Alone

- Key point – indifference abstention has same results as model with full turnout ( $\gamma = 0$ )
- Candidates choose  $\omega^X = \omega^Y = \frac{1}{2}$  (and split the vote)
  - ▶ extreme policy is an electoral loser, as it induces some to vote for a candidate rather than stay home, but drives away voters on the other side
  - ▶ extremist voters on each side “balance” one another, so that voter extremism does not induce candidate extremism

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  - ▶ extremist voters on each side “balance” one another, so that voter extremism does not induce candidate extremism
- Abstention due to candidate dislikability will change the results *significantly*
  - ▶ candidates will take extreme positions even though they have no ideology themselves
- In considering alienation, we thus begin with the  $\gamma = 0$  case

## Candidate Dislikability

- Suppose that there is also the constraint that a voter must like a candidate enough to vote for her
- In addition to relative likability, add an *absolute likability constraint* – a voter in group  $A$  votes for  $X$  only if for some  $\tau > -\infty$ :

$$\ln \omega^X + \pi_X^{Ai} \geq \tau \text{ for group } A \text{ voter to vote for } X$$

$$\ln \omega^Y + \pi_Y^{Ai} \geq \tau \text{ for group } A \text{ voter to vote for } Y$$

- Analogous conditions hold in group  $B$  with  $\ln(1 - \omega)$  replacing  $\ln \omega$  and  $\pi_P^{Bi}$  replacing  $\pi_P^{Ai}$



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- Analogous conditions hold in group  $B$  with  $\ln(1 - \omega)$  replacing  $\ln \omega$  and  $\pi_P^{Bi}$  replacing  $\pi_P^{Ai}$
- Voter  $i$  can be alienated on on candidate-specific grounds grounds
  - ▶  $\pi_P^{hi}$  is independent of  $\omega^P$
  - ▶ but can be indirectly correlated if distribution of  $\pi_P^{hi}$  differs across groups (who have different most preferred policies)
    - ★ gun lovers may like Trump ( $\bar{\pi}_{Trump}^{NRA} > 0$ ), but not because of his position on gun control



# Voters Agree on Candidate Dislikability – No Partisanship

- $\bar{\pi}_X^A = \bar{\pi}_Y^A = \bar{\pi}_X^B = \bar{\pi}_Y^B = 0$  with  $\pi^i$  normally distributed around these means
- For **low**  $\tau$ , the only equilibrium is where both candidates are located at the center
  - ▶ the reference “centrist policy” case

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  - ▶ the reference “centrist policy” case
- **High**  $\tau$  generates symmetric or asymmetric extremism:  $(L, L)$ ,  $(R, R)$ ,  $(L, R)$ ,  $(R, L)$ 
  - ▶ being centrist is the **worst** possible policy choice that is dominated by any other policy for both candidates
- Intuitively, when candidates must be sufficiently liked to induce voters to vote, centrist policies are seen as “wishy-washy” and a candidate espousing them can be defeated by one choosing a more extreme policy that strongly motivates a segment of the electorate

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**Election Probabilities for X :**

	$\omega^Y$						
	.05	.20	.35	.50	.65	.80	.95
.05	.5	.79	.97	1	.96	.75	.5
.20	.21	.5	.90	1	.90	.5	.25
.35	.03	.1	.5	.97	.5	.11	.04
.50	0	0	.03	.52	.03	0	0
.65	.04	.11	.5	.97	.5	.10	.03
.80	.25	.5	.89	1	.90	.5	.21
.95	.5	.75	.96	1	.97	.79	.5

# High (Non-Partisan) Candidate Dislikability – Turnout

- Asymmetric extremist policy equilibrium (e.g.,  $\omega^X = .05$ ,  $\omega^Y = .95$ )
  - ▶ 40% of each group votes for candidate favoring it, 0% of each group for candidate favoring the other group

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- But dislikability does not induce candidates to move to different extreme positions as a **unique** equilibrium
  - ▶ groups must differ in which candidate they dislike, so that candidate positions are pushed in different directions

## Partisan Candidate Dislikability

- Suppose also that group  $A$  is  $X$ 's “base” and  $B$  is  $Y$ 's “base”:  
 $\bar{\pi}_X^A > \bar{\pi}_Y^A$  and  $\bar{\pi}_Y^B > \bar{\pi}_X^B$

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- Even small partisanship implies asymmetric extremist equilibria for high enough  $\tau$ 
  - ▶ unique equilibrium where  $X$  chooses a high  $\omega^X$  (i.e., favoring group  $A$ ) and  $Y$  chooses a low  $\omega^Y$

		$\omega^Y$						
		.05	.20	.35	.50	.65	.80	.95
$\omega^X$	.05	.17	.43	.87	1	.99	.86	.5
	.20	.03	.11	.53	.98	.96	.51	.14
	.35	0	.01	.05	.73	.51	.04	.01
	.50	0	0	.02	.5	.27	.02	0
	.65	.03	.11	.5	.98	.95	.48	.12
	.80	.25	.5	.90	1	1	.89	.56
	.95	.5	.75	.96	1	1	.97	.83

$$\bar{\pi}_X^A = \bar{\pi}_Y^B = 0; \bar{\pi}_X^B = \bar{\pi}_Y^A = -0.2; \tau = 0$$

- Disliked candidates “pander” to their base (adopt extreme positions that a subset of voters like) in order to induce them to vote rather than abstain

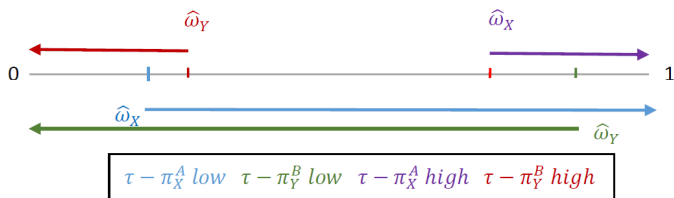
## Candidate Dislike – Illustration

- For simplicity of illustration, suppose  $\pi_X^{Ai} = \bar{\pi}_X^A$  for all  $i$  in  $A$ ,  $\pi_Y^{Bi} = \bar{\pi}_Y^B$ , etc.
- The absolute constraint for  $A$  relative to candidate  $X$  ( $\ln \omega_X + \pi_X^{Ai} \geq \tau$ ) may be written

$$\omega_X \geq e^{(\tau - \bar{\pi}_X^A)} \equiv \tilde{\omega}_X$$

- The absolute constraint for  $B$  relative to candidate  $Y$  may be written

$$\omega_Y \leq 1 - e^{(\tau - \bar{\pi}_Y^B)} \equiv \tilde{\omega}_Y$$



# Differential Dispersion of Candidate Likability

- Suppose the distribution of likability preferences differ across the groups
  - ▶ candidate-specific preferences are more concentrated in group  $A$  than in  $B$
- Standard model (*only* relative preferences for candidates matter)
  - ▶ “**swing voter**” result – both candidates target the more concentrated group  $A$ , since more votes can be gained from this group for a given change in  $\omega$

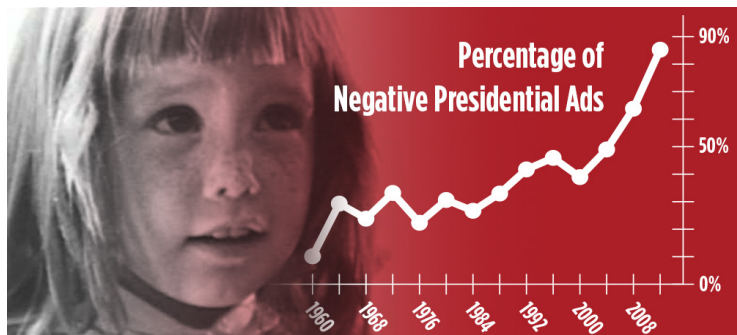
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- Binding alienation constraint **reverses** this result!
  - ▶ It is now the strictly dominant strategy for both candidates to favor the *dispersed* group  $B$  and choose a **low**  $\omega$  as the unique Nash equilibrium
  - ▶ in high abstention environments, the ones who vote will be the ones with extreme values of  $\pi^i$ 
    - ★ dispersed group has more of these voters

▶ turnout

# Campaign Advertising

- Candidates attempt to affect voters by campaign advertising
  - ▶ but, it is increasingly of a negative type



# Negative Campaign Advertising

- Effect of negative advertising on mobilizing or demobilizing voters is empirically unclear
  - ▶ *Lower* voter turnout: Ansolabehere, et al. (1994) and Ansolabehere and Iyengar (1995)
  - ▶ *Higher* voter turnout: Djupe and Peterson (2002) and Goldstein and Freedman (2002)
  - ▶ *No significant effect*: Finkel and Geer (1998) Lau, et al. (1998) and Krasno and Green (2008)
- Krupnikov (2011) – US presidential elections 1976 to 2000
  - ▶ negative advertising can demobilize voters only after an individual has chosen which candidate he or she prefers
  - ▶ when it is negative advertising about the selected candidate (rather than an opponent)
- We first explore this approach – negative advertising by  $Y$  on  $X$  may induce  $X$ 's base to abstain due to alienation
  - ▶ currently working on how it may frighten  $Y$ 's base to increase turnout



## Positive versus Negative Advertising

- Candidate  $P$  can spend fixed budget  $M^P$  on positive advertising  $m_P^+$  about herself or negative advertising  $m_{P'}^-$  about her opponent

$$M^X = m_X^+ + m_Y^-$$

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- Positive advertising is assumed to increase the attractiveness of a candidate relative to her opponent
  - ▶ For example, voter  $i$  in group  $A$  votes for  $X$ :

$$\ln \omega^X + \pi_X^{Ai} + \check{d}(m_X^+) - \left( \ln \omega^Y + \pi_Y^{Ai} + \check{d}(m_Y^+) \right) \geq \gamma$$

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- Negative advertising about a candidate, in contrast, affects only those voters who, in the absence of advertising, would vote for that candidate if they voted
  - ▶ To vote for  $X$ , voter  $i$  in group  $A$  must also satisfy:

$$\ln \omega^X + \pi_X^{Ai} - \hat{d}(m_X^-) \geq \tau \text{ for group } A \text{ voter to vote for } X$$

- Candidate chooses both policy position and allocation of advertising

## Alienation with No Average Partisanship

- $\bar{\pi}_X^A = \bar{\pi}_Y^A = \bar{\pi}_X^B = \bar{\pi}_Y^B = 0$  with  $\pi^i$  normally distributed around these means, as well as high (i.e., constraining)  $\tau$
- As before, only extremist equilibria are possible
  - ▶ supported by all advertisement being only of one type
  - ▶ from any interior advertising split, there is a strictly profitable deviation in terms of advertising choice to the four extremist equilibria)
- When advertising is *negative*, only divergent extremist ( $\omega^X = .95$  and  $\omega^Y = .05$ ; or vice-versa) survive
- When advertising is *positive*, only convergent extremist (e.g.,  $\omega^X = \omega^Y = .95$  or  $\omega^X = \omega^Y = .05$ )

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- When advertising is *positive*, only convergent extremist (e.g.,  $\omega^X = \omega^Y = .95$  or  $\omega^X = \omega^Y = .05$ )
- **Divergent extremism must be combined with negative advertising to be optimal**
- In other words, negative advertising feeds polarized extremism (candidates going to opposite extremes) whereas positive advertising induces non-polarized extremism (both candidates going to the same extreme)

# Extension – Negative Advertising Energizes a Candidate's Supporters

- The “fear” of the opponent winning”

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- Add  $m_Y^-$  to effect on preference for candidate  $X$  in the indifference constraint

$$\ln \omega^X + \pi_X^{Ai} + \check{d}(m_X^+, m_Y^-) - \left( \ln \omega^Y + \pi_Y^{Ai} + \check{d}(m_Y^+) \right) \geq \gamma$$

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- Negative advertising will be used if  $\partial \check{d}(m_X^+, m_Y^-) / \partial m_Y^-$  is high enough
  - ▶ but, is this too mechanical?
  - ▶ dependent on empirical evidence on effects of negative advertising that isn't very clear
  - ▶ different effects of negative advertising on different groups may help sort out the mixed empirical effects

## Extension – Risky Advertising

- Negative advertising by opponents could have either a negative or a positive effect on supporters of a candidate
- Multiply (for example)  $\hat{d}(m_X^-)$  by a random variable  $\mathcal{I}^- \in \{-1, +1, 0\}$  with probabilities  $\lambda(\mathcal{I}^-)$ 
  - ▶ As  $m_X^-$  gets larger,  $\lambda(-1)$  and  $\lambda(+1)$  get larger, though probably asymmetrically
  - ▶ shape of  $\lambda(\cdot)$  as a function of  $m_X^-$  could lead to candidate using negative advertising when behind

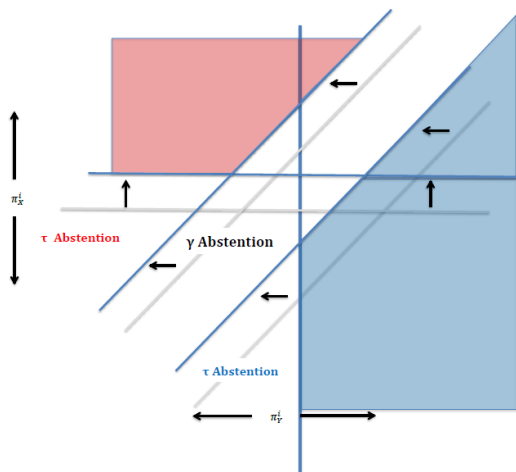
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- Negative advertising by opponents could have either a negative or a positive effect on supporters of a candidate
- Multiply (for example)  $\hat{d}(m_X^-)$  by a random variable  $\mathcal{I}^- \in \{-1, +1, 0\}$  with probabilities  $\lambda(\mathcal{I}^-)$ 
  - ▶ As  $m_X^-$  gets larger,  $\lambda(-1)$  and  $\lambda(+1)$  get larger, though probably asymmetrically
  - ▶ shape of  $\lambda(\cdot)$  as a function of  $m_X^-$  could lead to candidate using negative advertising when behind
- Analogously, possible ineffectiveness of positive advertising could be modeled as multiplying  $\check{d}(m_X^+)$  by  $\mathcal{I}^+ \in \{1, 0\}$  with probabilities  $\lambda(\mathcal{I}^+)$ 
  - ▶ characteristics of the probabilities of  $\lambda(\mathcal{I}^-)$  and  $\lambda(\mathcal{I}^+)$  as functions of  $m_X^-$  and  $m_X^+$  respectively may determine when negative versus positive advertising is used

# Conclusions

- Voter alienation due to disliking candidates *per se*, rather than their positions, is an important aspect in voting decisions
- Much discussed in the popular press, but largely absent from models of electoral competition
- Moreover, we show how alienation may induce extremism when voters are polarized, even though voter polarization in itself may not be sufficient to do so
- Negative advertising is part of the alienation driven equilibrium
  - ▶ but how exactly does it enter?

# Effect of Policy Less Favorable For Group A Voters



Effect of a Decrease in  $\omega^X$  on Group A Vote Choices

# Differential Dispersion of Candidate Likability – Abstention

ABSTENTION RATES FOR GROUP A

		$\omega^Y$						
		.05	.20	.35	.50	.65	.80	.95
$\omega^X$	.05	1	1	1	1	1	.99	.7
	.20	1	1	1	1	1	.99	.7
	.35	1	1	1	1	1	.99	.7
	.50	1	1	1	1	1	.99	.7
	.65	1	1	1	1	1	.99	.7
	.80	.99	.99	.99	.99	.99	.97	.69
	.95	.7	.7	.7	.7	.7	.69	.48

ABSTENTION RATES FOR GROUP B

		$\omega^Y$						
		.05	.20	.35	.50	.65	.80	.95
$\omega^X$	.05	.3	.39	.47	.53	.55	.55	.55
	.20	.39	.51	.61	.68	.71	.71	.71
	.35	.47	.61	.74	.82	.86	.86	.86
	.50	.53	.68	.82	.92	.95	.96	.96
	.65	.55	.71	.86	.95	.99	1	1
	.80	.55	.71	.86	.96	1	1	1
	.95	.55	.71	.86	.96	1	1	1

$$\bar{\pi}_X^A = \bar{\pi}_X^B = \bar{\pi}_Y^A = \bar{\pi}_Y^B = 0; \sigma_A = .1, \sigma_B = .4; \tau = 0$$

▶ advertising