

Dynamic Investigations

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Model

- Candidate (C) is $\omega \in \{N(\text{ot guilty}), G(\text{uilty})\}$
 - $\Pr(\omega = N) = p_0^N$, C knows ω .

Investigator (I)

- I has access to Poisson signal structure σ .
 - If $\omega = N$, σ returns σ_N at each instance of time.
 - If $\omega = G$, σ returns σ_G with probability $\lambda(k)dt$ and σ_N with probability $1 - \lambda(k)dt$.
- I decides in each t whether to irreversibly end the investigation.
 - Investigation must end by election at time T^E .
 - Observing σ_G at time t stops investigation.
 - Investigation has instantaneous cost cdt .
- I reports g if σ_G arrived, n o.w.
- I gets $\Delta^I > 0$ if matched state, 0 o.w.

Candidate (C)

- At $t=0$, C claims to be guilty or not guilty.
- If $\omega = G$ but C claims to be not guilty:
 - At each t , C picks obstruction level $k_t \in [0, \infty)$.
 - σ_G has arrival rate $\lambda(k_t) = \frac{\lambda}{k_t}$ at time t .
 - k_t is unobservable with cost $\beta k_t dt$.
- C receives office benefits B from winning the election and pays a cost f under g .

Median Voter (V)

- Sees results $\{g, n\}$ and votes for C or alt (A).
- If V has belief $p = \Pr(\omega = N)$, V's expected utility from voting for C is $V_C - (1-p)\alpha$.
- V's utility for selecting the A is $V_A + \varepsilon$.
 - $\varepsilon \sim \Phi(0, 1)$ is V's private info.

Perfect Bayesian Equilibria where C's strategy is continuous across time.

Equilibrium Characterization

- Let $q(p) \equiv \Phi(V_C - V_A - \alpha(1-p))$ be the prob. C wins when V has belief $p = \Pr(\omega = N)$.
- p_T^N is I/V's posterior belief after investigation of length T w/ no σ_G . Derived w/ Bayes Rule.

Lemma

If I's strategy is to stop investigating at T , the the optimal obstruction strategy for C, $k_t^*(T)$, is:

$$k_t^*(T) = \sqrt{\frac{\lambda(B[q(p_T^N) - q(0)] - f)}{\beta}} - \lambda(T - t).$$

- **When to Stop Investigating:** Let T^U solve the following condition:

$$\frac{\Delta^I \times (1 - p_T^N) \times \frac{\lambda dt}{k_T}}{\text{Marginal Value of Learning}} = \frac{cdt}{\text{Marginal Cost of Learning}}$$

Motivation

- Accusations of wrongdoing by political candidates often lead to formal investigations.
- Voters react to official investigation findings.
- Investigations hurt candidates via potential legal repercussions and affect on voter opinion \rightarrow incentive to obstruct investigations.
- In the US, most political scandals are released very close to the election or far in advance.

This Paper: a dynamic model of investigations.

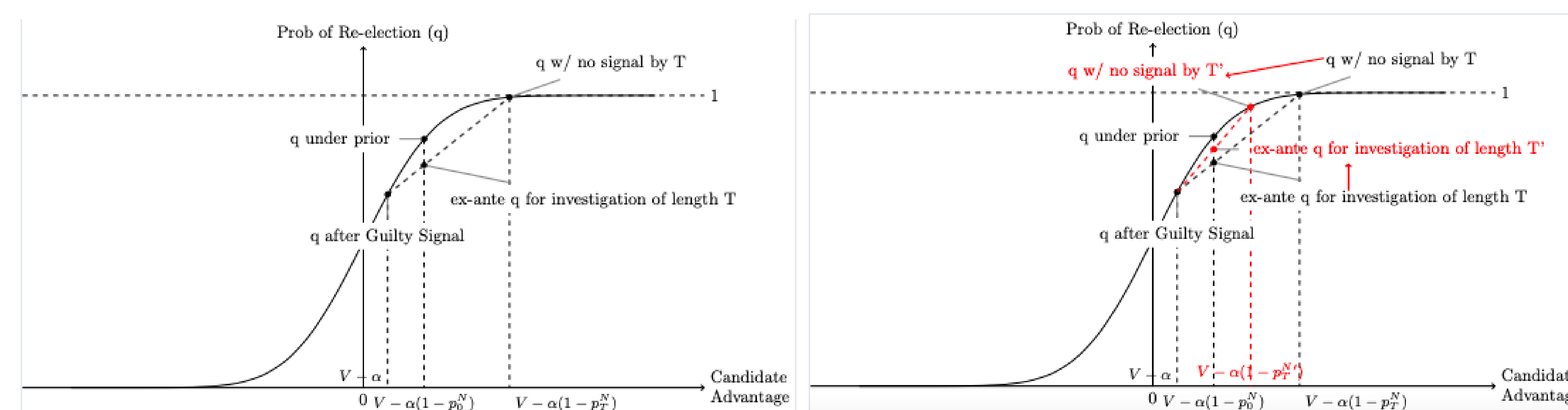
- 1 How does obstruction impact voter information?
- 2 Does penalizing obstruction increase or decrease voter welfare?
- 3 Given obstruction strategies, how does a competitor strategically time accusations?

Theorem - Equilibrium Characterization

The unique outcome of a PBE where C plays a continuous strategy is:

- I stops investigating at $T^* = \min\{T^U, T^E\}$. His posterior is 0 if σ_G arrived and p_T^N otherwise
- C uses strategy $\{k_t^*(T^*)\}_{t \in [0, T^E]}$.
- V inherits I's posterior and uses it to vote for his preferred option.

The Effect of Obstruction on Voter Information



- Proportion of Guilty Candidates elected increases as obstruction increases.

How Does Penalizing Obstruction Affect Voter Welfare

- **Modification to the model:**
 - If C confesses at $t = 0$, C pays fine f_1 for wrongdoing and voters penalize them with α_1 .
 - If C doesn't confess and is caught, they pay f_1 and additional obstruction fine f_2 . Voters penalize them at $\alpha_1 + \alpha_2$.
- **Key trade-off:** f_2 will induce some confession so voters start with a better prior \rightarrow improves welfare. More obstruction & less incentive for I to investigate \rightarrow decreases welfare.
- Welfare depends crucially on whether election is binding.

Proposition

For low values of p_0^N , for small increases in f_2 :

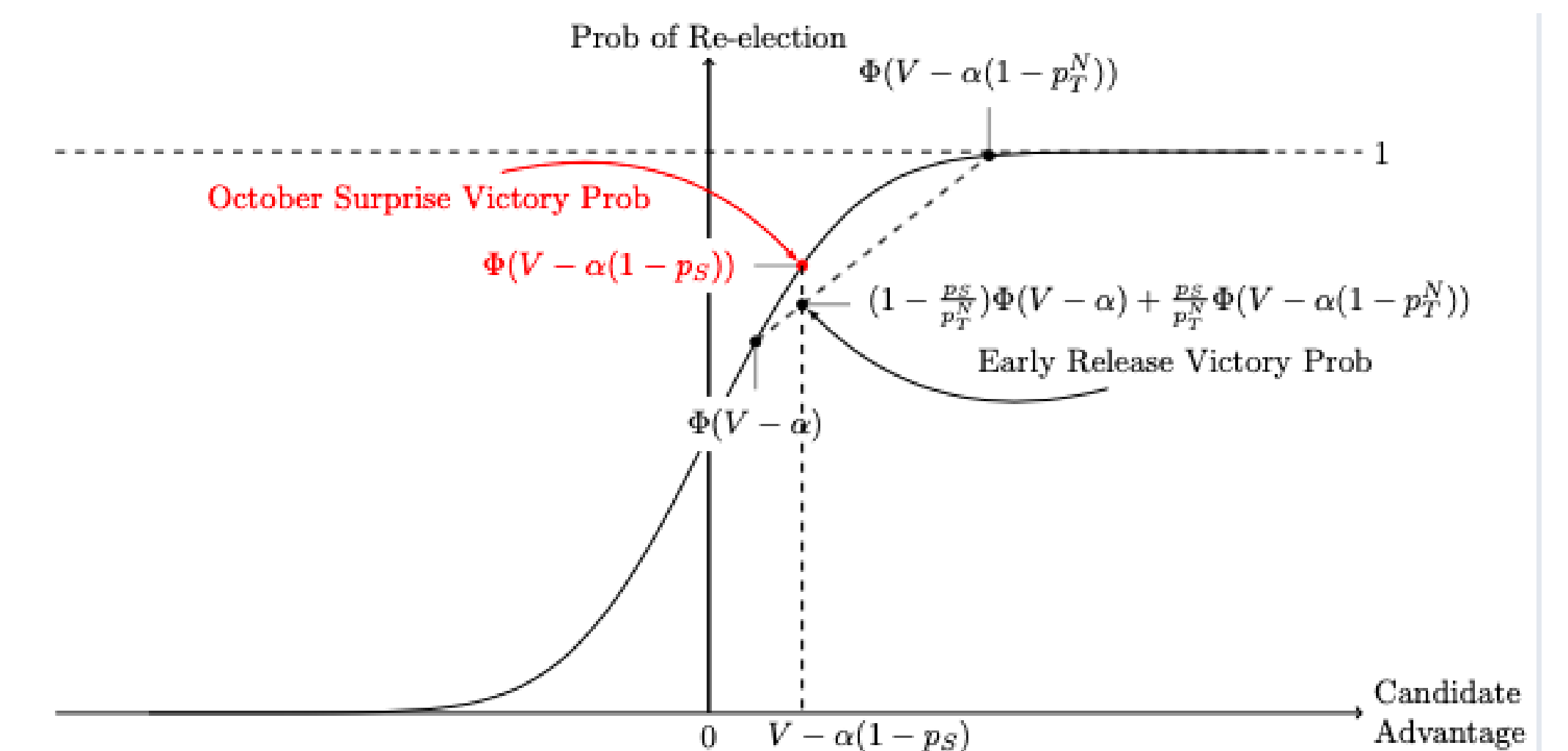
- If the election is binding ($T^* = T^E$) then voter welfare improves.
- If the election is non-binding ($T^* < T^E$) then there exists a cutoff $\alpha_2^* > 0$ s.t. for all $\alpha_2 < \alpha_2^*$, voter welfare decreases and for all $\alpha_2 > \alpha_2^*$, voter welfare increases.

Timing of Accusations

- Scandals often released by competitors.
- A chooses when to release an accusation wrt the election to minimize q .
- Suppose A may receive a piece of evidence implicating C as guilty with prob $1 - p_S^N$.

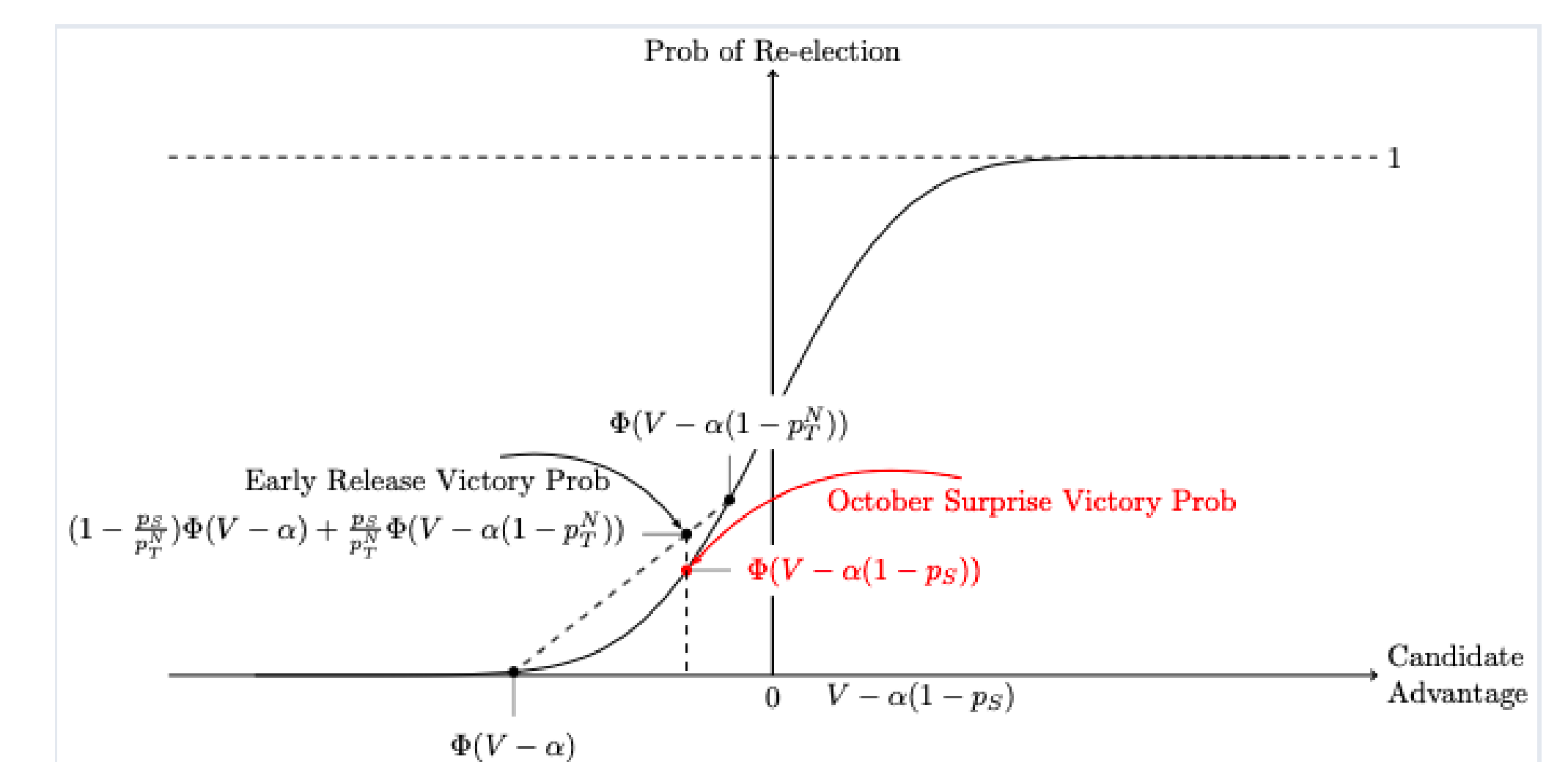
C is the Front-Runner

- A releases accusation early in the hopes it will be confirmed.



C is a Long-Shot

- A releases accusation late because C is sufficiently 'tainted' by the accusation.
- Connection to "Gambling for Resurrection."



Close Elections

- 'Credibility Cutoff' p_S^* below which there are October Surprises.
 - October Surprises are worse for voter information and welfare than releasing accusations early.
 - As obstruction increases, so does the credibility cutoff - another way obstruction damages voter welfare.

