Government Surveillance and Incentives to Abuse Power

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A Growing Surveillance Apparatus?

The Debate over Surveillance

- Proponents maintain that surveillance is vital to prevent terrorist attacks and other crimes.
- Opponents say that surveillance erodes privacy and enables totalitarian states.
  - Many abuses of power rely on data surveillance for their effectiveness.
    - Blackmail, bias political speech, secret assassinations, targeting of sympathizers

Research Questions

Underlying the debate, some questions rooted in individual incentives:

- How does surveillance affect incentives for governments to abuse power?

- How does surveillance affect the odds of governmental change or revolution?

- What level of surveillance maximizes the welfare of citizens?

Modeling Approach

- A *government* wants to minimize its chances of losing power to an *opposition*.

$S \in [0, 1]$	The surveillance level. Capabilities and deployment of surveillance technology.
$A \in [0, 1]$	Abuse of power. Use of government power in excess of moral or ethical standards of conduct.
$V_G \in \mathbb{R}$	Government popularity.
$V_O \in \mathbb{R}$	Opposition popularity.
$p \in [0, 1]$	Probability the government loses power.

Directional Assumptions

Assumption	Interpretation
$\left.\dfrac{\partial(V_G - V_O)}{\partial A}\right|_{A=0} > 0$	Initial amounts of abuse harm the opposition more than they harm the government.
$\left.\dfrac{\partial(V_G - V_O)}{\partial A}\right|_{A=1} < 0$	At high levels of abuse, increasing abuse further harms the government more than the opposition.
$\forall A, \dfrac{\partial^2}{\partial A^2}[V_G - V_O] < 0$	The marginal benefit of extra abuse to the government is decreasing.
$\forall S, \forall A, \dfrac{\partial}{\partial S}\dfrac{\partial}{\partial A}[V_G - V_O] > 0$	Surveillance makes abuse more effective, by harming the opposition more, or harming the government less.
$\dfrac{\partial p}{\partial(V_G - V_O)} < 0$	The probability of change decreases with the popularity gap.

Result 1: There is a unique abuse level, *A**, that minimizes *p*.
Result 2: *A** increases with *S*

- But is that good or bad for citizens?

Citizen-Based Model

- A unit mass of citizens with uniformly distributed type parameter $i \in [0, 1]$
- The type of a citizen determines her utility under the government and the opposition.

$$u_i = \begin{cases} V_G + (1 - i) & \text{if the government retains power} \\ V_O + i & \text{if the government loses power to the opposition} \end{cases}$$

- Let D be the demand for change, the amount of citizens that prefer the opposition.
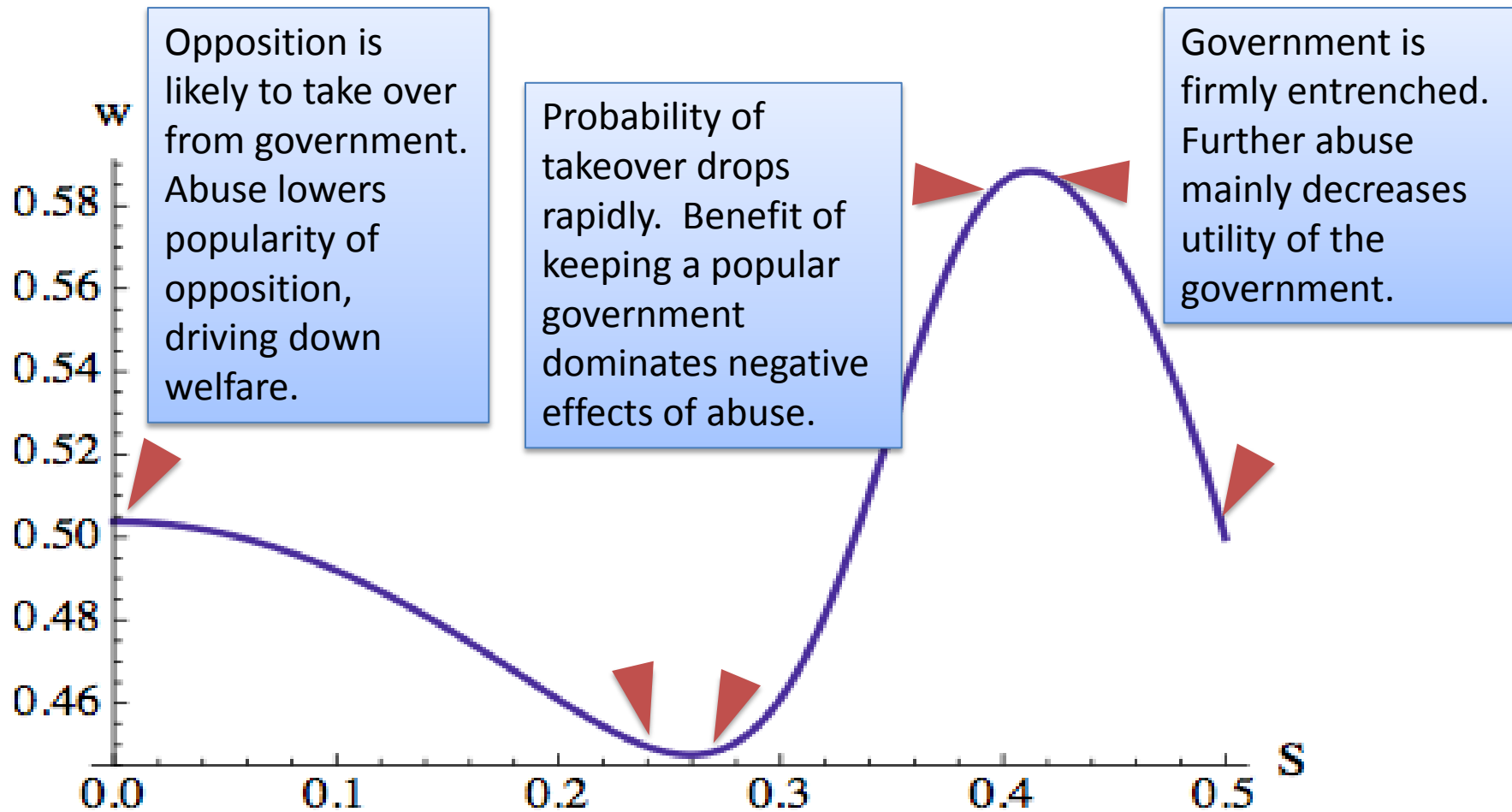- We choose functional forms for V_G and V_O that follow our directional assumptions:

$$V_G = L_G - A^2 D \qquad\qquad V_O = -AS$$

Key Results

- **Result 7:** If $V_G < V_O$ increased surveillance necessarily decreases welfare.

- **Result 8:** If $V_G > V_O$ increased surveillance may decrease or increase welfare.

- Intuition: Increasing surveillance has two effects:
    1. Abuse decreases popularity of both government and opposition.
    2. Government change is less likely.

    When $V_O > V_G$ both effects hurt citizens. But when $V_G > V_O$ surveillance prevents a transition to a less-liked opposition.

Welfare as a Function of Surveillance

Opposition is likely to take over from government. Abuse lowers popularity of opposition, driving down welfare.

Probability of takeover drops rapidly. Benefit of keeping a popular government dominates negative effects of abuse.

Government is firmly entrenched. Further abuse mainly decreases utility of the government.

$$p = \frac{1}{1 + e^{100(1/3 - D)}}$$

$$L_G = 0.25$$

Discussion

- Our stylized model highlights a few key effects
  - Surveillance increases the rational level of abuse of power.
  - Surveillance may increase welfare when it allows a popular government to stay in power.
  - A government that wants to stay in power will always want to increase surveillance.
- Many directions for future research
  - A more realistic distribution of consumers.
  - Institutional checks on surveillance. E.g. FISA courts, sousveillance.
  - A government with multiple opponents. E.g. a political opposition and armed revolutionaries.
  - Domestic versus foreign surveillance.

Questions?