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?
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

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>(\frac{(V_G - V_O)}{A}\big</td>
<td>_{A=0} &gt; 0)</td>
</tr>
<tr>
<td>(\frac{(V_G - V_O)}{A}\big</td>
<td>_{A=1} &lt; 0)</td>
</tr>
<tr>
<td>(A, \frac{2}{A^2} [V_G - V_O] &lt; 0)</td>
<td>The marginal benefit of extra abuse to the government is decreasing.</td>
</tr>
<tr>
<td>(S, A, \frac{1}{S} [V_G - V_O] &gt; 0)</td>
<td>Surveillance makes abuse more effective, by harming the opposition more, or harming the government less.</td>
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<tr>
<td>(\frac{p}{(V_G - V_O)} &lt; 0)</td>
<td>The probability of change decreases with the popularity gap.</td>
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**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:

$$V_G = L_G - A^2 D \hspace{2cm} V_O = -AS$$
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.

\[ p = \frac{1}{1 + e^{100(1/3 \cdot D)}} \]

\[ L_G = 0.25 \]
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?