Privacy versus government surveillance – where network effects meet public choice

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Two views of money and power

• The Bay Area view: money and power are all about network effects, which help you create a platform to which everyone else then adds value

• The Washington DC view: power is about having more tanks and aircraft carriers, which is founded on taxation capacity

• Almost no-one talks of network effects there, or among scholars of government!
Is this changing?

• 1980s: a non-aligned country like India is a democracy, but buys its jet fighters from Russia because they’re cheaper

• 2000s: Snowden tells us that India shares intelligence with the NSA rather than the FSB, as the NSA’s network is bigger

• The “five eyes” is maybe 15 eyes, or 30 eyes, or 65 eyes ...
View since WEIS 2002

• Three things make IT industries monopolistic:
  – Network effects
  – Low marginal costs
  – Technical lock-in

• Each of these makes dominant-firm market structures more likely

• Together, they make them much more likely

• They also explain security and privacy failures
View since WEIS 2002 (continued)

• In a market race, you open your system to appeal to complementers such as app writers
• Once you’ve won the race, you lock it down to extract rents
• In one market after another – mainframes, PCs, routers, phones, social network systems – security is added later
• Its design ends up aligned with the platform’s interests almost as much as the users’
Economics of privacy

• Privacy suffers from the same problems as security, and more
• Asymmetric information: users don’t know much about what gets done with their data
• Hyperbolic discounting: many users don’t care about long-term effects of disclosure
• Firms that depend on mining private data go out of their way to not make privacy salient
Now – economics of surveillance?

• The concentration of the industry into a few large service firms (MS, G, Y, FB ...) made the PRISM program foreseeable (except in its details)

• The concentration of the telecomms industry into a handful of large operators similarly made TEMPORA foreseeable (and its was described by several journalists in its earlier form of ‘Echelon’)

• But that’s not all!
Information economics and defence (1)

• Network effects do matter in the defence / intelligence nexus!
• Neutrals like India prefer to join the biggest network
• Network effects entangle us with bad states which use the same surveillance platforms (see rows over exports to Syria)
Information economics and defence (2)

• Medieval warfare was all run on marginal costs (40-60 days service for every peasant)
• WW1: sent millions of men to Germany
• WW2: hundreds of thousands, plus lots of planes, tanks and other capex
• Now: to kill a foreign dictator you can use a $30,000 Hellfire missile
• But we rely on trillions of capital investment
Information economics and defence (3)

- Complex technical lock-in games
- 1980s: it was basically about ammunition and spares
- Now: are you using Cisco or Huawei?
- Very expensive try to build independent infrastructure for government networks
- Even so, shared code can lead to shared attacks
Intelligence network governance

• Core is 5 eyes; expanding circles of others
• Governance: each agency could decide whether to minimise its citizens’ personal data
• Only Canada did so!
• So GCHQ happy for NSA to read my medical records, and NSA happy for GCHQ to read yours!
Law enforcement network governance

- Various models from Interpol through mutual legal assistance treaties
- Very slow and cautious: requests vetted by both governments, often several agencies
- Much effort on accelerating the process, e.g. via personal links created from NCFTA training and exchange programs
One network or many?

• Networks tend to merge: the Internet absorbs everything else
• Will the intelligence network and the law-enforcement network become one?
• Already intel resources are used for rapid solution of exceptional crimes
• NTAC and the Communications Data Bill
• PRISM
Network effects in civil government

• Example 1: the EU smart metering programme, which aimed at energy efficiency and demand response, but was fragmented by national energy markets

• Example 2: the EU itself as a customs union, which ends up imposing its legislation de facto on neighbouring states (Norway, Iceland, Switzerland ...)
The IR Community

• Realists (Thucydides, Machiavelli, Hobbes, Kissinger ...) vs idealists / liberals (Kant, Wilson, Keohane, Clinton ...)

• Not even the latter seem to have considered network effects (rare passing references only)

• Yet network effects surely add weight to the liberal side of the argument

• Serious opportunity for our industry to engage better with governments?
Conclusions

• There’s a big gap between left-coast people and right-coast people
• It’s not just whether you see Snowden as a whistleblower or a traitor!
• The economic models are just as different
• The IR people should start thinking about information economics
• We should start thinking about the economics of surveillance – and what it implies