Stupid Economics?

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Security is a branch of economics

Argued (Anderson, Varian et seq) that it explains a lot of puzzling behaviour...

• People buy backup solutions
  – albeit after they have lost data

• People buy anti-virus software
  – protecting their data

• People don’t buy firewalls
  – why spend money to protect Bill Gates?
Security is a branch of economics

• ATM fraud levels explained by incentives
  – in US the bank stands the cost
  – in the UK it is the customer

• Microsoft’s policy is rational
  – huge “first mover” effect, so shipping
    something that’s “good enough” is wise
But how much of this is true?

- Can we explain the distribution of AV software or firewalls more clearly by looking at what it is cheap to bundle?
- Maybe the crooks are more motivated to go after ATMs in the UK (or easier to catch)?
- Does Chip&Pin affect credit card fraud?
- Do immobilisers reduce car crime?
- Does CCTV reduce crime?
Easy to be seduced by economics

- More junk email than junk snail mail
- “Must be” the cost per unit
- Hence paying for email fixes problem?
- Micropayments schemes still pie in the sky!
- Hashcash (at about tenth cent per email)?
  - at dreadful response rates: $33 break even
  - defeated by an army of compromised machines
We don’t have any numbers

- Don’t know how much spam (or mail lists)
- Don’t know spam response rates
- Don’t know how many virus infections
- Don’t know how much phishing loss
- Don’t know how many protected by AV
- So perhaps suitable for economics where they tend to manipulate symbols anyway...
Summary

- Economics does help us to explain some puzzling things
- And they have a pile of cool results on auctions, elections and stuff that don’t make it into CS101
- But it’s a complex world, and maybe we haven’t explained things properly… perhaps not yet time to change department