

# Cybercrime: Some thoughts on the problem

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[www.southampton.ac.uk/sociology/about/staff/cw01.page#background](http://www.southampton.ac.uk/sociology/about/staff/cw01.page#background)

# Web Science: A Transdisciplinary Perspective

- Study of cybercrime at Southampton synthesises interests arising from 4 research groups.
- Institute of Criminal Justice Research; Academic Centre of Excellence in Cyber Security, IT Innovations and Web Science
- Web Science created by Computer Science Professors Dame Wendy Hall, Sir Nigel Shadbolt and Sir Tim Berners-Lee at the University of Southampton.
- Aim to study the impact of the web in a transdisciplinary way, integrating and combining disciplines.
- [www.southampton.ac.uk/wsi](http://www.southampton.ac.uk/wsi)

# Locating cybercrime

- If you are in your early 20's, then you have not known a world before the internet or mobile phones, you will have grown up having movies available on DVD whenever you wanted to watch them.
- But, not so long ago you had to see movies at the cinema, or hope they would be on the telly. A Bond film was on at Christmas each year, if you missed it you did not expect to see it again for a long while, if you even got to see it at all
- The rapid development of the internet and especially mobile technologies has made life simultaneously complicated and easier
- It has also extended criminal opportunities.

# Criminology and Cybercrime

## What are the challenges that Cyber Security will face?

Some key issues and questions needing answers:

- Why do people act differently when using the Internet and take risks they would not take offline?
  - War on poverty, drugs, crime, hacking?
    - Hacking as state weapon?
    - Identity theft to bio-theft
    - Digital archive AS property
  - Digital Profiling through Big Data
- What are the unintended (criminal) opportunities of the Web and how can we prevent victimisation?
- Facebook status updates: Craig is currently at a Cyber Security event...
- ...so his house is currently empty and available to burgle
- Except for the huge dog (wait and see!)

# UK: Cybercrime is a Tier 1 threat to the nation. More likely than chemical or nuclear attacks

## FINANCIAL TIMES

WEDNESDAY 28 OCTOBER 2015 WORLD BUSINESS NEWSPAPER UK £3.75 (Chester Herald £2.00) (Daily Mail £1.00)

**Predicting Viagra**  
Futurology's hits and misses  
JONATHAN MARSHALL, PAGE 16

**Ham hysteria**  
Unscientific scaremongering about the risks of eating meat  
COMMENT, PAGE 15

**Risk of a run**  
Is sterling riding for a fall?  
MARKET INSIGHT, PAGE 12

### Thousands of identities up for sale on the dark web

- 600,000 UK customers' data stolen
- Sets of details available for \$30 each

**DATA BREACH** Personal details of more than 600,000 customers were stolen from companies in the UK in 2014, leaving the extent of digital weaknesses in British business to the way up to last week's TalkTalk cyber attack. Interior government officials said that "one of the most serious" data breaches in the world took place in the UK last year, including thousands of stolen profiles from the social media site Facebook. The stolen data included names, email addresses, phone numbers, and other personal information. The information was reportedly sold on the dark web for as little as \$30 each. The breach was attributed to a group of hackers known as the "Lords of the Shadow".

### Door open for lower surplus target to 'lessen impact' of tax credit cuts



George Osborne left open the possibility that the rate could be reduced. The Chancellor said that the government was considering a range of options to reduce the impact of tax credit cuts. He said that the government was committed to supporting families and businesses, and that it was looking for ways to make the tax system more efficient. He also said that the government was committed to reducing the deficit, but that it was not willing to sacrifice the welfare of its citizens.

#### Insight

**• UK's private equity industry**  
A failed investment in the finance bill from the British Venture Capital Association's "Venture Capital Association" petition for a "venture capital" tax break has failed to attract the support of the industry's biggest firms.

**• US natural gas suffers price tumble**  
Prices have hit their lowest in more than three years as expectations of a warm winter helped ease fears of energy producers and left little room for gains in the BP and Shell.

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**• Slovenia seeks aid amid migrant crisis**  
The central European state on the front line of the continent's migrant crisis has asked the EU for help in dealing with the influx of refugees.

**• China has sought health insurance tips**  
China has turned to US health insurer Anthem to learn how medical coverage is set up in the US in helping people with growing health care costs.

**• Weak construction holds back growth**  
The recovery of the third quarter of growth in construction and manufacturing has been held back by a weak construction sector.

**• Washington deal set to avert debt crisis**  
Congressional leaders and the White House have struck a deal to avert a debt crisis by raising the debt ceiling.

**• Turkey's voting intentions**  
Turkey's voters are expected to elect a new government in the coming months, with the main contenders being the ruling AKP and the opposition CHP.

**• The EU's new rules on state aid**  
The European Commission has announced new rules on state aid, which will apply from January 2016.

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### Italy is latest entrant to elite negative yield club as stimulus talk fires bonds

Italy's 10-year bond yield fell to a negative 0.1% on Wednesday, making it the latest country to join the elite club of nations with negative yields. The fall was driven by speculation that the Italian government might announce a new stimulus package, which would increase the demand for Italian bonds. The yield on the 10-year bond is now lower than that of the UK and the US, which have both seen their yields fall into negative territory.

### CHAUOMET PARIS



Joaquim Collection  
Argenteo Medallion Ring

INDEX	28 OCT 15	27 OCT 15	26 OCT 15
FTSE 100	6,100.00	6,050.00	6,000.00
DAX	11,500.00	11,400.00	11,300.00
Nikkei 225	18,500.00	18,400.00	18,300.00
Hang Seng	23,500.00	23,400.00	23,300.00
ASX 200	5,500.00	5,400.00	5,300.00
EUR/USD	1.0500	1.0450	1.0400
USD/GBP	0.6500	0.6450	0.6400
USD/JPY	100.00	99.50	99.00
Gold (per ounce)	1,200.00	1,190.00	1,180.00
Oil (per barrel)	45.00	44.50	44.00

COUNTRIES	28 OCT 15	27 OCT 15	26 OCT 15
USA	1.0000	1.0000	1.0000
UK	0.7500	0.7450	0.7400
Germany	0.9000	0.8950	0.8900
France	0.8500	0.8450	0.8400
Italy	0.8000	0.7950	0.7900
Spain	0.7500	0.7450	0.7400
Japan	0.9500	0.9450	0.9400
China	0.8500	0.8450	0.8400
India	0.7500	0.7450	0.7400
Brazil	0.6500	0.6450	0.6400



## For pity's sake, leave Kate alone

AMANDA PLATELL'S plea to the cruel web critics pillorying her weight loss

PAGES 22-23

## Daily Mail

WEDNESDAY, OCTOBER 28, 2015

www.dailymail.co.uk

60p

# BABYFACE 'HACKER' WHO PARALYSED A PHONE GIANT

**Son of a single mother, TalkTalk suspect, 15, is violent video game addict who rarely leaves his bedroom**

**THE boy of 15 arrested over the TalkTalk cyber-attack is a baby-faced loner who rarely leaves his bedroom.** The reclusive youngster is suspected of being behind the huge security breach that put the banking details of four million households at risk. Scores of TalkTalk customers have been targeted by fraudsters exploiting the hacked data and the firm's share price plunged. The

By Arthur Martin, Stephen Wright and Neil Michael

boy was arrested in the pebble-dashed property he shares with his single mother on a rundown estate in Northern Ireland. His online blog reveals he is obsessed with violent video games such as Grand Theft Auto. And neighbours say he was being taught at home after repeated suspensions saw him kicked out of school. He's always



TalkTalk attack suspect: The Mail has altered the youth's appearance to protect his identity



# The response?

2

The 13 websites fashion editors love



Hannah Betts  
Don't kiss me, I'm British

THE



TIMES

Max 15C min 5C

Wednesday October 28 2015 | thetimes.co.uk | No 71740

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The GCHQ building in Cheltenham. Senior spies say they cannot work behind veils of secrecy any longer

Exclusive

For your eyes only

**Ben Macintyre**  
As Britain prepares for new surveillance laws, spies emerge from the shadows to talk to The Times



Britain's most secretive organisation, the eavesdropping headquarters of GCHQ, has given unprecedented access to The Times as parliament prepares to debate groundbreaking legislation to set out the future of spying in the digital age.  
The newspaper was allowed inside the agency's HQ in Cheltenham and its top-secret London offices to see the scale of the intelligence-gathering operation. I was furthermore shown "the Cage", which houses the machine that generates government encryption codes and is the most secret part of the country's £2-billion espionage machinery. Accused by Edward Snowden of conducting "mass surveillance" on

ordinary citizens, GCHQ attempted to show how its officers worked around the clock to identify the muggers of intelligence that protect Britain from terrorist attack, rescue hostages abroad and pinpoint the locations of child abusers.  
The agency is at the forefront of the battle against cybercrime and cyberespionage. Robert Hannigan, the director of GCHQ, said that his organisation "detects a wide range of cyberattacks every day", adding: "The threat is growing in number, sophistication and impact."  
In a three-day series before the expected publication next week of the draft Investigatory Powers Bill, The Times will detail the work of GCHQ from interviews with all its

section heads and visits over several days to its high-security facilities.  
The Secret Intelligence Service (MI6) has also offered access to intelligence officers, who have to hide what they do from their closest family and friends, and ex-informants have described the dangerous reality of spying for British intelligence in the fight against jihadist terrorists.  
Intelligence officials admit that the three main British spy agencies — GCHQ, MI6 and MI5 — have been forced by the Snowden controversy to challenge their own deeply ingrained culture of secrecy. They claim that they recognise the urgent need to inform the public about what they do and how they

do it if they are to continue to command the trust of the population.  
One official said: "GCHQ has to be out there. We can't operate behind veils of secrecy any more."  
Another senior spy rejected the allegation of mass spying and emphasised that GCHQ accessed a minute fraction of internet traffic with the sole intention of thwarting terrorists and other criminals. The head of tradecraft at Cheltenham said: "If the internet is being used to sell you things, who is it wrong for little GCHQ to use a tiny bit of the data to stop you being blown up on holiday?"  
The draft Investigatory Powers Bill is due to be published before

Continued on page 2, col 3





# HACKERS CAN TURN YOUR HOME COMPUTER INTO A BOMB

By RANDY JEFFRIES / Weekly World News

WASHINGTON — Right now, computer hackers have the ability to turn your home computer into a bomb and blow you to Kingdom Come — and they can do it anonymously from thousands of miles away!

Experts say the recent "break-ins" that paralyzed the Amazon.com, Buy.com and eBay websites are tame compared to what will happen in the near future.

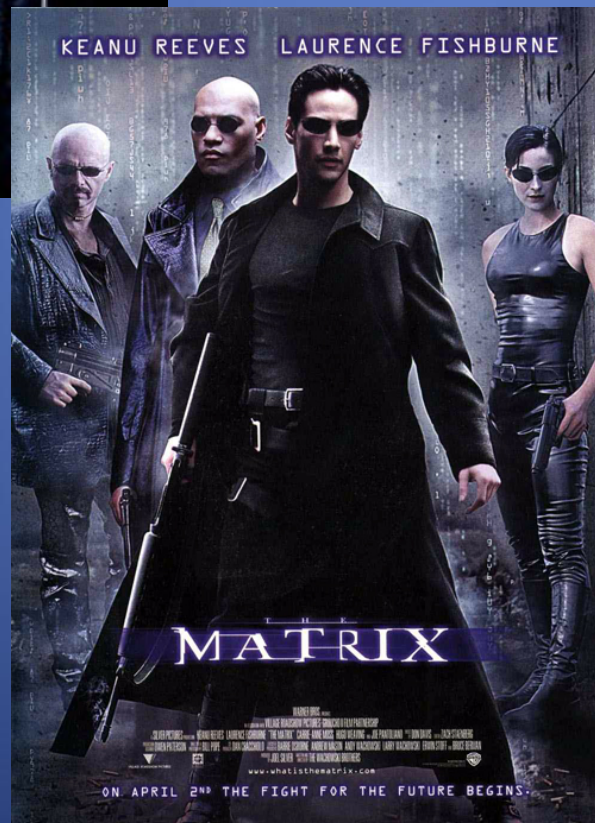
Computer expert Arnold Yabenson, president of the Washington-based consumer group National CyberCrime Prevention Foundation (NCCPF), says that as far as computer crime is concerned, we've only seen the tip of the iceberg.

"The criminals who knocked out those three major online businesses are

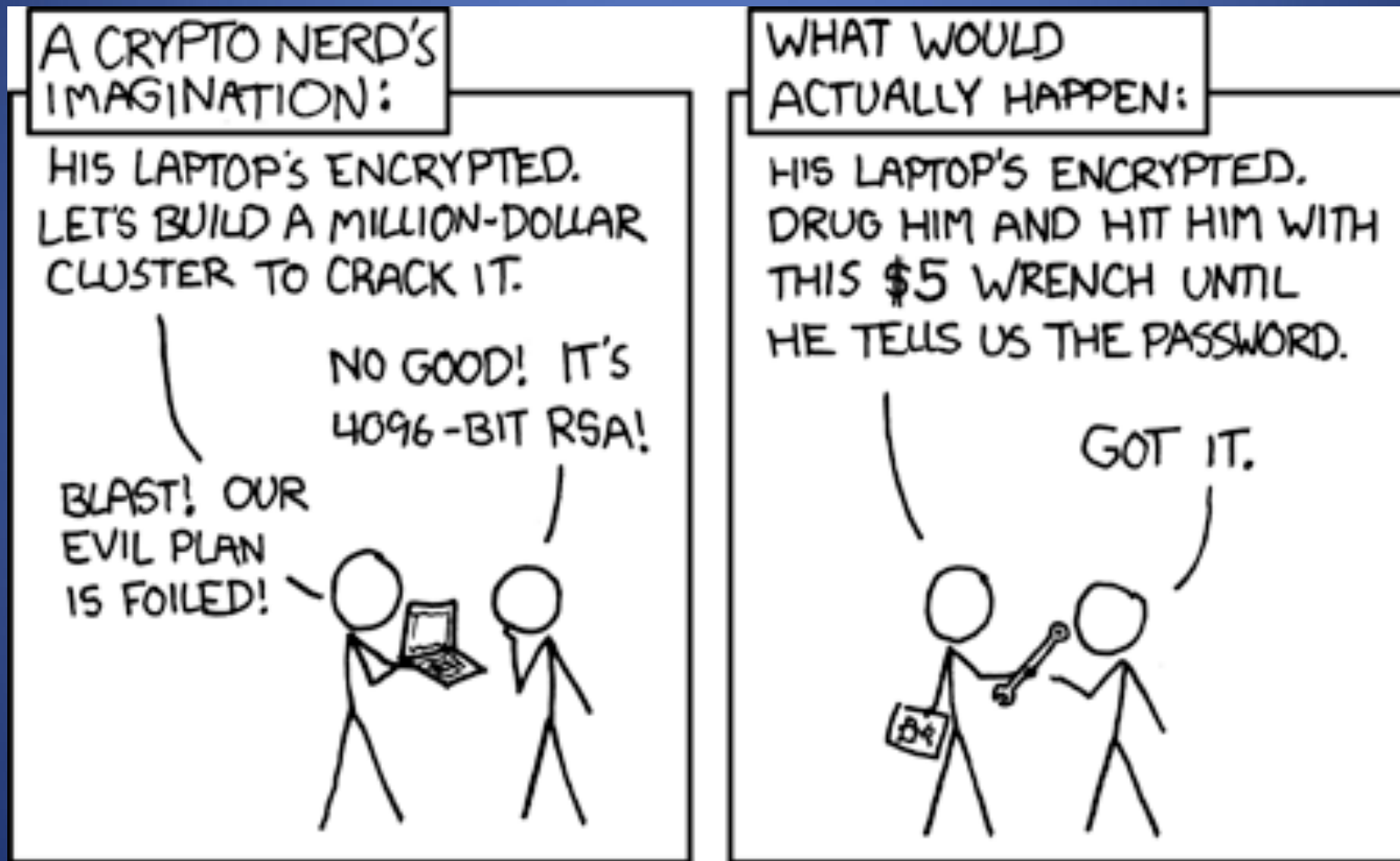
... & blow your family to smithereens!



KABOOM! It might not look like it, but an innocent home computer like this one can be turned into a deadly weapon.



# Exploiting the Weakest Link





# Let's look inside the Cybercriminal Mind

- Not a great deal different to what we might find in anyone else's mind.
- Motivations will be similar
- Personality fits within everyday parameters: some shy, some outgoing, some aggressive...
- Some are not even aware that they are engaging in crime
- A lot of cybercrime is the result of a desire for a thrill, or to show off a skill
- Big data to profile cybercriminals, and big data used by cybercriminals to profile you

# Important issue:

## Drifting on and off line

- Crime that occurs online frequently drifts offline.
- The boundaries between online and offline are blurred. The virtual online world is now where many of us live all the time. Smartphones are common.
- A credit card needs to be either stolen or the magnetic strip and identifying details copied.
- This is a face-to-face relationship
- It needs to be physically stolen, or copied when you buy something
- A PIN can be stolen in a variety of ways. Simplest is to watch you enter it

# What can be done?

- Criminals of all varieties need to TRUST each other
- Undermining trust is the single most important tool for disruption of crime



# The Future?

## Biometrics?

The passkey that you can never forget?

What are the potential problems?

If key parts of who we are become  
'owned' by companies, governments  
and services, what becomes of our  
humanity?

Do we need this much security?

# Contactless payments?









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# Thank you for listening