

CRIM6002

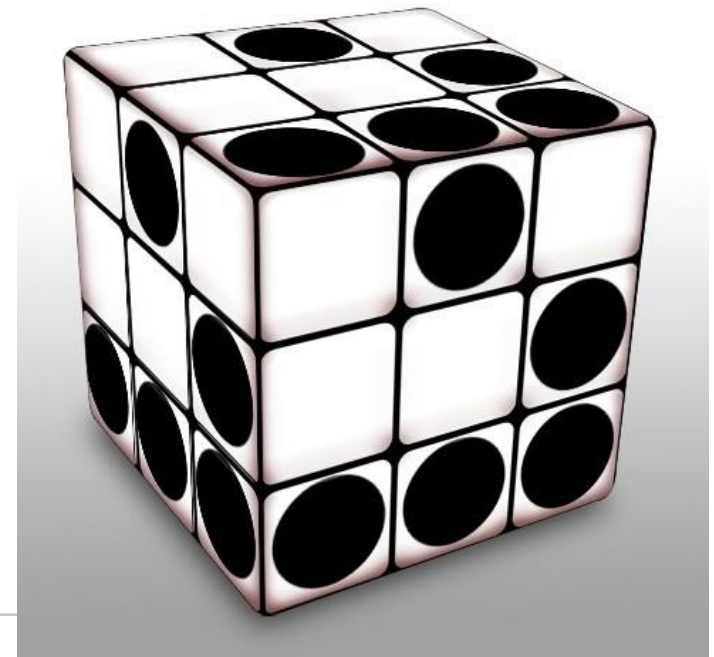
Hacking

Workshop 4

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Today

- Hacking, hackers
 - Definitions, myths, and realities
 - Illegal/deviant behaviours
 - Why?
 - Challenges



Hacking, hackers

“Hack” as an innovative use of technology

“Hacking” as “the unauthorised access and subsequent use of other people’s computer systems”
(Taylor, 1999)

“Crackers”, “black” / “grey” / “white” hats



Hacktivism



"Mr. Grimshawe, somebody's
hacked into the
office computer!"

“Hacking” as socially constructed

- **Labelling process** (Becker, 1963)

Social groups create deviance by creating rules and applying them to particular people whom they label as “outsiders”.

Therefore an act or person only becomes deviant when labelled by others as deviant.

- **Moral panic** (Cohen, 1972)

[next slide]

Social representations of hackers

- Hyperbole
- Unusual intelligence, ingenuity VS resistance to invasive use of technological power





What hackers do (1)

- Unauthorised access to a computer system (“taking ownership” of a system)
 - E.g., by the network of computer sy
 - New wave of automatic methods
 - ☐ Botnet *[next slide]*
 - ☐ Zombie machines
 - Smartphones
 - ☐ Near field communication (NFC)





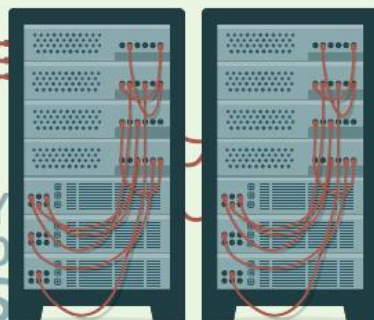
1. Criminal infects your computer with Malware.

2. Criminal sends attack orders to servers.

ANATOMY OF A BOTNET ATTACK

FROM CRIMINAL TO TARGET

CRIMINALLY CONTROLLED SERVERS



3. Your infected computer retrieves the orders.



Your Internet Service Provider may...

- notify you if they detect a known botnet
- block communication with compromised servers

4. Your computer carries out the orders attacking the target.

YOUR PERSONAL COMPUTER



What hackers do (2)

- Theft of computer resources (e.g., leeching)
- Theft of proprietary or confidential information
- System sabotage, alteration, and destruction
- Website defacement and “spoofing”

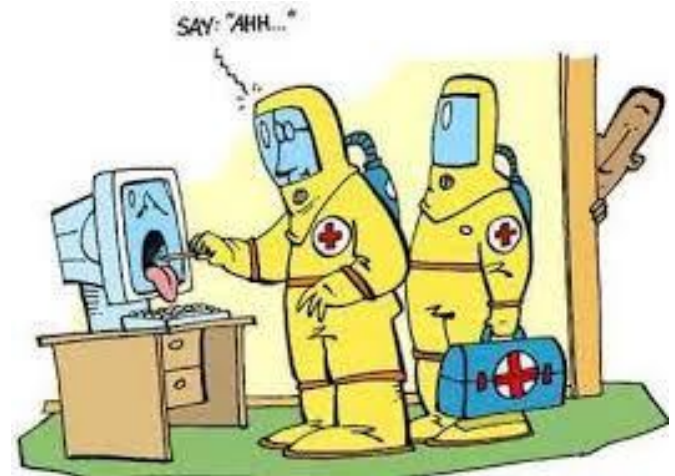
[no need to “break in”]

- Denial of service attacks
- Distribution of malicious software *[next slide]*



Distribution of malicious software (“malware”)

- *Viruses* (need host to reproduce and transmit themselves)
- *Worms* (capable of self-replication and self-transmission)
- *Trojan horse* (appears to perform a useful function but has hidden destructive capabilities)



Please note: “Democratisation” of hacking

Debate

- Do you think these types of actions constitute completely new crimes or they are “just” updated versions of “old” crimes? Why?
- What kinds of harm are caused by hacking activities?



Why?

- Rational actors, profit-driven
- Malicious, vandalism and destructive behaviour
- Moved by political ideas/ideologies - “cyber-vigilantism”
- Intellectual curiosity, to “improve” – “The Hacker’s Manifesto” *[next slide]*
- ...

- **Techniques of neutralisation** (Sykes and Matza, 1957)
- **Routine Activity Theory** (Cohen and Felson, 1979)
- **Masculinity** (cultural influences)
- **Juvenile delinquency** (developmental criminology, subcultural/differential association theories)
- **Psychological perspective**: “Internet addiction disorder”



“The Hackers’ Manifesto” by “The Mentor”, 1986

"Yes, I am a criminal. My crime is that of curiosity. My crime is that of judging people by what they say and think, not what they look like. My crime is that of outsmarting you, something that you will never forgive me for. I am a hacker, and this is my manifesto. You may stop this individual, but you can't stop us all... after all, we're all alike."

Challenges

1) Tendency to rely on existing legislation

2) Computer Misuse Act (1990)

- Gaps in the law
- Difficulties in policing
- Lenient sentences
- Transnational (Council of Europe “Budapest” Convention on Cybercrime)

Debate

- Can you think of ways that you to make things (more) cyber-secure? Think about how what we covered today applies to your computer, phone, and other devices that connect to the Internet

Cyber-physical systems

