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CHAPTER 3: THE ETHICAL HACKER

What is a Hacker?

- 'Hack'
  - Refers to unconventional methods
  - Negative and positive meaning
  - Unauthorized access
- Cybercrime
  - Cyber trespass
  - Cyber vandalism
  - Computer fraud
  - Cyber terrorism
- Laws
  - Computer Fraud and Abuse Act (CFFA)
  - US PATRIOT Act

Is Hacking Always Wrong?

- Ethically neutral
  - Hacking is skill set
  - Hackers similar to doctors, locksmiths, or martial artists
- User responsibility
  - "Open door"
- "Slippery slope"
  - Hacking leads to less-than-ethical activity

Why do People Hack?

- Nuisance
  - Cheating on video games
- Activist
  - Election tampering
- Crime
  - Identity theft, malware, ransomware
- Acts of War
  - Attacks on critical infrastructure

The professionalization of hacking

- "Old" hacker ethic
  - Not an ethical system
  - Aspiration by early hackers
  - Technologically deterministic
  - Declaration of the Independence of Cyberspace
  - Information has agency/will

New and old hacker ethics

- New values on intellectual property
  - Rejection of technological determinism and utopianism
- New Ethic
  - Hacker community defines values
  - Share code, don't freeload
  - People have right to privacy
  - Internet self-governing
  - Worlds are linked
  - Community self-governance

Development of a professional code

- Certified Ethical Hacker
  - "White-hat" hacker
  - Endorsed by NSA and DoD

- Certified Information Systems Security Professional (CISSP)
  - ISC Code of Ethics

White hat, black hat and grey hat hackers

- "Black hat hackers"
  - Malicious cyber action
  - Cyber hostage taking
  - Harm specific individuals, classes of individuals, corporations, agencies, or nations
  - Unauthorized access to systems

Ethics of Pen Testing

- ⦿ Penetration testing
  - Practice of accessing another person's/company's system
  - Widely utilized
  - Utilizes traditional hacking and social engineering
    - ○ Social engineering involves deception

Ensuring the legality of penetration testing

- Written agreements
- Certifications for pen testers
- Nondisclosure agreements
- Ethical issues
  - Virtue
  - Utilitarianism
  - Deontology

Going Deeper: The EFF

- Electronic Frontier Foundation (EFF)
  - US-based nonprofit
  - Champions civil liberties in cyberspace
  - Issues
    - Net neutrality
    - NSA surveillance
    - Blogger/journalist rights

Going Deeper: Bug Bounty Programs

- Rewarding hackers for reporting security flaws
  - Netscape in 1995
  - 2016, "Hack the Pentagon"

Application: Sharing Passwords

- Virtue Ethics
  - Does this make one *moral* (intent)?
- Utilitarian Ethics
  - What is the outcome?
- Deontological Ethics
  - Is there a universal principle?

MAKING IT 'OFFICIAL'

NETFLIX OFFICIAL

PUT A RING ON IT

51% BELIEVE SHARING A NETFLIX PASSWORD MEANS THE RELATIONSHIP IS SERIOUS.

17% WILL NOT SHARE THEIR NETFLIX PASSWORD UNTIL THEY GET ENGAGED!

Application: Ransomware

- Ransomware
  - Holds files "hostage" for "ransom"
- Reacting to ransomware
  - Attribution and jurisdiction problems
  - Should people pay?
- Ethics of paying a ransom
  - Paying may cause future harm
  - Duty to protect
  - Save "some" or "more"?

Discussion

- If you work in an authoritarian country, do you have to obey that country's laws to be an ethical hacker?

- How do you ethically approach setting up servers for illegal/immoral activities?

- How do the skills associated with hacking enhance/detract from society?