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CHAPTER 8: THE WAY FORWARD

The moral significance of one's work

- ◎ What does it mean to be an ethical cybersecurity *professional*?
 - Deontological/utilitarian: limited, preventative
 - Virtue: character of professional

View one: avoiding harm

- ◎ The 'ideal' professional
 - Avoid creating harm *and* improve lives
 - E.G. Hippocratic Oath
 - Virtues
 - Value safety
 - Value sustainability
 - Value efficiency

View two: cultivating moral imagination

- ◎ Awareness of social implications of technology
 - ‘Big picture’ mentality
 - Consider problems through many angles
 - Positive/negative soft impact
 - ‘Moral imagination’

Looking Forward: Anticipatory Ethics and Cybersecurity

- ◎ Dynamic ethical challenges
 - Anticipate new ethical challenges
 - Emerging technologies
 - Epistemic communities and professional standards

Comparing codes today

- ◎ Starting point – ethical codes
 - Differ in specificity and universality
 - ‘Bottom-up’ codes, imposed codes

- ◎ ACM Code
 - Contains all three perspectives
 - Lays out responsibility of professional
 - Larger vision of professionalism

Enacting Cybersecurity in the Real World

⊙ Ethical constraints

- Professional constraints
- Organizational constraints
 - Money, time, one's position
- Previous decisions
 - Solutions to prior technical decisions
- Constraints through expectations
- Political constraints

Defining the scope of professional responsibility

- ◎ Responsibility belongs to architect and user
 - Maker responsibility to 'guide' ethical behavior
 - User responsibility to consider choices

Going Deeper: Just War Theorists

- ◎ Augustine of Hippo
 - Born in North African provinces of Roman Empire
 - Critical exploration of Christianity
 - *Contra Faustus* seminal for Just War Theory
- ◎ Thomas Aquinas
 - Catholic priest, *Scholastic* period
 - *Summa Theologica* – Natural Law and Just War
- ◎ Hugo Grotius
 - Dutch philosopher, father of international law
 - Contributed to sovereignty, international commerce, just war
 - *De Jure Belli ac Pacis* – contemporary Just War development

Application: US Cybercommand

- ◎ Established 2009
- ◎ Mission to defend DOD networks, support US commanders, react proactively/reactively
- ◎ US conception of cyberspace as warfighting domain
- ◎ Trains cyber/information warriors
- ◎ HQ at Fort Meade, MD

Discussion

- ⦿ Should the ACM regulate computer activities?
- ⦿ Is it appropriate to have a professional 'ideal' for cybersecurity?
- ⦿ How can we best prepare for future challenges?
- ⦿ Have you experienced ethical constraints, and if so, how have you overcome them?