

# Engineers as Responsible Experimenters

Jack Moore, Alex Wentzel, Ben Shenk, Bryce  
Persichetti, Rob Mustak

A.K.A. Park of the Covenant

# Unit 4.2: Engineers as Responsible Experimenters

Four major features of being a responsible person while acting as an engineer:

- 1) A primary obligation to protect the safety of human subjects and their right of consent
- 2) A constant awareness of the experimental nature of any project, imaginative forecasting of its possible side effects, and a reasonable effort to monitor them
- 3) Autonomous, personal involvement in all steps of a project
- 4) Accepting accountability for the results of a project

# Conscientiousness

- We must be sensitive to the full range of moral values and responsibilities relevant to a given situation
- Freely applying one's conscience
- Constant consideration of societal impact

# Comprehensive Perspective

- Commitment to obtain and assess all available information pertinent to the holding of moral obligations
- Mustn't pass off moral obligations as someone else's job (customer relations, governmental bodies)
- “Preventative Technology”- the implementation of technology with the goal of curing issues while creating minimal new problems

# Moral Autonomy

- Engineers are responsible to maintain independent morality
- Voicing opinions and objections regardless of perceived attitude of others
- Working in the interest of a company or organization does not free oneself from moral obligations

# Accountability

- Responsible experimenters must accept responsibility for their actions
- Being open to have one's actions scrutinized and assessed
- Accepting and responding to feedback from others
  - Doing so despite fragmentation of responsibilities within a project

# The Law and Industrial Standards

- Engineers must work under the purview of governmental and industry regulation
- One must avoid being blinded by minimal compliance
  - Leads to avoidance of responsibilities in lieu of leaning on regulations
- Groups tasked with safety and compliance cannot always keep up with tech development
  - In many cases, regulatory development occurs in response to a disaster
  - Ex. 3-Mile Island disaster leads to development in regulation of nuclear power plants

# Discussion Questions

- What are some excuses commonly used to avoid moral obligations in relation to engineering roles?
- “If I don’t do it someone else will”
- “I only work here”
  - It’s not my job to question the rules, just to follow them
- “There’s no rule against it”
- “Everybody does it”



# Discussion Questions

- What are the challenges faced by regulatory bodies? What sort of regulations that you know of impede innovation? What are some examples of regulations which you see as vital to safety and responsibility?
- Use of electronics on airplanes (in flux)
- Environmental regulation for cars
- Deep water horizons drilling incident