Computers and Safety Critical Systems Electrical and Computer Engineering Howard University Instructor: Dr. Charles Kim WWW.MWFTR.COM

The Origins of Accident

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Special Topics Computers and Nuclear Energy
Assignment #3

Impending nuclear war?



Opening thoughts



- * The author, Scott Sagan, began his chapter by saying how lucky we are that never in history we had a serious accidental nuclear denotation. But however, history shows that there's a first time for everything.
- * However, we did had near catastrophic events relating to the failure of nuclear plants. Notable examples: The Chernobyl disaster, the Three Mile Island accident, and recently the Fukushima Daiichi nuclear disaster

The author's main point





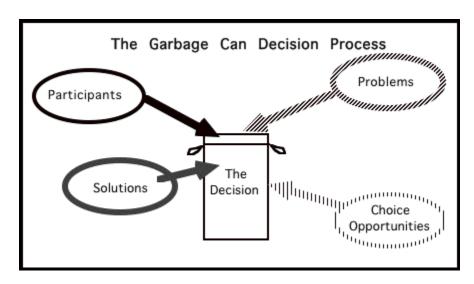
- * The author use two scholastic theories to explain that could complex organizations, like nuclear power plants, are capable of handling hazardous materials.
- * The two theories are:
- High reliability theory optimistic view
- Normal accidents theory pessimistic view

High reliability theory



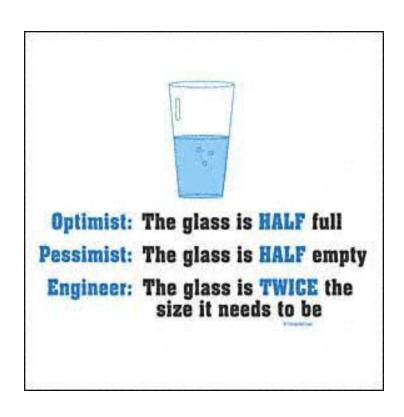
- * Redundancy
- * Culture of reliability in the organization Everyone works as a group, know what to do, and is prepared for any event.

Normal accident theory



* Garbage can model - any organizations could have inconsistent preferences, unclear technologies, and fluid participation

My own opinion from the chapter



* Both theories should be look upon for maintaining a complex organization. While I believe that through hard work and preparation is enough for maintaining hazardous materials, accidents of any kind will happen.