

## Technology as an Agent of Social Change (Outline of a longer presentation) 2010

Jim Dator  
Hawaii Research Center for Futures Studies  
Department of Political Science  
University of Hawaii at Manoa

1. Definition of "Technology":
  - How humans do things.
  - Technology is not just tools. It is also techniques, and more.
  
2. Three views of the relation between technology and society.
  - A. "Mere" Technology
  - B. "Demonic" Technology
  - C. "Transforming" TechnologyExamples of each view.

We become "human" and change what it means to be human by interacting with each other and our environments via technology (media).

Technology is not neutral.
  
3. Three components of technology.
  - A. Hardware
  - B. Software
  - C. OrgwareExamples of each component.
  
4. All rules, mores, laws, and ethical and moral values are based on behavior.

Behavior is based on biology, environment, culture, situation, technology, and will.

New technology permits new behavior which eventually changes beliefs and challenges old rules (if not "your" beliefs, then of those who "grow up" with the technology).
  
5. Three kinds of technology.
  - A. Physical
  - B. Biological
  - C. SocialExamples of each kind.

Each hardware has its own software and orgware.
  
6. Lifecycle phases of a technology.
  - A. Invention
  - B. Development
  - C. Diffusion and maturity
  - D. Obsolescence and replacementExamples of each phase

7. Specific, category, and level of technology and social/environmental impact.

A. A single new technology has little impact.

B. Categories (groups) of new technologies have some impact.

C. New levels of technology have greatest impact.

Eg., a single computer had little impact on industrial society. Groups of individual computers had more impact. But linked computers and related technologies ended the "industrial society" and created the "information society".

8. Technology Transfer

From first use to other uses.

Military to civilian

Games to education

"Developed" to "Underdeveloped"

Always in an historical and cultural context. More than "technology" is transferred.

Examples of some consequences of transfer.

9. Technology Assessment

Assess the social and environmental consequences of a technology before developed or transferred.

US (and Hawaii) Office of Technology Assessment

Difficult to do, theoretically and politically.

Can we say what technologies we "need" before we use them?

10. Functions of technology

Manifest

Latent

Examples and consequences

11. Concluding point

Humans have never been "without technologies".

Examples and consequences for the futures.