

Questions?

Psychopathology of everyday things

- Everyday frustrations
 - Blame it on the users?
 - *They should learn?*
 - *They should read the manual?*



Psychopathology of everyday things

- Everyday frustrations
 - Blame it on the users?
 - *They should learn?*
 - *They should read the manual?*
 - Blame it on poor design?
 - *Does not take into account basic human capabilities*
 - How humans perceive the world
 - How humans learn
 - How humans cope with errors

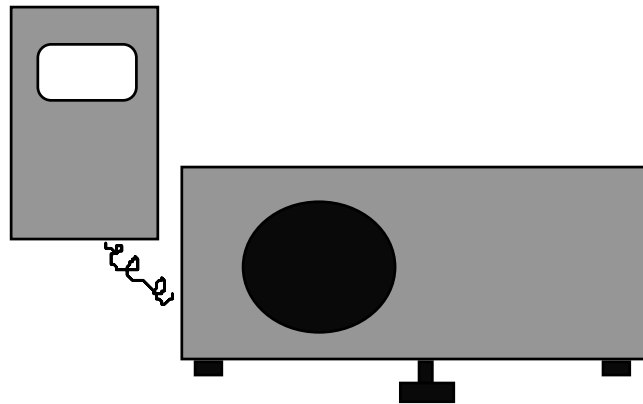
Psychopathology of everyday things

- How many of you can program or use all aspects of your
 - *digital watch?*
 - *VCR?*
 - *sewing machine?*
 - *washer and dryer?*
 - *stereo system (especially car ones)*
 - *unfamiliar water faucets*



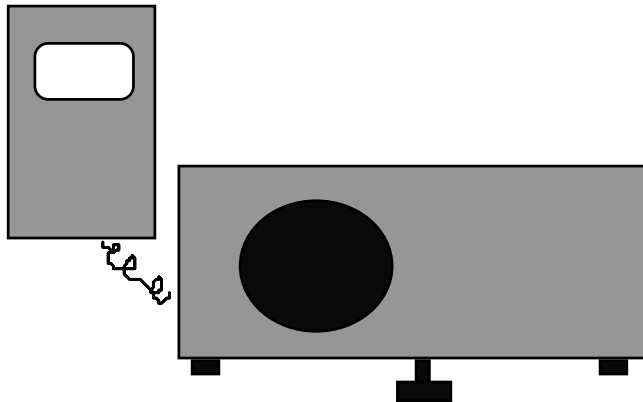
Other pathological examples:

- Remote control from Leitz slide projector
 - How do you forward/reverse?



Other pathological examples:

- Remote control from Leitz slide projector
- Instruction manual:
 - *short press*: slide change forward
 - *long press*: slide change backward



Do mouse buttons seem similar?

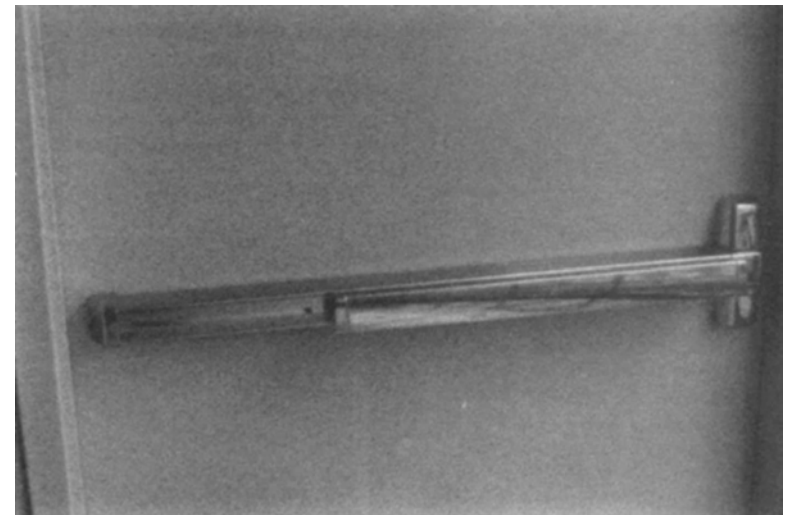
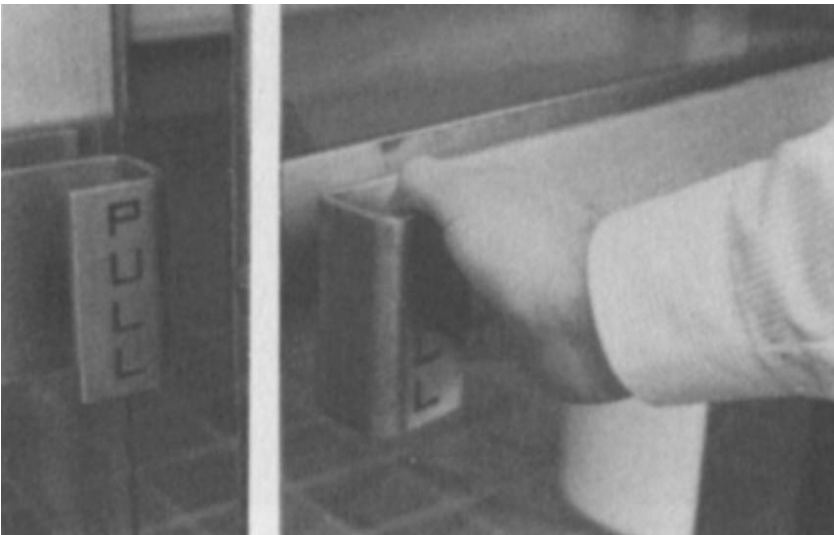
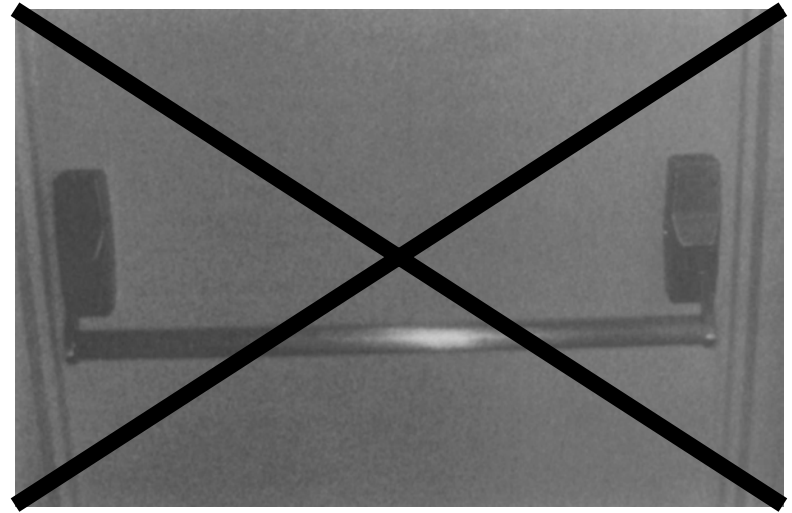
**Unix, PC, Mac debate:
How many mouse buttons?**

Why so many frustrations?

- Every objects is designed
- Many criterions influence the design outcome

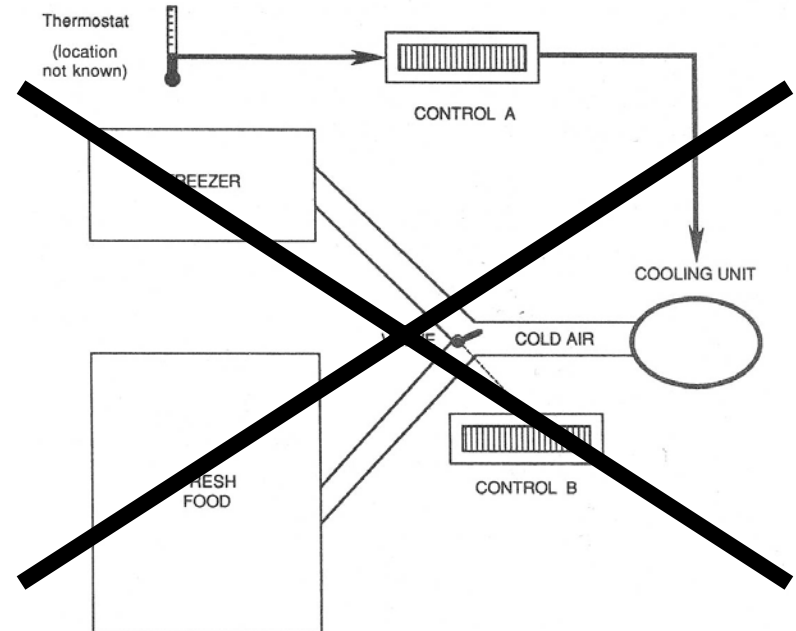
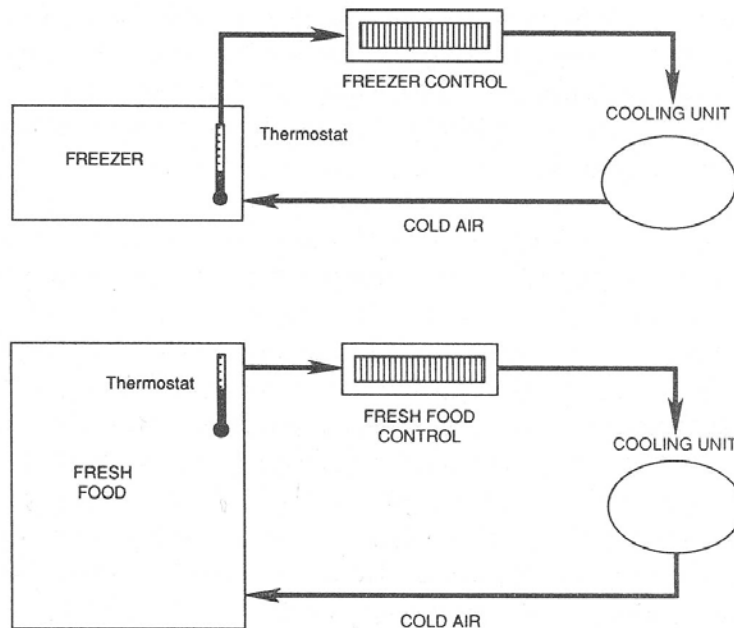
Fundamental Design Goals

- Provide the right affordances



Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
 - Fridge control



Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
- Provide a good mapping
 - Mercedes seat adjustments



Fundamental Design Goals

- Provide the right affordances
- Provide the right conceptual model
- Provide a good mapping
- Make things visible
 - A step backward: BMW iDrive?



Who are your users?

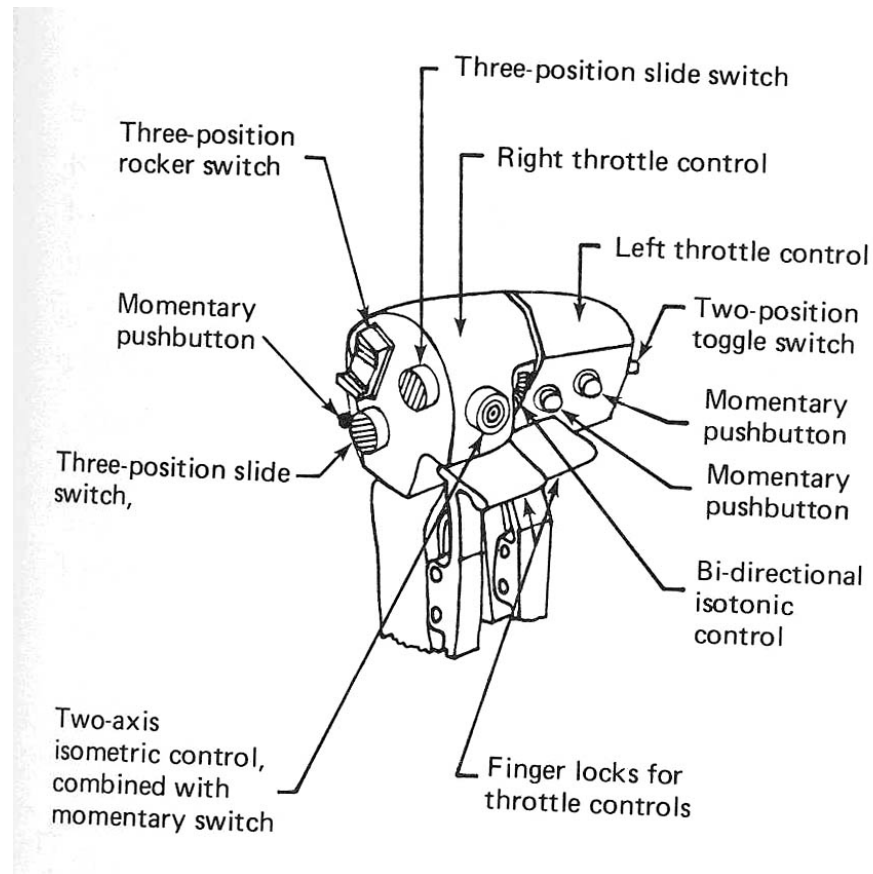


Darn these hooves! I hit the wrong switch again!
Who designs these instrument panels, raccoons?

Who are your users?

- F18 left hand control

(From Human Factors in Engineering and design)



Who are your users?

- Accessibility / Universal Usability
 - Ages
 - *Kids, elderly...*
 - Capabilities
 - *Visually impaired...*
 - *Physical disabilities...*
 - Socio-economical status
 - *Digital Divide*
 - ...

How to measure it?

1. Speed - Speed of performance
2. Accuracy - Rate of errors by users
3. Learnability - Time to learn
4. Memorability - Retention over time
5. Preference - Subjective satisfaction

Brainstorming

“The best way to get a good idea is to get a lot of ideas”
(Linus Pauling)

- Seed the brainstorm
- Get physical
- Follow the rules (IDEO)
 - Defer judgment
 - Encourage wild ideas
 - Build upon idea from others
 - One conversation at a time
 - Stay focus



Brainstorming sessions

- New ways to enter text on a computer
 - For everyone
 - For physically impaired persons
- New ways to pay for your MP3
- Interacting with MS/Windows while visually impaired
- New ways to take digital pictures
 - Easy panorama, no need for flash
- New ways to manage your digital photo album
- New scanner interfaces
- Reducing waiting line at 6 Flags

Homework & Project

- Homework I
 - Usability report for:
 - *Remote control*
 - *Car radio*
 - *Cell phone*
 - *MP3 player*
- Grad project
 - Implementation
 - Study
 - Research paper

Questions