CMS.608 / CMS.864 Game Design
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- The reading had two bad definitions of "information"
- In the future, don't use the word "information" …unless you're trying to deliberately confuse

- 'Information' as a measure of uncertainty
- In the Shannon-Weaver model, information is the range of possibilities
- So in game design, the <u>perimeter</u> of all moves that the players can make is the possibility space
    - Degrees of freedom, range of choice
- One important difference between information and uncertainty is NOISE
- Noise is a part of the information that is not controllable by the source
- This fits in with the idea of games as purposely inefficient systems
    - Being unable to clearly communicate in Charades or Pictionary <u>is</u> the point of the game
- It can be more fun, or it can be just frustrating
- Game state and player knowledge can be obfuscated
- A particular signal can mean more than one thing
    - Can happen in many ways – for example, low sampling rate
- Are there games where you're trying to communicate to some people but not others?
    - Canadian Fish, Kemps, Bridge, sports signals
- There's misdirection, obfuscation, encoding
- Noise cancellation is redundancy is error correction
- Are there games with error correction?
    - Sudoku, Picross, any game with multiple referees, photo-finish for races
    - Even in video games, if you get shot, there are multiple signals: sound effects, red flash, stats drop, other visual effects…

- Perfect vs. Imperfect knowledge
- Most board games have perfect knowledge
- Are there card games with perfect knowledge?
    - Freecell,
    - Blackjack? Is the state of the deck knowledge?
    - Hard to find, because cards are <u>designed</u> for hiding information
- There are games with too much knowledge as well as too little knowledge
- There are games where the rules are the commodity
    - Flux, Mao
- Computer games can be generally slow to introduce rules, since the rules are hard coded in, so the players don't need to understand every nuance to play
- Over the course of play, the range of uncertainty generally decreases
- Are there games where uncertainty increases?
    - Mario Kart?
    - Strategy games where the effects multiply

<u>Managing information, I mean knowledge, overload</u>
- Player memory and player computation power
- Many games (especially German computer simulations!) throw a <u>matrix</u> of information at you – too much!
- But too little information, like a text adventure, can be bad too
- Overall, decisions should be easy to make and execute
- The data can be obscured (and should be sometimes!)

- Objective vs. perceived information (warning: bad definition in book!)
- Is perceived information the stuff you the player know and the objective info what's there in the game?