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CMS.608 / CMS.864 Game Design
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Emergence, cybernetic systems

- positive/negative feedback
- dynamic difficulty adjustment
- emergence exercises

Positive and Negative feedback in Cybernetic Systems

- a tool to regulate fun and interest in games
- it can happen outside the game rules, just between personalities
- think Monopoly – positive feedback
 - but the losing players can collude...

DDA

- Mario Kart
- how does the player know about it? does it feel cheapened?
- the balance of challenge vs. skill
- anxiety -> flow channel -> boredom
- but maybe the “flow channel” should $\wedge\wedge\wedge$ -> a bit
- variable positive reinforcement
- does it happen in non-digital games? (not statistically!)
 - Risk

Two kinds of games

- Emergence
 - strategy guides
 - “more than the sum of its parts”
- Progression
 - walkthroughs
 - “no more than the sum of its parts”
- most games these days combine both
- originally most adventure games were about progression
- now action games (like shooters) are about emergence
- John Conway’s Game of Life – not a game, but emergence
 - simple rules, but independent structures
- sometimes emergence breaks the game – they can surprise you!
- if you plan for it, is it emergence?
- orthogonal unit differentiation – Harvey Smith
 - all units should have more than one axis
 - even in a seemingly simple game system like Katamari, objects have size and shape
- parameters vs. rules
 - is there a clear distinction between them?
- rule changing games
 - players like changing strategies but not difficulty spikes
 - in multiplayer, is an all-over difficulty spike meaningless?