Game and Learn:
An Introduction to Educational Gaming
1. What Is A Game?

Ruben R. Puentedura, Ph.D

Some Definitions

Formal Definition of **Play** (Salen & Zimmerman)

"Play is free movement within a more rigid structure."

Vygotsky on Learning

- Zone of Proximal Development (ZPD):
  - Gap between:
    - what a learner can accomplish independently (the Zone of Current Development, ZCD)
    - what they can accomplish with assistance from a "more knowledgeable other" (MKO)
- *"…what a child can do with assistance today she will be able to do by herself tomorrow."*
- This is an iterative process:
  - The ZCD and ZPD change over time;
  - Independent practice is required to close the loop.

Vygotsky on Play and Learning

"…play creates a zone of proximal development of the child. In play a child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself."

Formal Definition of **Game** (Salen & Zimmerman)

"A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome."

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Relationship of Videogame Play to General Play

Videogames

Game Play

Ludic Activities

Being Playful
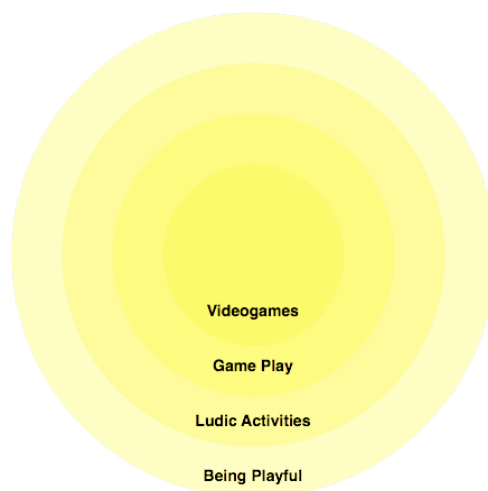
Games and Abstraction

- Some videogames are more like real-life simulations:
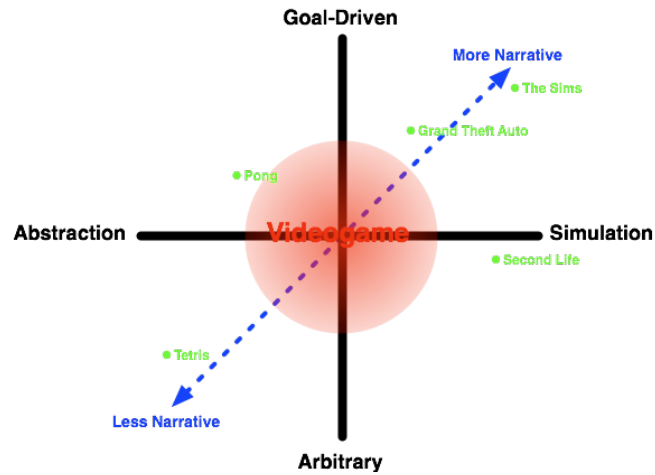

- Others are more abstract:

Games and Goals

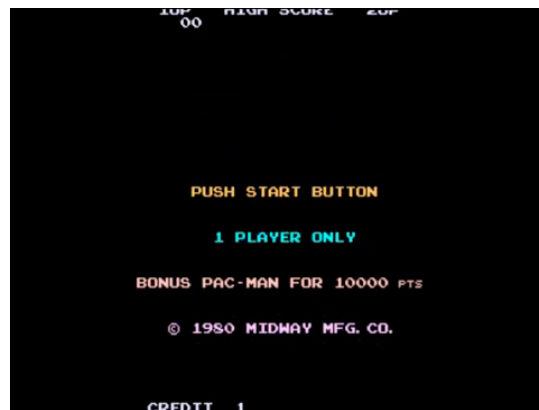- Some videogames are driven by real-life type goals:

- The goals in other games are more arbitrary:

Games and Narrative

Example: *Pac-Man*

Example: *Ico*

Exercise: Elements of a Game

- Sample games:

  - *Pac-Man*

  - *Tetris*

  - *Space Invaders*

  - *Breakout*

  - *Donkey Kong*

Resources Cited

- **Some Definitions:**
  - Salen, K. and E. Zimmerman. *Rules of Play : Game Design Fundamentals.* The MIT Press. (2003)
  - Vygotsky, L. *Mind in Society: Development of Higher Psychological Processes.* Harvard University Press. (1978)
  - Koerper, H.C. and N.A. Whitney-Desautels. "Astragalus Bones: Artifacts or Ecofacts?" *Pacific Coast Archaeological Society Quarterly*, 35(2&3). (1999)
  - Puentedura, R.R. "Playing Games in Education - or, *Thank You Mario… But Our Princess Is In Another University!*". *NMC Summer Conference*. (2005)

- **Photos:**
  - *Young Chimps Play*, by Jonny White:
    http://www.flickr.com/photos/jonnyw/282283374/
- **Game Videos:**
  - PacMan:
    http://www.youtube.com/watch?v=uswzriFIf_k
  - Ico:
    http://www.youtube.com/watch?v=f3puAsMp0MI

Hippasus

http://hippasus.com/rrpweblog/
rubenrp@hippasus.com