

# Rules, Game Types

# Upcoming Assignments

Friday: Team Selection for semester project

Name of team

Full names of students on team

Two pieces of contact info for each team members

Two times during week when entire team can meet for at least one hour

A default location that is used for meetings

**NEW: Email to me!**

# Announcements

Argh! I need your gamelog user id to find your game logs!

Fill out sheet in class

# What you should have read for today

- Read: Chapter 13 (The Rules of Digital Games, pp. 141-149), Chapter 14 (Games as Emergent Systems, pp. 151-171) of Rules of Play.
- Read: Chapter 3, pages 61-83, of Half-Real, Jesper Juul

# Games of Emergence and Progression

- There are two broad structures to games
- From Jesper Juul, *Half-Real*, MIT Press, 2005.
  - Games of Emergence
  - Games of Progression

# Games of Emergence

- Interactions among rules combine to create intricate and complex gameplay
- The historically dominant form of game
- Chess, Go, Bridge, etc.
- Civilization, real-time-strategy games
- “Easy to learn, difficult to master”

# Games of Progression

- Games of Progression
  - Challenges are presented serially, by way of special case rules
  - If player goes to position P, go to cut scene, then have boss fight
  - Designer explicitly decides how game will progress
- Most role playing games, most shmups
- Historically newer game form, evolved out of adventure games

# Challengers for Games of Emergence

- Set up challenges indirectly due to the way rules interact
- Interactions among each unit's movement, attack strength, attack range, terrain interactions, etc. in turn based strategy games like Advance Wars: Dual Strike

# Challenges for Games of Progression

- Directly set up each consecutive challenge in the game
- Waves of aliens in shmups
- Progression of boss fights in role playing games

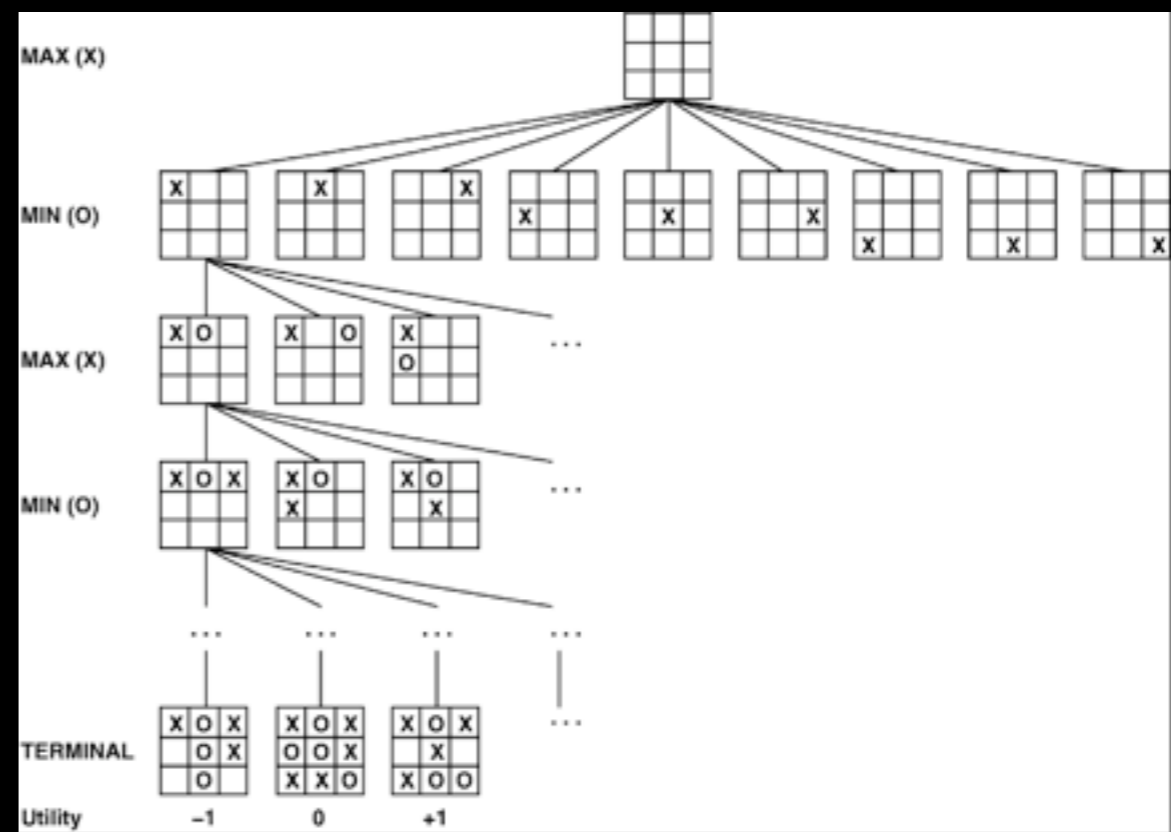


# one way to tell a game's type

- Game guide test
  - Search for a game guide for the game on the Internet
  - If the guide is a walkthrough, it's progression
  - If the guide is a strategy guide, it's emergence

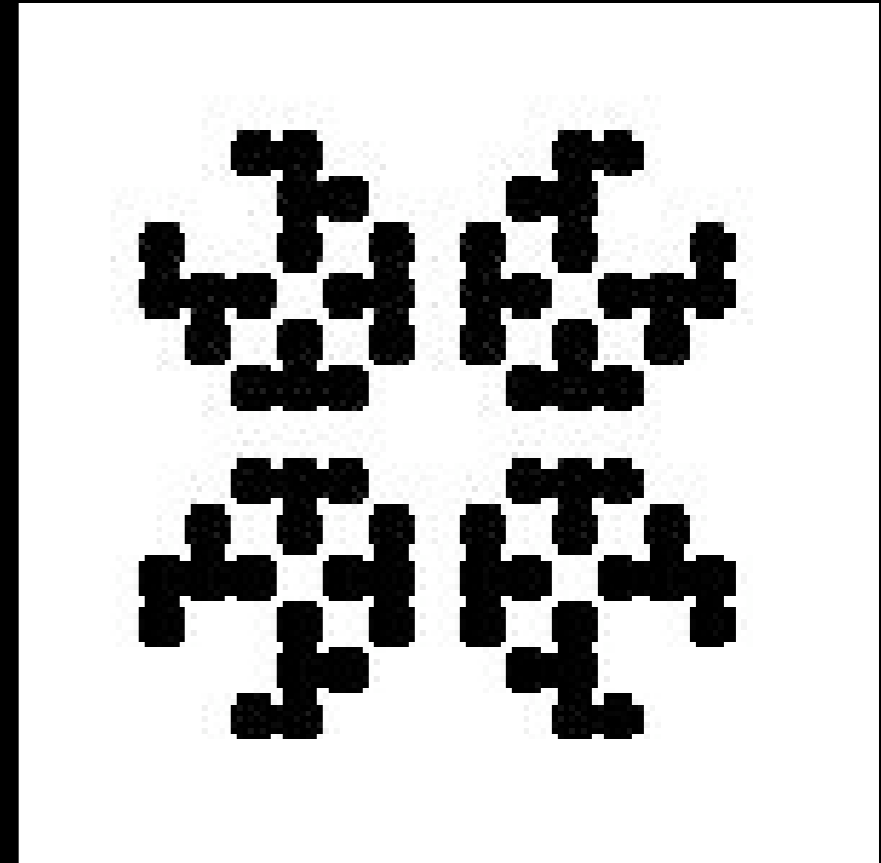
# properties of emergence

- Small number of rules that combine and yield a large game tree
- Players react to large game tree by designing strategies
- Basic asymmetry between relative simplicity of game rules and relative complexity of playing game
- Not a straight line, but an open landscape of possibilities



# Conway's Game of Life

- Playing space
  - A board with many squares
  - Each square can be filled (a live cell is there) or empty
- Rules
  - Proceeds in turns. On each turn:
    - If a square is filled (alive)
      - It dies with less than two neighbors (from loneliness)
        - I.e., two of the nine surrounding squares must be live
      - It lives with 2 or 3 neighbors
      - It dies with more than 3 neighbors (overcrowding)
    - If a square is off, it turns on if there are exactly 3 neighbors



# Demonstration of

# Game of Life

- Golly
  - [golly.sourceforge.net/](http://golly.sourceforge.net/)
  - Open source, multi-platform tool for examining Game of Life
- Color Game of Life Visual Exhibition
  - [www.collidoscope.com/cgolve/welcome.html](http://www.collidoscope.com/cgolve/welcome.html)
- Hexatron: Hex-based cellular automata
  - [www.hexatron.com/hexca/](http://www.hexatron.com/hexca/)

# gameworld rules

- Intrinsic qualities of the gameworld
  - In Monopoly, design of the board, with its fixed spaces, is a representation of rules enforced by the game
  - Cannot alter the fact there are 9 spaces per edge (not counting corner squares) without altering game board
- In computer games, the virtual world inhabited by the player's avatar is subject to constraints and consistency rules
- These are the gameworld rules
- That is, the description of the affordances, structure, and limitations of the gameworld itself

# types of gameworld rules

- Checkpoint
  - Places or moments in a game where a player is not forced to start completely over if he or she were to lose a life
- Cropping
  - Existence of some entities in the game determined by player's field of view.
- Expiration
  - Entities whose existence is limited by time
- Powerups
- Savepoints
  - Point in game where player's game state is saved (or player has opportunity to save game state)

# pseudo-physical rules

- Many games create a virtual world inhabited by the player's avatar
- Rules concerning the simulation of a physical environment are the pseudo-physical rules
  - Gravity
    - How things fall towards ground
    - May have greater or lesser degrees of accuracy
  - Life Support
    - Need for consumables to stay alive
    - Air, food, water, etc.
    - Most games do not permit staying underwater indefinitely
  - Solidity
    - Entities in gameworld take up space and have mass

# discussion: gameworld rules

- break into groups of 2 to 4 people
- write down some of the gameworld rules for the following games:
  - Portal
  - Super-Mario Galaxies
  - Guitar Hero II
  - Pong

# game ends: example of gameworld rule

- The way in which a game may end
- Many possibilities
  - Completing the game's goals
  - Running out of lives
  - Exhausting available time



# game ends: example of gameworld rule

- Separate from evaluation of the ending
  - Want to separately describe possible endings, and the value judgements applied to each one
  - Similar to Juul's game definition, where he discusses valorization of outcome
- Evaluation:
  - Usually win/loss, but can also have ranked endings
    - Team rankings over a season
    - Placement in a race

# no game end?



- Examples
  - World of Warcraft (strong example)
    - No single goal (though achieving high levels is popular)
    - New content is added periodically
  - Grand Theft Auto III (weak example)
    - Player can complete all missions, but can still continue to play the game
  - Civilization II/III (weak example)
    - Player can satisfy a win condition, and can still continue playing
    - Is very possible to lose the game, which is final

# game exhaustion

- Gameworld exhaustion
  - Player has seen and done everything there is to do
  - Pac-Man: only 255 levels, with a maximum possible (“perfect”) score
    - Well, there is a 256th level, but the right hand side is garbled, and appears impossible for an unassisted human to play

# more exhaustion

- Narrative exhaustion
  - Once the game's story has been completely told
  - Narrative and gameworld exhaustion are often synonymous
- Resource exhaustion
  - Player runs out of some resource needed to play the game
  - No more lives
  - Insufficient resources leave player in position where it is not possible to win the game