

G54GAM Games

Categorising Games

Dramatic Elements of Game Design

Dramatic Elements of Game Play

- Challenge
 - What keeps a player keep playing
 - Learning new skills, inability to do something
 - Constant reward
 - Control over own destiny
- Play
 - The experience of the game is an end in itself
 - Exploration, competing, being creative
- Premise
 - Why you are playing
- Narrative
 - Character development
 - The unfolding storyline

Challenges (Ernest Adams)

- Pure Challenges
 - Abstract game play archetypes, not found in the wild but form the basis of most actual challenges
- Applied Challenges
 - Combining one or more pure challenges in a given situation
 - Often *hybridized* combinations of pure challenges
- A good game presents a range of challenges
 - Different challenges appeal to different players
 - Best time
 - Found everything
 - Highest score
 - Increasingly present multiple challenges
 - Multiple challenges = multiple strategies to achieve same goal
 - Stealth vs action
- Genres suggest certain challenges, but not set in stone.

Races

- Not necessarily a physical race
 - Construct something
 - Accumulate something
 - Put time pressure on the player
- Discourage careful strategic thought
- Encourage direct, brute-force solutions
 - Requires **coordination**
 - Requires **good reflexes and reactions**
 - “If the player has only 15 seconds to get through a host of enemies and disarm a bomb, he's not going to pick them off one by one with sniping shots; he's going to mow them down and charge through the gap, even if it means taking a lot of damage.”
- How might you add a race challenge to lab exercise 2?
 - (Objectives)

Puzzles

- Often presented as an obstacle
 - A mental challenge
 - When solved opens another part of the game
- Player is presented with a series of objects
 - Related in ways that are not immediately obvious
 - Manipulate them into a certain configuration to solve the puzzle
 - Must understand the relationship between objects by trial and error and observation
- The correct solution should be clear at the outset
 - Not the *answer*
 - Player has to guess at what they are trying to achieve
- Race + Puzzle = Intelligence challenge against the clock
 - Problematic to consider as inclusive?

Deus Ex: Human Revolution (2011)



Gunpoint (2013)



Exploration

- Moving into new areas and seeing new things
 - Cannot be free from *challenge* (sightseeing, Dear Esther)
- Obstacles challenge the player to work for their freedom to explore
 - Barriers to exploration
 - Enable structured exploration to prevent the player exhausting *things to be seen* too quickly
- Locked door obstacle
 - Not necessarily a door
 - Any device that prevents the player from going on until he has done something to unlock it
 - Find the key elsewhere and bring it here
 - Find a hidden control
 - Solve a puzzle
 - Defeat the doorkeeper

Exploration

- Traps
 - A locked door with higher stakes
 - Harm the player
 - Causes death or damage
 - Discourages the player from coming that way or using that move again
 - Some fire off once and then are harmless.
 - Others fire but require a certain recycle time before they can fire again.
 - Still others respond to particular conditions but not to others, like a metal detector at an airport.
 - Fun is in outwitting traps
 - pleasurable feeling of having outfoxed you, the designer, even as you were trying to outfox them
- Maze
 - Implemented as a puzzle
 - Must discover how the places are related by exploration
 - Learn the space
 - Deduce the organisation of the maze from clues found within it
 - Always turn right
 - Illogical mazes (antichamber)
 - teleporters

Conflict

- Arises from the *outcome*
 - Attempting to win, attempting to beat other players
 - Challenges vary based on scale, speed, complexity
- Strategy and tactics
 - Examine the state and devise tactics
 - Logistics of managing resources
 - Putting the plan into execution
- Action
 - Personal conflict with an opponent
 - Immediate, visceral, fast
 - How might this be scaffolded?
 - Responding to unforeseen events and the actions of other players
- Survival
 - Staying alive, sacrificing units
 - Defending other things that cannot defend themselves – flags, bases, escorting NPCs
- Avoiding Conflict
 - Stealth – Thief: The Dark Project

Wolfenstein: Enemy Territory (2003)



Thief: The Dark Project (1998)



Economies

- The movement of resources
 - Arises from the formal resource element
 - Which pure challenges?
- Simple Economy of an FPS
 - Ammunition is obtained by finding, consumed by firing weapons
 - Health is obtained by finding medikits, consumed by being hit
- Accumulate the most of something
 - Money - Monopoly
- Achieve an economic balance
 - Sim City

Conceptual Challenges

- Require the player to understand something new
 - Arising from intrinsic knowledge challenges
 - Her Story
 - Examine the evidence and deduce who committed the crime
- Simulate processes that the player must come to understand
 - Relationship not immediately made explicit by the game
 - Sim City
 - Direct relationship between efficient transport system and economic prosperity
 - Failure to deduce this will lead to difficult for the player
- “Gaming the system”
 - Dominant strategies and cheating

Her Story (2015)



Counter Strike

- <http://www.youtube.com/watch?v=-kkEj4rl2t8>
- Are first person shooters sufficiently *challenging*?
 - “Depth” of challenge

The “Work” of Counter Strike

- Spatial awareness, coordination, memory, reflex and reaction times, conflict
- Moving competently
 - Mouse and keyboard
 - Gross movements, precise aiming
 - Efficiently traversing the terrain
 - Glancing
 - Ducking
 - Strafing

The “Work” of Counter Strike

- Collaboration
 - Identifying the team
 - “At a glance appearance”
 - They don’t look like a counter-terrorist texture
 - Orientation towards the terrain
 - Aiming towards where the enemy is expected to appear
 - They don’t shoot the player
 - Maintain distance
 - Prevent friendly fire
 - Awareness of position via glancing
 - State actions / intentions
- Terrain
 - Map is known / must be learned
 - History of play gives expectation as to where to throw grenade
 - (Expectation can be used against you)

Alien Isolation

- <https://www.youtube.com/watch?v=AiB5pW3aggE#t=654>

Uncertainty and Risk

- Risk as a challenge
 - The outcome of an action is uncertain
 - Perhaps the action has random results
 - May depend upon an opponent's actions
 - Need to know what opponent will do
- Two primary means of introducing risk
 - Chance and **randomness**
 - **Imperfect information**
 - *Apparent* randomness

Uncertainty != Skill

- Outcomes may depend on player skill
 - Hand-eye coordination challenges
 - Reaction-time and twitch challenges
 - Knowledge of optimal strategies
 - Read the walkthrough
- Varying skill level leads to an uncertain outcome
 - But challenges themselves are predictable
 - Players can train at a challenge over time
 - Become better
 - **Progression**

Random Chance as Challenge

- Is random chance a good game design?
 - Flipping a coin, rolling a dice with no context
 - Player has no meaningful choice
 - All games require *some* uncertainty
 - Otherwise deterministic
 - Meaningful play requires decision-output causality
- But many games *are* random
 - Tetris
 - Have a choice in how to position random pieces
 - Hedge your bets to prepare for certain drops
 - The piece that's a line
 - RPG combat is based on rolling a dice
 - Armor the defender is wearing
 - Weapons the attack uses



Expected value

- Outcome of actions is never the same
 - How is the choice meaningful then?
 - Whether to perform the action or not
 - Certain decisions are more fun than others
 - Psychological effect on other players
 - Jump scares, horror games
 - The sum averages out over many tries
 - Expected value = outcome x % success
 - If many outcomes (attempts) sum them together
 - Only applies if player can perform action repeatedly

Psychology of Randomness

- Gambling is bad
 - House controls expected value
 - The house always wins
- Expected value (i.e. losing) only true over many tries
 - We might get lucky
 - Uncertainty is “fun”
- Players favour longshots
 - Rare event with a very high payoff
 - Especially if failure is cheap
- Players have “monte carlo syndrome”
 - After a series of bad results, expect a good result
 - Otherwise the game is “unfair”

Imperfect Information as Challenge

- Players lack information about the game
 - May not know complete game state
 - May not know all of the (high level) rules
- Can reason about *likelihood*
 - Rules eliminate certain possibilities
 - Model opponent psychology
 - What is the Alien doing
 - Less precise than a model of *probability*
 - A “feeling” of randomness from strategic, social complexity
- *C.f. Counter Strike example*

Making Information Imperfect

- Hide Information
 - Fog of war
 - Hidden moves
 - Hidden dice rolls / RNG
- Generate random noise
 - “Something” happened over there
- Who holds the information?
 - Information known to **all players**
 - The rules of the game
 - Information known to **one player**
 - My health, weapon held, ammunition remaining, where I am
 - Information known only to **the game**
 - The patterns of the enemies, the next sequence of challenges
 - **Randomly** generated information

Avalon (2012)



Trouble in Terrorist Town (2010)



Level Design

- Good game design is about creating a series of interesting challenges
 - Player has inefficient means to achieve their objectives
 - Players become more skilled over time, more adept at using means
 - A “good” game is one where success of the player is largely determined by the skill of the player
- How should we **balance** rules and challenges in general for appropriate progression?
 - What are the *parameters* of the challenges
- How can we ensure or **assess engagement?**
 - Flow (Mihaly Csikszentmihalyi)
 - The mental state of operation in which a person in an activity is fully immersed in a feeling of energized focus, full involvement, and success in the process of the activity

Reading

- Rollings and Adams chapter 7
- Rules of Play chapters 15, 17
- <http://www.cs.nott.ac.uk/~str/doc/counterstrike.pdf>