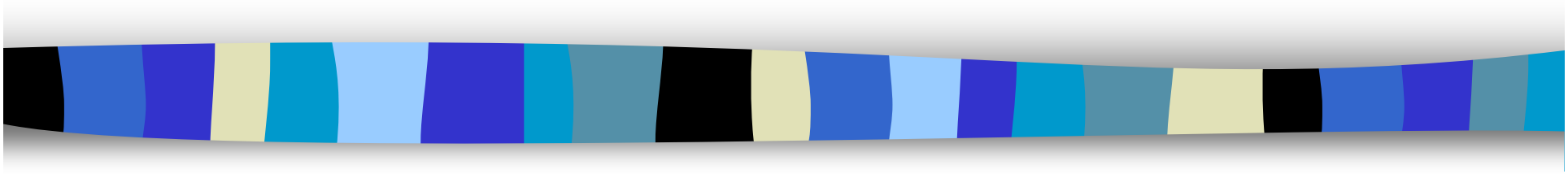
Gameplay



Topics in Game Development

UNM

ECE 495/595; CS 491/591

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What is Gameplay?

General definition:

- It is what makes a game FUN.

- It is how players play a game.

Taking one step back: what are games?

- They present player with an overall goal
- Directly involve player
- Contain conflict and competition; opposition of some kind
- Thus include the basic elements of drama
- Are intensely exciting

Games also are:

- Experienced as “play”… as fun
- Full of challenges that block way to the overall goal
- Have a structure, rules
- Something you can win or lose (victory condition)

Gameplay – boiled down

- It consists of the **challenges** you offer the player and the **actions** players can take to overcome the challenges
- Also involves:
  - Victory conditions
  - Rules
  - Stress factors
  - Game balance

Hierarchy of Challenges

(via Ernest Adams)

- Players usually face several challenges simultaneously – both small and large:
- **“Atomic”** – lowest of hierarchy: whatever is immediately confronting player
- **Sub-mission**: various goals of level (may be several in each level)
- **Mission:** goal of current mission
- **Game goal:** winning the game --the ultimate challenge and highest point of hierarchy

Challenges and game narrative

- Overall goal and major challenges usually established in context of the game's story
- Story gives motivation to player; makes experience richer
- **Caution**: too much story gets in way of game; players want to **act**, not **watch**

Challenges: Explicit and Implicit

Explicit: ones that are made clear in game; that player is aware of

- Victory conditions
- Major challenges for each level

Implicit: ones that player discovers in course of playing game

- Part of the fun lies in figuring them out
- Midlevel challenges often implicit
- May be more than one way to overcome them
- Ways to overcome: observation, deduction, planning, experimentation

Competition and Cooperation: 2 Ways to Overcome Challenges

- **Competitive**: direct conflict; only one winner; must defeat opponent (true of many classic games, including board games)
- **Cooperative**: players may work together to defeat opponent, though may be opponents in other situations (MMOGs)

Physical challenges

- Tests players' physical abilities
- Typical of action games, arcade games ("twitch games")
- Calls for quick reflexes, physical coordination, speed, timing
- Also calls for accuracy and precision

Mental Challenges

- **Internal**: may require knowledge gained during gameplay (visual clues; pieces of information)
- **External**: may require knowledge of things outside game (trivia, physics; how things work)
- **Intellectual**: May require solving of puzzles, pattern recognition, etc.
- **Strategic**: planning of tactics

Economics as a challenge

- The management of resources: acquiring, stealing, creating, storing, expending, destroying
- Resources includes anything of value: money, ammunition, health points, tools, equipment, clothing, property, weapons, real estate, character skills
- An economy adds realism to games

Exploration as a challenge

- Exploration is can be own reward; a form of sightseeing
- But as a form of gameplay, requires:
  - Navigation and spatial awareness – not getting lost
  - Opening “locked doors:” barriers that block access
  - Avoiding traps

Actions: Players' response to challenges

- The actions are the the player's "verb set"
  - game must offer play sufficient actions to overcome each type of challenge in game
  - actions can be combined for greater utility
- Games have fixed number of actions, because each action requires animation – expensive – and also requires more complicated interface
- Common to have large number of challenges, small number of actions
- Different genres offer different types of actions

Stress factors

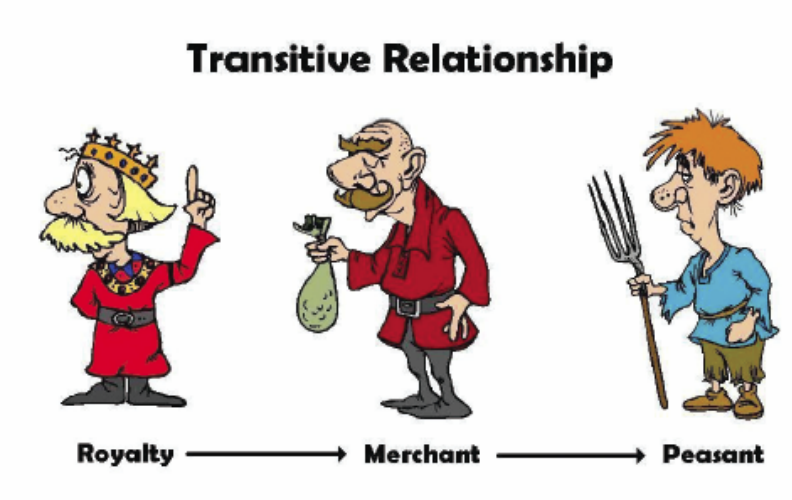
- Two major ways to increase stress:
  - Time pressure: make player to overcome challenge within specific time frame
  - Multitasking: make player deal with several challenges at once
  - Maximum stress: combine time pressure and multitasking
- Stress can add excitement, but can also discourage strategic thought

Game Balance

A game is balanced if:

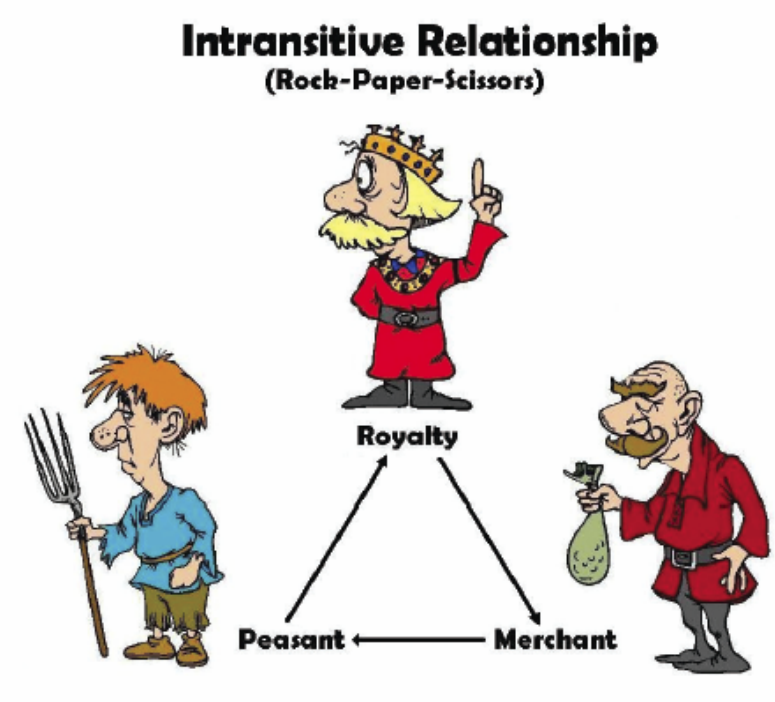
- players perceive it as fair, consistent
- challenges increase gradually
- more highly skilled players do better than less skilled ones
- if game has symmetry: each player starts with same conditions, abilities

Transitive relationships as form of symmetry



- Linear: one way relationship between two or more resources
- Example: hierarchy with each group progressively more powerful
- All start at same level, then advance, depending on skill

Intransitive relationships as form of symmetry



- Circular rather than linear
- Rock, paper, scissors model
- Each group can beat all other groups or be beaten by all other groups

Rules and Gameplay

- Essential in all games, even simple ones
- Define what players can and cannot do
- May be imparted via tutorial levels or in manual
- Rules determine victory and loss conditions

Victory Conditions

- What the player must do to win; overall goal
- Should be clear to player
- May be multiple ways to win, multiple endings
- Some games have no specific victory conditions (sims, puzzle games)

Loss (termination) conditions

- Specifies how a player loses
- Explicit loss: avatar dies or world is destroyed (obvious)
- Implicit loss: you are not first player to win; another beats you (could be other player or NPC)

In sum, gameplay…

- Is made up of challenges player faces and what player does to overcome them (actions, choices)
- Challenges can by physical or mental
- Challenges may also involve game economy, exploration
- Gameplay is governed by rules
- Gameplay is what makes a game fun, exciting, pleasurable