Foundations of Interactive Game Design

05: Building Blocks

Brenda Romero
blromero@ucsc.edu
@br
QUIZ FRIDAY
What is Game Design

Designing **experiences**

- done through creating mechanics
- mechanics in motion create dynamics (the **core**)
- dynamics lead to play aesthetics
What game design is not

programming
- tool for creating a specific type of game (video game)

graphics
- adds to the feel of the game, but not required to make a game

idea
- it is execution
Game Core

Core mechanics
– without this mechanic it would be a different game

Core dynamics
– the general goal of the game
Common core dynamics

Territorial Acquisition
Risk, Carcassonne, Settlers

Prediction
Roulette, Rock Paper Scissors

Spatial Reasoning
Tetris, Pente

Survival
Every FPS ever
<table>
<thead>
<tr>
<th>Common core dynamics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Territorial</strong></td>
<td><strong>Building</strong></td>
</tr>
<tr>
<td>Acquisition</td>
<td>RPGs, Minecraft, SimCity</td>
</tr>
<tr>
<td>Risk, Carcassonne,</td>
<td>Collection</td>
</tr>
<tr>
<td>Settlers</td>
<td>Platformers, CCGs, match 3</td>
</tr>
<tr>
<td><strong>Prediction</strong></td>
<td>Trading (?)</td>
</tr>
<tr>
<td>Roulette, Rock Paper</td>
<td>Settlers of Catan, Pokémon</td>
</tr>
<tr>
<td>Scissors</td>
<td>Race to the End</td>
</tr>
<tr>
<td><strong>Spatial Reasoning</strong></td>
<td>Mario Kart, Chutes and Ladders</td>
</tr>
<tr>
<td>Tetris, Hundreds</td>
<td>Exploration (?)</td>
</tr>
<tr>
<td><strong>Survival</strong></td>
<td>Walking Dead, Myst</td>
</tr>
<tr>
<td>Every FPS ever, Pac–Man</td>
<td></td>
</tr>
</tbody>
</table>
“Core” and “Core Loop”

What is the one thing this game is about?
Core: Survival

Core Loop

Fight → Rewards → Improve Avatar

XP
Gold
Items
Core: Survival

Core Loop

Move Forward → Rewards → Get Lives

- XP
- Gold
- Items
Game Atoms
Game building blocks
What is Game Design

Give the player **meaningful** and **interesting** decisions
Interesting Choice

Interesting choice:

- no clearly **better** option
- options are not equally attractive
- the player must be able to make an **informed** choice
Meaningful choice:

- discernible, noticeable effect
- integrated, significant impact
Decisions within context

To be meaningful, decisions must have consequences or tradeoffs (or both).
Game State and Game

Game state
- all the things the game needs to keep track of

Game view
- what the player is aware of
Players and Avatars

Avatars – represent the player in the game

Not all games have avatars, but all games have players
Mechanics – Rules of the game

Common Mechanics:
Setup
Victory conditions
Progression of play
player actions
definition of game views
Dynamics – The way the player interacts with the game. What you would need to capture in an AI if you wanted to simulate the player

game-supported dynamics
meta-game dynamics
Goals

- Provided to reward and motivate players through the game

Victory conditions
- Mid-game goals
  - Missions/quests
Theme – Gives a backdrop for your game. Gives players affordance. 

Outside of the mechanics, but when chosen well, supports them.
Putting it all together

Can start from anywhere, but need:

desired core dynamic

mechanics: starting, progression, player actions
Not an **interesting** game, yet!

Add **elements**:
- strategy or chance
- interactions between players if multi-player
- add and remove mechanics