Lecture13 Principles of Game Feel

1. Predictable Results

> When players take action, they get the response they expect

- There's no interference between intent and outcome for the player
- When creating a system of real-time control, we as game designers must attempt to mold player expectations indirectly through mapping, metaphorical representation and art treatment
- The player's perception of what happened trumps the computer's. We have to program the player's perception via the computer

Control Ambiguity

- When mapping input to response, game designers sometimes create unintentional control ambiguities
  - Press A and Z at the same time give a random results
- For a game to provide consistent, predictable results for input, these control ambiguities must be resolved

State Overwhelm

- Changing mappings depending on what's happening in the game
- When the player does not perceive the state change, inputs begin to feel random

Staging

- It is important that when staging an action, that only one idea be seen by the audience at a time
- Providing clear, immediate feedback
  - The goal is to make it clear to the player what the result of an input was so it can be reproduced at-will
- Game designers have very little time to hook the players
  - If they don't feel successful and oriented within the first couple min utes, we've lost them
  - The lowest-order feedback loop, the first thing they'll encounter, is game feel, the moment-to-moment control
  - If it doesn't feel good at an intuitive level, giving them predictable results they can sink their teeth into, they'll stop playing

2. Instantaneous Response

> The player feels the response to their input is immediate

- In a video game, response time is important
- To maintain the impression of responsiveness, the **result of input must be perceived by the player as immediate**
  - The attack phase can take 10 seconds but will still feel responsive as long as there is some obvious result within 70 to 100ms of the input

3. Easy but Deep

> The game takes minutes to learn but a lifetime to master

- The basic skills are easy to learn, but there are always new levels of mastery to aspire to

Make Game Easy

- The most elegant way to make a game easy to learn is to exploit natural map pings
  - the motion of the ship in Geometry Wars closely matches the physical movement of the thumbstick input that drives it
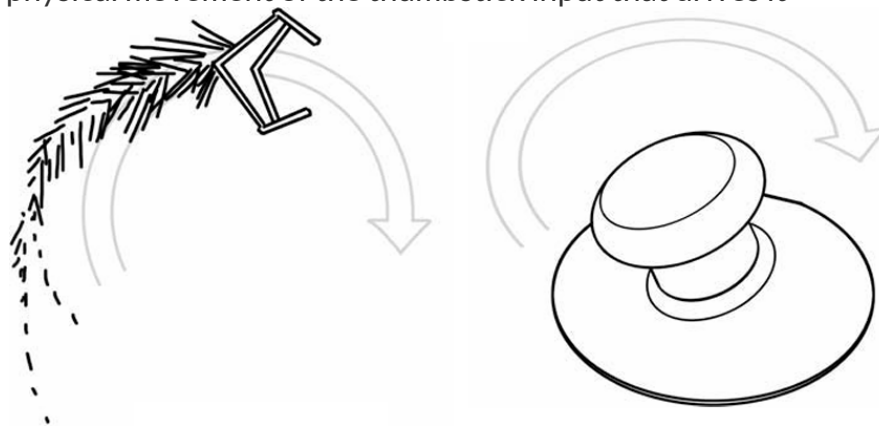
- Tutorial and helpers

Make Game Deep

Creating a game with depth is a difficult, unpredictable process

- design the **challenges** that define the skills as well as the basic movements themselves
- adding **additional sensitivity** to the controls enables more subtlety and nuance to the interactions
  - This simple rule—recording the time it took to complete an action and showing the result to the player—unlocks whole layers of skill learning and optimization the player would never have experienced otherwise
- enable **multiple players** to compete, directly or indirectly

- Enabling competition between players effectively makes the skill ceiling infinite
- You can only be better than someone else

4. Novelty

> Though the result of an input is predictable, there is enough subtlety and expressiveness to keep the controls feeling fresh and interesting through hours and hours of play

- Create mountains of additional content, running the player through a series of increasingly challenging and varied levels that give new and interesting context to the virtual sensation to keep it from feeling stale
- Introduce more mechanics—additions and modifications to virtual sensation—over the course of the game
- Increase the sophistication of the global physics simulation. Physics games make control feel novel because the player will never be able to offer the same input twice
- The nature of reality: messy and imprecise. No one person can punch exactly the same way twice or throw a discus or javelin the same way twice

5. Appealing Response

> The sensation of control is aesthetically appealing and compelling, separate from context

- When completely removed from its context, real-time control should still be engaging and aesthetically appealing
- Making sure that no matter what input the player gives the system, the result is compelling
    - especially important for things like crashes and failure states

6. Organic Motion

> Controlling the avatar creates appealing arcs of motion
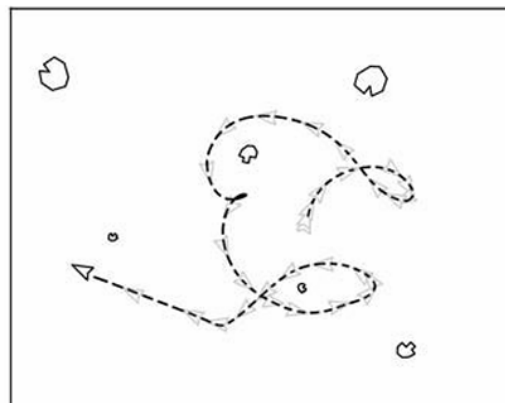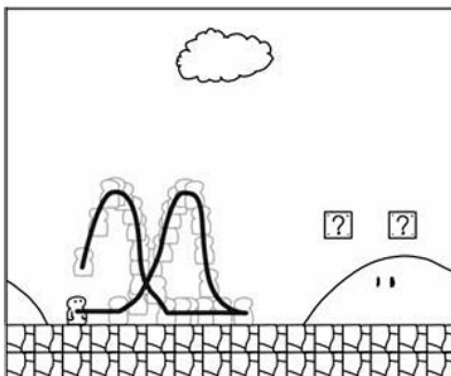
- Whether it's the motion of the avatar itself, animation that's layered on top of it or both, **curved, arcing motions are more appealing**
- Arcs give animation a more natural action and better flow
- In animation, this means arranging frames along a curved path
- In a video game it comes down to mapping and simulation

7. Harmony

Each element of a game's feel supports a single, cohesive perception of a unique physical reality for the player

- People are extremely sensitive to perception at the level of everyday physical interactions
- This makes designing game worlds very difficult because any tiny inconsistency becomes glaringly obvious
- Making a game more iconic than realistic makes it much easier to meet or exceed player expectations for harmony across all the elements of a game
- The most difficult piece of harmony is motion
- Being aware of each element of the game's feel and the way it will change the player's perception of the game's unique physical reality can help to avoid and mitigate these little annoyances

8. Ownership

Players feels a personal investment in a game and keep playing it

- Improvisation in a game is the ability to create new and interesting combinations of motion in real time, adapting and reacting to the game's environment in a fluid, organic way, without forethought
- To enable such improvisation, a mechanic needs to have not only a lot of **sensitivity** (between its input and reaction) but to be very **flexible** in how it interacts with objects in its environment