

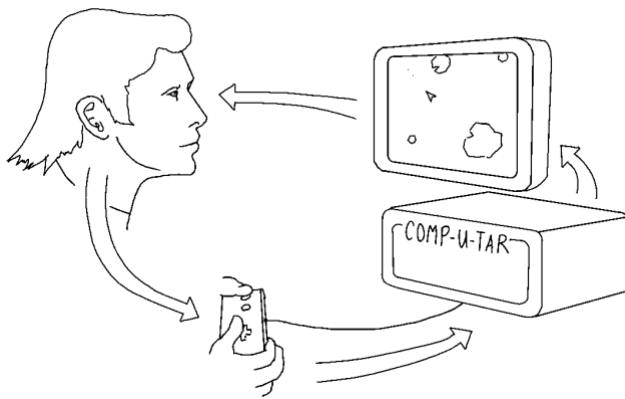
# Lecture2 Defining Game Feel

## 1. What is Game Feel

- Let players do what they want when they want, without having to think too much about it
- Make the game easy to learn but difficult to master
- Make players really feel the impact
- Polish the interactions
- Make players feel as though they're really there, as though they're in the game
- All about appeal, layering on effect after careful effect, polishing every interaction—no matter how trivial—until interacting with the game has a foundation of aesthetic pleasure

## 2. Three Building Blocks of Game Feel

### Real-Time Control



Include at least two participants

- the computer
- the user

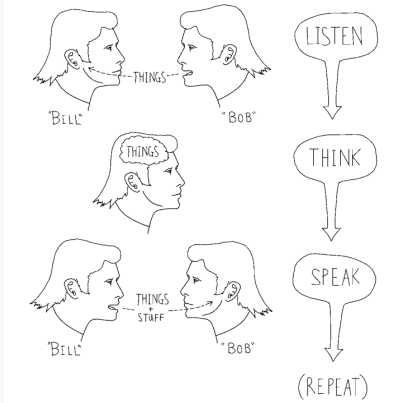
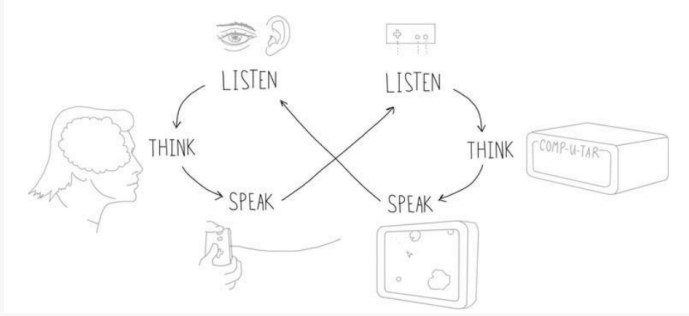
### Steps

- user express the intent to the computer in the form of the user's input
- computer reconciles this input with its own internal model and outputs the results
- user perceives the changes, thinks about how they compare to the original intent, and formulates a new actions, which is expressed to the computer through another input

### Cyclic Process

*cyclic process*: two active agents alternately listen, think and speak

Real-World Example	Game
Bob speaks	Player inputs

Real-World Example	Game
Bill, listens to what was said, thinks about it, formulates a response and speaks in return	Computer, reconciles this input with its own internal model and outputs the results
Bob, listens to what was said, thinks about it, formulates a response and speaks in return	Player, perceives the changes, thinks about how they compare to the original intent, and formulates a new actions, which is expressed to the computer through another input
	

## Instantaneous

Different from conversation, the feeling of game is:

- The process is nearly instantaneous
- The result of input feels as though it is perceived in the same moment it's expressed
- The basic of game feel: precise, continuous control over a moving avatar

## Simulated Space

Simulated physical interactions in virtual space

- gives us the tactile, physical sense of interacting with virtual environments the same way we interact with our everyday physical spaces

## Active Perceived

Perception

- **passive:** objects you see on TV and in films
- **active:** exploring a simulated space using real-time control

Game feel as we're defining it means active perception of literal space

## Polish

Any effect that artificially enhances interaction without changing the underlying simulation

- add appeal and emphasize the physical nature of interactions
- if all polish were removed, the essential functionality of the game would be unaltered, but the player would find the experience less perceptually convincing and therefore less appealing
- for players, simulation and polish are indistinguishable

## Final Definition

**Real-time control** of **virtual objects** in **simulated space**, with **interactions** emphasized by **polish**

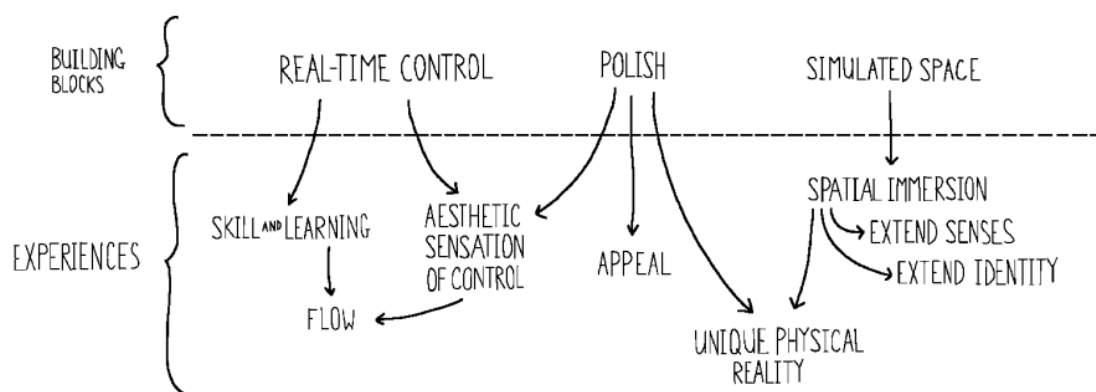
## 3. Experiences of Game Feel

- Game feel is comprised of many different experiences
- What we call game feel is the sum of all these experiences blended together, coming to the surface at different times

### Common experiences of game feel

- Aesthetic Sensation of Control
  - The feeling that player is controlling the game, while to certain extent the game is also controlling the player
- The Pleasure of Learning, Practicing and Mastering a Skill
  - In one neatly wrapped package, there were skills to master, rewards at every level and a hyper-accelerated ramp of increasing challenges upon which to test those skills
- Extension of the Senses
  - Having the sense that thing player is controlling is an extension of the body
- Extension of Identity
  - The experience of subsume the game character and suddenly being separated from the entity
- Interaction with a Unique Physical Reality within the Game
  - The feeling of the weight and mass of the things in the game world, and the interactions with them in a unique physical reality

### The Experience of Game Feel



- **aesthetic sensation of control**
  - pure, aesthetic pleasure of steering something around and feeling it respond to input
- **skill and learning**
  - clumsiness of unfamiliar controls
  - the triumph of overcoming challenge

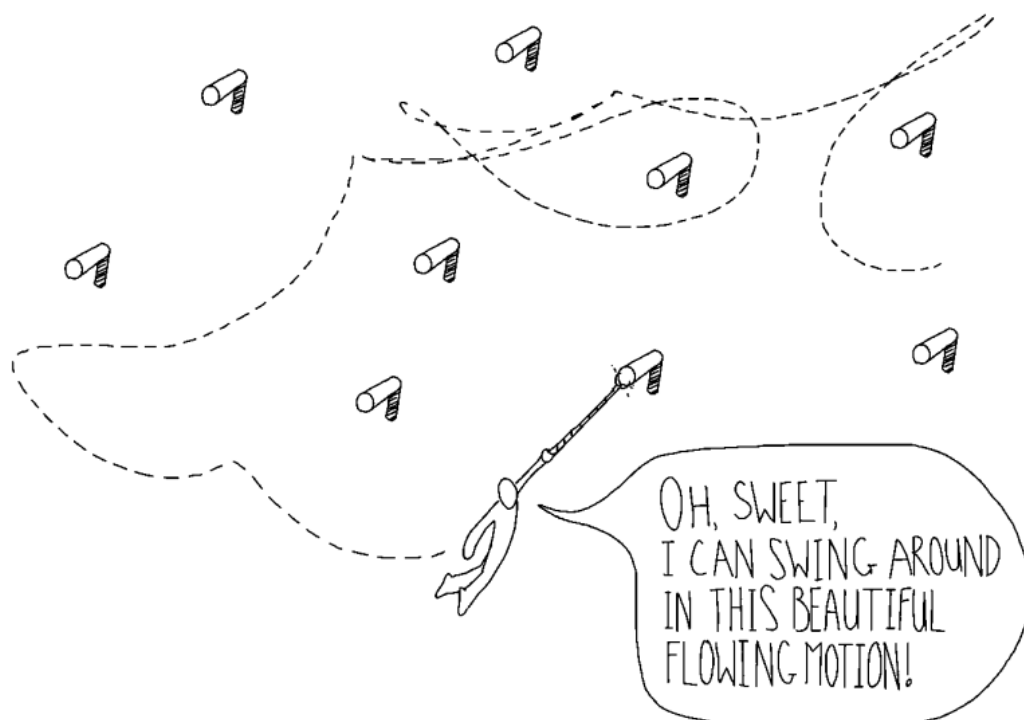
- the joy of mastery
- **flow**
  - skillful control can lead to the feeling of being in the zone, being one with the game and the loss of self-consciousness
- **extend scenes**
  - "It feels like I'm really there"
  - "It's like I'm in the game "
  - "The world looks and feels realistic"
  - The game world becomes real because the senses are directly overwritten by feedback from the game
- **extend identity**
  - Players will say "I am awesome!" during moments of skillful triumph and "Why did he do that!?" when they fail a moment later
  - a player's identity becomes fluid, it can inhabit the avatar
- **unique physical experience**
  - perceive virtual things the way they perceive everyday things
  - when a player observes enough of these interactions, a cohesive picture of a self-contained, unique physical universe begins to emerge as the various clues are assembled into a mental model

## 4. Creating Game Feel

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### Aesthetic Sensation of Control

#### Mapping input signals to motion



- An avatar in motion can create flowing, organic curves as it moves and enable a player to feel the aimless joy of control

- These sensations are what players mean when they say a game feels smooth, floaty or stiff
- Each of the potential motions has an aesthetic character that will be experienced by the player if he or she steers the avatar through that action
- Problem: Without some kind of focus, even great-feeling controls will quickly wear thin. The solution is to add some challenge

## Skill, Goal and Challenge

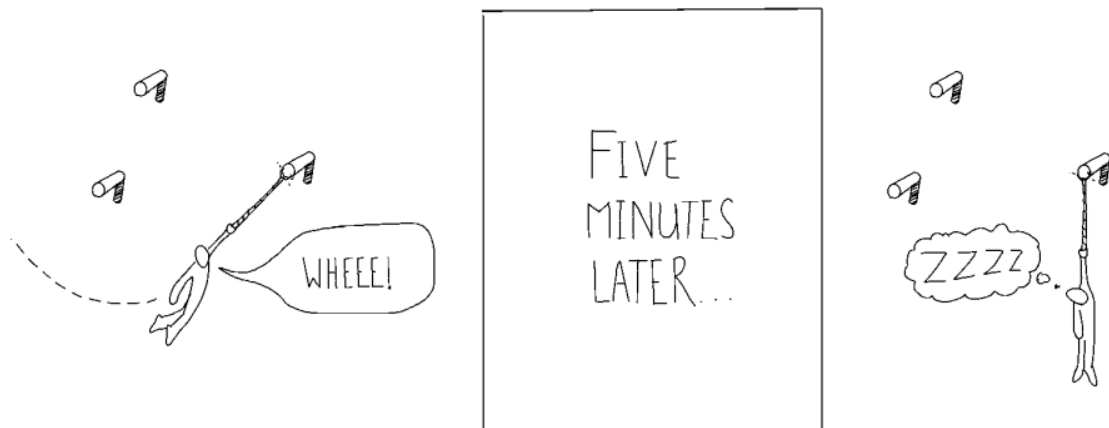
- A skill is a learned pattern of coordinated muscle movement intended to achieve a specific result
- Game skills and real-world skills are essentially the same
- The primary difference is that a video game designer has control over both challenge and physics

Game feel and skill are related in three ways

- Challenge alters the sensation of control by focusing the player on different areas of the possibility space of motion, rewarding him or her for exploring it
- The feel of game changes depending on the skill of the player
- Players find controls to be intuitive when they can translate intent to outcome without ambiguity

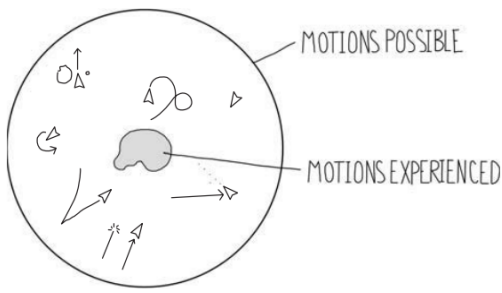
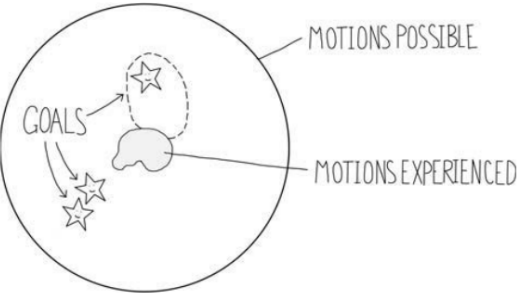
## Challenge Alters the Sensation of Control

Even if the game feels great, aimlessly controlling something gets boring quickly

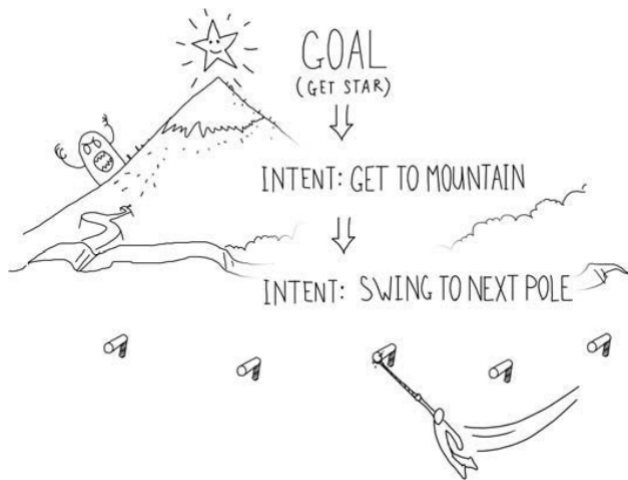


With a specific goal to pursue, control takes on new meaning. Aimless, pleasurable motion is replaced by focused, purposeful attempts to complete the challenges presented

Challenge provides landmarks in the distance, encouraging the player to explore the aesthetic frontiers of the game

Players only experience as much of a game's feel as the area of this space they feel inclined to explore	With challenges, there is a reason to explore more of the possible sensations of a particular mapping
	

Challenges consist of two parts



### goals

- goals affect feel by giving the player a way to measure his or her performance
- this creates players' nebulous perception of their own skill, their own ability to translate intent into reality
- the nature of the goal shapes the players' focus
- a single goal can create multiple layers of intentions

### constraints

- constraints affect game feel by explicitly limiting motion
- a constraint selectively removes some motions from the possibility space
- by limiting motion, the player is again focused on particular motions, which changes the feel of control

### Game Designer can do

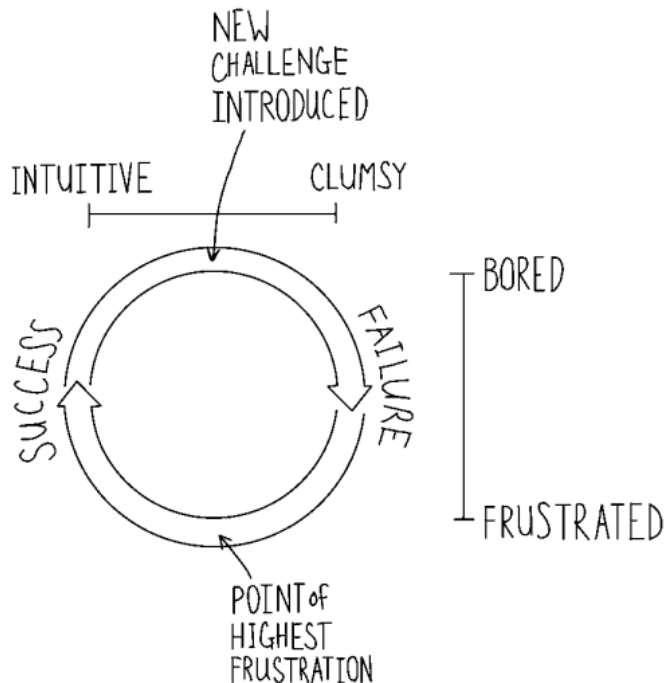
the job of a game designer in crafting game feel is to explore the possibility space of a new mapping

- emphasizing the good with goals
- pruning the bad with constraints

## Game Feel Changes Depending on the Skill of the Player

The game's controls

- always the same from an objective standpoint—the cold precision of programmed bits allows no other reality
- feel will change for the players depending on how well they can translate their intention into game reality



- When player first pick up a game, they suck. Player know this and accept it—skill is the price of admission—and they trust in the game designer
  - They feel at this point is clumsy, disorienting and bad
  - It takes a great deal of conscious effort to perform the most basic tasks in the game
- Over time, skills are mastered and get pushed down below the level of conscious processing
  - The player gradually improves relative to the challenges presented, and the feel gets better and better
  - Eventually, the player learns the skills well enough and breaks through, completing the current goal
  - Without the oppressive feeling of clumsiness, the aesthetic sensations of control come to the forefront, combining with the satisfaction of a challenge overcome to provide a reward for reaching this level of skill
- Then the next challenge is introduced and the cycle starts again...

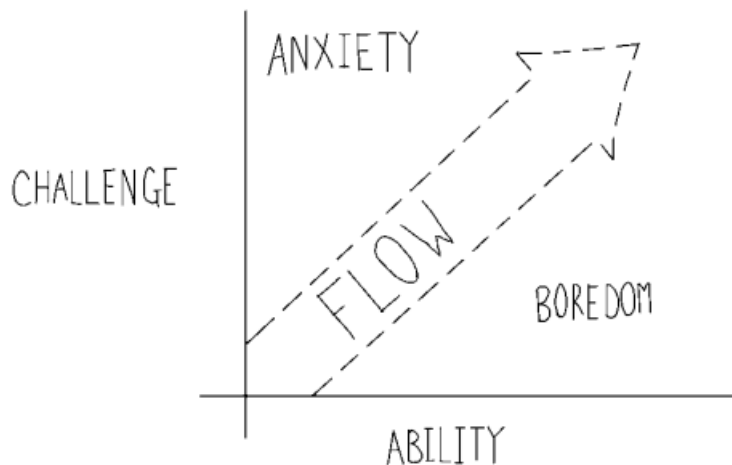
## Game Designer can do

The best game designers create feel at different levels of skill

- a clever designer can tune game feel differently at each level of skill
- you know
  - the skill that was learned last (what the player will be focused on)
  - which skills are completely reflexive (those already mastered)

- which skills have not yet been encountered
- it's possible to shape the feel of a game across time

## Flow



- Player must never get so bored or frustrated that they stop playing
- If this delicate balance between the player skill and game challenge is perfectly maintained, player will enter the flow state

When a challenge you undertake is very close in difficulty to your current level of ability, you will enter the flow state, which is characterized by a loss of self-consciousness, a distorted perception of time and a host of pleasurable sensations

Video games have advantages in creating and maintaining flow

- providing clear goals
- a limited stimulus field
- direct, immediate feedback

## Intuitive Controls

Near-perfect translation of intent into game reality

- Players will be able to translate their intent into reality with varied degrees of efficiency, based on their skill

## Challenge & Interference

- **challenge:** make game more difficult in the dimension of skill
  - the result of an action is predictable, the goals clear and the feedback immediate
- **interference:** obfuscates intent arbitrarily
  - unintentional control ambiguities disrupt the sensation of control by making the player feel as though the game is not accurately responding to their input

## Extension of the Senses

Devices overwrite the scenes

- screen: visual scene
- speakers: hearing



- rumble motors: touch

The feedback from these devices enables player to experience things in a game as if they were objects in the immediate physical reality

The screen, speakers and controller have become an extension of people senses into the game world

## Game Designer can do

- create a particular feel is mapping input signals to motion
- create a space and objects that motion a frame of reference
- define camera behavior to represents player's eyes

## Proprioception

When you move the controller, though their movements are small, still giving you feedback about their position in space

You have a sense of where your body is in space

You're now concerned with how your real-world motion affects virtual objects; the process of motion and feedback is transposed

It's an impression created through illusory means, but is experienced as real by the senses

## Extension of the Player's Identity

When an avatar in a game feels like an extension of your own body and senses, identity flows outward to encompass it

It can flow outward, encompassing something we're controlling and a moment later be withdrawn

Through a combination of polish and simulation, the designer can have players feeling they've hit or been hit, shaping those interactions with great precision

## Unique Physical Reality

People are good at figuring out the physics of a virtual space because they're subconsciously familiar with the way things work in the real world

As soon as we encounter a virtual space, we piece together whatever clues we have about the physical laws that govern it into a mental model

Using sound and motion, we give players an entire universe worth of physical laws to reconstruct in their heads, a mental model of the virtual space

## 5. Summary

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### Definition of game feel

Real-time control of virtual objects in a simulated space, with interactions emphasized by polish

## Three Building Blocks of Game Feel

- Real-time control of virtual objects
- Simulated space
- Polish effects

## Five Experience to Player

- The aesthetic sensation of control
- The pleasure of learning, practicing and mastering a skill
- Extension of the senses
- Extension of identity
- Interaction with a unique physical reality within the game