Lecture 2:

Nature of Games

What is a Game?

Nature of Games

the gamedesigninitiative
at cornell university

What is a Game?

Hopscotch Rules

- Each player has a unique marker

- Toss marker from starting line
  - Marker hits squares in sequence
  - Progress to next square each turn

- Hop through squares and back
  - Skip over square with marker
  - Hop on one foot
  - Except for side-by-side squares

- If fail, repeat at next turn

Nature of Games

What is a Game?
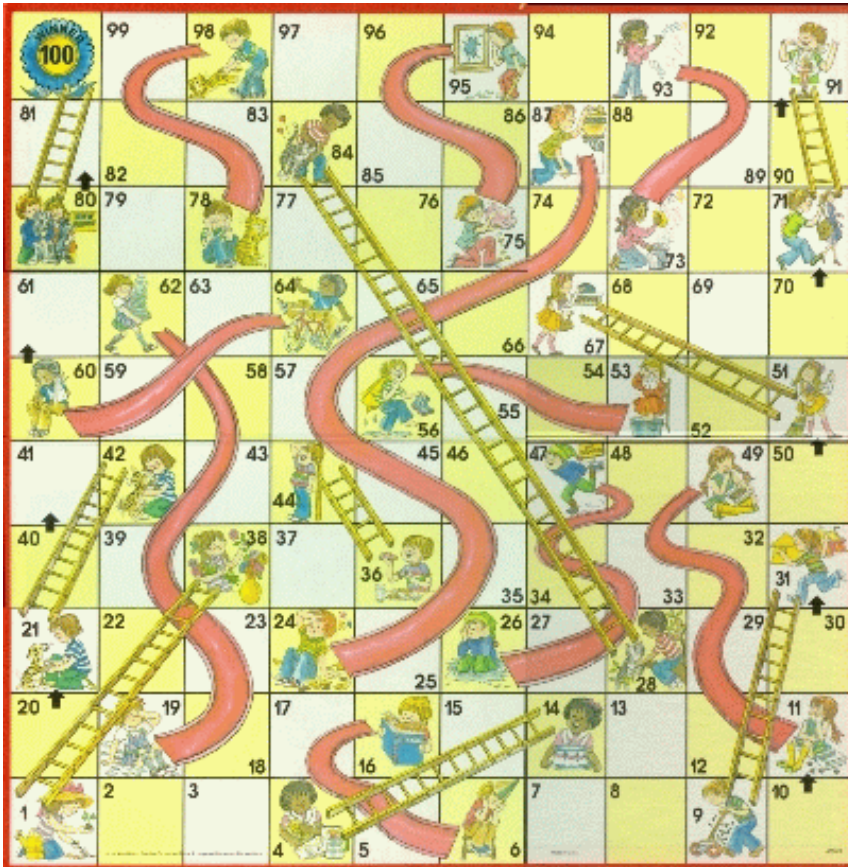
Nature of Games

What is a Game?

Contest Rules

- Two attempts per trick
  - 5 points for success on 1st
  - 3 points for success on 2nd

- Trick is complete when
  - String fully wound on axel
  - Yo-yo is back in hand

- Disqualification if
  - Player moves feet
  - Throw leaves trick box

Nature of Games

What is a Game?

Rules

- Players take turns
  - Spin the number wheel
  - Move that many spaces

- When land on space…
  - Ladders take you up
  - Chutes take you down

- First one to 100 wins!

Nature of Games

the gamedesigninitiative
at cornell university

What is a Game?

Nature of Games

Definitions of Games

- Adams: *Fundamentals of Game Design*
A **game** is a form of *interactive entertainment* where *players* must overcome *challenges*, by taking actions that are governed by *rules*, in order to meet a *victory condition*.

- Salen & Zimmerman: *Rules of Play*
A **game** is a *system* in which *players* engage in *artificial conflict*, defined by *rules*, that results in a *quantifiable outcome*.

Definitions of Games

- Adams: *Fundamentals of Game Design*
  A **game** is a form of *interactive entertainment* where *players* ... actions that ar ... *victory condit* ...

- Salen ...
  A **gam** ... n *artifici* ... s in a *quantifiable outcome*.

- Players
- Challenges
- Rules
- Goals

Design Decisions

- **Players**
  - How many players are there at a time?
  - Who or what is the player in the world?
  - Specifies a notion of *identity*

- **Goals**
  - What is the player trying to achieve?
  - Defined by the game or by the player?
  - Specifies the player *focus*

Design Decisions

- **Rules**
  - How does the player effect the world?
  - How does the player learn the rules?
  - Specifies the *boundaries* of the game

- **Challenges**
  - What obstacles must the player overcome?
  - Is there more than one way to overcome them?
  - Specifies the fundamental *gameplay*

(Other) Design Decisions

- **Game Modes**
  - How are the challenges put together?
  - What is the interaction *context*?

- **Setting**
  - What is the nature of the *game world*?
  - What is the *perspective* (e.g. side-scroller, 3D, etc.)?

- **Story**
  - What *narrative* will the player experience?
  - How is it connected to gameplay?

the game**design**initiative
at cornell university

What about Fun?

- But how do we create **good** game*s*?

  - Games are a creative medium

  - Games are designed to entertain

- **Question**: What makes a game *fun*?

- **Better**: Why do people play games?

Nature of Games

the game**design**initiative
at cornell university

Casual vs. Core

- **Core gamers** play lots of games
  - Almost always to finish games they play
  - Want hard games; will tolerate frustration

- **Casual gamers** play for enjoyment
  - Will stop when the game stops being fun
  - Challenges must be reasonable

- Harder to distinguish than you think
  - Something designers are paying less attention to

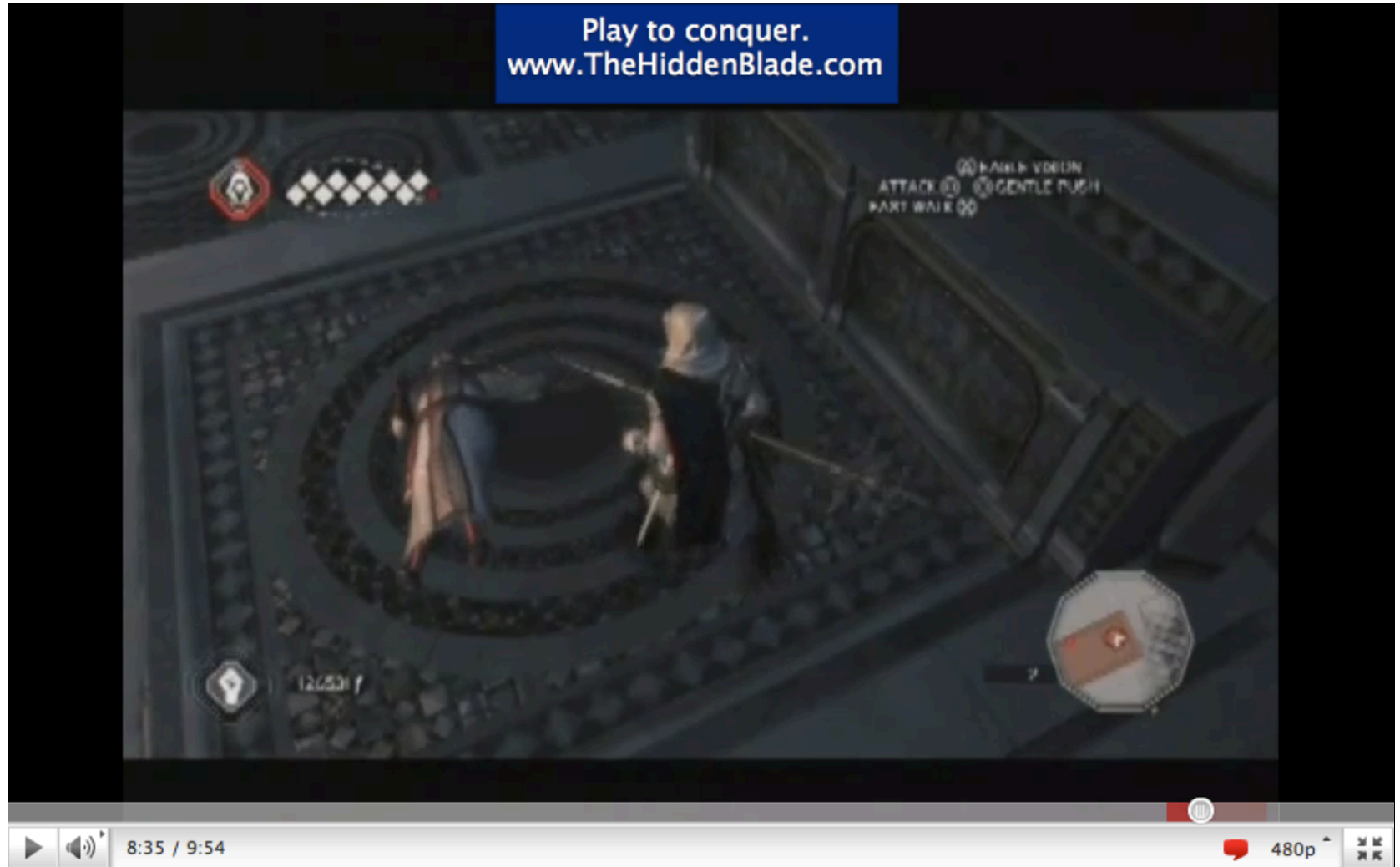the game**design**initiative
at cornell university

Play Length

- How short a game can I play and have fun?
  - Least meaningful unit of play
  - **Console**: 30 minutes+ is acceptable
  - **Mobile**: No more than a minute

- **Casual** often means short play units
  - But can have sophisticated gameplay!
  - **Example**: *Plants vs. Zombies*

- But long play length is always **core**

Nature of Games

Psychology: Bartle's Four Types

- Theory of players in online games:

  - **Achiever**: Overcome challenges, gather rewards
  - **Explorer**: Discover, understand game world
  - **Socializer:** Interact & role-play with others
  - **Griefer:** Distress other players in the game

- Games often designed for multiple groups

  - **Example:** *World of Warcraft*

- But just one *model* of player psychology

Nature of Games

The Explorer

Nature of Games

the gamedesigninitiative
at cornell university
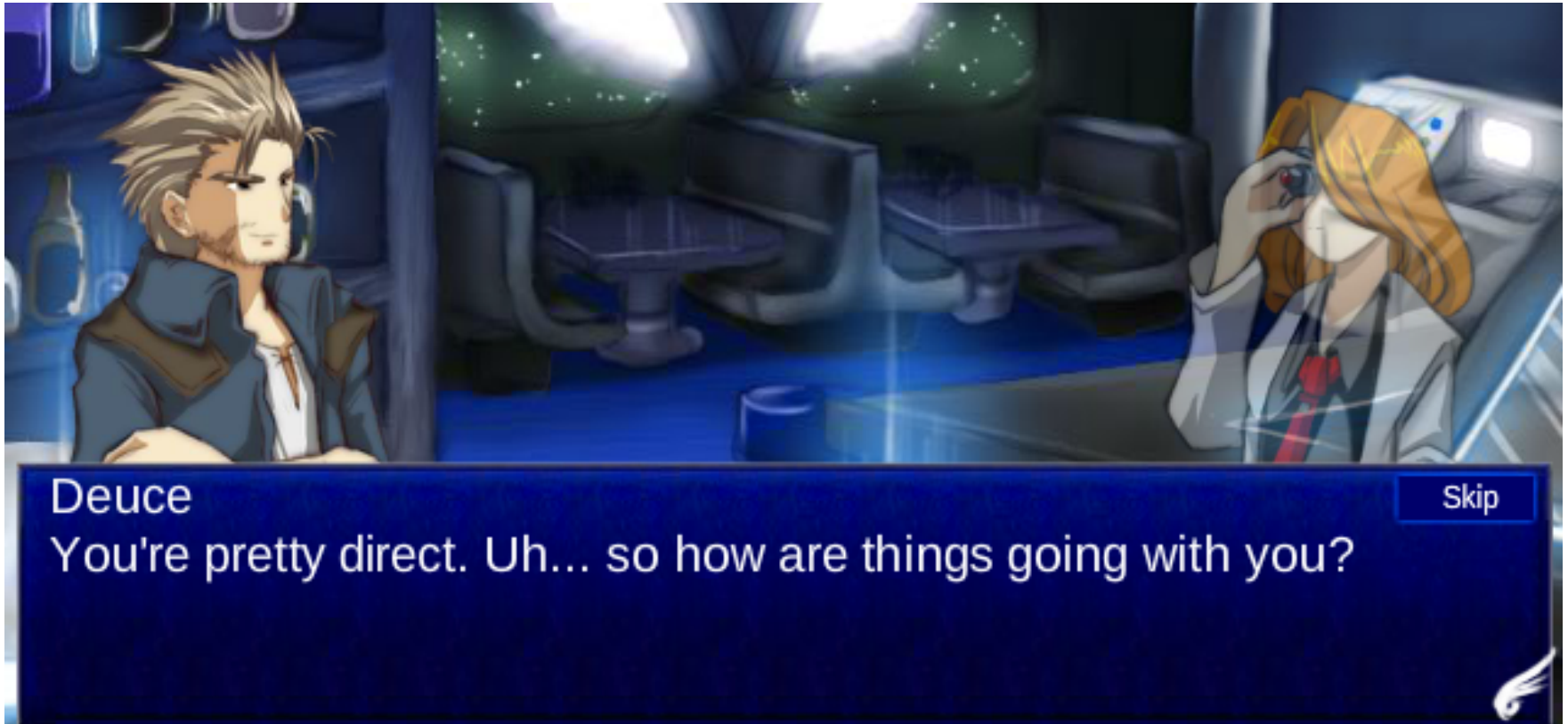
Dueling Design Philosophies

Narrative

- Games are a *story medium*
  - Focuses on storytelling
  - Traditional narrative structure

- **Advantages**:
  - Emotionally compelling
  - Strong artistic vision

- **Disadvantages**:
  - Author *voice* over player voice
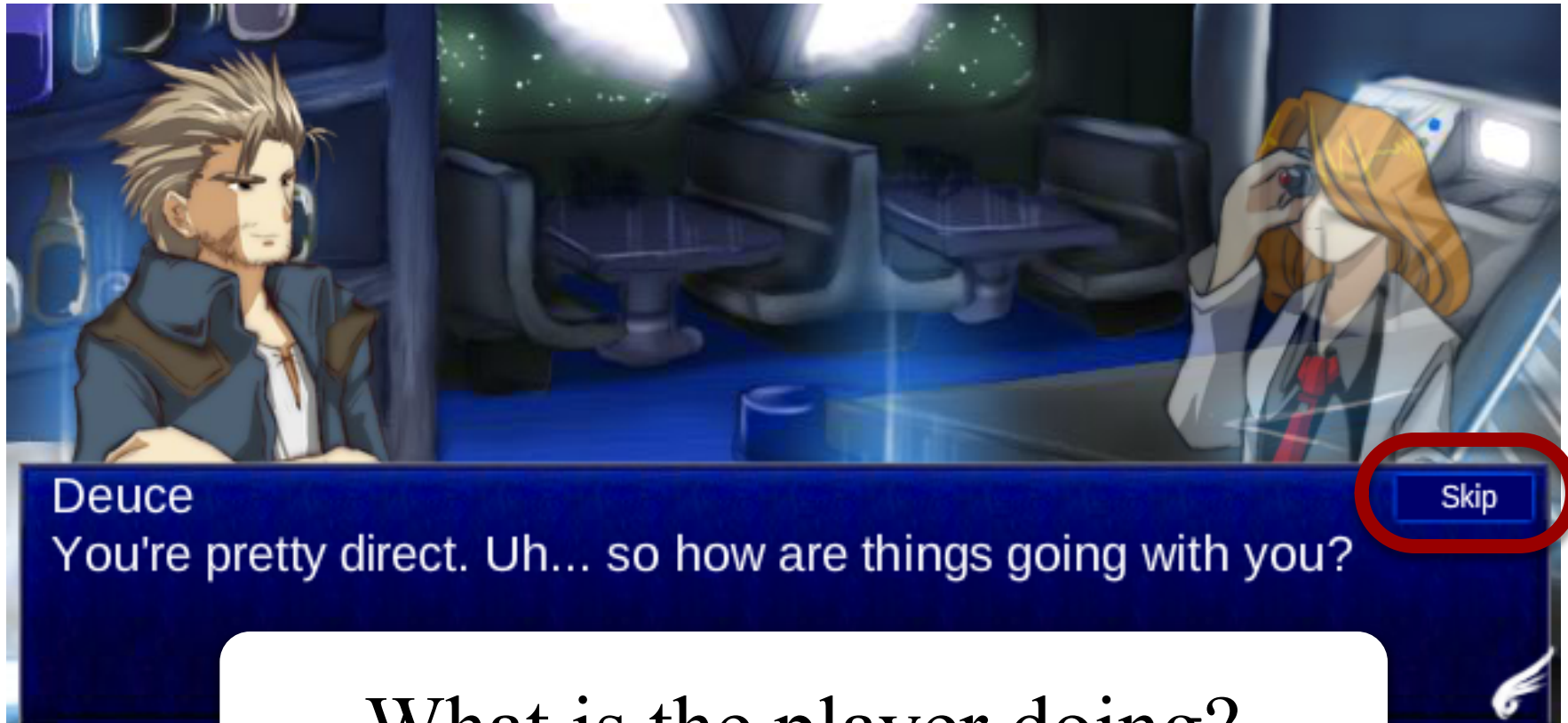 - Poorly defined mechanics

Ludic

- Games are about *mechanics*
  - Focus on gameplay, rules
  - Storytelling is minimal

- **Advantages**:
  - Focus on player *agency*
  - Tight, well-defined gameplay

- **Disadvantages**:
  - Lack of player motivation
  - Hard to distinguish yourself

the **game**design**initiative**
at cornell university

The Dangers of Pure Story

Nature of Games

The Dangers of Pure Story

Deuce
You're pretty direct. Uh... so how are things going with you?

Skip

What is the player doing?

Nature of Games

But Ludic is Not Everything

Nature of Games

But Ludic is Not Everything

Nature of Games

the gamedesigninitiative
at cornell university
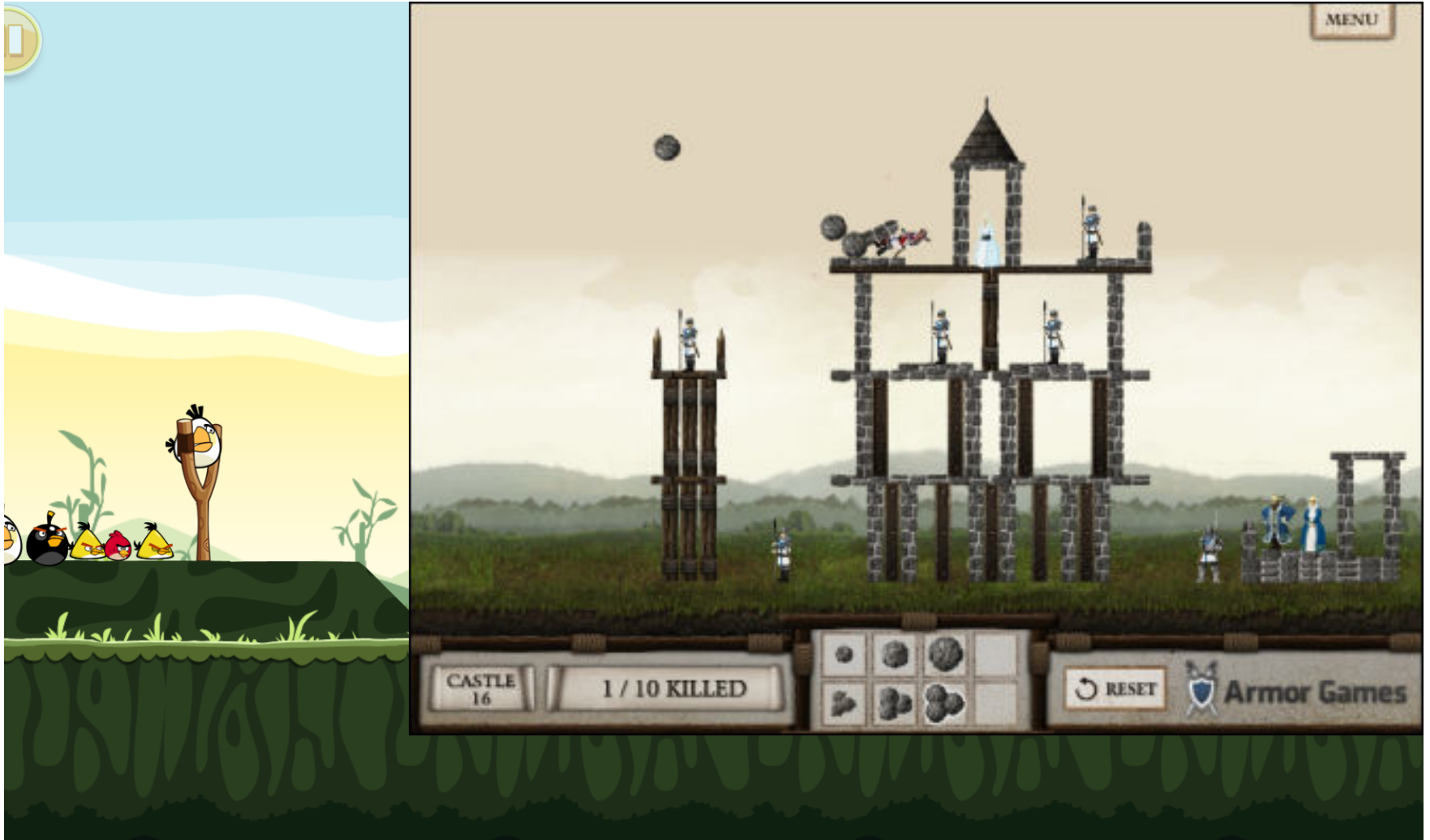
Game Design Must Be a Balance

Motivate the Player

- Needs a story *framework*
  - Setting to work within
  - Strong sense of identity
  - Challenges with context

Empower the Player

- Drama from player *actions*
  - Define what the player can do
  - Challenges reward or punish
  - Freedom in achieving goals

Games are **dramatic**, but they have their own **conventions**.

the **gamedesigninitiative**
at cornell university

But This Course Will Be Ludic-Centric

- Will focus on **design tools**
  - Techniques that we can train
  - Using them requires practice
  - Implementing them has technical challenges

- But design is much more
  - You use tools to create art
  - Can only learn by doing
  - With critiques from us
  - Like a studio course

- Keeping balance is up to you

Base to Hit Table

Range		To Hit	
Short		3	
Medium		7	
Long		14	

If a 1 is rolled for a weapon that has an event
occur on the normal 2d6 roll of "2" (such as a Jam) , re-roll.
On a re-roll result of 10 or less, the weapon event occurs.

Hit Location Table

1d20	Left	Front / Rear	Right	
1	Left Leg	Right Arm	Right Leg	3
2	Left Arm	Right Arm	Right Arm	4
3	Left Arm	Right Arm	Right Arm	4
4	Left Arm	Right Leg	Right Arm	5
5	Left Arm	Right Leg	Right Arm	5
6	Left Leg	Right Torso	Right Leg	6
7	Left Leg	Right Torso	Right Leg	6
8	Left Leg	Right Torso	Right Leg	6
9	Left Torso	Center Torso	Right Torso	7
10	Left Torso	Center Torso	Right Torso	7
11	Left Torso	Center Torso	Right Torso	7
12	Center Torso	Left Torso	Center Torso	8
13	Center Torso	Left Torso	Center Torso	8
14	Center Torso	Left Torso	Center Torso	8
15	Right Torso	Left Leg	Left Torso	9
16	Right Torso	Left Leg	Left Torso	9
17	Right Arm	Left Arm	Left Arm	10
18	Right Arm	Left Arm	Left Arm	10
19	Right Leg	Left Arm	Left Leg	11
20	Special	Special	Special	2/12

Special Hit Location Table

1d20	Left	Front / Rear	Right
1 – 10	Head	Head	Head
11 – 20	LT (Critical)	CT (Critical)	RT (Critical)

the **gamedesigninitiative**
at cornell university

The Adams Approach

- Games as *wish-fulfillment*
  - I want to _____

- Questions to answer:
  - What dream are you satisfying?
  - What *goals* does this dream create?
  - What *actions* achieve those goals?
  - What *setting* does this dream create?
  - What is the appropriate *interface*?

- Use this to define **gameplay**

Nature of Games

the **game**design**initiative**
at cornell university

The Adams Approach

- Games as *wish-fulfillment*
  - I want to _____

- Questions to answer:
  - What dream are you satisfying?
  - What *goals* does this dream create?
  - What *actions* achieve those goals?
  - What *setting* does this dream create?
  - What is the appropriate *interface*?

  Narrative

- Use this to define **gameplay**

  Ludic

Nature of Games

Exploring Gameplay

- To design games, you must play games!
  - Experience many different types of gameplay
  - Do not play the same type of game all the time

- Flash portals are still a good resource
  - Games are small but focus entirely on gameplay
  - Kongregate & Armor Games are some of the best
  - Puzzle game? Look at Kongregate first

- This is how we will use **Piazza** this semester

Have Realistic Goals

- **Goal**: Size of a large, elaborate Flash game
  - Quality should be 3.5+ stars on Kongregate
  - Can be played instantly with minimal tutorial

- **Quality over Quantity**
  - Ten amazing levels > 30 poor levels
  - Balance number of challenges with level size
  - Avoid feature bloat (e.g. power ups)

- We will give you constant feedback on this

Nature of Games

the gamedesigninitiative
at cornell university

Commercial Examples

- **Braid**: Puzzle platformer with time-travel mechanics

- **Limbo**: Dark platformer with realistic physics

- **Hotline Miami**: Top-down stealth and action

- **Clash of Heroes**: Match 3 + Turn-based strategy

- **Guild of Dungeoneering**: RPG + CCG
  - Use cards to build the dungeon that you explore

- **Monument Valley**: Puzzle-based exploration

- Think indie games, not boxed retail

the gamedesigninitiative
at cornell university

Examples from Previous Semesters

- **Arc en Ciel (Spring 2015):**
  - Platformer where you paint platforms, while enemy erases

- **Dash (Spring 2014):**
  - Action game with dash mechanics to avoid enemies, obstacles

- **Lifted (Spring 2010):**
  - Physics-based puzzle game of alien abduction

- **Exodus Protocol (Spring 2013):**
  - X-Com style strategy game with only three units

- **Ensembler (Fall 2011):**
  - Classical music rhythm game with you as conductor

Nature of Games

Examples from Previous Semesters

- **Arc en Ciel (Spring 2015):**
  - Platformer where you paint platforms, while enemy erases

- **Dash (Spring 2014):**
  - Action game with dash mechani~~c~~ ... les

- **Lifted (Spring 2...**
  - Phy~~sics~~ ...

- **Exo~~dus~~ (Spring 2013):**
  - X-C~~OM~~ ...rategy game with only three units

- **Ensembler (Fall 2011):**
  - Classical music rhythm game with you as conductor

Many are available at
http://gdiac.cs.cornell.edu

Nature of Games

the **game**design**initiative**
at cornell university

Summary

- Games are not necessarily well-defined
  - They have **players**, **goals**, **rules**, and **challenges**
  - Not much agreement on anything else

- Game design is about finding balance
  - Want **narrative** to motivate players
  - But need **ludic** elements to give agency

- Will start with the Adams approach
  - Create a setting or narrative framework
  - Use that to guide the ludic elements

Nature of Games