Game Design Theory
Part 1: Design and Player Experience

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So how do we make games?

We all have games we like to play

We all have ideas for how we'd change them
  or how we'd make new ones

What goes into making a shipping game?

Game core

1. Core game idea
   ◦ What is the game about?
   ◦ What is the player doing?
   ◦ Why are they doing it?
   ◦ What is the challenge?

(Similar to advice for writers:
who is the speaker, what are they saying,
why are they saying it, etc.)

CORE GAME IDEA

What is the game?
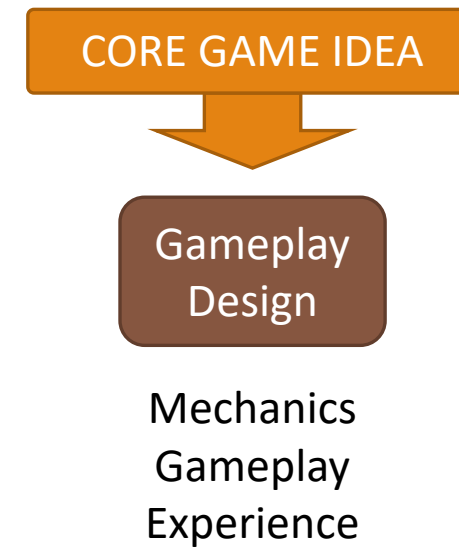Who is the player?
Why? How?

Gameplay design

1. Core Game Idea

2. Gameplay Design
- Mechanics
  - *Rules,* resources, units, weapons…
- Gameplay
  - How the game + player *behave over time*
- Experience
  - How that makes the player *feel*

CORE GAME IDEA

Gameplay Design

Mechanics
Gameplay
Experience

Game design

1. Core Game Idea

2. Gameplay Design

3. Game Design
- ◦ + Art
- ◦ + Story
- ◦ + Tech

CORE GAME IDEA

Gameplay Design

Characters + Story

Visual Design

Technical Design

Game design
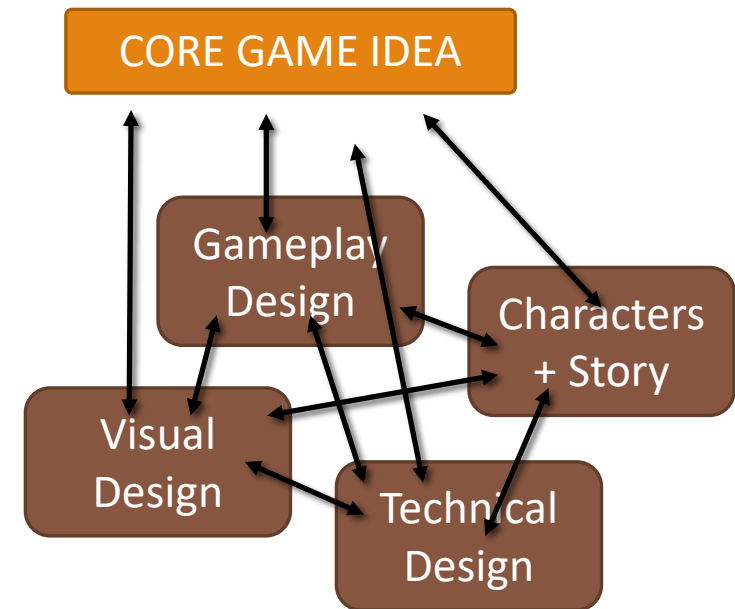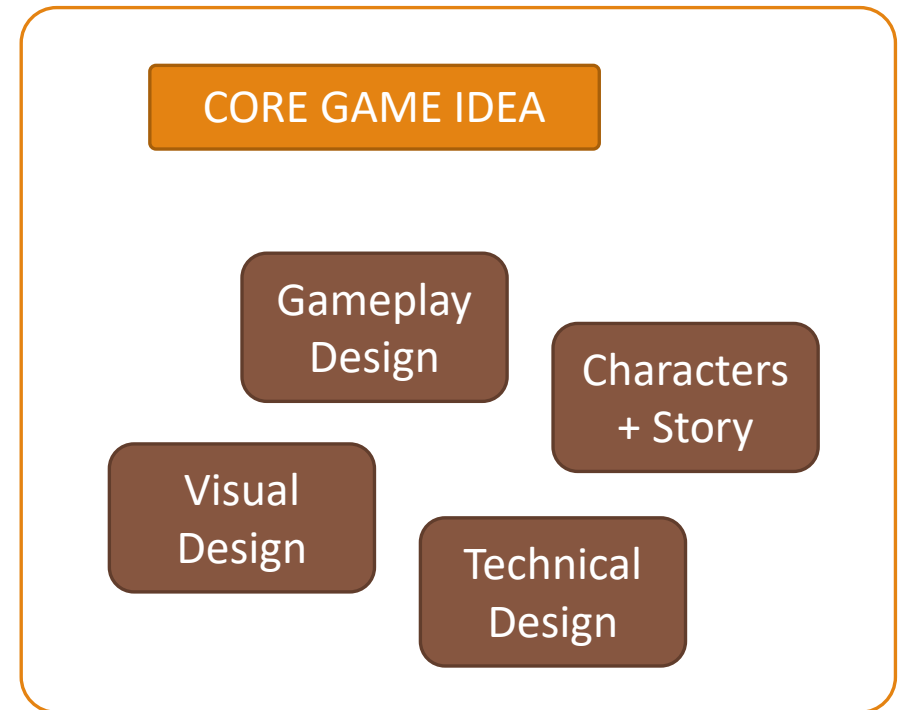
1. Core Game Idea

2. Gameplay Design

3. Game Design
- + Art
- + Story
- + Tech
- All intertwined of course

Product design

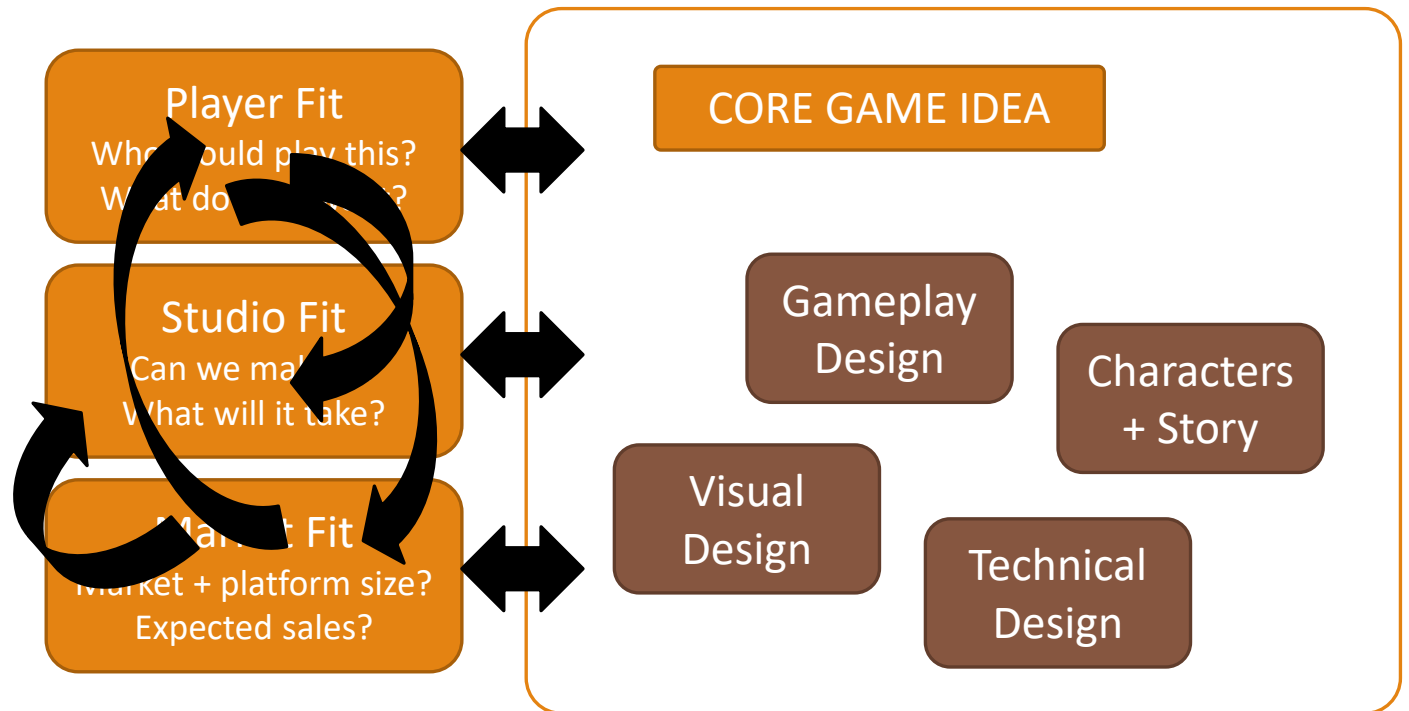1. Core Game Idea

2. Gameplay Design

3. Game Design

4. Product Design
   ◦ Player fit
   ◦ Studio fit
   ◦ Market fit
   ◦ Cost and budget

Player Fit
Who would play this?
What do they want?

Studio Fit
Can we make it?
What will it take?

Market Fit
Market + platform size?
Expected sales?

CORE GAME IDEA

Gameplay Design

Characters + Story

Visual Design

Technical Design

Product design

1. Core Game Idea

2. Gameplay Design

3. Game Design

4. Product Design
   ◦ Player fit
   ◦ Studio fit
   ◦ Market fit
   ◦ Cost and budget

Player Fit
Who would play this?
What do they like?

Studio Fit
Can we make it?
What will it take?

Market Fit
Market + platform size?
Expected sales?

CORE GAME IDEA

Gameplay Design

Characters + Story

Visual Design

Technical Design

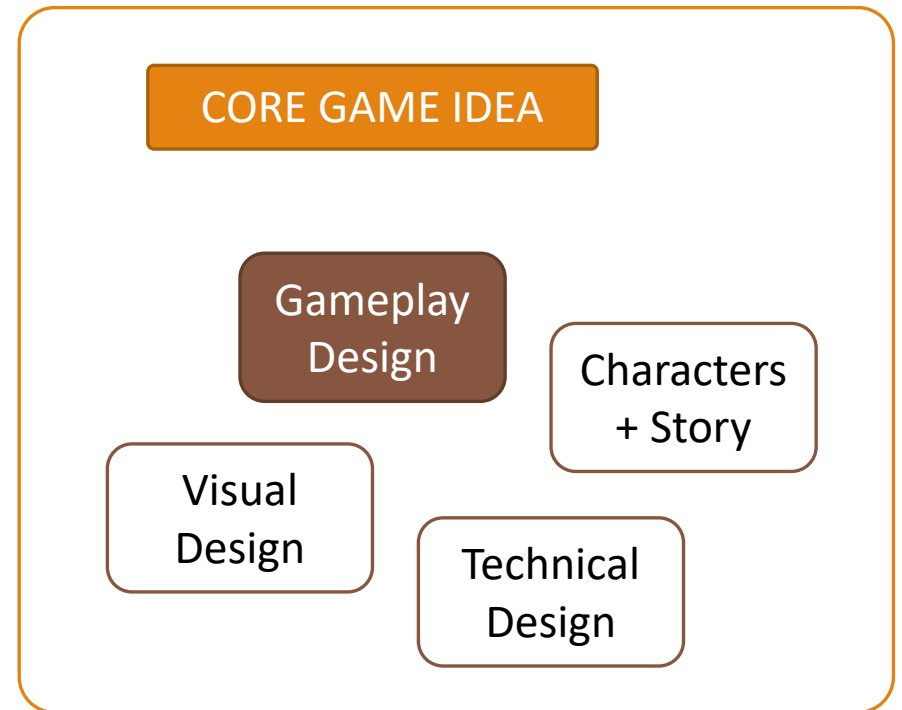# Our plan

Today:
◦ Part 1: Gameplay and player experience

Then:
◦ Part 2: Mechanics and game pieces

Future:
◦ Product design

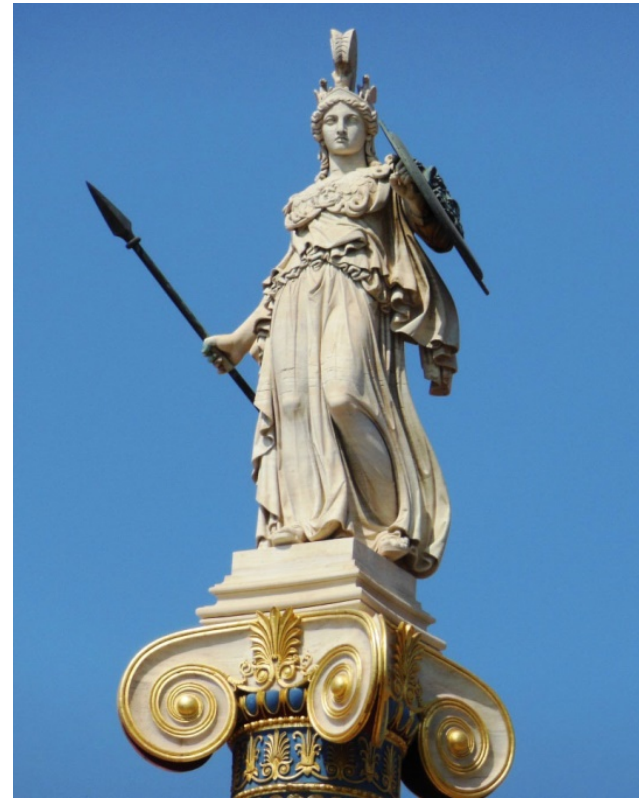(Visual / Character design not part of this class ☺)

CORE GAME IDEA

Gameplay Design

Characters + Story

Visual Design

Technical Design

How do we design gameplay?

GAMES !=

(Athena, sprang out fully formed from the head of Zeus)

How do we design gameplay?

Start out by thinking analytically
- ◦ What are games
- ◦ What makes them enjoyable
- ◦ How do we play them
- ◦ How do they decompose into smaller pieces

And then do a whole lot of building and prototyping :)

Example

Pick your favorite game
◦ What makes this game fun to play?
◦ What makes the whole genre fun?
◦ Are there other games that are similar? And how?
◦ Can stuff be added or removed w/o affecting fun?
◦ Are some elements central and necessary?
◦ How does it all fit together?

Games

Gameplay is an **experience** created by the **designer** for the **player**

player

designer

Games

Gameplay is an experience

Player can't talk to the designer
◦ They can only interact with the game itself

player   designer

Games

Gameplay is an experience

Player can't talk to the designer
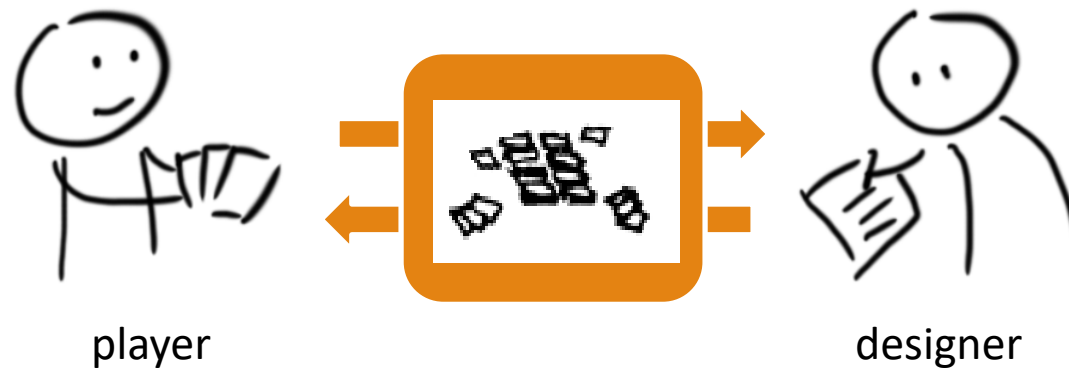
Designer can't talk to the player

player   designer

Games

Gameplay is an experience

… mediated by the game artifact

player   designer

Example: Poker

What do players like about it?

Fun
Winning
Socializing
Etc.

Example: Poker

What do players like about it?

What are the basic game elements?

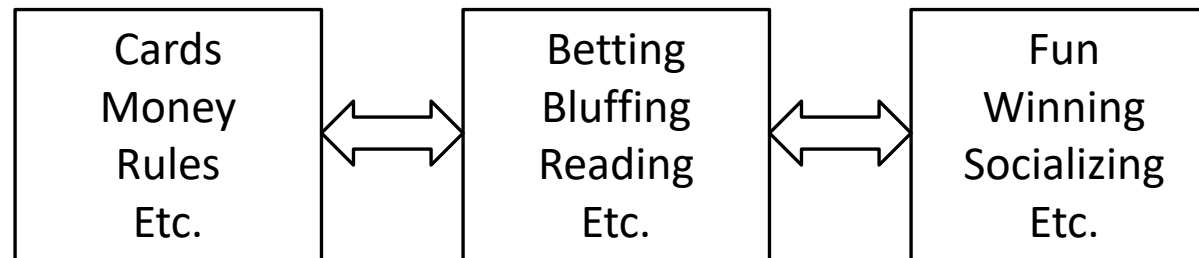| Cards |
| --- |
| Money |
| Rules |
| Etc. |

Fun
Winning
Socializing
Etc.

Example: Poker

What do players like about it?

What are the basic game elements?

What do you do with game elements, to produce this kind of fun?

Cards Money Rules Etc.	⟷	Betting Bluffing Reading Etc.	⟷	Fun Winning Socializing Etc.

MDA model

Mechanics / Dynamics / Aesthetics

Like color theory for games
◦ Very broad
◦ Immediately useful
◦ Starting point: not end all and be all

Originally developed by LeBlanc for the GDC Game Design Workshop in early 2000s. See MDA paper in course notes (Hunicke, LeBlanc, Zubek 2004) for details

Example: Poker

Translated to MDA

Mechanics	⟷	Dynamics	⟷	Aesthetics

Cards Money Rules Etc.	⟷	Betting Bluffing Reading Etc.	⟷	Fun Winning Socializing Etc.
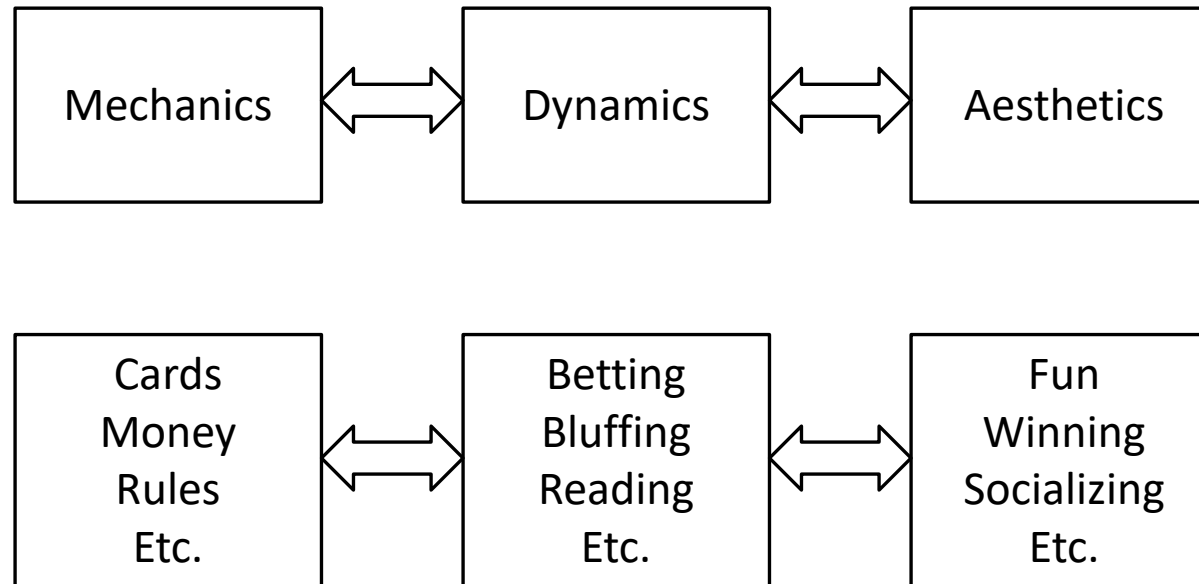
Note on terminology

Practicing designers don't use this kind of M/D/A terminology

Nobody says "let's adjust the dynamics so that …" or "the aesthetics of this game are …"

Practicing designers talk about the *gameplay,* and how that affects *player experience*

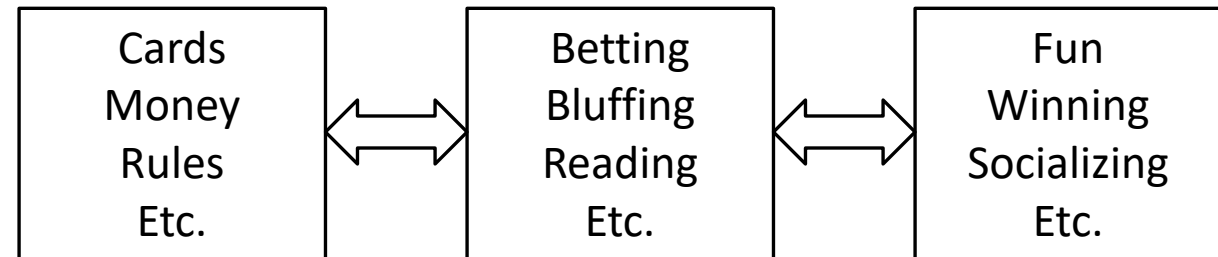Let's use **contemporary terminology** instead

Gameplay

Mechanics
◦ Game elements, rules, code
◦ Player's inputs and outputs

Gameplay
◦ How the game unfolds over time
◦ Activity / behavior/ patterns of play

Experience
◦ The enjoyable experience
◦ The feels / the fun

| Mechanics | ⟷ | Gameplay | ⟷ | Experience |

| Cards Money Rules Etc. | ⟷ | Betting Bluffing Reading Etc. | ⟷ | Fun Winning Socializing Etc. |

Gameplay ...is not the only thing

Note: this model only talks about things connected to gameplay

Other aspects also influence player's experience of the game:
◦ Art style, setting, visuals
◦ Story, characters, plot
◦ Etc.

Mechanics	⟷	Gameplay	⟷	Experience

Characters, plot elements, story arc

Art assets, style, style, theme

. . .
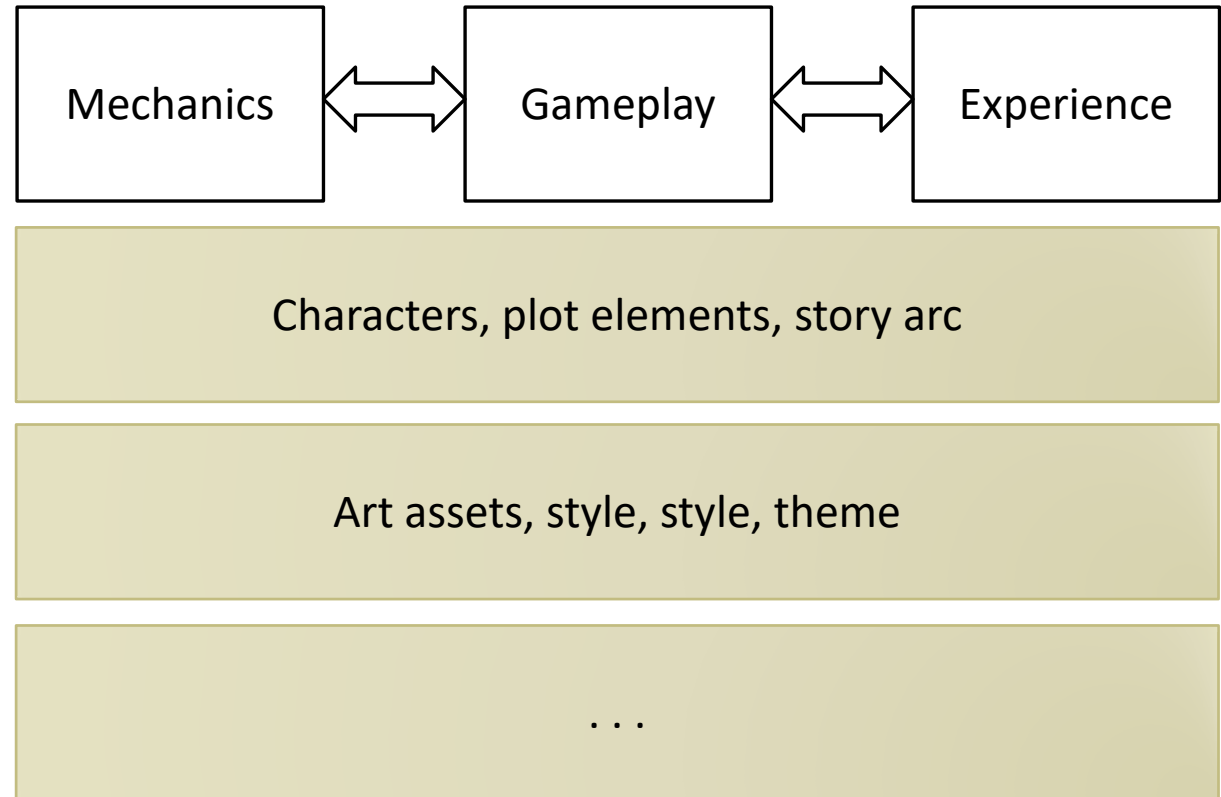
State of the Art

Some books, no unified theory

Random knowledge scattered across
◦ websites and blogs
◦ article anthologies (Gems books)
◦ textbooks etc

Most designers learn on the job

Popular Game Design Books

(showing 1-49 of 487)

The Art of Game Design: A Book of Lenses (Paperback)
by Jesse Schell (shelved 71 times as *game-design*)
avg rating 4.42 — 2,656 ratings — published 2008

A Theory of Fun for Game Design (Paperback)
by Raph Koster (Goodreads Author) (shelved 63 times as *game-design*)
avg rating 3.93 — 2,196 ratings — published 2004

Rules of Play: Game Design Fundamentals (Hardcover)
by Katie Salen (shelved 42 times as *game-design*)
avg rating 4.04 — 1,436 ratings — published 2003

Challenges for Game Designers (Paperback)
by Brenda Brathwaite (shelved 38 times as *game-design*)
avg rating 3.97 — 448 ratings — published 2008

Reality Is Broken: Why Games Make Us Better and How They Can Change the World (Paperback)
by Jane McGonigal (shelved 35 times as *game-design*)
avg rating 3.82 — 8,718 ratings — published 2010

Game Design Workshop: A Playcentric Approach to Creating Innovative Games (Paperback)
by Tracy Fullerton (shelved 24 times as *game-design*)
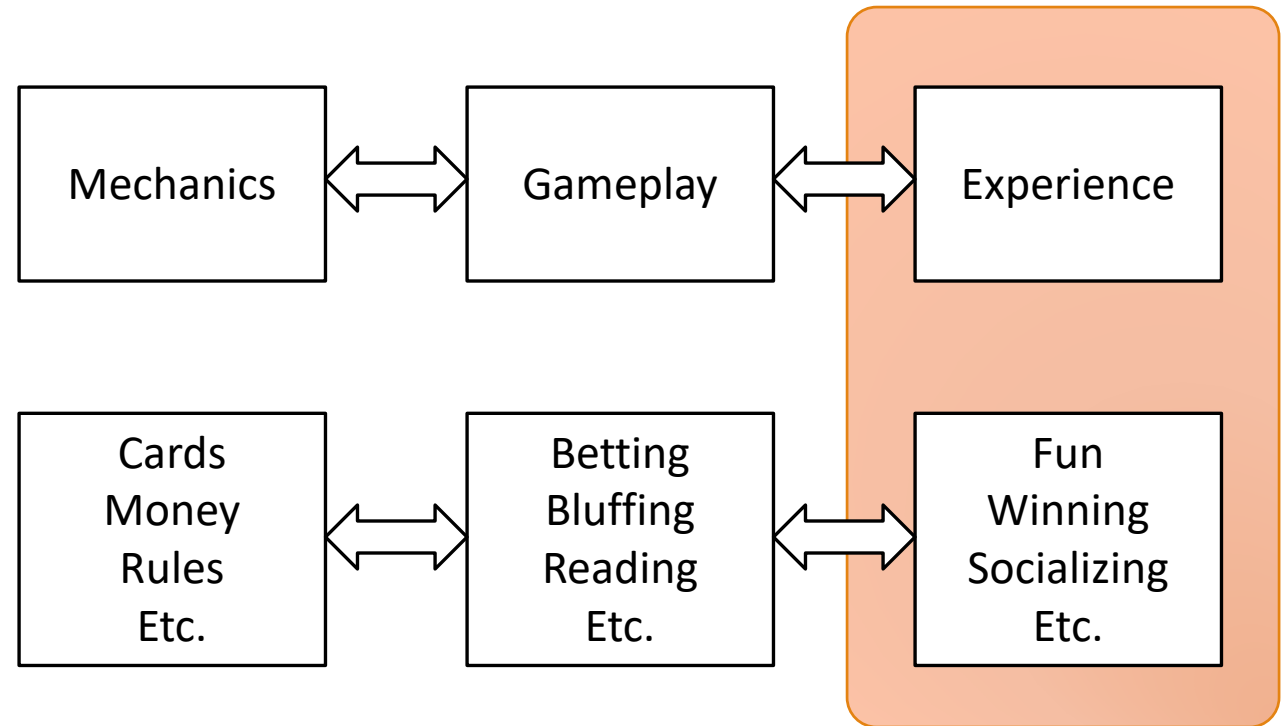avg rating 4.10 — 533 ratings — published 2008

Level Up!: The Guide to Great Video Game Design (Paperback)
by Scott Rogers (shelved 15 times as *game-design*)
avg rating 4.17 — 576 ratings — published 2010

Roadmap

Today
◦ Experience

Future
◦ Gameplay
◦ Mechanics
◦ Deep dive into uncertainty

Mechanics	⟷	Gameplay	⟷	Experience
Cards Money Rules Etc.	⟷	Betting Bluffing Reading Etc.	⟷	Fun Winning Socializing Etc.

Player Experience

Player's feeling of "fun"
◦ "This game is awesome!"
◦ "This game sucks! It's not fun!"

But what does "fun" mean?
◦ It's an awfully vague word
◦ Everyone has a different idea of "what's fun"
◦ Are there better terms than "fun"?

Types of Experience

Desire for challenge / frustration / "fiero"

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush
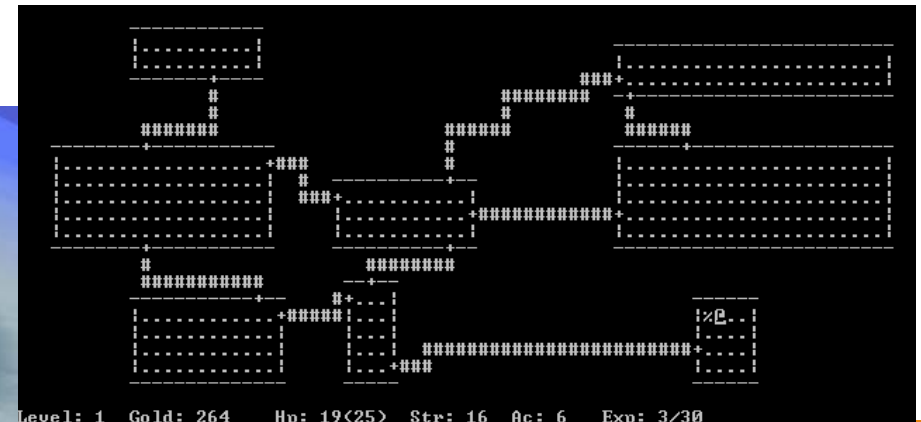Desire for learning / figuring things out

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush
Desire for learning / figuring things out
Desire to explore unknown worlds

Types of Experience

Desire for challenge / frustration / "fiero"
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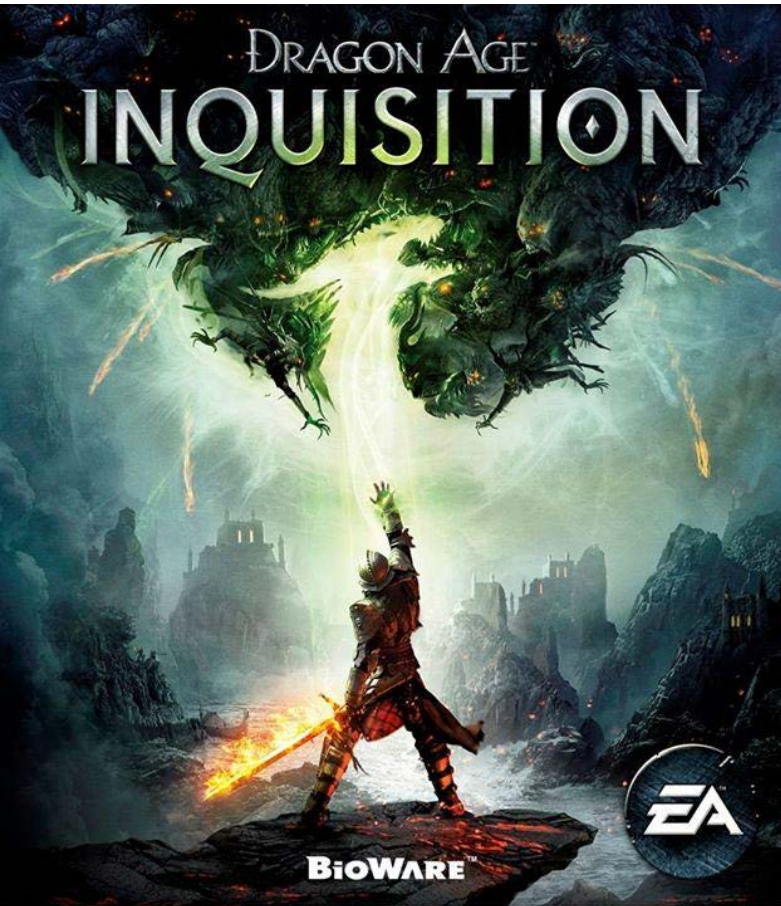**Desire for fantasy / be someone else**

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush
Desire for learning / figuring things out
Desire to explore unknown worlds
Desire for fantasy / be someone else
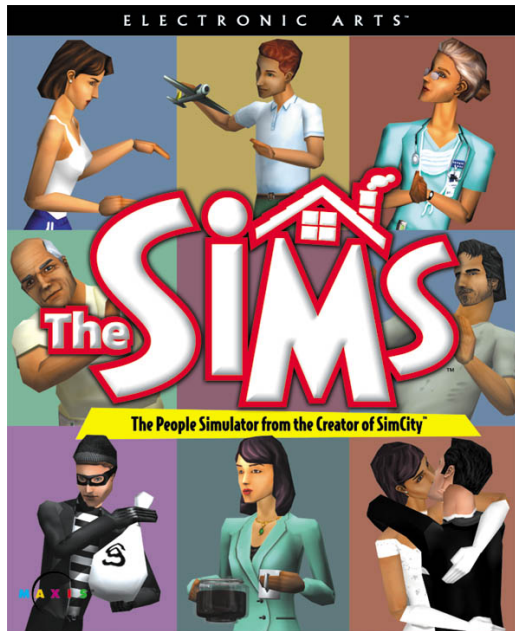**Desire for story / empathy / catharsis**

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush
Desire for learning / figuring things out
Desire to explore unknown worlds
Desire for fantasy / be someone else
Desire for story / empathy / catharsis
Desire for fear / disgust / paranoia

Types of Experience

Desire for challenge / frustration / "fiero"
Desire for action / adrenaline rush
Desire for learning / figuring things out
Desire to explore unknown worlds
Desire for fantasy / be someone else
Desire for story / empathy / catharsis
Desire for fear / disgust / paranoia
Desire for humor / cuteness

Types of Experience

Desire for challenge / frustration / "fiero"
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Desire for humor / cuteness
Desire to feel joyous

Types of Experience

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Desire to feel joyous
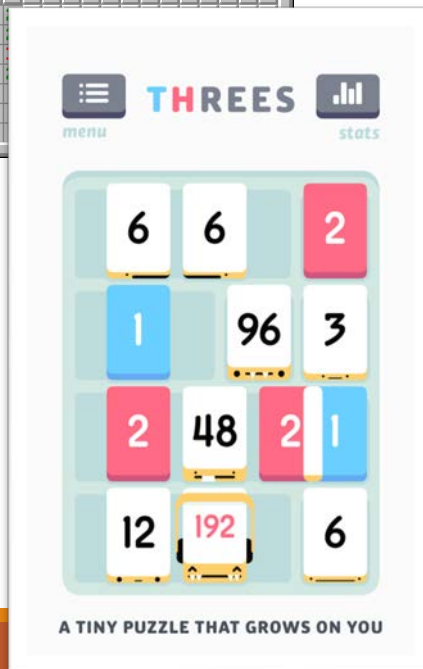Desire to create / express yourself
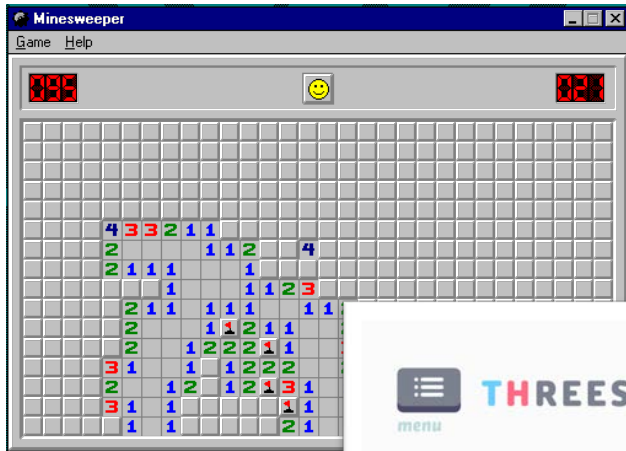
Types of Experience

Desire for challenge / frustration / "fiero"
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Desire for fear / disgust / paranoia
Desire for humor / cuteness
Desire to feel joyous
Desire to create / express yourself
Desire for sensory pleasure

Types of Experience

Desire for challenge / frustration / "fiero"
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Desire for fantasy / be someone else
Desire for story / empathy / catharsis
Desire for fear / disgust / paranoia
Desire for humor / cuteness
Desire to feel joyous
Desire to create / express yourself
Desire for sensory pleasure
Desire for repetition / past time

It all depends on the player

Different people like different things
◦ Eg. maybe I'm really into story driven RPGs

Different people will react differently to the same gameplay elements
◦ Eg. just because I like story doesn't mean that you'll like it too

There is no "objectively good" game design–
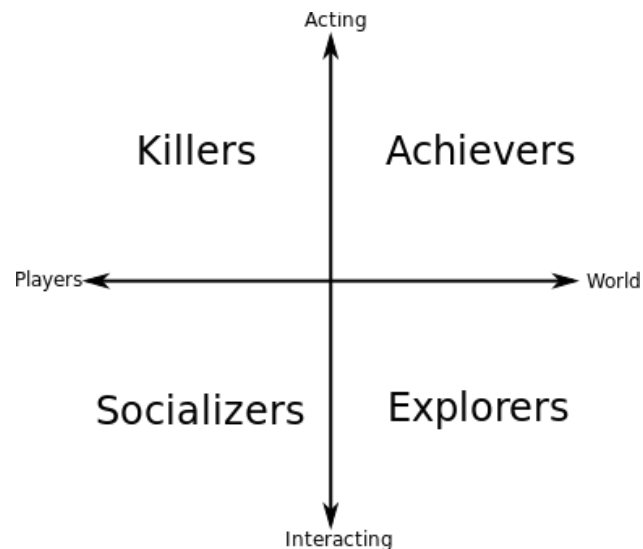   just good in context of particular players and their goals
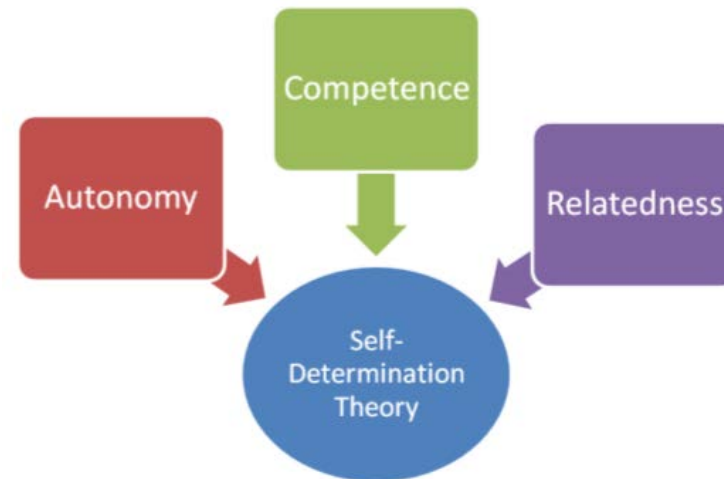
Player enjoyment theories

Some theories:

1. Bartle MUD player types [link]
2. Self-determination Theory (Deci & Ryan) [link]

Marketing approach: user stories

Consider your typical players and write stories about who they are and why they would like to play your game

- Ideally: by surveying existing players

- More commonly: by imagining players :)

Somewhat useful, but more as a marketing tool not design tool

John Doe, male, mid-20s

Occupation: assistant manager, retail

Plays: Console and PC, evenings after work, ~1-2h nightly

Favorite games: Assassin's Creed, The Witcher, World of Tanks, FIFA

Why are they favorite:
Good action, gets your adrenaline pumping – Winning is important – Friends at work also play and they compare tactics

Personality modeling: Five Factor

"Gold standard" for psychological personality tests

Statistical analysis finds five independent axes:

- Openness to experience   vs cautiousness
- Conscientiousness   vs lack of care
- Extraversion   vs intraversion
- Agreeableness   vs detachement
- Emotional Stability   vs neuroticism

(Note: much better than Meyer-Briggs :))

Bleeding edge research

Very interesting survey by Nick Yee that tries to match up:

1. Gamer motivation profiles (what games they like to play)

2. Personality surveys (using the Big 5 Model)

Presented at GDC 16, CHI 16, etc

Nick Yee study

Started by collecting 12 different possible motivations from existing literature

Then asked players to rate their preference for each of them

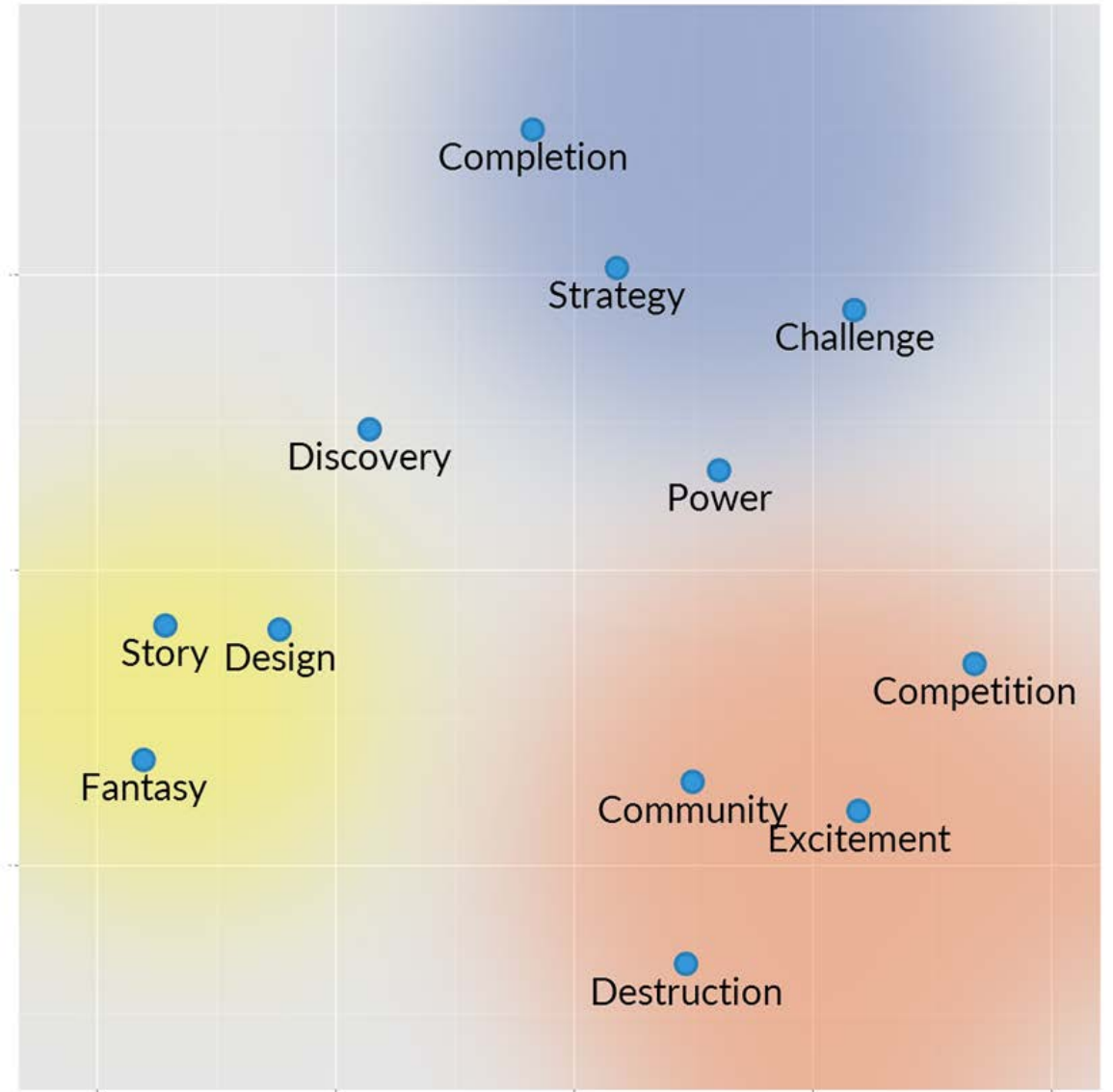| Action "Boom!"	Social "Let's Play Together"	Mastery "Let Me Think"	Achievement "I Want More"	Immersion "Once Upon a Time"	Creativity "What If?"
Destruction Guns. Explosives. Chaos. Mayhem.	**Competition** Duels. Matches. High on Ranking.	**Challenge** Practice. High Difficulty. Challenges.	**Completion** Get All Collectibles. Complete All Missions.	**Fantasy** Being someone else, somewhere else.	**Design** Expression. Customization.
Excitement Fast-Paced. Action. Surprises. Thrills.	**Community** Being on Team. Chatting. Interacting.	**Strategy** Thinking Ahead. Making Decisions.	**Power** Powerful Character. Powerful Equipment.	**Story** Elaborate plots. Interesting characters.	**Discovery** Explore. Tinker. Experiment.

Source: http://quanticfoundry.com/gdc/

Nick Yee study

Very large survey, N = 140,000
Produced clear clustering of
gamer preferences
◦ But why?

After that, he went on to match
them up against personality types…

MAP OF GAMING MOTIVATIONS

- Completion
- Strategy
- Challenge
- Discovery
- Power
- Story Design
- Competition
- Fantasy
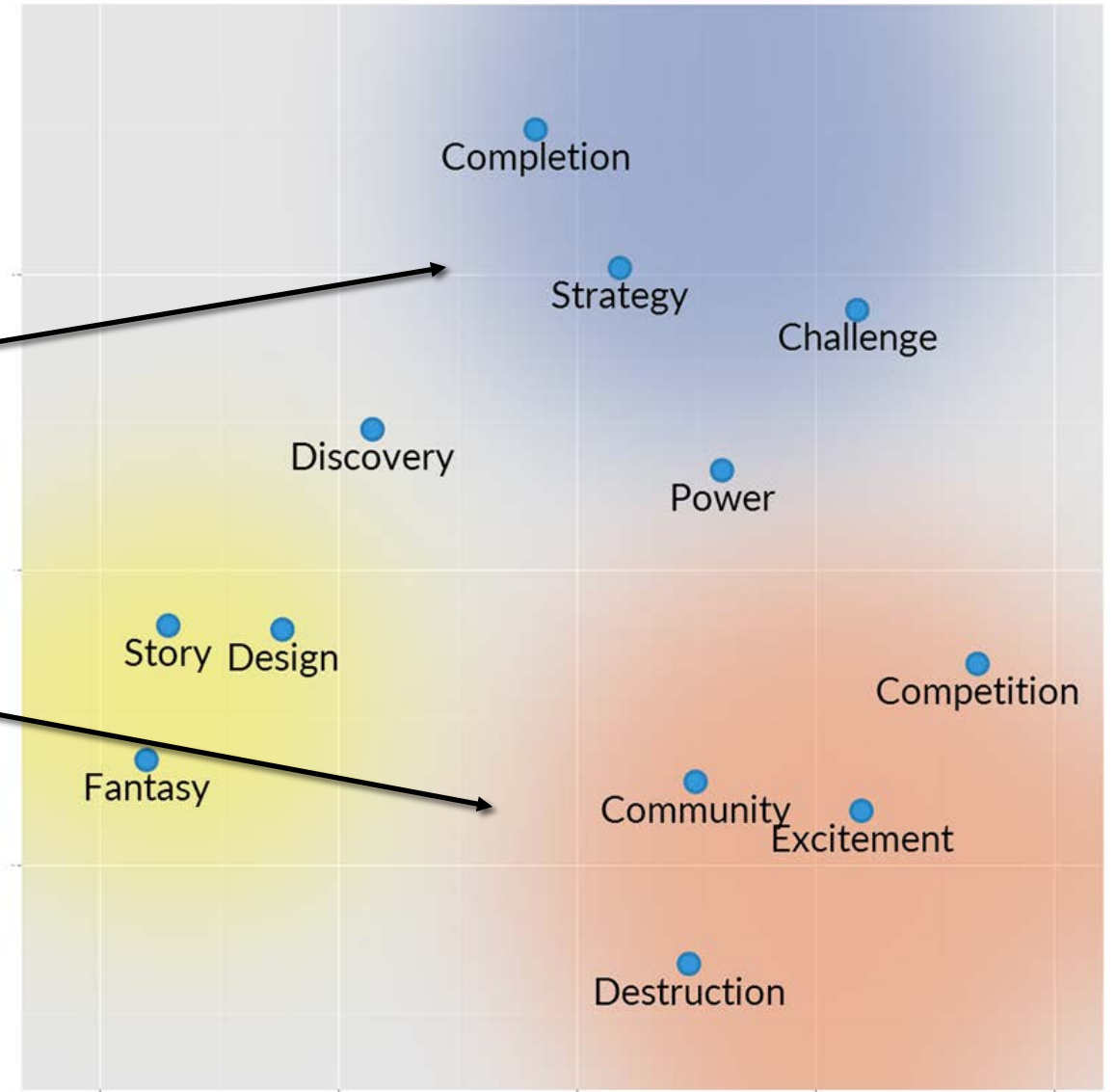- Community Excitement
- Destruction

Nick Yee study

Found that three of the FFM
axes correlate with gaming profiles:

- ◦ Conscientiousness
- ◦ Openness
- ◦ Extraversion

No results for:
- ◦ Agreeableness
- ◦ Emotional Stability

MAP OF GAMING MOTIVATIONS

Completion

Strategy

Challenge

Discovery

Power

Story Design

Competition

Fantasy

Community
Excitement

Destruction

How do games compare?

Counter-Strike fulfills desires for
◦ Challenge, strategy, competition, destruction

Final Fantasy fulfills desires for
◦ Challenge, story, discovery, challenge, fantasy

The Sims fulfills desires for
◦ Story, design, fantasy, strategy, destruction

Every game pursues multiple player desires *and therefore multiple player types*

Experience Summary

Let's not talk about "fun" in general

Different players have different motivations

Let's be as precise as possible when talking about the player's experience
◦ Know who you're making the game for
◦ Know what you want the player to experience
◦ Layer multiple types of experiences together

Start thinking about your own project…

What kind of a game do you want to make?

What will be fun about it?

You don't have to have any answers yet…

Start thinking about your **team**

We'll want ideally 3-person teams

You have time until Jan 28 to self-organize and come up with team + project proposals

◦ So the sooner the better :)

Today's summary

Game Design
◦ Intro
◦ Player Experience

Quick final project update

Homework

EOD Sunday Jan 14 (11:59pm)
◦ Do all exercises from lecture notes chapters 1, 2
◦ Submit as PDF on Canvas

Monday: MLK, no class!

Readings for next Wednesday
◦ Lecture notes chapters 3, 4, 5
◦ Costikyan text (all)

On Wednesday Jan 17 we continue on with game design: mechanics and uncertainty

Q&A