

GAME INTRODUCTION

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QUESTIONS

1. What's your favorite video game? (now, ever)
2. What made/makes that game fun?
3. Does a game have to be fun?
4. What is fun?
5. What is a game?
6. Can a video game be "art"?

WHAT IS A GAME?

A game is a structured form of play, usually undertaken for enjoyment and sometimes used as an educational tool

Movie? (ask: why not?)

Toy? (has interaction ... ask: why not?)

Puzzle? (has goal + interaction ... ask: why not?)



VIDEO/COMPUTER GAME

A **video game** is an electronic **game** that involves human interaction with a user interface to generate visual feedback on a **video** device

“A computer game is a software program in which one or more players make decisions through the control of game objects and resources, in pursuit of a goal.”



- *Play* - Interactions to elicit emotions
- *Game* - Object that provides rule-bound play
- *Frame* - The border of a game's context (Inside the frame is in the game, Outside the frame is real life)
- *Aesthetics* - Emotional responses during play

COMPUTER GAME & PLAYING GAME

A Computer Game is a *Software Program*, Not a board game or sports

- Consider: chess vs. soccer vs. Warcraft

Playing a Game is About Making Decisions

- Ex: *what weapon to use, what resource to build*
- Can be frustrating if decision does not matter

Playing a Game is About Control

- Player wants to **impact outcome**
- Uncontrolled sequences can still happen, but should be sparing and make logical
- Ex: *Riven uses train system between worlds*

A GAME NEEDS A GOAL

A Game Needs a Goal

- Ex: Defeat Ganandorf in Zelda

Long games may have sub-goals

- Ex: recover Triforce first, then Sword of Power

Without game goals, a player develops his/her own (a toy)



WHAT A GAME IS NOT

A bunch of cool features

- Necessary, but not sufficient
- May even detract, if not careful, by concentrating on features not game

A lot of fancy graphics

- Games need graphics just as hit movie needs special effect ... but neither will save weak idea
- Again, may detract
- Game must work without fancy graphics
- Suggestion: should be fun with simple objects

A series of puzzles

- All games have them
- But not gameplay in themselves
- Puzzles are specific, game systems spawn more generic problems

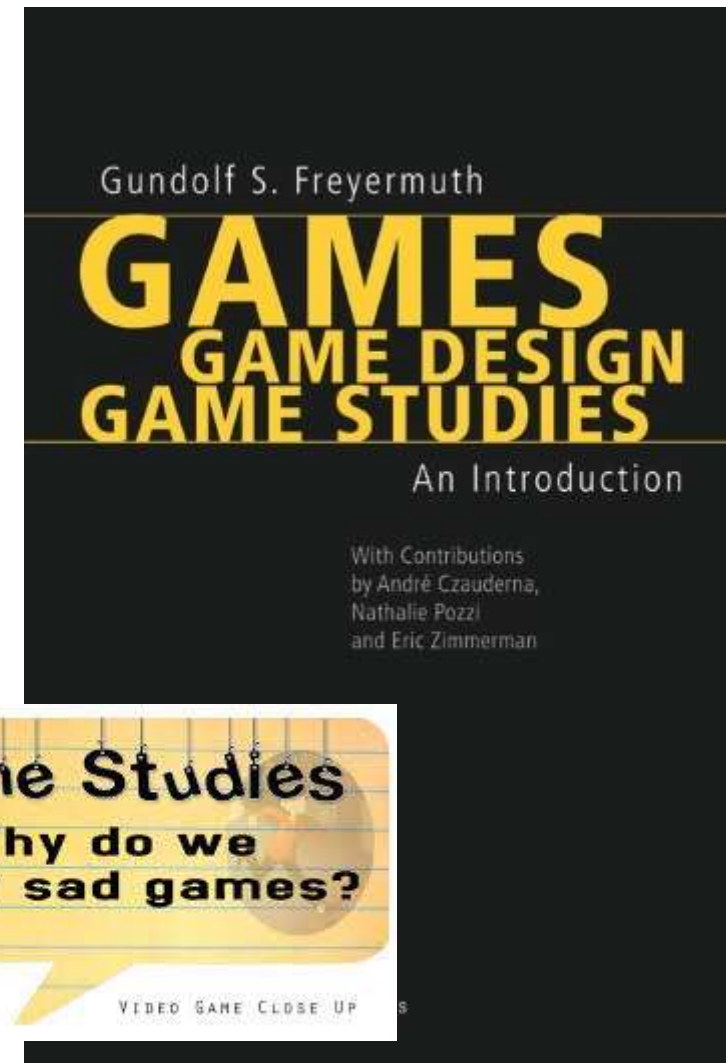
An intriguing story

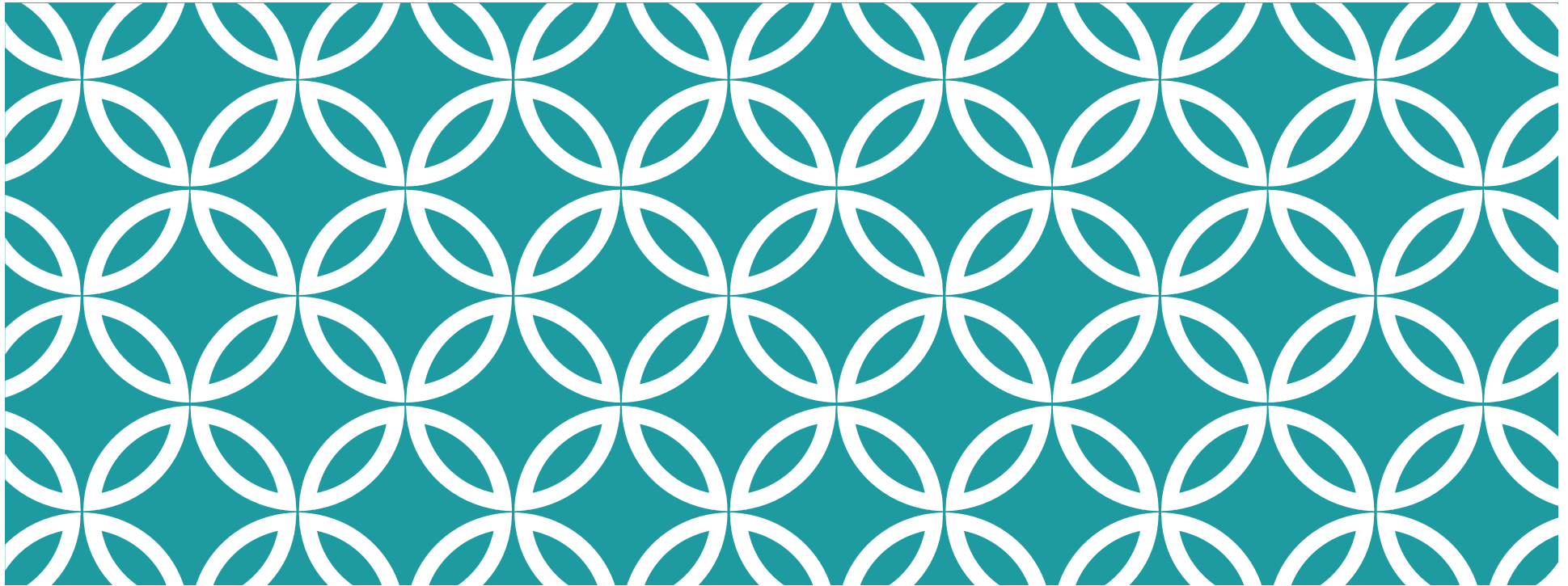
- Good story encourages immersion
- But will mean nothing without gameplay
- Example: Baldur's Gate, linear story. Going wrong way gets you killed. But not interactive. Interaction in world all leads to same end.

GAME STUDIES

Game studies is a "huge" field.

- **Psychology, Sociology view**
- Structure, Dynamics view
- Industry/Engineering view





Psychology, Sociology view

Game studies

PSYCHOLOGY / FUN?

- Why is going to the movies (sometimes) fun?
Why is reading a novel (sometimes) fun?
- Watching how kids play
(useful in understanding fun - they are the experts)

- ✓ Mental fun
- ✓ Physical fun
- ✓ Social fun



"FUNATIVITY"

(PSYCHOLOGY/SOCIOLOGY)

How, why is something fun?

Do these kittens look like they are having fun?

- ✓ Pretending / Practicing
- ✓ Challenging / pushing ones limits
- ✓ Learning / Growing / Experiencing



"THEORY OF NATURAL FUNATIVITY"

- All fun derives from practicing skills that (previously) insured species survival.
- Skills may relate to earlier context, but appear disguised in a more modern form.
- Games are safe way to "practice" skills.
 - Thus kittens practice:??



Applied to Cats: Adult cats need to be able to catch small prey for food and fight for territory/mates.

FUNATIVITY & HUMANS

For most of our species' history humans have been tribal hunter/gatherers.

Many current popular games reflect modern incarnations of these ancient skills:

- **Hunting:**
 - Shooters, sports games, hand-eye-coordination
- **Gathering:**
 - Pattern games, powerups, resources
- **Tribal Interaction:**
 - High scores, head-to-head, Sims, MMO



HUMANS FUNATIVITY CATEGORIES

- In humans we can identify three overlapping categories into which we can divide aspects of game play.
- People like (or find fun) games that have components that fall into these categories (realms):
 1.)
 2. (Mental)

1. SPATIAL REASONING (PHYSICAL)

Abstract Definition: Reasoning about objects in 3D space and how they might interact (includes your own body, hand-eye coordination).

Note: Preferred by boys.

Spatial reasoning is a category of **reasoning** skills that refers to the capacity to think about objects in three dimensions and to draw conclusions about those objects from limited information.



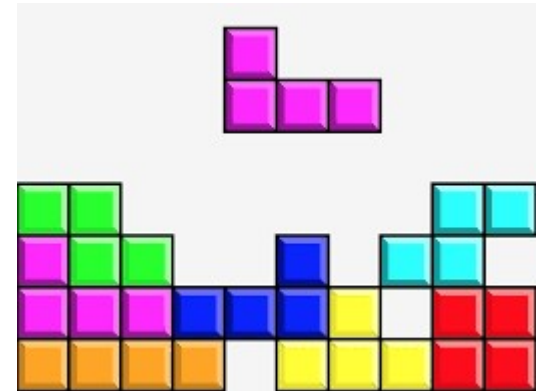
2. PATTERN RECOGNITION (MENTAL)

Abstract Definition:

Recognizing patterns in organized sets of data, remembering chains of linked events that are significant.

pattern recognition for object **detection**,
classification

Note: Preferred by girls.



3. SOCIAL

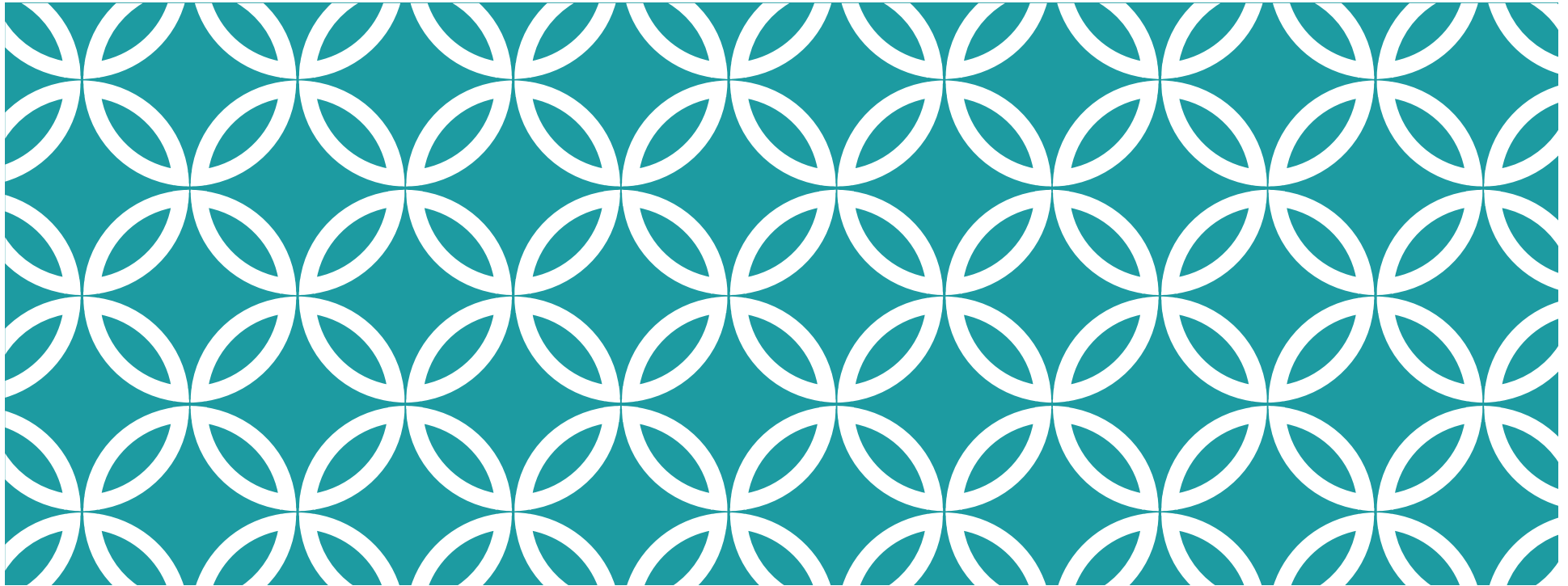
Abstract Definition:

Practicing interpersonal communication skills, competing/cooperating with others or modeling dynamics of social situations.

“Man is by nature a **social animal**;

Society is something that precedes the individual





FLOW CONCEPT

EMOTION & IMMERSION

Emotions and feelings.

- We are more likely to play a game, if it can make us "feel" an emotion (change our internal state).

Suspension of disbelief (immersion).

- A game isn't "real", and yet we can have "real" physical/psychological responses (anger, fear, pride).
- "Immersive" and "flowing" gameplay.

FLOW

Mihaly Csikszentmihalyi - psychologist - famous book in the late 80s / early 90s.

In positive psychology, **flow** is the mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity.

flow is characterized by complete absorption in what one does, and a resulting loss in one's sense of space and time.



THE CONCEPT OF "FLOW"

“Flow: The Psychology of Optimal Experience”
by Csikszentmihalyi

- Flow is a state of exhilaration, deep sense of enjoyment.
- Keeps player immersed in the gameplay.

Start with relatively low level of challenge to match starting skill levels. Then gradually increase challenge.

- Fast enough to prevent boredom
- Not so fast as to induce frustration

FACTORS OF EXPERIENCE OF FLOW

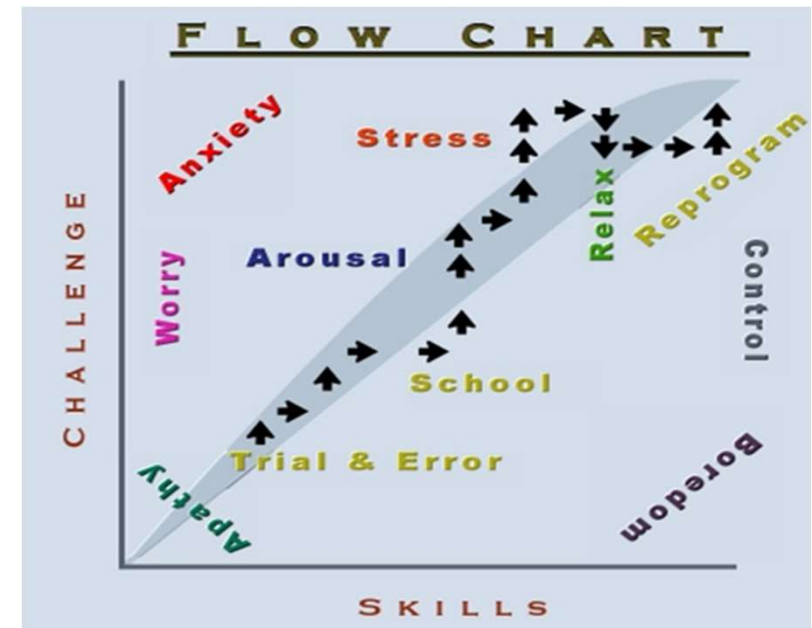
Jeanne Nakamura and Csíkszentmihályi identify the following six factors as encompassing an experience of flow:

1. Intense and focused concentration on the present moment
2. Merging of action and awareness
3. A loss of reflective self-consciousness
4. A sense of personal control or agency over the situation or activity
5. A distortion of temporal experience, one's subjective experience of time is altered
6. Experience of the activity as intrinsically rewarding, also referred to as autotelic experience

WHAT MAKES FOR FLOW?

(GOOD THOUGHTS ON HOW TO MAKE WORK - OR ANYTHING - ENJOYABLE)

- Goals / Objectives - that are possible
- Measureable progress
- Concentration / Focus
- Right level of challenge - between boredom and anxiety - balance of *skills and challenges* (flow channel graph)
- Awareness control (zen and the art of ...)



EIGHT COMPONENTS OF ENJOYMENT

1. Confront a task you have a chance of completing
2. You must be able to concentrate on what you're doing
3. The task has clear goals
4. The task has immediate feedback
5. Your deep involvement removes the worries and frustrations of everyday life from your awareness
6. You have a sense of control over your actions
7. Concern for self disappears, but sense of self emerges stronger after the experience is over
8. Sense of duration of time is altered

DOPAMINE ENHANCES FOCUS IT REWARDS AND FEELS GOOD TOO

DOPAMINE – functions as a neurotransmitter

Reward System: is a group of neural structures responsible for incentive salience (i.e., motivation and "wanting", desire, or craving for a reward)

Primary reward are those necessary for the survival of one's self and offspring

Focus increases focus (addiction is an over focus)

Many Emotions Focus Attention Instead of aiming for addiction, let's use dopamine for good!

Help people focus on what they need to unlock their potential and improve their quality of life.

POSITIVE ENGAGED BRAINS BOOST PRODUCTIVITY 50%

AMA Survey 2013

Positive Mental States Increase:

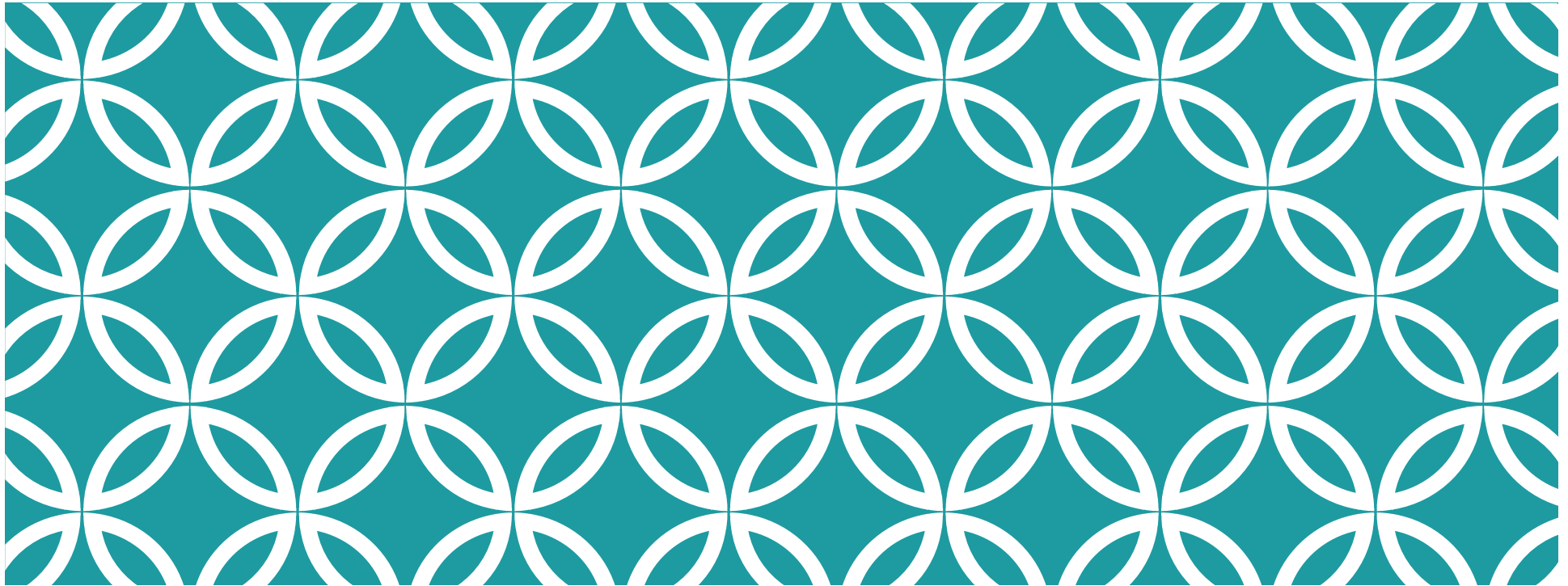
- **50%** more productive
- **237%** generated new leads
- Up to **50%** closed sales faster
- **210%** increased profits
- **67–100%** more emotionally engaged

Fear State



Happy State





GAME FLOW

Flow in game

REWARD SYSTEM IN SIDE OF FUN

Most important ... *is it fun, compelling, engaging?*

- And these come from a superset of games

Computers are good at interactivity

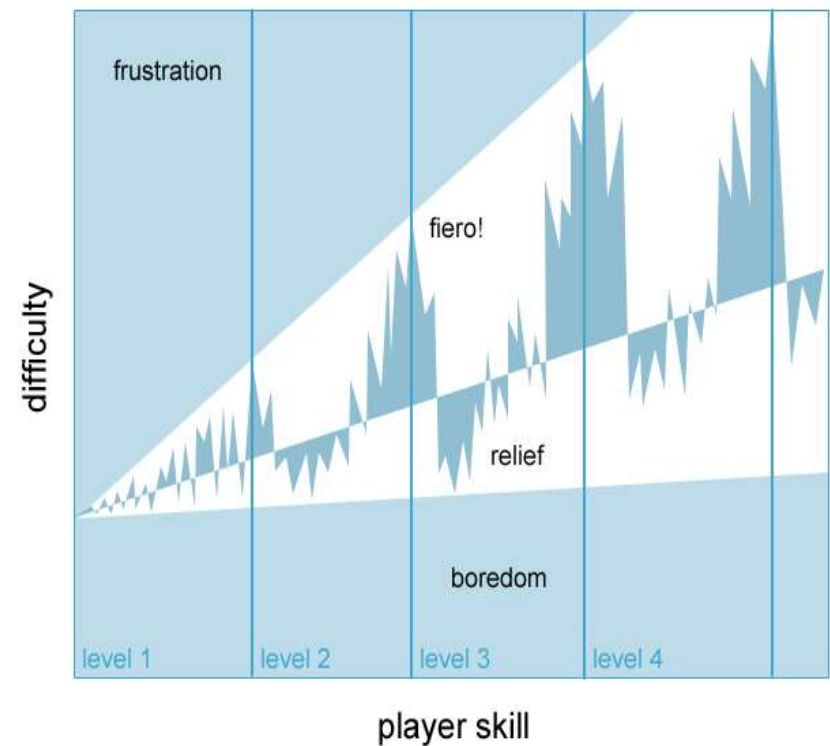
- Allow for interactive fun

What makes Games (or anything else) fun?

These are the overall goals - game design is how to achieve them.

DEEP ENGAGEMENT = FUN

- The Good News is that Happiest Moments are in the Zone
- In Flow engaged and happy
- Balance difficulty and skill
- Fiero requires frustration



Modified from "Flow"
Csikszentmihalyi

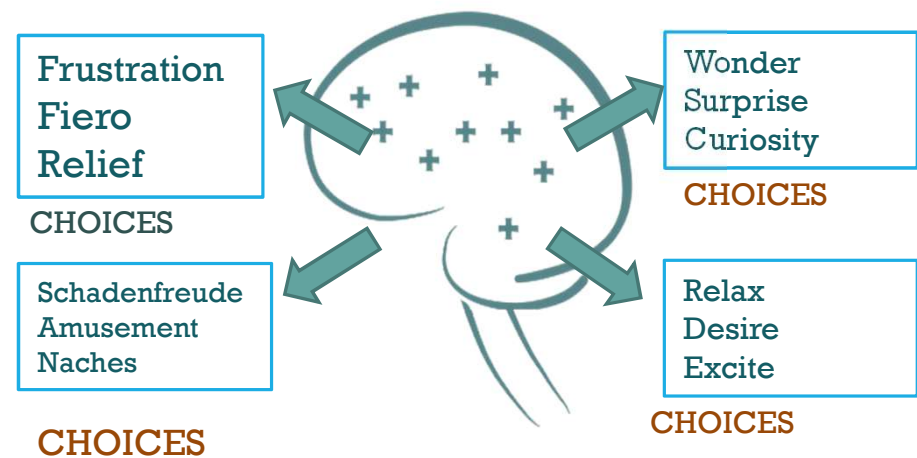
WHY DO GAME "THEORISTS" LIKE FLOW?

- Easy segway to *positive psychology*
A whole field that thinks about this stuff (what is enjoyment/happiness)
- Enjoyment vs. Pleasure
- *Optimal Experience*
 - observed its not only what people enjoyed, but also where they did the best.
 - Surgeons, pilots, - and lots of mundane jobs too.

CREATED MAP FOR DESIGNING ENGAGEMENT



Watched Player Emotions to Measure Kinds of Engagement



Positive Engagement

4 KEYS TO ENGAGEMENT

The 4 Keys is a proven practical model to help companies innovate by crafting emotions to create deeper engagement with Gamification.

The 4 Keys to Fun: the game mechanics that drive play

1. Easy Fun (Novelty): Curiosity from exploration, role play, and creativity
2. Hard Fun (Challenge): Fiero, the epic win, from achieving a difficult goal
3. People Fun (Friendship): Amusement from competition and cooperation
4. Serious Fun (Meaning): Excitement from changing the player and their world

Most Engaging Moments created emotion

<i>Hard fun</i> Fiero Frustration Relief	<i>Easy fun</i> Curiosity Wonder Surprise
<i>People fun</i> Amusement Admiration Competition	<i>Serious fun</i> Excitement Focus Relaxation

Best Selling Games have 3-4 keys

CHALLENGE - HARD FUN

You can't just push a button to win

- Reward From Challenge Increases Engagement
- Emotions from Meaningful Challenges, Strategies, and Puzzles
- Hard Fun creates emotion by structuring experience towards the pursuit of a goal.
- The challenge focuses attention and rewards progress to create emotions such as Frustration and Fiero
- It inspires creativity in the development and application of strategies. It rewards the player with feedback on progress and success



WHO ARE HARD FUN PLAYERS ?

- Playing to see how good I really am
- Playing to beat the game
- Having multiple objectives
- Requiring strategy rather than luck

Games with this Key offer compelling challenges with a choice of strategies. They balance game difficulty with player skill through levels, player progress, or player controls.

Games with this Key include Civilization, Halo, Top Spin Tennis, Crosswords, Hearts, Tetris, and Collapse

NOVELTY - EASY FUN

Easy Fun: Emotion from Novelty is Enjoyed and Remembered More, Grab Attention with Ambiguity, Incompleteness,

- players focus on the sheer enjoyment of experiencing the game activities.
- Easy Fun maintains focus with player attention rather than a winning condition.
- The Immersion Key awakens in the player a sense of curiosity, the player to consider options and find out more.
- Ambiguity, incompleteness, and detail combine to create a living world.
- The sensations of Wonder, Awe, and Mystery can be very intense.



Novelty

WHO ARE PLAYERS ?

- Exploring new worlds with intriguing people
- Excitement and adventure
- Wanting to figure it out
- Seeing what happens in the story, even if I have to use a walk through
- Feeling like me and my character are one
- Liking the sound of cards shuffling
- Growing dragons

Not necessarily in a 3D world but to become immersed in the experience.

Rich stimuli and ambiguity as well as detail cause the player to pause with wonder and curiosity.

Repetition and rhythm can be hypnotic.

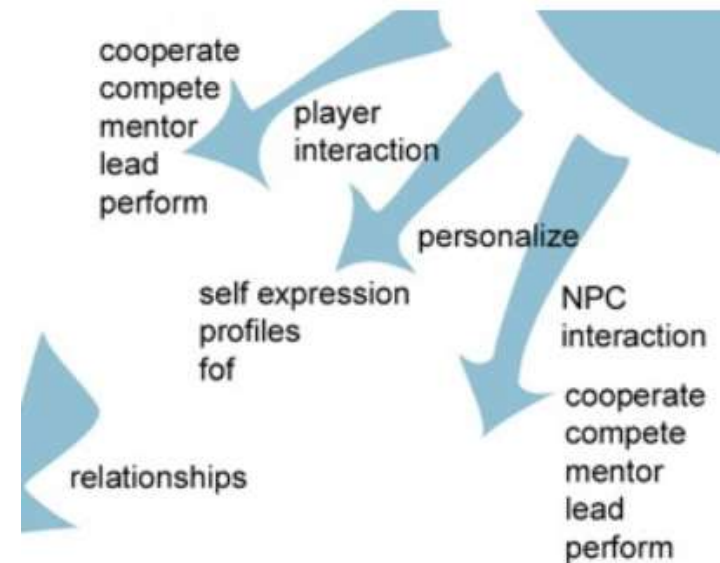
Other games with Easy Fun mentioned by players include: *Myst*, *Splinter Cell*, *EverQuest*, *GTA III*, *Max Payne*, *Halo*, *Civilization*, *Collapse*, *Tetris*, *Dark Age of Camelot*, and *Hearts*

FRIENDSHIP - PEOPLE FUN


Create Opportunities for Player
Competition, Cooperation, Performance,
and Spectacle

“...emotion comes from connecting friends,
the messages they pass, and the actions
they take.
Each of these are channels that carry and
amplify the emotions between people.”

Nicole Lazzaro, Founder and President of XEODesign, Inc., is
an authority on emotion and the player experience



Friendship

- 
- It's the people that are addictive not the game.
 - I want an excuse to invite my friends over.
 - I don't like playing games, but it's a fun way to spend time with my friends.
 - I don't play, but it's fun to watch.

Multiplayer games are the best at using this Key, although many games support some social interactions through chat and online boards.

Games that offer both cooperative and competitive modes offer a wider variety of emotional experiences.

For example EverQuest, Dark Age of Camelot, Soul Calibur II, Halo, and GTA (it is fun to watch)

MEANING - SERIOUS FUN

Play creates value through learning and meaning, enjoying changes in internal state during and after play

Generate Emotion with Perception, Thought, Behavior, and Other People

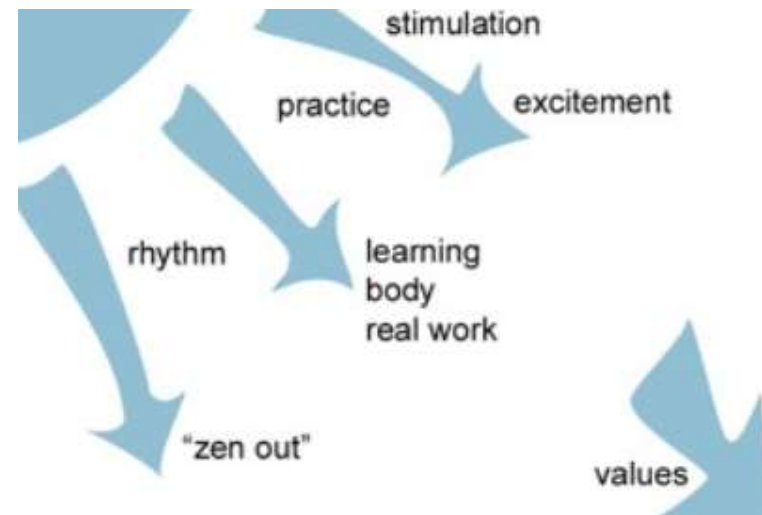
Goal: collect all you can

- Enhance progress
- Aspire and acquire

The Internal Experience Key focuses on how aspects of the game external to the player create emotions inside player.

This aspect of the player's experience is the way in which perception, behavior, and thought combine in a social context to produce emotions and other internal sensations most frequently those of Excitement and Relief

1. Collection
2. Learning
3. Rhythm



SERIOUS FUN

Players using this Key play to move from one mental state to another or to think or feel something different

- Clearing my mind by clearing a level
- Feeling better about myself
- Avoiding boredom
- Being better at something that matters



Meaning: Diner Dash Trophy = New Strategy

Systems Create: Excitement, Relaxation, Learning, Enhance Sense of Value

Serious Fun: Collection, Learning, Rhythm

Meaningful Experiences are More Engaging

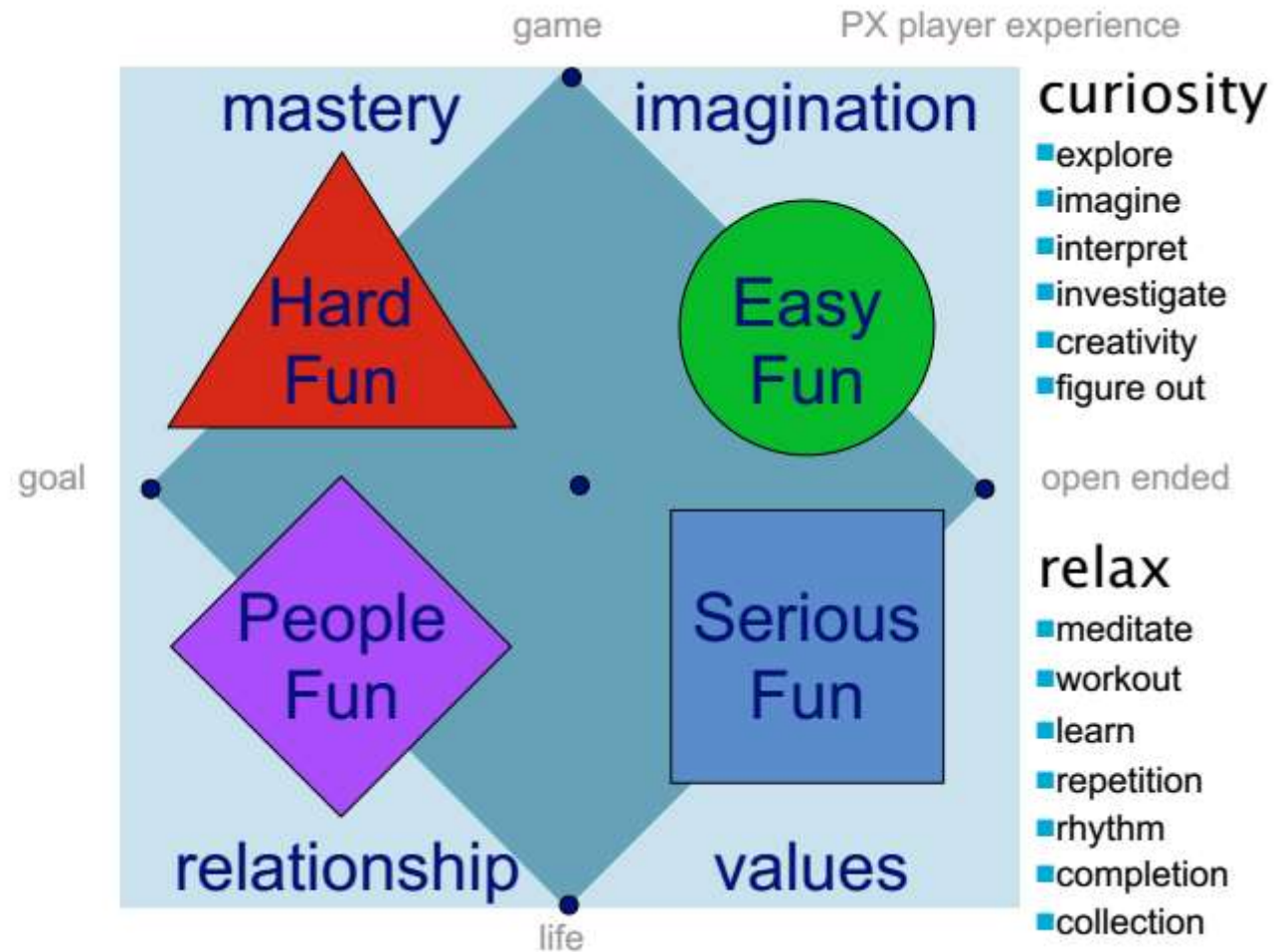
Serious Fun: Values and Meaning

fiero

- win
- goals
- challenge
- obstacles
- strategy
- power ups
- levels

amuse

- cooperate
- compete
- communicate
- perform
- spectacle
- characters
- personalize



INCREASE MOTIVATION WITH GAMES: HERE'S WHAT YOU CAN DO

- Take players through all 4 engagement loops
- Design strong emotional brain state required for the desired action
- Design systems to create brain states with your brand's emotions



The Four Keys> Emotion> Engagement

GAMIFICATION

Gamification is the concept that you can apply the basic elements that make games fun and engaging to things that typically aren't considered a game.

In theory you can apply Game Design to almost anything including Education, Health, Work and more.

Gamification at it's core is about fun, rewards and social connections. It has the opportunity to connect people in ways never seen before.

5 Keys to Smart Gamification from [Amy Yo Kim](#)

SUMMARY

What is Game ?

Why We Play Games People play games?
to change or structure their internal experiences.

Game studies:

- Psychology, Sociology view
- Structure, Dynamics view
- Industry/Engineering view

- Fun& Funavity
- Flow concept
- Game Flow
- Gamification