GAME STUDIES

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GAME STUDIES

Game studies is a "huge" field.

- Psychology, Sociology view
- Structure, Dynamics view
  - games as artifacts, "affordances", critical analysis
  - "How do you define a game and it's rules?"
- Industry/Engineering view

WHY GAME STUDIES

With so much money at stake, thousands of papers and books have been written on the subject of game design/development.

We would like to answer the following questions:

- What defines (how do we classify) a game?
- What makes a game fun? (in side game)
- Can we come up with a methodology for creating successful games?

WHAT IS A GAME? (STRUCTURE/DYNAMICS)

choices => FUN

What make a game ?

- Feedback
- Uncertainty
- Emergence

Not a simple question.

Things we find in (some) games:

- Objectives, goals
- Outcomes, (specifically variable results)
- Uncertainty
- Rules and Structure
- Stories

A game as a "magic circle".

LUDOLOGY (STRUCTURE/DYNAMICS)

From the Latin ludus (game) + -logy.

Ludology is an *academic attitude to games,* The study of games and other forms of play.

Ludological efforts aim to understand better

- What games are
- How they work
- Why people play them
- How to design more diverse and better games

Market research, technology development, background research are often too case-specific to be regarded as representatives of ludology

GAME DESIGN RESEARCH'

Many researchers and practitioners have developed methods and models to design games

The following methods and models are all recently proposed and display the ludological attitude in practice

'Game design research' is a means to apply ludology to practical game development tasks

GDR is, thus, a development-oriented means to practice ludology

IN TERMS OF LUDOLOGY:

Research *into* game design

- Analyses of existing games, i.e. their designs, and how players engage with those designs, i.e. play the games

Research *through* game design

- Research into games that builds prototypes as its results

Research *for* game design

- The most fruitful area to cover in more detail

CHRIS CRAWFORD

The Art of Computer Game Design (1984) may well be the first contemporary treatise with a strong ludological attitude

Crawford identifies four common factors between all games:

- Representation
- Interaction
- Conflict
- Safety

See also *Chris Crawford on Game Design* (2003)

GREG COSTIKYAN

"I Have No Words & I Must Design" (1994)

Identifies design choices that have to be made when games are designed

And the main features necessary for games and that should be taken into account by game designers when making games:

- Decision making
- Goals
- Opposition
- Managing resources
- Game tokens
- Information

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NARRATOLOGY (STRUCTURE/DYNAMICS)

Ludology has a competing view that is called "narratology".

The narratological view is that games should be understood as novel forms of storytelling and can thus be studied using theories of narrative.

"Choose your own adventure?"

(Question: What is the compelling story behind "tetris"?)

The Ludology-Narratology Debate

- Ludologists claim that "***games aren't stories***" because...
  - Stories are ***linear***, games are ***non-linear***
  - Readers are ***passive***, gamers are ***active***
  - Stories are recounts of what happened in the ***past***, games happen ***now*** – they have no discourse time, only play time
- Hence, they conclude that ***we don't need Narratology*** to study games, **because games are something entirely different**!

NARRATIVE (STRUCTURE/DYNAMICS)

Questions:

- What about the story?
- Shouldn't a game have a good story?

The narratological view of game studies says that games should be understood as a form of storytelling.

Treating a game as a narrative (or including narrative as part of a game) can help us make a more compelling game, and may even be thought of as adding a "social" component.

NARRATIVE IN LITERATURE

Rules for narrative in literature have been around since the time of the Greeks (Aristotle's Poetics).

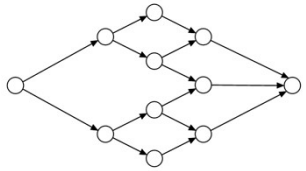
Questions to ask:

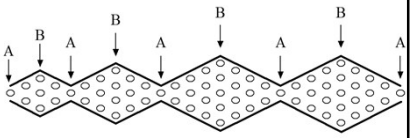
1. Whose telling the story?
2. What is the conflict?
3. Who is the player meant to identify with?
4. What do you want the player to feel?

CONCRETE COMPONENTS (STRUCTURE/DYNAMICS)

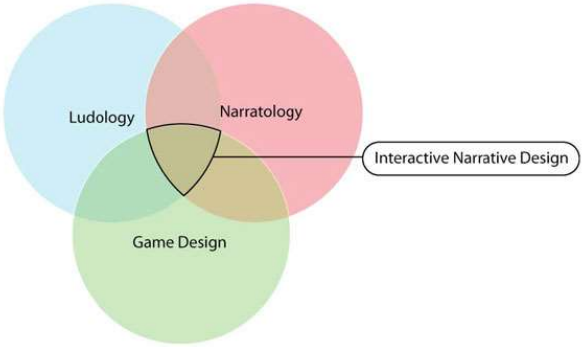
Research has identified many concrete things that can improve a players perception of a game:

1. Multiple clear achievable goals.
2. The illusion of choice.
3. Clear punishments and rewards.





GAME DESIGN



MDA: MECHANICS, DYNAMICS, & AESTHETICS

A METHODOLOGY FOR CREATING SUCCESSFUL GAMES?

Q: Knowing what we know now, can we create a formula or a pattern for creating great game.

A: No. Many useful game design methodologies have been suggested (MDA), and they do help insure that a game gets developed consistently and within time and budget limitations.

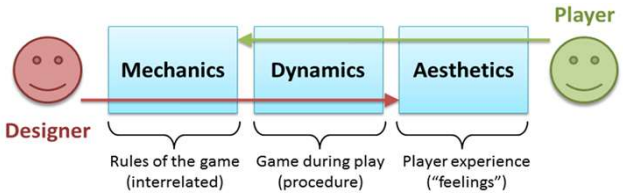
But every great game starts with a great idea, and nobody can predict where those come from.

MDA: MECHANICS, DYNAMICS, & AESTHETICS

Proposed at the Game Developers Conference (2001)

"MDA: A Formal Approach to Game Design and Game Research" Robin Hunicke, Marc LeBlanc, Robert Zubek (2004)

Most well known framework for game analysis

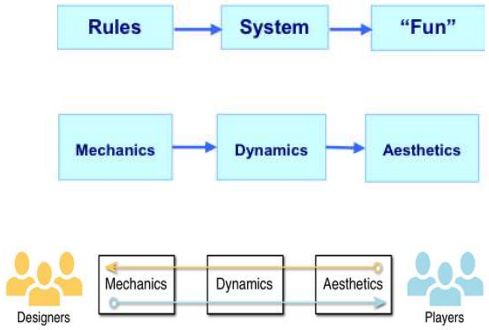


PLAYER – DESIGNER

Mechanics: The particular components of the game at the level of data representation and algorithms

Dynamics: The runtime behavior of the mechanics acting on player inputs and each other's outputs

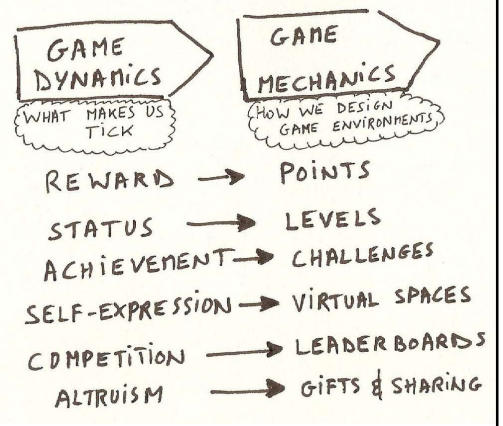
Aesthetics: The desirable emotional responses when player she interacts with the game

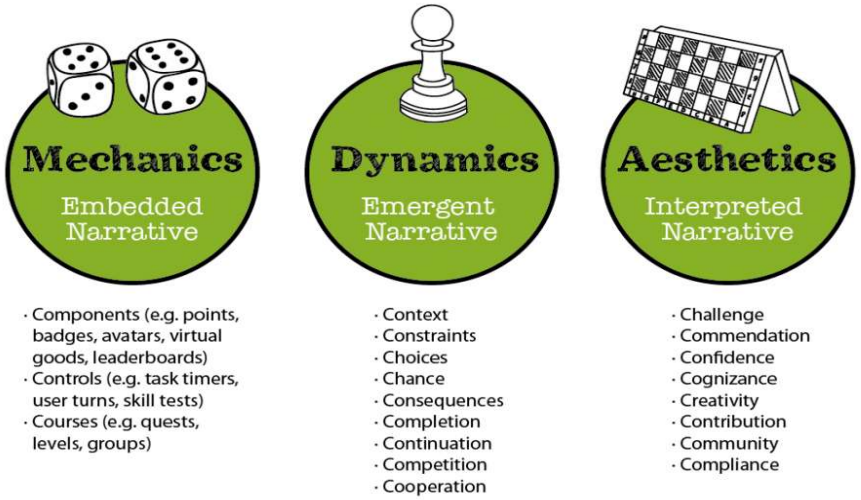


MDA PARADIGM

MDA is a game development paradigm designed to help developers make the most out of a game idea, and proceed efficiently through the complex process of bringing a game to market.

MDA is one of many development paradigms that are used by large game development companies.





ADVANTAGES

- General and versatile
- Helps to define the game aesthetic unambiguously
- Stresses the role of dynamics for aesthetic activation

CONS

- Doesn't provide a design method
- Doesn't provide design tools

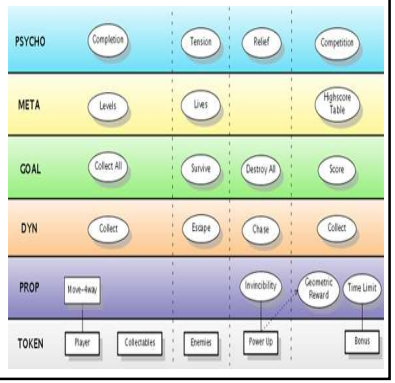
LAYERS

PAOLO TAJÈ, FEDERICO FASCE - (2004)

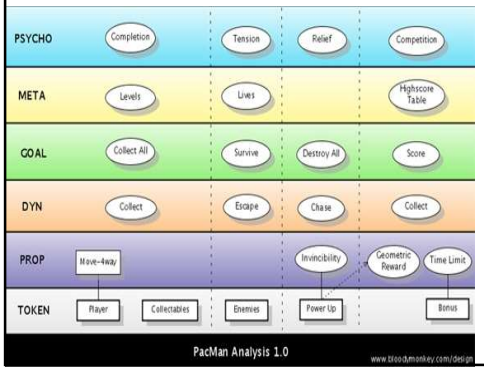
- Layer 0: **TOKEN** game element or entity that modifies its state after player input or that has a remarkable role on gameplay: e.g. player's avatar, enemies, various bonuses...
- Layer 1: **PROP** fundamental properties elements, i.e. limitations or opportunities directly or indirectly connected to game tokens. Adjective
- Layer 2: **DYN**
  Game dynamics are those actions that give life to gameplay in the course of time through interaction. Terms in this layer should be essentially verbs.
- Layer 3: **GOAL** impulses driving the player to behave in a certain way *within the game*. These elements can often be connected to verbs in DYN layer.
- Layer 4: **META** outside of the game itself, but they affect gaming experience. Examples are subdivision in levels, or the use of lives to justify a limited number of trials.
- Layer 5: **PSYCHO** The last layer lists the desirable emotional responses of the player

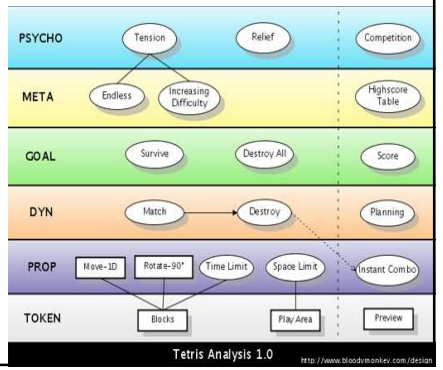
- Deck of cards is a great tool for brainstorming
- Starts from MDA, goes deeper

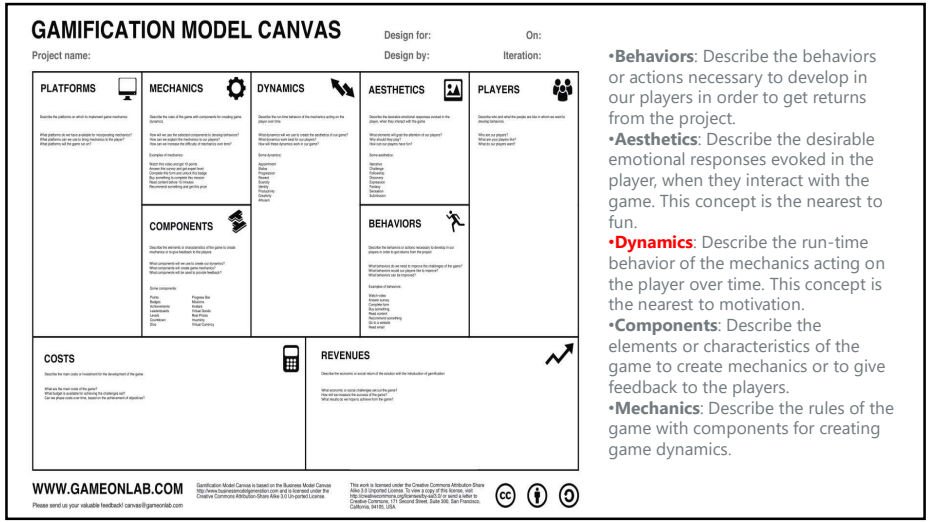
Doesn't provide a design method



PACMAN & TETRIS







- **Behaviors**: Describe the behaviors or actions necessary to develop in our players in order to get returns from the project.
- **Aesthetics**: Describe the desirable emotional responses evoked in the player, when they interact with the game. This concept is the nearest to fun.
- **Dynamics**: Describe the run-time behavior of the mechanics acting on the player over time. This concept is the nearest to motivation.
- **Components**: Describe the elements or characteristics of the game to create mechanics or to give feedback to the players.
- **Mechanics**: Describe the rules of the game with components for creating game dynamics.

GAME DESIGN EXERCISE

Groups of 4 - 6 Choose a game you all know: **Quake: The Sims: Final Fantasy**

Aesthetics Dynamics Mechanics

1. How does it makes you feel?
2. What are the system behaviors ?
3. What are the elements of those systems?

What is a game?

Interactive

Goal

Rules

Competition

Story

WHAT ARE YOU DOING WHEN YOU PLAY A GAME?

Killing time

Sensing an environment

Taking action

What makes games boring?

Repetition

Micro management

Technical issues

Too easy too hard

Copy cat stuff

Poor endings

Weak storyline

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WHAT DO PLAYERS WANT?

A challenge

To socialize

To play on their own (sometimes)

Bragging rights

Emotional experience

To fantasize

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WHAT DO PLAYERS EXPECT?

Consistent game world
To understand game world boundaries
Reasonable solutions to problems
Sense of direction (goals and hints)
Accomplish goals incrementally
To be immersed in game world

To fail
Fair chance to win
Avoid unnecessary repetition
Not to get stuck hopelessly
Not to be passive watchers of all action sequences

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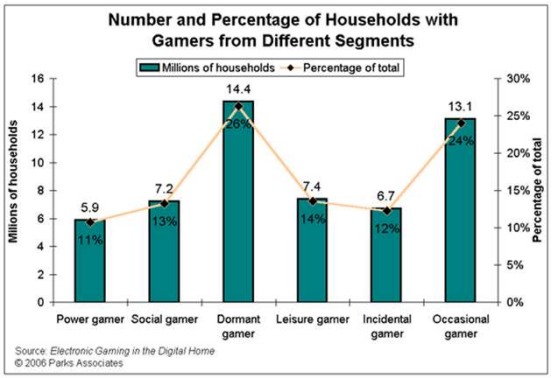
WHAT A GAME NEEDS TO BE SUCCESSFUL

Playability
Knowledge of audience



AGES 2 TO 5

Ages 2 to 4
Trouble controlling mice and keyboard
No instructions
Prompt user for input during long pauses
Use speech for payoffs
Speech for stories
Talking characters
Simple graphics and bright colors

Ages 4 to 5
Similar to ages 2 to 4
Kids can recognize a few words
Mouse control is a little better
Keyboard is a must

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AGES 5-8/7-11

Early Elementary Ages 5 to 8
Monsters and bad guys can't be too scary
Injury, blood, and gore is a no-no

Upper Elementary Ages 7 to 11
"age or reason"
Quick to judge material as babyish
Characters a little older than the players
Watch vocabulary

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MIDDLE/HIGH SCHOOL AGES 12 TO 17

Tough age group

Operate computers at an adult level

Boys love games like Quake

Girls like social activity games

Adults Age 17+

PG or R content

Sophisticated story lines are fine

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GAME DESIGN EXERCISE (NEXT . . .)

For example if you take game like Quake, Final Fantasy and The Sims, they are all fun but each one of them has a very different aesthetics components:

Quake: Challenge, Sensation, Competition, Fantasy.

The Sims: Discovery, Fantasy, Expression, Narrative.

Final Fantasy: Fantasy, Narrative, Expression, Discovery, Challenge, Submission.

As you can see, each game has multiple aesthetics goals expressed in various degrees.

WHAT MAKES A GOOD GAME GREAT?

Unique solutions

Better to anticipate user actions than to restrict them to a single course of action

Providing a rich environment that allows player unique solutions to emerge

Non-linearity

- Story telling (user determines plot direction)
- Allow multiple puzzle solutions
- Order (let user decide when to tackle each piece of the solution)
- Selection (allow user to decide which challenges to include in game and which to leave out)

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WHAT MAKES A GOOD GAME GREAT?

Modeling reality

- It is possible to have so much realism in a game that it interferes with player's fun
- Players love fantasized reality

Teaching the player

- Provide tutorial or practice games

Reward players

- Especially for training effort

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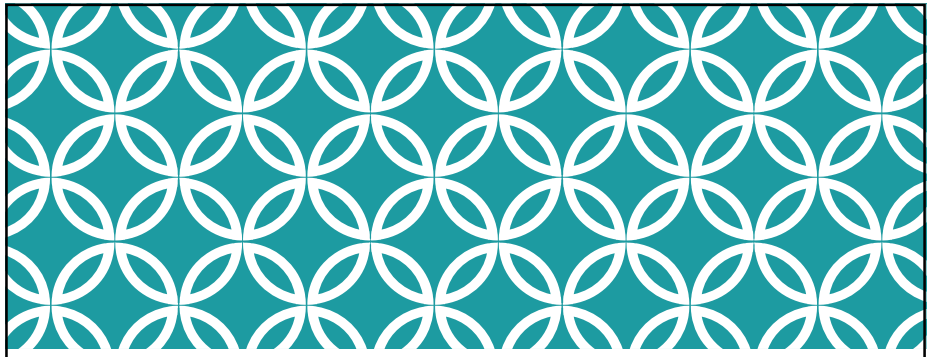
10 BASIC RULES FOR GAME DESIGN

1. Start with a good story and a good idea
2. Write down your design on paper or equivalent
3. Don't bite off more than you can chew
4. Know your target audience
5. Come up with a new idea
6. Be flexible follow a rapid prototyping mindset
7. Design for the future
8. Think series or sequels
9. Content is everything
   a. Use of graphics and technology
   b. Game is fun to play
10. Give the players goals

TEN BIGGEST MISTAKES GAME PROGRAMMERS MAKE

1. Make a bad publishing deal
2. Forget to back up work
3. Missing Christmas
4. Fail to test properly
5. Using old technology
6. Writing for DOS
7. Lying to the public
8. Neglect to advertise
9. To many cooks not enough helpers
10. Omitting comments from source code

Most Common Failings
Developers overestimating their own abilities
Lack of market testing
Nothing distinguishes the product from others in the market place



GENRES

GENRES

MDA also gives us a way to classify (and group) games into Genres:

What are some types of games?

Provide examples

What separates them from others?

Mechanical Genres:
- IPhone game, C++ game, Quake Engine

Dynamic Genres
- Shooter, Strategy, RPG, MMORPG

Aesthetic Genres:
- Fantasy, Sci-Fi, Horror Survival

GENDER CONSIDERATIONS

Games should have both male and female protagonists

No significant blood and gore

Avoid significant fighting

Avoid gender stereotypes

Include humor

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Fighting Games

Hand to hand combat with or without weapons

Design issues

- Character creation issues
- Special or secret moves
- Violence
- Continued inventiveness (future growth)

Puzzle and Card Games

Diversion or break games

Design issues

- Take an old idea and give it a twist
- Often no one owns the rights to the "paper" version of the game

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ROLE PLAYING GAMES

Originally played with pen, paper, dice, as board game

Design issues

- Sequels make money
- Create a world like no other – fictitious and realistic
- Network PC's and real time conversation
- Battles and conflicts

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SPORTS GAMES

Games with people

Design issues

- Realistic action and statistics
- Packaging the game
- Licensing
- Celebrity endorsement
- User control
- Role

Shooters

Player as hunter and hunted

Design issues

- 3D graphics
- Complex interaction devices

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VIRTUAL REALITY GAMES

Suspension of disbelief is key

Most focus so far has been on 3D view

Design issue
- Tough to do on a single flat screen
- Need a helmet
- Need complex interaction devices

Serious
- A game designed to teach real-world events or processes to adults
- Most are privately funded
- Popular with the US Government and the medical field
  - "Sapphire" simulation trainer

Party Games

Variety of types
- Ex: Mario Party, DDR, Karaoke

Social aspects important with participants in the same space

Allow for rapid change of turns

Allow for disparate abilities (beginners and experts, both have fun)

WHAT'S YOUR IDEA?

Remember, there is no proven method for creating a great game.
- Every great game started out as someone's great idea.
- We have no proven way of generating great ideas.

IF you have a great idea, there are things you can do and methods you can apply to make it into the best game possible:

- Apply "theory of funativity" (Spatial, Mental, Social)
- Apply concrete rules (goals, choices, punishments & rewards)
- Include a compelling narrative (what should player feel?)
- Use a methodology such as MDA (Mechanics, Dynamics and Aesthetics)

SERIOUS ABOUT GAME DESIGN?

Fundamentals of Game Design, 2nd Edition, by Ernest Adams, New Riders

Rules of Play: Game Design Fundamentals, by Katie Salen and Eric Zimmerman, MIT Press.