

INTRODUCTION TO **GAMES**

Part 1: Game Basics



Hello!

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gangman_



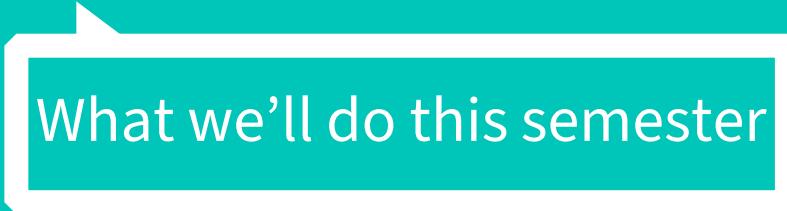
Wolfganghochleitner



FH1.230 (FH1 Ebene 2)

1.

About this Course



What we'll do this semester

The People Involved



Michael Lankes



Alina Menten



Wolfgang Hochleitner

Our Goals

- A Basic understanding of games
- An overview of game theory
- Cover partial aspects in games

Topics this Semester

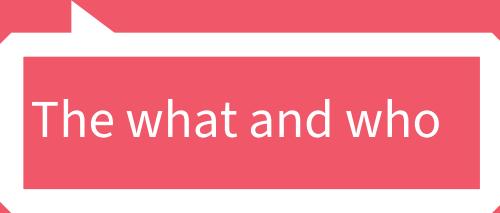
1. Game Basics & Analysis (WH)
2. History of Games (WH)
3. Game Design & Prototyping (2 lectures, ML)
4. Level Design (AM)
5. Game Art (AM)
6. Game Interfaces (WH)
7. Playtesting (WH)
8. Originality & Ideation (2 lectures, ML)
9. Games Research (ML)
10. Recap & Outlook (WH)

Today's Lecture: Game Basics & Analysis

1. About this course
2. Games: an introduction
3. Defining games
4. State of the art in games
5. Analyzing games

2.

Games: an Introduction



The what and who



Welcome
To the World of
Games

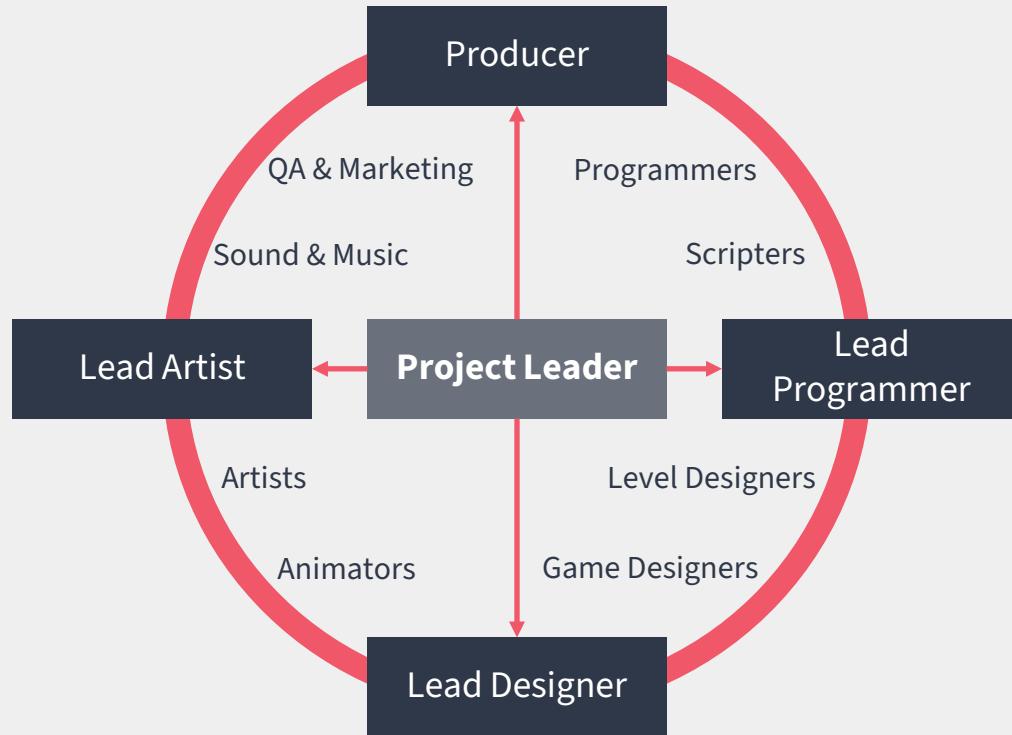




THE ACTORS

Who are the different **stakeholders** involved in creating a game?

The People Involved



Games Can Be This

Popular Games

The games “everyone” plays. On PC or consoles.



But Games Can Be Much More!

Research Prototypes

Games to find out how people are actually playing



Or Even This

Games outside of the traditional environments

Deep Space 8K games in the Ars Electronica Center



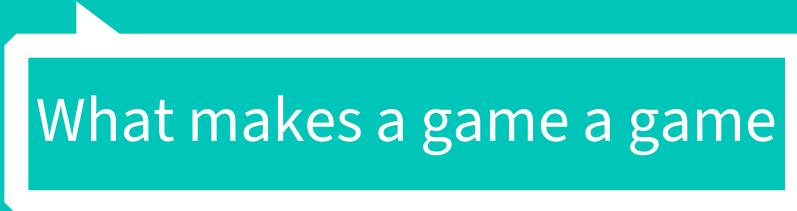


ALL ARE VALID

We'll keep an [open mind](#) and look at games from all perspectives.

3.

Defining Games



What makes a game a game



DEFINITIONS

Let's look at some different definitions for games.

“

*A free activity standing quite consciously outside ordinary life as being **not serious**, but at the same time absorbing the player intensely and utterly. It is an activity connected with **no material interest**, and no profit can be gained by it. It proceeds within its **own proper boundaries** of time and space according to fixed rules and in an orderly manner. It promotes the formation of social groupings which tend to surround themselves with secrecy and to stress their difference from the common world by disguise or other means.*

– Johan Huizinga
Homo Ludens. A Study of the Play-Element in Culture

“

*An activity which is essentially: Free (voluntary),
separate in time and space, uncertain, unproductive,
governed by rules, make-believe.*

– Roger Callois
Man, Play and Games.

“

To play a game is to engage in activity directed towards bringing about a specific state of affairs, using only means permitted by rules, where the rules prohibit more efficient in favor of less efficient means, and where such rules are accepted just because they make possible such activity.

– Bernard Suits
The Grasshopper. Games, Life and Utopia

“

*I perceive four common factors: **representation** (a closed formal system that subjectively represents a subset of reality), **interaction**, **conflict**, and **safety** (the results of a game are always less harsh than the situations the game models).*

– Chris Crawford
The Art of Computer Game Design.

“

A game is a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.

– Katie Salen and Eric Zimmerman
Rules of Play. Game Design Fundamentals.

“

A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are optional and negotiable.

– Jesper Juul

Half-Real. Video Games between Real Rules and Fictional Worlds.

Jesper Juul's 6 Game Features

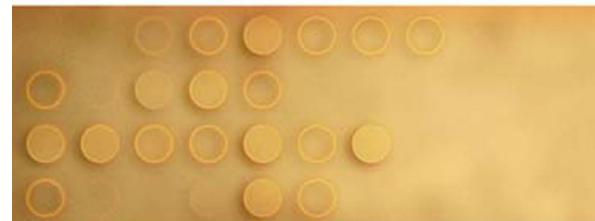
1. Rules
2. Variable, quantifiable outcome
3. Value assigned to possible outcomes
4. Player effort
5. Player attached to outcome
6. Negotiable consequences



Jesper Juul

half-real

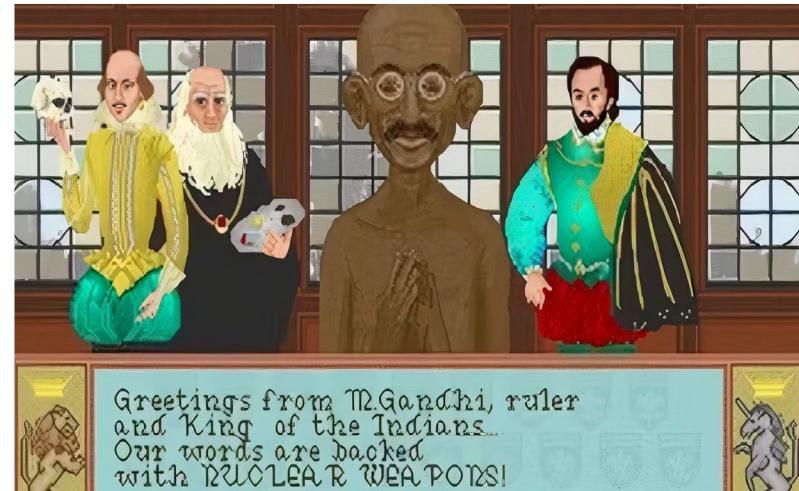
Video Games between Real Rules and Fictional Worlds



Rules

Games are rule-based

The **rules** of games have to be **sufficiently well defined**: that they can either be programmed on a computer or sufficiently or that you do not have to argue about them every time you play.



Greetings from Mr. Gandhi, ruler
and King of the Indians.
Our words are backed
with NUCLEAR WEAPONS!

Variable, Quantifiable Outcome

**Games have variable,
quantifiable outcomes**

The outcome of a game
must be feasible

RANK	SCORE	NAME
1ST	10000	BOB
2ND	10000	JWC
3RD	10000	SKT
4TH	10000	TBS
5TH	10000	MNM
6TH	10000	WKJ
7TH	10000	SVO
8TH	10000	WHO
9TH	10000	TRN
10TH	10000	JWC



Value Assigned to Possible Outcomes

Valorization of outcomes

Some outcomes are better than others.



Player Effort

Players invest effort to influence the outcome

Effort means challenge and conflict. It makes games interactive.



Player Attached to Outcome

**Players become attached
to the outcome**

It makes a difference how
the game ends.



Negotiable Consequences

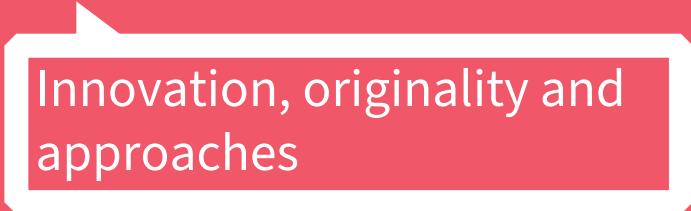
A game may or may not have real-life consequences

Playing for fun vs. playing for money

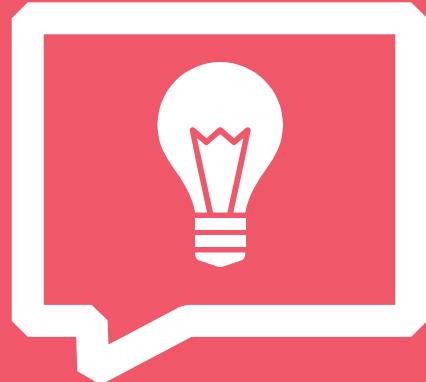


4.

State of the Art in Games



Innovation, originality and
approaches

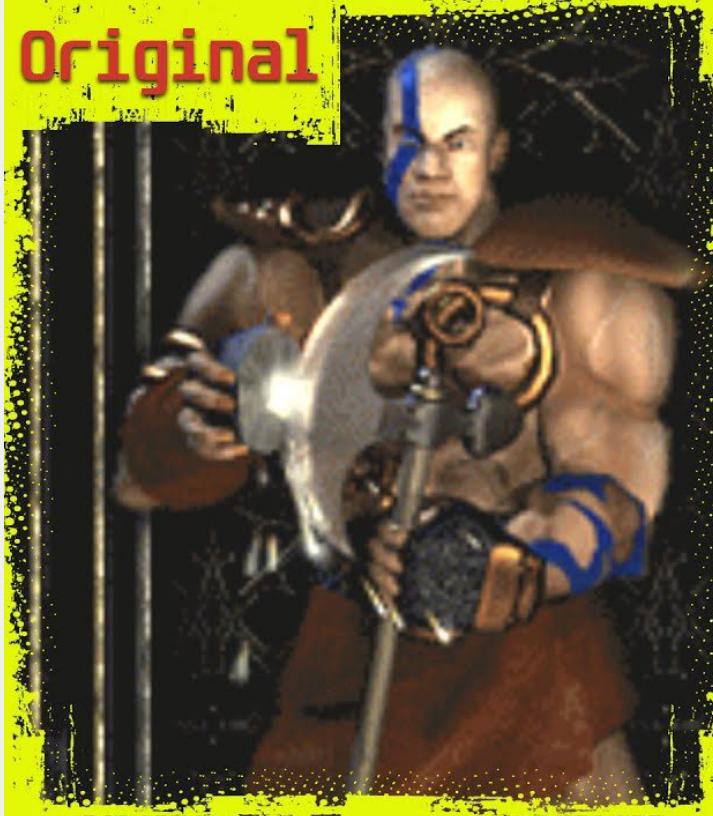


REMAKES

Already existing games are being developed completely new.

A few examples.

Original



Remake





GAMECUBE



Wii



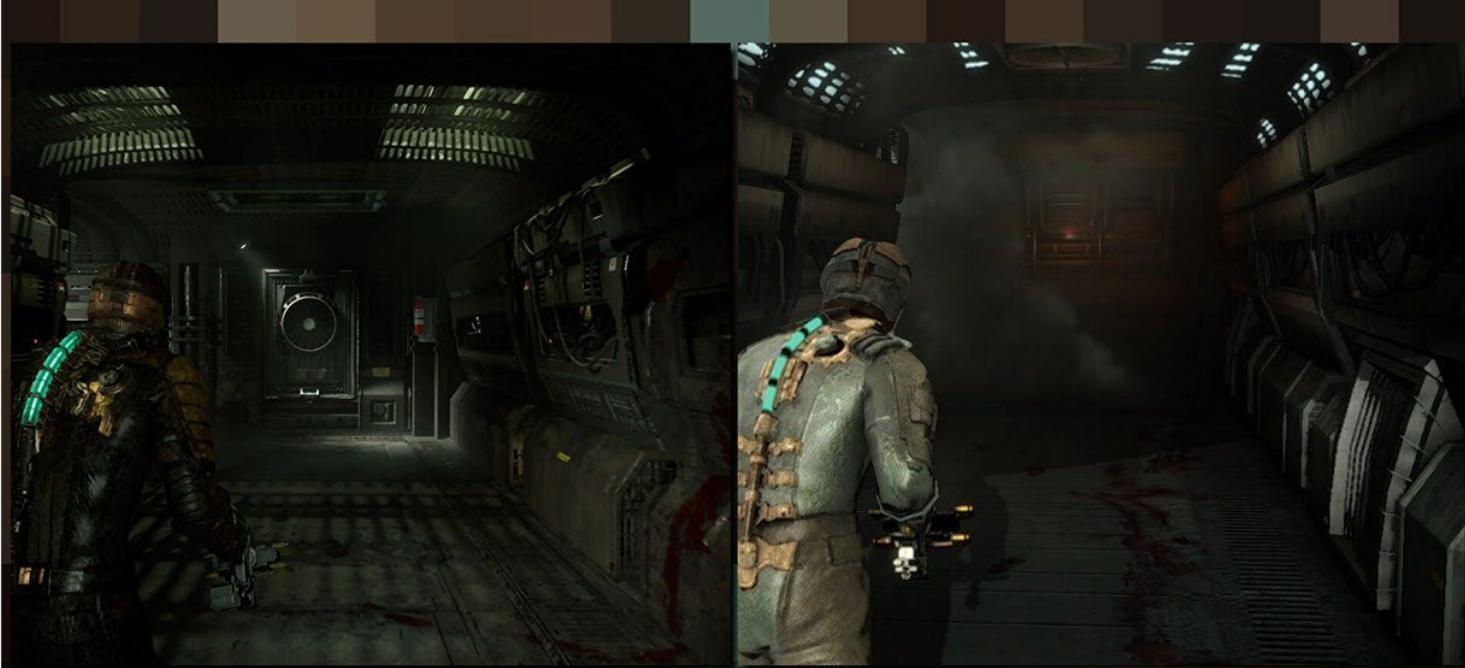
NINTENDO
SWITCH



ORIGINAL



REMAKE



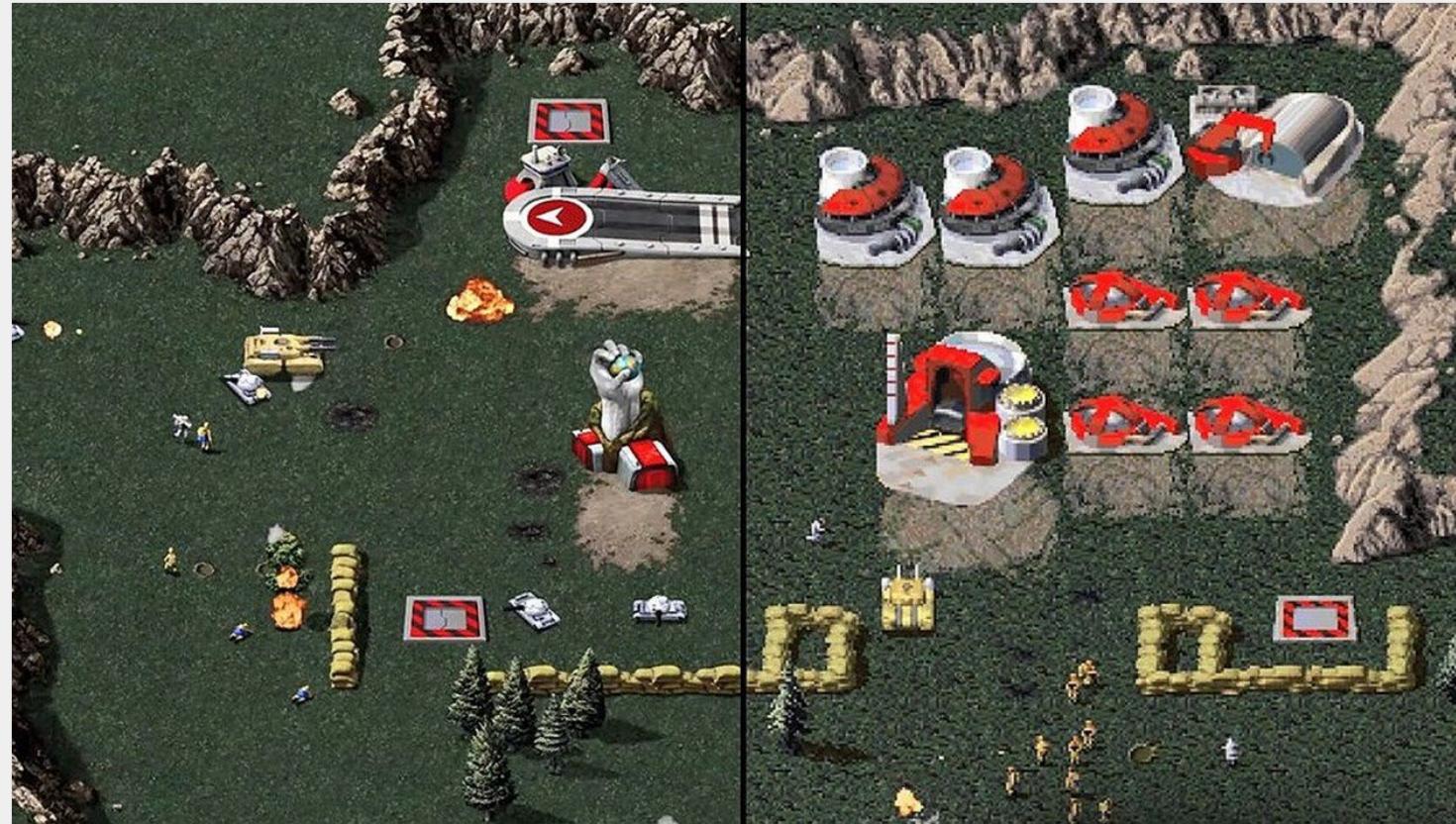
DEAD SPACE 2023

DEAD SPACE 2008



REMASTERERS

Using the original game, improving graphics and making it playable on new hardware.







Tomb Raider I-III (1996/2024)



THE LAST OF US (PS3)

THE LAST OF US PART I (PS5)





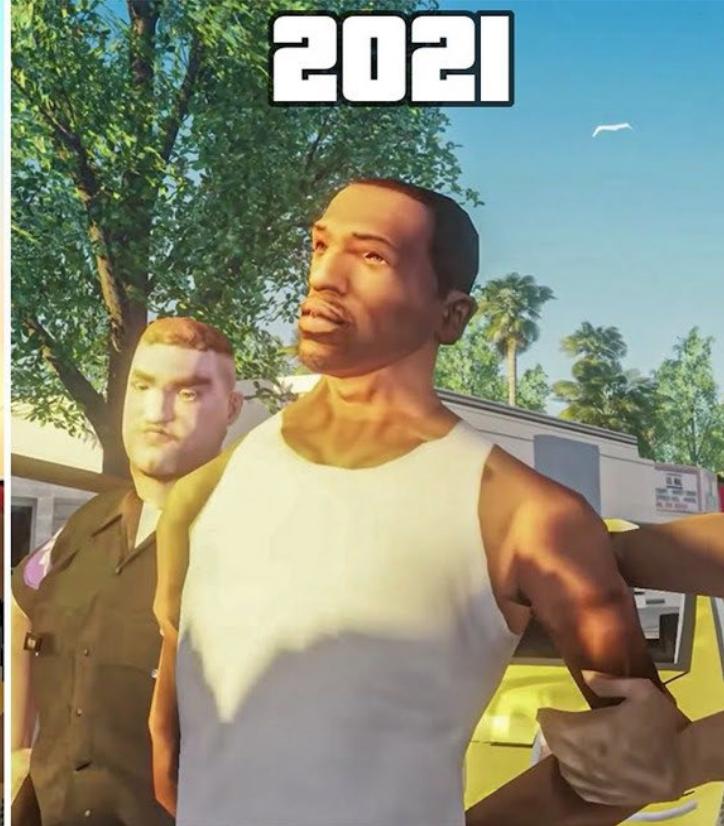
NOT ALL IS WELL

Some remakes or remasters just didn't work out as planned.

2004



2021



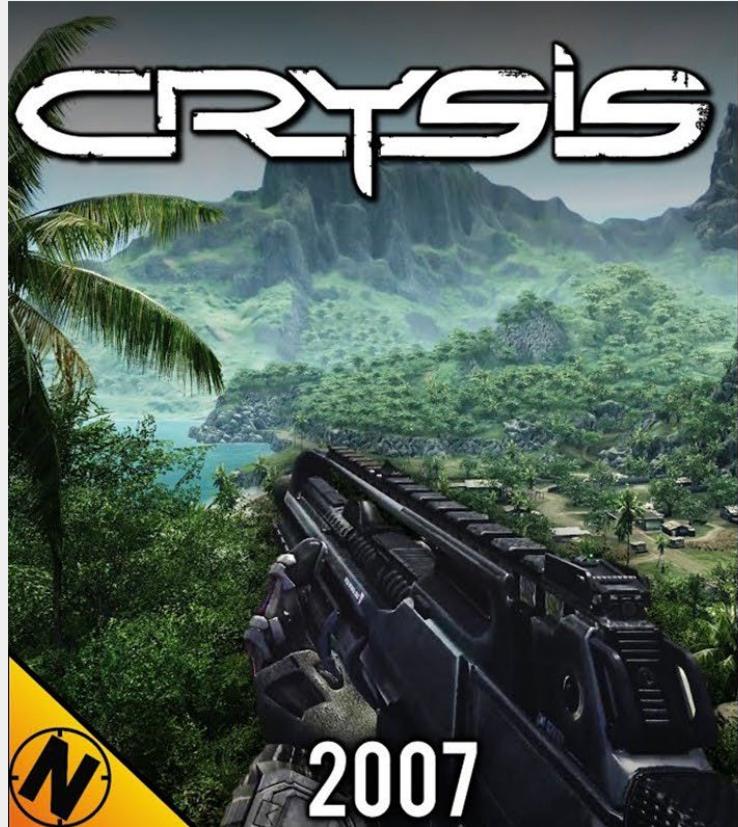
Grand Theft Auto San Andreas (2004/2021)



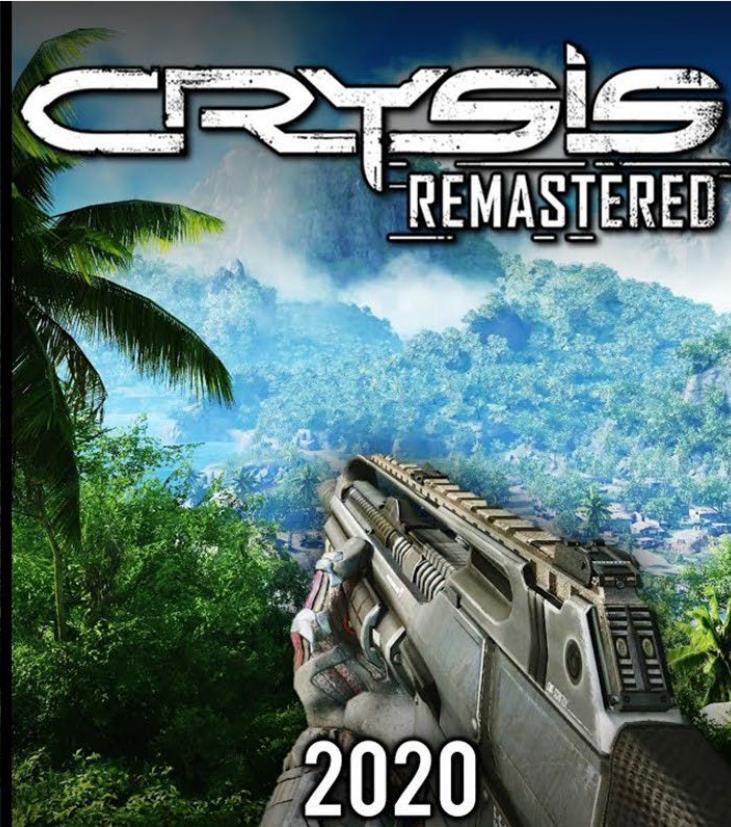
OLD



NEW



Crysis (2007/2020)



47

ORIGINAL



REMAKE





AAAAA GAMES

Quadruple A. When triple A isn't enough.



Skull & Bones (2024)



Assassin's Creed: Shadows (2025)



INNOVATION

Is this still innovation? Does it even exist in the games industry anymore?



Captured on PS5™. ©2024 KOJIMA PRODUCTIONS Co., Ltd. / HIDEO KOJIMA. Produced by Sony Interactive Entertainment Inc. Published by Sony Interactive Entertainment.



The Plucky Squire (2024)



Split Fiction (2025)



INDIE GAMES

Indie games are video games created by **individuals or small teams** without the financial and creative backing of a major publisher, often resulting in a strong focus on artistic expression and innovative gameplay.



Braid (2008)



Unpacking (2021)



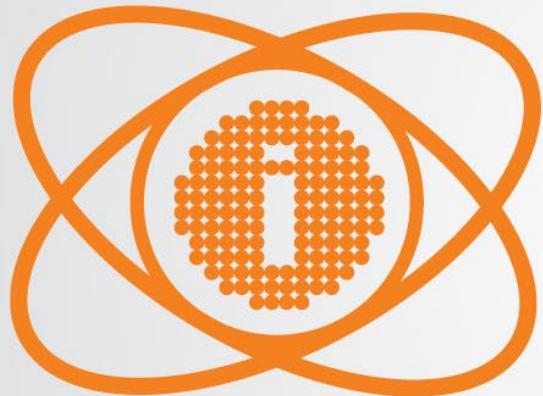
Inscription (2021)



Cruelty Squad (2021)

Papetura (2021)





INDEPENDENT GAMES FESTIVAL

<https://igf.com/>

3.

Analyzing Games

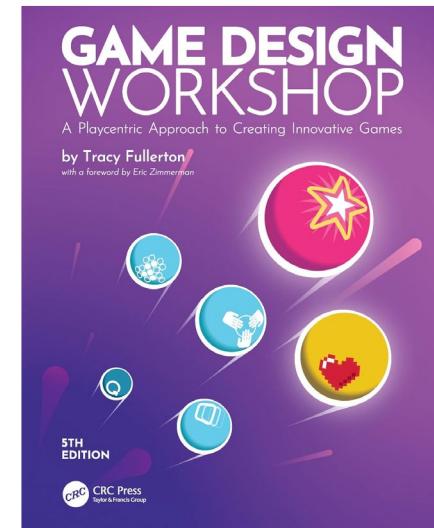


Identifying elements of a game

Tracy Fullerton: Game Design Workshop

Formal and dramatic Elements

The **skeleton** (structure) of a game and its **soul**.



Formal Elements

Players

How many players are there? Do they cooperate or compete?



Formal Elements

Objectives

- Capture
- Chase
- Race
- Alignment
- Rescue or Escape
- Forbidden Act
- Construct
- Exploration
- Solution



Formal Elements: Objectives

Race

Seen in pure racing games
such as Le Mans Ultimate



Formal Elements: Objectives

Race & Chase

Multiple objectives in Chase
H.Q.



Formal Elements: Objectives

Race & Chase & Explore

Even more objectives in
Grand Theft Auto IV



Formal Elements

Procedures

What are the methods of play and actions that players can take.
Procedures define the game mechanics.



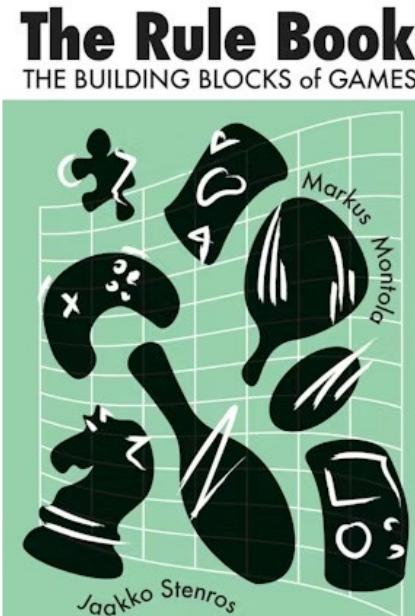
Formal Elements

Rules

- Constitutive Rules
- Operational Rules
- Implicit Rules

Jakko Stenros' & Markus Montola's Rule Definition

1. Formal Rules
2. Social Rules
3. Internal Rules
4. External Rules
5. Material Rules



Formal Rules

“The” rules in a game

What people call “rules” in a game. **Codified** and **house rules**.

Game of tag:
“If you get tagged, you’re it.”



Social Rules

How people treat each other

Includes the **culture of play** that surrounds the game.

Game of tag:
“Don’t be a dick!”

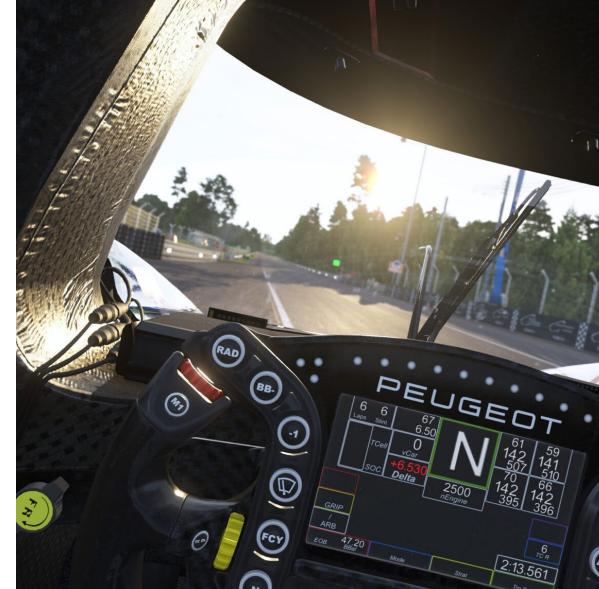


Internal Rules

Your own rules

Restrictions that people put on themselves when they play.

Game of tag:
“I’m a superhero, so I gotta play the way a superhero would”



External Rules

External regulations

Restrictions applied from external pressure like law or venue.

Game of tag:
“Don’t run on the road.”



Material Rules

The brute facts

The **materiality** of the toys
that compose it.

Game of tag:
“The faster kids are harder to tag
than the slower kids”



Formal Elements

Resources

- Lives
- Units
- Health
- Currency
- Actions
- Power-Ups
- Inventory
- Special Terrain
- Time



Formal Elements: Resources

Sometimes resources are obvious

For example, in StarCraft II.
But what about this following example?



Formal Elements

Conflict

- Obstacles
- Opponents
- Dilemmas



Formal Elements: Conflict

Obstacles

Static things that get in the player's way.



Formal Elements: Conflict

Opponents

Dynamic things that get in the player's way.

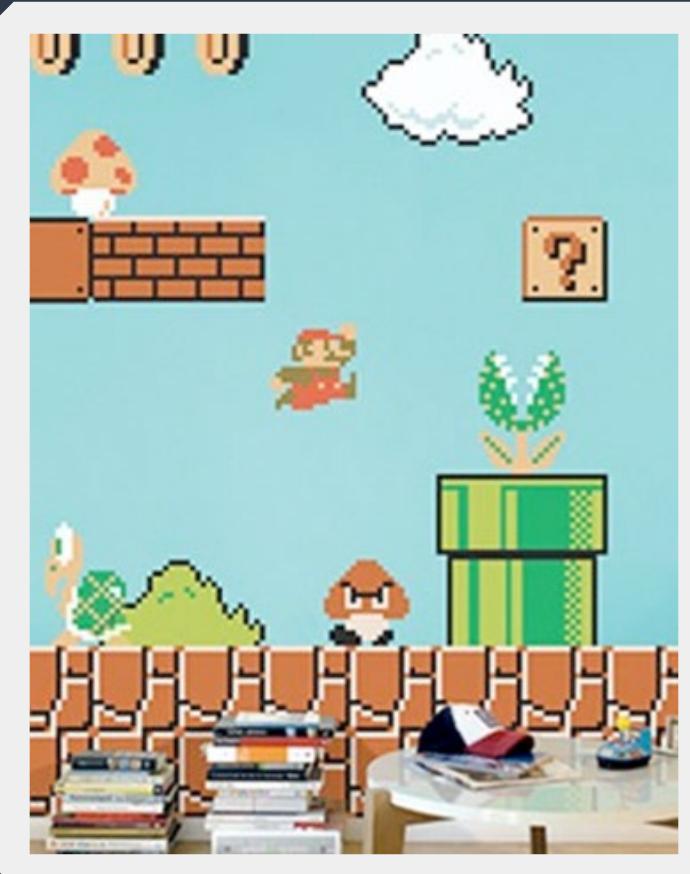


Formal Elements: Conflict

Dilemmas

Decisions the player must make.





Name the Conflict(s) in Super Mario

Formal Elements

Boundaries

Where does the game take place? What's its **magic circle**?



Formal Elements

Outcome

How does the game **end** and what does it mean?





Name the Outcome in Sim City

Dramatic Elements

Premise

The fundamental idea of the game.



Dramatic Elements

Characters

How are the **characters** in the game designed?



Dramatic Elements

Story

How does the story unfold?
Is it linear or open?
Juul calls linear games
Games of Progression.



Dramatic Elements

Story

Non-linear games are referred to as Games of Emergence.



Dramatic Elements

Challenge

How does the game present the tasks and formal elements to the player so that it becomes meaningful?



Dramatic Elements

Play

What kind of **play style** does the game foster?
Exploration? Competition?
Expression?





EXAMPLES

A few game analysis examples.

FTL: Faster Than Light

- **Objectives:** Escape the fleet!
- **Rules:** Complex ruleset
- **Resources:** Fuel, shields, health bars, hull, etc.
- **Conflict:** Fleet, raiders, hostile planets, etc.
- **Outcome:** Being destroyed, defeating the capital ship
- **Challenge:** Manage ship & crew, battle tactics, etc.

FTL: Faster Than Light

- **Theme:** being chased
- **Experience:** on the run, getting stronger
- **Art style:** 2D, pixel art
- **Setting:** sci-fi
- **Story:** you navigate the last remaining ship and have to warn the fleet
- **Protagonist:** ship

Half-Life 2: The Lost Coast

- **Objectives:** Get from A to B, disable cannon, defeat soldiers
- **Rules:** Egosshooter (kill or be killed)
- **Resources:** Armor, health, ammunition, etc.
- **Conflict:** Combine soldiers, headcrabs, etc.
- **Outcome:** Good: reach goal; bad: health is 0
- **Challenge:** Shooting, dodging, etc.

Half-Life 2: The Lost Coast

- **Theme:** Resistance
- **Experience:** Feeling of prevailing against odds
- **Art style:** 3D, realism
- **Setting:** Dystopian alternate reality
- **Story:** You help a small coastal town against the occupation forces
- **Protagonist:** Gordon Freeman

Dear Esther

- **Objectives:** Explore
- **Rules:** Minimalist. Walk and look.
- **Resources:** None.
- **Conflict:** None, only internal (struggle with grief).
- **Outcome:** Only one outcome.
- **Challenge:** None.

Dear Esther

- **Theme:** Grief, loss, guilt.
- **Experience:** Melancholic, contemplative
- **Art style:** 3D, painterly
- **Setting:** Deserted island
- **Story:** A man walks across an island while reading letters to his deceased wife, Esther
- **Protagonist:** Unnamed man

Credits

- S. 9: Pourquoi les jeux vidéo rétro sont aussi populaires?: <https://urbania.ca/article/pourquoi-les-jeux-video-retro-sont-aussi-populaires>
- S. 10: Overworked Workers sleep in their office: <https://www.flickr.com/photos/hiyori13/1232025852/>
- S. 24: Half-Real: <https://half-real.net/>
- S. 26: Nuclear Gandhi: <https://www.thegamer.com/civilization-ghandi-nuke-meme-origin-story-explained>
- S. 29: Teamwork makes the dream work: <https://www.fenews.co.uk/skills/teamwork-makes-the-dream-work-esports-prepares-the-next-generation-for-a-better-connected-society/>
- S. 30: So war's wirklich in Cordoba: <https://www.oe24.at/sport/fussball/hans-krankl-so-war-s-wirklich-in-cordoba/94444610>
- S. 31: Late Stage Tournament Strategy: <https://www.888poker.com/magazine/strategy/late-stage-poker-tournament-strategy>
- S. 33: The Rule Book: <https://mitpress.mit.edu/9780262547444/the-rule-book/>
- S. 34: D&D Player's Handbook: <https://www.amazon.com/Players-Handbook-Dungeons-Dragons-Wizards/dp/0786965606?th=1>
- S. 35: Fun Card Play: <https://www.timeanddate.com/holidays/fun/card-playing-day>
- S. 36: Le Mans Ultimate: <https://simracingcockpit.gg/le-mans-ultimate-how-to-drive-the-lmgt3-and-hypercar/>
- S. 37: USK 16: https://de.m.wikipedia.org/wiki/Datei:USK_16.svg
- S. 38: DualSense Controller: https://de.wikipedia.org/wiki/DualSense#/media/Datei:Playstation_DualSense_Controller.png