CS354P

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GAME DESIGN

WHAT IS GAME DESIGN?

▸ Use of interaction and aesthetic principles to create a compelling interactive experience

▸ Interdisciplinary area of study and practice

  ▸ HCI

  ▸ Design

  ▸ Art

  ▸ Business/Economics

▸ Few "pure" design positions in game development

  ▸ Scripting often required

  ▸ Understanding system limitations helps

  ▸ Nobody likes the "idea" guy :)

THINKING ABOUT GAME DESIGN

▸ Game design is a nebulous, ill-defined space

  ▸ "Game" is a broad term

  ▸ "Design" is a broad term

  ▸ Game design varies wildly depending on intended audience, monetization strategies, budget etc
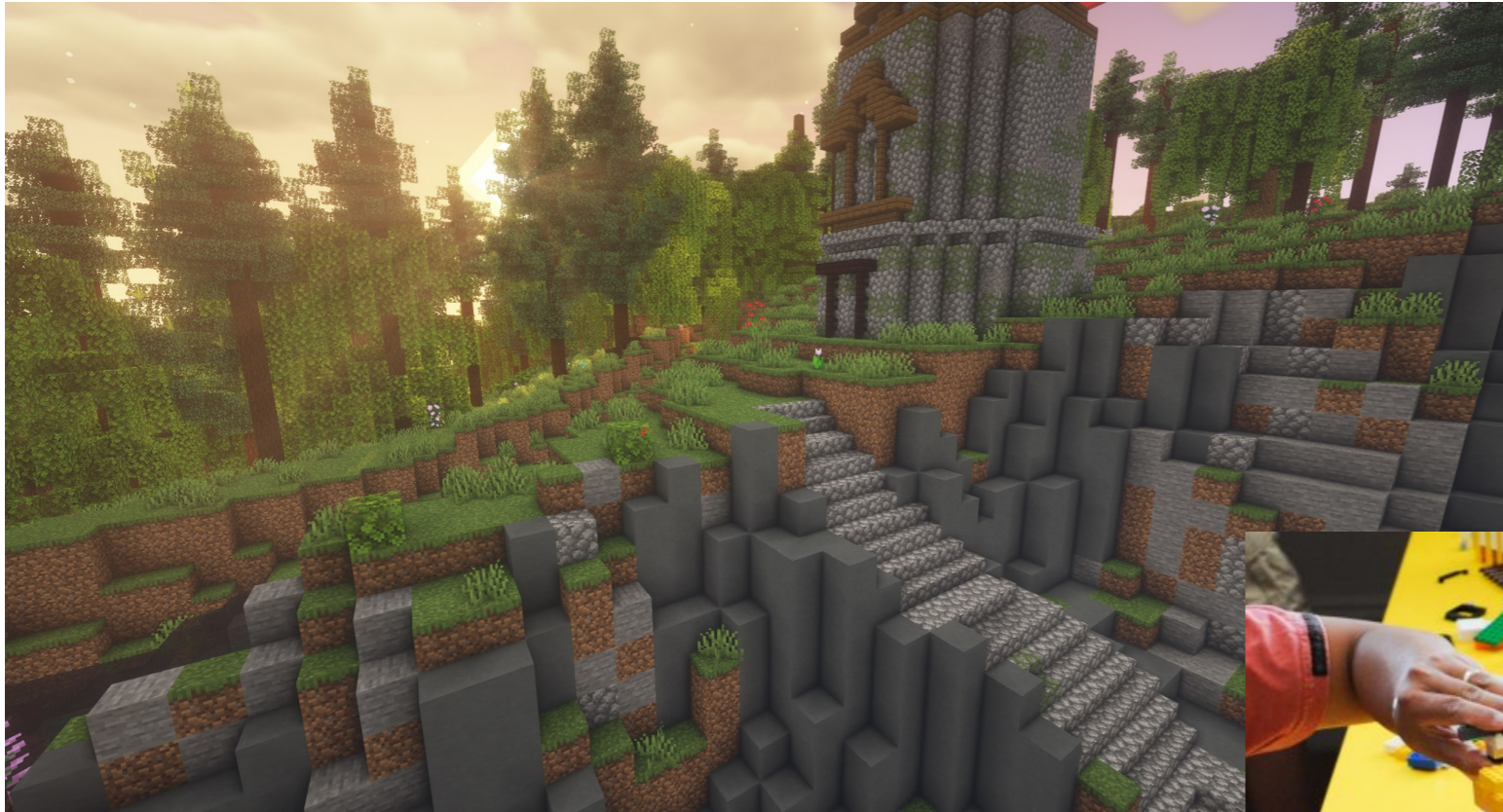
ARE THESE GAMES?

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WHAT DO THESE GAMES HAVE IN COMMON?

MDA FRAMEWORK

▸ Mechanics-Dynamics-Aesthetics (MDA) framework created to:

  ▸ Encapsulate all forms of gaming

  ▸ Analyze design aspects in context of game's intentions

  ▸ Provide a common language for design discussions

MDA DESIGN CONSIDERATIONS

▸ Mechanics

▸ In-game actions

▸ Control mappings

▸ Responsiveness

▸ Dynamics

▸ Intended experience

▸ Emergent strategies

▸ Engagement

▸ Aesthetics

▸ Look and feel

▸ Emotive experience

▸ Player expectations

MECHANICS

▸ Particular components of a game

  ▸ Data representation of systems

  ▸ Algorithmic representation of play

▸ Define the rules of play and response to player input

  ▸ Controls

  ▸ Win-lose conditions

  ▸ Intermediate systems

MECHANICAL CONSIDERATIONS

▸ In-game actions

  ▸ What does the player actually do?

  ▸ What is the novelty?

  ▸ What is the player expectation?

▸ Control mappings

  ▸ Are the player actions ergonomic?

  ▸ Do the controls follow conventions of genre?

  ▸ Are controls remappable? (the answer should be yes!)

▸ Responsiveness

  ▸ How do the controls respond?

  ▸ How do the interactions feel?

CASE STUDY: DEVIL MAY CRY 3

https://www.youtube.com/watch?v=L8mf-NV2fgw&t=64s

https://www.youtube.com/watch?v=xdOPZFu-GU0&t=63s

DYNAMICS

▸ Run-time behavior of mechanics based on player input

  ▸ Holistic system encapsulating mechanics

  ▸ Creates novelty within play

▸ Interactions and experience of given play through

  ▸ Scope of player choices

  ▸ Breadth of player strategies

DYNAMICAL CONSIDERATIONS

▸ Intended experience

  ▸ How should the player interact with the world?

  ▸ How do its systems create interest?

  ▸ What is the scaling in terms of difficulty?

▸ Emergent strategies

  ▸ How does player choice change game outcome?

  ▸ What are the timings and flow?

▸ Engagement

  ▸ What engages the player?

  ▸ How does player attention ebb and flow?

  ▸ What is player expectation in terms of play cycle?

CASE STUDY: STAR CRAFT 2

https://www.youtube.com/watch?v=7nAgHxykgLw

https://www.youtube.com/watch?v=Kbwk2vwXNyU

AESTHETICS

▸ Intended emotional response to the game

    ▸ Visuals/Audio

    ▸ Overall "feel" during play

▸ Sets tone of game

▸ Creates "fun" in game

    ▸ Exploration

    ▸ Narrative

    ▸ Challenge

    ▸ Fellowship

    ▸ etc…

AESTHETIC CONSIDERATIONS

▸ Look and feel

　▸ What is the framework for the emotional response?

　▸ How does this change over the course of the game?

▸ Emotive experience

　▸ What emotional spectrum makes the game's "fun"?

　▸ What is the range of expected player emotion?

　▸ How does the game create emotional investment?

▸ Player expectations

　▸ How does the game meet expectations?

　▸ How does the game break expectations?

CASE STUDY: ICO

https://www.youtube.com/watch?v=kSRIlwXDBB4

CASE STUDY: SPEC OPS: THE LINE

https://www.youtube.com/watch?v=-b7TaLjdXMc&t=6s

GAMES AS DESIGN

▸ Games are inherently a designed experience

▸ Good design is generally invisible

▸ There is no such thing as "wrong" user interactions

⠀⠀▸ Empathy for players promotes better design

▸ Every interaction should contribute to the overall experience

▸ Games should be made with a purpose

⠀⠀▸ Why are you making a game?

⠀⠀▸ Why should someone play your game?

▸ Consider game design decisions holistically and critically

⠀⠀▸ Play-testing and user studies invaluable in feedback loop

REFERENCES

▸ MDA Framework <http://www.cs.northwestern.edu/~hunicke/pubs/MDA.pdf>

▸ Hideo Kojima's GDC 2009 Keynote <https://www.youtube.com/watch?v=7Pq1Jyr6ffU>

▸ <http://www.polygon.com/2012/11/14/3590430/dont-be-a-hero-the-full-story-behind-spec-ops-the-line>