

Department of Art Practice
University of California, Berkeley

Professor Greg Niemeyer

Spring 2021: Art 178

Document available online at:

<https://docs.google.com/a/berkeley.edu/document/d/11vrXbLotYZ-lRrQFPLPrGEx9Z2IS1fID3it4cJdyNcY/edit?usp=sharing>

Game Design Methods

Studio, Lab and Lecture:

T 1:00-4:00 PM Kr 295

Th 1:00-4:00 PM Kr 295

Greg Niemeyer

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Office Location: Kroeber Hall 341

zoom office: zoom.berkeley.edu/my/studio

Course Goal:

To create supportive enthusiastic game studio environment in which all participants feel safe and free to imagine, create, test and debate games *together*, to innovate as a form of critique, to allow each participant to expand their portfolio of games, and to create an academic framework for the understanding of the conditions which lead to the creation, distribution and adoption of specific games at specific times.

Grading:

We track your progress through assignment completion. Completing all assignments listed below plus one classroom presentation equals 100%. Extraordinary efforts yield up to 20% additional credit. The last three assignments together constitute the final exam.

Module 1: Character Design: 2D Walk Cycle

Topics:

Course Overview, Point System, Presentation Assignments and CEC codes.

Required Reading:

Octavia E. Butler, *The Evening and the Morning and the Night*

<https://www-jstor-org.libproxy.berkeley.edu/stable/2931653>

or

https://drive.google.com/open?id=1hCJFSTC0J2LrM3gpqJ_aNSqOfKr3OBJ

Free audio book recording:

<http://escapepod.org/2015/02/02/ep479-evening-morning-night/>

Summary:

https://en.wikipedia.org/wiki/The_Evening_and_the_Morning_and_the_Night

GamerGate: https://en.wikipedia.org/wiki/Zo%C3%AB_Quinn

Mission:

Read (Butler 477-494) by class time.

Lecture:

Analysis of *The Evening, the Night and the Morning*, by Greg Niemeyer

GamerGate by student TBA

GamerGate Sample Slides:

https://docs.google.com/presentation/d/1Ev8dKsuABTyI__pbGVC6r2zytQalqxcMV1BsX2mi-Zg/edit?usp=sharing

Module 2: Walk Cycle and A Critique of MDA

Required Readings:

gMDA: A formal approach to game design and game research In Proceedings of the AAAI-04 Workshop on Challenges in Game AI (25--29 July 2004), pp. 1-5 by Robin Hunicke, Marc LeBlanc, Robert Zubek

<https://www.cs.northwestern.edu/~hunicke/MDA.pdf>

Mission 1: Interactive Walk Cycle

Create a Walk Cycle, presented in a Unity stand-alone format with basic left/right/idle functions, to the Game Design Methods Folder:

<https://drive.google.com/open?id=0B4HsTo4WJ5xfdk8zcU9TR3p0NFk>

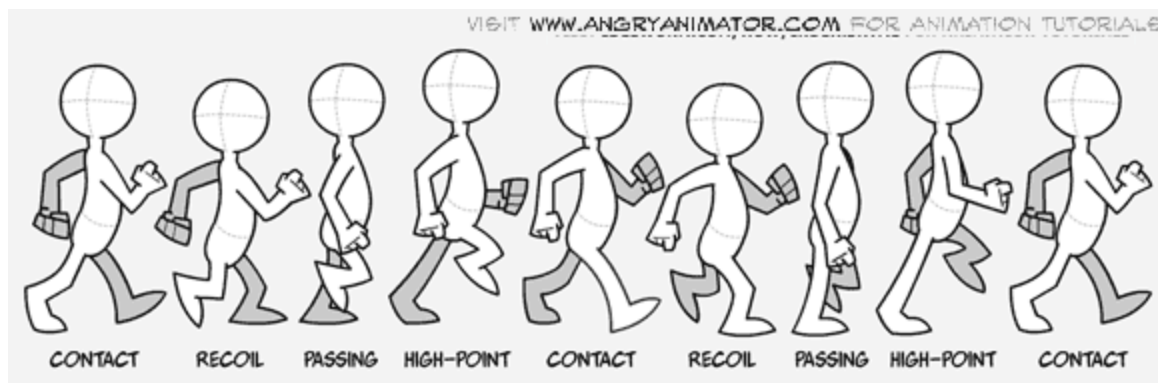
Individual Project, due Thursday

Mission 1 Steps:

1. Create walk cycle left, right and idle in a single file in Photoshop
2. Import walk cycle art into Unity, create animations and scripts (follow tutorial)
3. Build Standalone version of basic walk cycle interaction in Unity
4. Upload Standalone version to Google Drive Game Design Methods walk cycle folder

If you run into problems, check that your "exit time" setting in Animator is unchecked. There are many other details to check as well, and if you want to compare your work or start with a working project, download it all from the sample folder in the walk cycle folder on Google Drive.

Reference Material:



[Imgur.com/gallery/ZrJz2](https://imgur.com/gallery/ZrJz2)

2D walk cycle (Photoshop)

<http://afadecal.weebly.com/animation-part-ii.html>

Preparing walk cycle in photoshop

<https://www.youtube.com/watch?v=f4qRPIxqDb4>

Sprites in Unity Part 1:

<https://www.youtube.com/watch?v=6P1ivCvofuk>

Sprites in Unity Part 2:

<https://www.youtube.com/watch?v=PuxUCX21jJU>

Reference Material for Walk Cycle Demo:

Sample Script: <https://drive.google.com/open?id=1L1uhOic9vkCJbtMjE6ikdeUN6hWuKown>

Presentations:

MDA Paper Presentation (by Student TBA)

Revisiting an Art 178 Classic: Game Over by Jeejun Bertuso and Tyler Milles, presented by Greg Niemeyer

<https://drive.google.com/open?id=0B4HsTo4WJ5xfQy1Fbkc2UWRnVGM>

Module 3: The Fun Loop

Deliverable: Mission 1: Interactive walk cycle

Tuesday:

Review of Mission 1: Walk cycle

Thursday:

Fun Loop lecture by Greg Niemeyer

Module 4: The Fun Loop: Due

Topics:

Global collaboration, Diegetic and Non-Diegetic Experiences, Game Classification, Game as Culture, Game as Performance, 6 levels of Performance, Visuality

Required Reading:

Summary of Homo Ludens, presented by Student TBA

https://en.wikipedia.org/wiki/Homo_Ludens

On Visuality, Mirzoeff 53-79, presented by Student TBA

<https://drive.google.com/open?id=0B4HsTo4WJ5xfSnFSVUFseVJISGs>

Deliverables:

None, use class time to research fun loops

Presentations:

Homo Ludens

Reference Slides by Yuan Zhou:

<https://docs.google.com/presentation/d/1VE2R2ZBiQy9Gy3a2trhZj9S7i1XtbSJmQ-Rs8Rh3xH>

[c/edit?usp=sharing](#)

On Visuality

Reference Slides by Grace Li

<https://docs.google.com/presentation/d/1jDantdqiiPx03OgGMLI5SY5CqRVsUdN0rcmmMnlVE4c/edit?usp=sharing>

Unity Fun Loop Demo

Sample files available here:

https://drive.google.com/open?id=1KeiVRQKKV5_dOr4y-CbjBNO2ZWYIFwX

Module 5: Applying MDA to a Mini-Game

Topics:

Game States Game Classification, MDA Implementation, Game logs and metrics, js code demo

Required Reading:

Full text of Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDS

<http://mud.co.uk/richard/hcds.htm>

Full text of Game Metrics without Players: Strategies for understanding game artifacts

<http://www.aaai.org/ocs/index.php/AIIDE/AIIDE11WS/paper/download/4114/445>

Mission 2 Deliverable:

Fun Loop Implementation, Individual Project, due Thursday

Create and present, in a medium of your choice, a novel fun loop, the core mechanic of the game. The fun loop must be interactive and novel. This is a difficult challenge since most known fun loops have been milked to death (candy crush anyone). If you write code, make sure the loop is solid and fast, no interaction lag greater than 10 ms. Prepare to present trade-show style.

Presentation:

Hearts, Clubs, Diamonds, Spades: Players Who Suit MUDS by Gabby

Game metrics without players: Strategies for understanding game artifacts by Andrea

Game Log Code

<https://drive.google.com/open?id=15z6fDZmjhQiP0pBq3j29oL7r-qCZ0slu>

Game Log Tutorial Video:

<https://www.youtube.com/watch?v=n3unJZnoAG8>

Module 6: Mini-Game Iteration

Topics:

Game Analysis, Outcome

Required Reading:

Summary of Man, Play and Games by Student TBA

https://en.wikipedia.org/wiki/Man,_Play_and_Games

Mission 3 Deliverable:

Game Iteration based on Fun Loop , Individual Project, due Thursday

Create and present a complete mini-game with an intro or tutorial and a win condition, in a medium of your choice, based on the fun loop or an iteration of your fun loop. You must include a game log, which you will review for next Module.

Presentation:

Man, Play, And Games by Roger Caillois

Sample Slides:

https://docs.google.com/presentation/d/17r0IKZYPS-flbB6MvSvqdwFsMek3MkMQLXI5FUCMEKg/edit#slide=id.g2755b36e3e_0_93

Module 7: Game Narratives

Topics:

Game Narratives, Game Metrics

Required Reading:

Game Design as Narrative Architecture by Student TBA

http://homes.lmc.gatech.edu/~bogost/courses/spring07/lcc3710/readings/jenkins_game-design.pdf

Mission 4 Deliverable:

Game based on Mini-Game, Individual Project, due Thursday

Create and present an improved version of your mini-game, and demonstrate how feedback collected last Module improved game metrics. Be sure to collect “pre” and “post” game metrics before the beginning of class, and display a chart comparing the two data sets. Use Google Sheets for this comparison, and share the links with the instructor.

Base Points: 10 for completing the project

Extra Points: 10 for showing more than 10% improvement metrically

Extra Points: 5 for creating a publicly accessible website around your game

Presentation:

Game Design as Narrative Architecture

Sample Slides:

<https://docs.google.com/presentation/d/1NARoPX3VDoBbgV6QgYAqyjN8QjjhwYs56POnOxR2HAE/edit?usp=sharing>

Module 8: Developing Game Synopses

Topics:

Theme, environment, characters, plot, outcomes, diegesis vs. mimesis

Required Reading:

Juul, Jesper: Games telling stories?

<http://www.gamestudies.org/0101/juul-gts/>

<https://en.wikipedia.org/wiki/Diegesis>

<http://truecenterpublishing.com/psycyber/disinhibit.html>

Mission 5 Deliverable:

Game Synopsis, due Thursday

Create and pitch a synopsis for game project, in 4 minutes or less. The synopsis also must be submitted online via google docs and shared via link with all students by email. The purpose of the pitch is to create two-person teams for game development. Prepare to answer what the purpose of the game you are proposing is: What kind of culture, community and environment does your game make more likely?

Post your pitch deck or synopsis to this folder:

<https://drive.google.com/open?id=0B4HsTo4WJ5xfSHAwcWZjRGVCaDA>

Base Points: 10 for completing the project

Extra Points: 10 for pitching in 4 minutes

Bonus Points: 5 for a story that feels “here and now” urgent

Presentation:

- Juul, Jesper: Games telling stories by student TBA
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Module 9: Paper Test

Topics:

Theme, environment, characters, plot, outcomes

Required Reading:

Wizard of Oz Prototyping of Computer Vision Based Action Games for Children

<http://dl.acm.org/citation.cfm?id=1017837>

Local copy

<https://drive.google.com/open?id=0B4HsTo4WJ5xfd2lYaVZKX29CWWc>

Mission 6 Deliverable:

Wizard of Oz Paper Test, due Thursday

Character Sheet Reference:

http://img06.deviantart.net/1801/i/2010/271/6/2/gatorgirl_character_sheet_by_colonel_strawberry-d2zoxk.png

In the two-person team you formed during the story pitch session, synthesize your stories and create a Wizard of Oz playtest using only simple tools such as paper, pens, and glue. Focus on creating the player experience that fits your story best through a mechanic that mimetically tells the story. Note: Demos will happen in parallel and must be presented by one team member.

Base Points: 10 for completing the project

Extra Points: 10 for pitching in 10 minutes

Extra Points: 5 for a story that feels “here and now” urgent

Presentation:

Wizard of Oz Prototyping of Computer Vision Based Action Games for Children

Presentation by Fonda

Sample Slides

https://docs.google.com/presentation/d/1AIXbzZM7EJmLAY1sIaFisIqy8xeuDkt1l6p3Za6lS4s/edit#slide=id.g28bbd34761_0_68

ESports by Alex Jiang

Sample Slides:

<https://docs.google.com/presentation/d/1CN3u9BHWIK2wmH0xs7SMwFn40o-g3KbeiSVjAhLMCRI/edit?usp=sharing>

Module 10: Game Art

Topics:

Overview of game assets, character design, environment design, interaction design

Required Reading:

Bogost, Ian: Rhetoric of Games

<https://drive.google.com/open?id=0B4HsTo4WJ5xfSVVyWFpxNXdlYTg>

Mission 7 Deliverables:

[Character pose sheet](#), Concept art, Environment or background art, type design, music, core processes due Thursday

Still working in your team, develop basic game art approaches: Select a medium you are confident in, create the aesthetics for the whole game (from the playable character to the banner ad), and prepare to present these artifacts trade-show style. Include sound effects and music if these elements are present. Store all elements in a game project folder you create.

Presentation:

Ian Bogost, The Rhetoric of Games by student TBA

Game References:

Molle Industria website, featuring MacDonald’s Game: <http://www.molleindustria.org/>

Module 11: Game Balance

Topics:

Balancing games, demo of [The Art of Game Design, A Deck of Lenses](#)

Required Reading:

Jesse Schell: The Art Of Game Design

<https://drive.google.com/open?id=0B4HsTo4WJ5xfWE9ILWpjM015X3c>

Citation:

Schell J. The Art Of Game Design : A Book Of Lenses [e-book]. Boca Raton : CRC Press, [2015]; 2015. Available from: OskiCat, Ipswich, MA. Accessed August 18, 2017.

Mission 8 Deliverable:

Wireframe version of all game interactions, due Thursday

In your wireframe version, address these key points mechanically, borrowed from Futurlab¹:

Responsive Controls: Controls have to be close to perfect, if not perfect.

Watertight Concept: The game has to make sense throughout.

Positive Feedback & Reward: Good games are full of positive feedback for the player.

Frictionless User Interface: The UI has to be streamlined to keep the player engaged.

Consistent Audio & Visual Style: The audiovisual style of the game should be consistent throughout.

Make sure the game runs well in parts. The parts do not need to be connected, and we don't need to see any level design yet.

Presentation:

Schell J. The Art Of Game Design: A Book Of Lenses by student TBA

Module 12: Game Levels

Topics:

Diversity in Games, Games and Worldmaking

Required Readings:

¹ <https://www.futurlab.co.uk/designing-an-awesome-video-game.html>

Bonnie Ruberg: No Fun: The Queer Potential of Video Games that Annoy, Anger, Disappoint, Sadden, and Hurt

<https://drive.google.com/open?id=0B4HsTo4WJ5xfanlMQ3VBWVBOQTQ>

Mission 9 Deliverables:

Game with at least three levels or modes and game log (applied game metrics), due Thursday

Make sure the game runs well all together. Pay special attention to skill progression or experience progression. What makes a player stay in the game longer? How many people play how far into the game?

Presentations:

Bonnie Ruberg: No Fun, by student TBA

Module 13: Game Iteration and Distribution

Topics:

Playtesting Strategies

Required Reading:

Oswaldo Cleger: Procedural Rhetoric and Undocumented Immigrants

<https://drive.google.com/open?id=0B4HsTo4WJ5xfMWt2eUVndDVUMk0>

Five Tips for Better Playtesting: [Link](#)

- ask non-friends to play
- Prepare: The test is testing the game, not the author
- Watch, listen: record and take notes
- Don't explain the game, give the game a chance to explain itself

From: http://www.gamasutra.com/view/feature/185258/best_practices_five_tips_for_.php

Mission 10 Deliverables:

Game fully playable, with all the tools required to play, evaluation form, due Thursday

This is your chance to share your game with a wider audience: We will invite some guest critics as well as your friends to class from 10 to 12, to come test your games and give you feedback via the evaluation forms you provide.

Presentation:

Oswaldo Cleger: Procedural Rhetoric and Undocumented Immigrants, by student TBA

Game Evaluation Questions:

GU1 Audio-visual representation supports the game

The game graphics should support gameplay and story and be informative for the player. In addition, the graphical look and feel should be consistent throughout the game. Audio can be used to evoke emotions and increase immersion. A good sound environment in the game supports a positive gaming experience. The graphics or audio should not prevent the player from performing actions or make them unnecessarily difficult.

GU2 Screen layout is efficient and visually pleasing

The layout should present all necessary information for the player, but on the other hand, if the screen is filled with all kinds of information, it starts to look crowded. It is important that the player finds the navigation controls and they should not be mixed with the information that needs to be visible on the screen.

GU3 Device UI and game UI are used for their own purposes

It should always be noticeable whether the player is dealing with the game user interface or device functions. The game interface should not use the device's user interface widgets in the game interface, because it breaks the immersion. The most impressive immersion is achieved when the game uses full-screen mode hiding other features.

GU4 Indicators are visible

The player should see the information such as the current state of the game and

GU5 The player understands the terminology

The terminology that is used in the game should be understandable and not misleading or unfamiliar for the players. Technical jargon should be avoided. For instance, terminology that is related to the game concept or features that the game needs from the device should be translated into more understandable language.

GU6 Navigation is consistent, logical, and minimalist

Navigation consists of the game menu and the game world. The game menu consists of settings and selections for the desired game session. Different functions should be organized reasonably and possibly on different screens. However, long navigation paths should be avoided. Short navigation paths provide more clarity and are easier to remember. In the main game menu, the player should be able to start a game and have access to other important game

features. In the game world, navigation should be intuitive and natural. Regardless of the complexity of the game world, players should be able to navigate there smoothly. With a proper set of control keys, navigation can be very intuitive and almost invisible.

GU7 Control keys are consistent and follow standard conventions

Using common conventions in control keys reduces the time that is needed to learn to play the game since the player can use his or her knowledge from other games. Game devices usually have specific keys for certain actions and every game should follow them.

GU8 Game controls are convenient and flexible

Novice players usually need only a subset of the controls when they start playing the game. On the other hand, veteran players often need shortcuts and more advanced commands. It should be possible to customize the game controls or use shortcuts or macros. However, using shortcuts should not provide a major edge in a competitive player vs. player game. The configurability and amount of controls needed to play the game should be kept at the minimum, but they need to be sufficient. In addition, the controls should be designed according to the device's capabilities.

GU9 The game gives feedback on the player's actions

A good user interface has a low response time on the player's actions. An action can be either a single key press or a more complicated input sequence. The player should notice immediately that the game has recognized the action by providing feedback. The most common way of providing feedback is to present it graphically. Other alternatives are to use audio or tactile feedback. Providing only auditory feedback is not acceptable since a player may be playing the game without sounds. Although the game needs to respond immediately to the player's actions, the consequences of the action can be shown to the player later. If an action cannot be performed immediately, the game should notify the player about the delay.

GU10 The player cannot make irreversible errors

The game UI should confirm actions that can cause serious and irreversible damage, which affects the player's ability to play the game. Such errors are typically related to the game character or player's progress in the game. When mistakes happen, it is helpful to enable recovery.

GU11 The player does not have to memorize things unnecessarily

The game should not stress the user's memory unnecessarily, unless it is part of the gameplay.

GU12 The game contains help

The players do not often read manuals. Instead, the game should teach the player what he or she needs to know to start playing the game. This can be done through a tutorial mode at the beginning of the game. The tutorial mode should be divided into chapters that teach a couple of things at the beginning. Ideally, the tutorial could be embedded completely in the game so that help would be provided every time when it is really needed. Help is also often needed in error situations. If the game provides useful error messages, the player can understand better what caused the problem.

GP1 The game provides clear goals or supports player-created goals

The players should be able to understand goals that exist in the game. The goals can be either set by the game or created by the players. The game should contain both short-term and long-term goals. Short-term goals provide repeated opportunities for reinforcement and keep players motivated to play the game. Long-term goals are usually more difficult to achieve and they can consist of several short term goals.

GP2 The player sees the progress in the game and can compare the results

The players should have enough information so that they can see their progress towards the goals in the game. The progress can be shown to the player explicitly, for instance with numbers, or implicitly, for instance, by changing the behavior of non-player characters or the game world. The players feel more motivated if they can compare themselves with the other players or the previous achievements. Traditionally, this has been done with high-score lists, rankings, character levels, or different titles.

GP3 The players are rewarded and rewards are meaningful

The players should receive a meaningful reward as they progress in the game. In addition, the reward should be adjusted to the challenge that the player had to face in order to get it. The rewards schedule should be varying and frequent, but still unpredictable.

GP4 The player is in control

The game should provide at least an illusion that the player is in control of what is happening in the game world. The players should be able to decide on actions

they want to take and these actions should have an influence on the game world.

GP5 Challenge, strategy, and pace are in balance

The game should be designed so that the challenge is comparable to player's current skills, then the players do not feel frustrated or bored with the game. In single-player games, the player can often choose the difficulty level and thus affect the challenge. The players learn new strategies as they play the game. There should not be dominating strategies for any part of the game. The pace should be adjusted to the game style and it can be intensive or deliberate. The game should allow the player to take a deep breath once in a while during the play sessions.

GP6 The first-time experience is encouraging

The first impression of the game is formed within a few minutes and it is very difficult to change. The players should feel that they have learned the basics and have accomplished something. The first play session should make the player desire for the next play session.

GP7 The game story supports the gameplay and is meaningful

Even though the story plays an important role in many games, it should not dominate the gameplay. Some games do not even have or need a game story. If the game has a story, it should fit the other elements in the game and sound plausible to the player. The dialogue with non-player characters (NPC) should be meaningful and interesting for the player.

GP8 There are no repetitive or boring tasks

The game should not require repetition of tasks without changing any conditions. Often, this repetition happens when the player needs to reach a certain goal before the game becomes interesting or challenging. However, during the training phase (tutorials), it is useful to repeat certain tasks so that the player learns and practices for example how the character is controlled in the game.

GP9 The players can express themselves

The players should be able express themselves by, for instance, customizing their characters, acting in a certain way, or modifying the game world. Allowing the players to customize and personalize their game characters makes it more probable that they feel attachment to a game.

GP10 The game supports different playing styles

The players can vary a lot in terms of both experience and preferred play styles. There are also different playing styles that should be supported at least in the more complex games. The player types are defined based on how the players prefer to interact with the game world or with the other players. Four common player types are: A) Achievers, who like to compete with the game mechanics. B) Explorers, who wish to explore different aspects of the game. C) Socializers, who prefer to socialize with other players D) Killers, who enjoy dominating other players.

GP11 The game does not stagnate

The players should always feel that it is possible to reach the goals and the game progresses. The game should recognize immediately when the game is over and inform the players. Ending of the play session should be clearly indicated and restarting the game should be possible.

GP12 The game is consistent

The game world and actions should be consistent and logical for the player. If something works in the beginning, the player assumes that it also works later on. Correspondingly, if the player is able to perform a certain action in the game world or for a game item, the player assumes that similar kind of action is possible for other similar objects or in the similar situation as well. Moreover, if the game world resembles the real world, the player assumes that the same principles also work in the game world. The game should not contain invisible walls.

GP13 The game uses orthogonal unit differentiation

Each game item should have a purpose in the game world and it should be notably different to other similar game items. In addition, if the player needs to select character classes or roles in the game, they should be functionally different.

GP14 The player does not lose any hard-won possessions

The game should maintain possessions that the player has earned while playing the game and the player cannot lose them accidentally. However, in some cases the game can provide very high risks and the player can stake valuable game items which can be lost.

Module 14: Closed Playtest and Feedback

Module 15: Public Playtest: Showtime

Topics:

Game distribution methods

Required Reading:

Jockel S, Will A and Schwarzer F. Participatory Media Culture and Digital Online Distribution

<https://drive.google.com/open?id=0B4HsTo4WJ5xfX24wSDF5TmhScFk>

Deliverable:

Game in a format that can be distributed to the target device, due Thursday. This is your final!

Presentation:

Participatory Media Culture and Digital Online Distribution by student TBA

Final Paper:

The Impact of Games on Culture, Historical, Present or Future

minimum 1000 word essay, due May 14, 2020, via google docs share link.

Please post all papers to this folder:

<https://drive.google.com/open?id=0B4HsTo4WJ5xfcU4wbkhDTEtwMkk>

Your paper structure should follow this rough outline:

Identify a game, either historic, contemporary or not yet invented. Show a screenshot and describe the game.

Describe the impact that game has on its culture and environment. How did it reflect or change values, ethics, morals, expectations of the times? Whom did it empower, what did it suppress or distract from? What transformative impact do the games have on the players?

Quantify the impact. How many people were playing? How many mods were made? How many versions existed? Cite references. Compare the game of your choice to another game related to yours, and discuss how the game play evolved. For example, describe how Guild Wars 2 (Jaco's example, don't copy) advanced its love interest options beyond the limited framework of the love interest options in World of Warcraft.

Conclude with a statement discussing how your game impact example relates to broader

cultural changes (in the example above, how Guild Wars 2 supports equal rights for LGBTQ community), and consider where more work needs to be done to advance cultural change and improve dialog.

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esign.pdf.

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<http://dx.doi.org/10.1177/1470412906062285>.

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Proceedings of the 2011 AIIDE Workshop on Artificial Intelligence in the Game Design Process, pp. 14-18. *AAAI Technical Report WS-11-19*,

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<https://drive.google.com/open?id=0B4HsTo4WJ5xfanlMQ3VBWVBOQTQ>.

Schell, Jesse. *The Art Of Game Design: A Book Of Lenses*. Elsevier/Morgan Kaufmann, 2008.

"Zoë Quinn." *Zoë Quinn*, Wikipedia, https://en.wikipedia.org/wiki/Zo%C3%AB_Quinn.

Addenda

Additional Readings:

1. Friedrich von Borries, Steffen Walz, Matthias Böttger, eds. 2007. [*Space Time Play: Computer Games, Architecture, and Urbanism – The Next Level*](#). Basel: Birkhäuser. Note: This book is referred to as STP in the following text.
2. Steven Johnson. 2006. *The Ghost Map*: New York: Riverhead Books.

3. Schell, Jesse: [The Art of Game Design, A Deck of Lenses](#)
4. Edgar Allen Poe. [The Murders in the Rue Morgue](#), [The Purloined Letter](#).
5. [Edgar Allan Poe, Man of the Crowd](#)
6. Arthur Conan Doyle. *The Adventures of Sherlock Holmes*
7. Italo Calvino. *Invisible Cities*, 1972.
8. Phillip K. Dick. *Do Androids Dream of Electric Sheep?*
9. Dashiell Hammett: [The Maltese Falcon, 1930](#).
10. Frank Cane, *Esprit De Corpse*, 1965.
11. Katie Salen and Eric Zimmerman. 2003. *Rules of Play: Game Design Fundamentals*. Cambridge: The MIT Press.
12. Samuel R. Delany: *Dhalgren*
13. Flanagan, Mary, *Critical Play*: [Radical Game Design](#)

Recommended Games:

1. Drift for Google Daydream
2. Legend of Zelda: Four Swords
3. Tron: <http://armagetronad.org/index.php>
4. [Machinarium](#)
5. [GTA China Town](#)
6. Little Big Planet
7. Professor Layton's Curious Village
8. Clue
9. Risk
10. [Blade Runner Video Game \(1997\)](#) and [video opening sequence](#)
11. [Grim Fandango](#) (1998), STP p. 196 ff
12. [Pandemic](#)
13. Portal 2
14. <http://bibliodyssey.blogspot.com/2008/11/board-games.html>
15. LA Noire: <http://www.rockstargames.com/lanoire/#!/video:8081>

Links

- Queerness and Games Conference: <http://www.qgcon.com>
- Early days of facial animation: Making of Return to Zork: <http://www.resonant.org/games/infocom/Articles/cgw93.html>
- Face recognition endgame: <http://www.sterlingcrispin.com/data-masks.html>

Quotes

Mystery Quote 1

Au fond, la découverte d'un coupable importe moins que la réduction de l'impossible au possible, de l'explicable à l'expliqué, du surnaturel au naturel.

—What does it mean? Who wrote it?

“In summary, the discovery of who is responsible [for the result] is less important than bringing the impossible into the realm of the possible, explaining the inexplicable, making natural that which is supernatural.”

-Jean Foubert

Mystery Quote 2

Likewise, the essence of technology is by no means anything technological. Thus we shall never experience our relationship to the essence of technology so long as we merely represent and pursue the technological, put up with it, or evade it. Everywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral; for this Conception of it, to which today we particularly like to pay homage, makes us utterly blind to the essence of technology.

— Martin Heidegger

Mystery Quote 3

People tend to think of perception as a passive process. We see, hear, smell, taste or feel stimuli that impinge upon our senses. We think that if we are at all objective, we record what is actually there. Yet perception is demonstrably an active rather than a passive process; it constructs rather than records “reality.”

— Michael Michalko

Monopoly History Video: <https://www.youtube.com/watch?v=F4sW-yL5hBY>

Games and Coming of Age:

Rob Gallager

<https://www.theguardian.com/commentisfree/2017/sep/25/mps-play-videogames-tech-gaming-industry>

Race and Games:

<https://techcrunch.com/2020/06/21/confronting-racial-bias-in-video-games/>