GDD

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1. Games

Definition of a Game

- A game can be defined as a **rule-based formal system** with a **variable and quantifiable outcome**.
- Outcomes in a game are assigned different values.
- The player exerts effort in order to influence the outcome.
- The player feels attached to the outcome.
- The consequences of the activity are optional and negotiable.

Elements of a "Killer Game"

- Is there a formula to design a killer game? The sources list the following elements:
  - **Aesthetic** (Ae)
  - **Fun** (Fu)
  - **Character** (Cr)
  - **Levels** (Lv)
  - **Addiction** (Ad)
  - **Story** (St)
  - **Mechanic** (Me)
  - **Genre** (Ge)
  - **Audio** (Au)
  - **Originality** (Or)
  - **Feel** (Fe)
  - **Pacing** (Pa)
  - **Art** (Ar)
  - **Coding** (Co)
  - **Interface** (In)
  - **Strategy** (St)
  - **Reward** (Rw)
  - **Planning** (Pl)
  - **Feedback** (Fe)
  - **Testing** (Te)
- These elements are part of the **creative process for designing games**.

Rules and Game Mechanics

- **Core Concept**: What all games share with one another is **rules**.
- **Video Games**: In video games, rules can also be thought of as the game's **mechanic**.
- **Example**: The mechanic of a first-person shooter (FPS) game is shooting things.
- **Action Definition**: The action of the game is defined by the mechanic of:
    - Damage
    - Aiming
    - Running
    - Jumping
    - Hiding
- **World Rules**: The game mechanic is also informed by the rules of the world, such as:
    - What you can and cannot shoot.
    - How much damage you can inflict or sustain.
- **Discipline of Game Design**: Minor additions to game rules speak to the discipline of game design. These include:
    - Time limits
    - Proximity
    - Agreements of fairness

Game Evolution and Variants

- More games evolve from variations on a core mechanic.
- This phenomenon is common to game design.
- **Example Case Study: Tag vs. Stick in the Mud**:
    - From a **"core" game** (such as tag) emerge **variants** (such as "stick in the mud").
    - It is the same game but with a **twist**: tagged players are stuck.
    - Another "free" player must tag the stuck players to liberate them from the imagined "mud".
    - The goal of the "it" player in this variant is to **entrap all of the active players** in order to "win".

Definition of Play

- **Nature of Activity**: Play is a free activity standing quite consciously **outside "ordinary" life**.
- **Material Interest**: It is an activity connected with **no material interest**, and **no profit** can be gained by it.
- **Structure**: It proceeds within its own proper boundaries of time and space according to **fixed rules** and in an orderly manner.
- **Boundaries**: Play, unlike real life, can take place anywhere and for any amount of time.
- **Control**: Play is **controlled** and **excludes** those not playing the game.
- **Purpose**: Play is essentially a **reward unto itself**.

Classroom Activities (Using Miro)

- **Activity 1**:
    - Divide into teams.
    - Each team must bring out **2 core games** and tell the **variants available as video games**.
- **Activity 2**:
    - Answer the question: Do you take **Social Media** as a game?.
    - If yes, **list down the rules/mechanics** of this game.
- **Activity 3**:

    - Take a game and **dissect its game rules and mechanics**.
    - Answer: What do the rules tell you about the game?.
    - Answer: How do the mechanics support and enhance both the rules and the gameplay?.

2. The Game World

- **Questions to Ask Before Game Design**
    - In what way is my world more interesting than the real world?
    - Does my world focus on one individual's story or can several stories be told?
    - How will the player internalize my world?
- **Constructing a Universe**
    - When you build a game, you construct a Universe.
    - It will have:
        - **Physics**
        - **Boundaries**
        - **Interfaces**
- **The Building Blocks of Game World Design**
    - **The Field of Play**
    - **The Game Mechanic**
    - **The Rules of Play**
    - **The Outcomes of Play**
    - **The Objectives of Play**
    - **Player Resources and Conflict**
- **Detailed Analysis of Building Blocks**
    - **The Field of Play**
        - **Consistency:** The field of play has to be consistent and work within the mechanics and rules of the game world.
        - **Interface Design:** The design of the interface between the player and the world is also an aspect of the field of play.
            - This involves how the player navigates through the world and how the world reacts to the player.
        - **Boundaries:** The field of play can also be thought of as the game's boundaries, tasks, and outcomes.
        - **Media Definition:** The field of play is defined by the media it is played on.
        - **Stability vs. Change:** Game worlds can be generated to be infinite or ever-changing, but the rules and mechanic must remain consistent.
        - **Level Design:** The field of play can constrain and guide the player towards a goal (this is part of level design).
    - **The Game Mechanic**

        - **Definition:** The mechanic of a video game does not just refer to the “nuts and bolts” of the game or just the programming and art assets.
        - **Core Function:** The mechanic is what the game is, how it plays, and how the player interacts with the game.
        - **Scope:** Mechanics explain the gameplay, environment, and physics of the world.
        - **Player Interaction:** They are what a player can and cannot do, as well as how they interact within the game space.

    - **The Rules of Play**

        - **Action Limitation:** Rules limit actions.
        - **Clarity:** Rules must be explicit, unambiguous, and consistent.
        - **Fairness:** The game should never give the impression of “cheating” the player by changing rules and outcomes on the fly.
        - **Consistency Scope:** Rules have to be consistent within the game, but they do not have to be consistent across games.
        - **Space and Action:** In video games, the rules define the potentiality of any space for play and define and restrict an array of possible actions.

- **General Document Requirements**

    - A general document should include the following elements:
        - **Overview:** An overview of the game’s premise, covering what the game is and what platform it is intended for.
        - **Story:** The story (if there is one).
        - **Level Concepts:** Concepts for level designs and environments (which could be mood boards or sketched art).
        - **Gameplay:** Details on what the mechanic is and what the rules are.
        - **Art:** Sketches, mood boards, and tone art to show what the world looks like.
        - **Sound and Music:**
            - How much will there be?
            - Do specific characters have specific sounds?
            - Does each level require new music?
        - **User Interface:**
            - Game controls.
            - Controls may change once production is underway, but it is useful to know if the game has “conventional” controls and interfaces or if it is bringing something unique or unusual to the genre.

3. Ludology

- **Ludology**

    - **Definition**: The name for the study of games and game design.
    - **Common Frameworks for Ludology**:
        - **MDA**: Mechanics, Dynamics, and Aesthetics.
        - **FDD**: Formal, Dramatic, and Dynamic elements.
        - **Elemental Tetrad**: Splits games into four core elements (Mechanics, Aesthetics, Story, Technology).

- **MDA Framework (Mechanics, Dynamics, and Aesthetics)**
    - **Overview**: A framework defining the components of a game and how they interact with players and designers.
    - **The Three Components**:
        - **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 over time.
        - **Aesthetics**:
            - The desirable **emotional responses** evoked in the player when they interact with the game system.
    - **Designer and Player Views**:
        - Designers create Mechanics, which create Dynamics, which lead to Aesthetics.
        - Players experience the game in reverse: they experience Aesthetics through Dynamics, which are driven by Mechanics.

- **FDD Framework (Formal, Dramatic, and Dynamic Elements)**
    - **Formal Elements**:
        - **Definition**: The elements that make games different from other forms of media or interaction and provide the structure of a game.
        - **Seven Formal Elements** (proposed by *Game Design Workshop*):
            - **1. Player interaction pattern**:
                - How the players interact.
                - **Types**:
                    - Single-player.
                    - One-on-one.
                    - Team versus team.
                    - Multilateral: Multiple players versus each other (e.g., most board games).
                    - Unilateral: One player versus **all the other players** (e.g., some *Mario Party* minigames or the board game *Scotland Yard*).
                    - Cooperative play.
                    - Multiple individual players each working against the same system.
            - **2. Objective**:
                - What the players are trying to achieve.
                - Defines when someone has won the game.
            - **3. Rules**:
                - Limit the players' actions by telling them what they may and may not do.
                - **Explicit Rules**: Written and included in the game.
                - **Implicit Rules**: Understood by all players without being written (e.g., it is understood you cannot steal money from the bank in *Monopoly*, even though no rule explicitly says so).
            - **4. Procedures**:

        - The types of actions taken by the players in the game.
        - Often defined by the interaction of a number of rules.
        - **Example**: In *Snakes and Ladders*, a rule tells you to roll the die and move; the **procedure** is the actual action of rolling the die and moving the piece.
      - **5. Resources**:
        - Elements that have value in the game.
        - **Examples**: Money, health, items, and property.
      - **6. Boundaries**:
        - Where the game ends and reality begins.
      - **7. Outcome**:
        - How the game ended.
        - Can be both final and incremental outcomes.

- **Dramatic Elements**:

  - **Definition**: The story and narrative of the game, including the premise.
  - **Purpose**: Help make rules and resources more understandable and give players greater emotional investment.
  - **Three Types of Dramatic Elements** (Fullerton):
    - **1. Premise**:
      - The basic story of the game world.
      - Forms the basis around which the rest of the game's narrative is built.
      - **Examples**:
        - *Monopoly*: Each player is a real-estate developer trying to get a monopoly on corporate real estate in Atlantic City, New Jersey.
        - *Donkey Kong*: The player tries to single-handedly save his girlfriend from a gorilla that kidnapped her.
    - **2. Character**:
      - The individuals around whom the story revolves.
      - Ranges from nameless/undefined silent first-person characters to defined individuals.
    - **3. Story**:
      - The plot of the game.
      - The actual narrative that takes place through the course of the game (the premise sets the stage for this).

- **Dynamic Elements**:

  - **Definition**: The game in motion.
  - Elements that occur **only** when the game is being played (when players turn rules into actual gameplay).
  - **Key Concepts**:
    - **Emergence**: Collisions of seemingly simple rules can lead to unpredictable outcomes.
    - **Emergent Narrative**:
      - Narrative can be dynamic, with a breadth of narratives emerging from the gameplay itself.
      - This is distinct from the dynamic behavior of mechanics in MDA.

        - Games put players in extra-normal situations, leading to interesting stories.

- **The Elemental Tetrad**
    - **Overview**: A framework (attributed to Schell) splitting games into four core elements that interrelate.
    - **Nature of the Framework**:
        - Focuses on the **static elements** of the game "as it comes in a box".
        - Does not touch on dynamic play.
    - **Visibility**:
        - **More Visible**: Aesthetics (always very visible to the player).
        - **Less Visible**: Technology (players usually understand mechanics better than the underlying technology, like probability distributions).
    - **The Four Elements**:
        - **1. Mechanics**:
            - The rules for interaction between the player and the game.
            - Differentiates games from noninteractive media.
            - Includes rules, objectives, and formal elements.
            - **Difference from MDA**: Here, the term differentiates game mechanics from the underlying technology.
        - **2. Aesthetics**:
            - How the game is perceived by the **five senses**: vision, sound, smell, taste, and touch.
            - Includes soundtrack, character models, packaging, and cover art.
            - **Difference from MDA**: MDA uses "aesthetics" to refer to emotional response; Tetrad uses it to refer to sensory input.
        - **3. Technology**:
            - The underlying technology that makes the game work.
            - **Digital Examples**: Console hardware, software, rendering pipelines.
            - **Analog/Board Game Examples**: Type and number of dice, use of cards vs. dice as randomizers, stats and tables used to determine outcomes.
        - **4. Story**:
            - Encompasses all narrative elements, including both premise and characters.