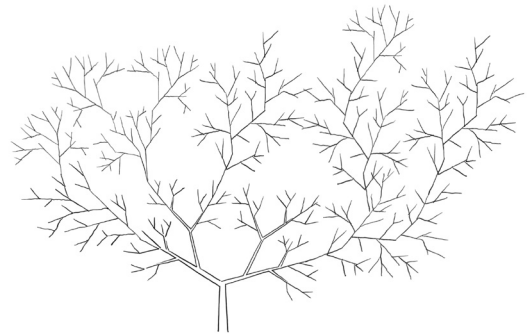


ωx
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WILL WRIGHT | CHAPTER 09

Game Mechanics

TERMS

affordance (adj.) The range of possible interactions visible and understandable to the player at a given time.

game mechanics (n.) The sub-systems and processes of interaction that constitute the underlying structure of the larger game system. They are objective—the “if” levers that produce predictable “then” outcomes within your system.

game dynamics (n.) Moments of play produced by the game system in motion with player inputs. When a player starts conversing with a game system through its game mechanics, the conversation produces the game dynamics, or the whole game system in motion.

When selecting game mechanics, think about the experience your game is creating. Then work backwards to find the mechanic that will improve that experience. Sometimes that means borrowing a common mechanic from another game, and sometimes it means creating your own. The best way to get good at using game mechanics is to start recognizing them in other games. Play games with an analytical mind. Break each system down into its component parts, and eventually you'll see how many mechanics are shared across games and systems. Strive to become a mechanics collector, gathering things from here and there that you'll eventually use in your own designs.

Many game mechanics will use some form of probability or randomness. A simple dice roll is an example. Use randomness when you want to create interesting variability in play, or add tension to a certain moment within your game.

Never apply positive feedback to an element that is essentially random, because that fools the player into thinking that they did something significant. Similarly, if you apply randomness to moments that are supposed to be precise and vital to success, such as firing a gun in a shooter game, the game begins to feel arbitrary. Instead, introduce small, mathematically simple elements of chance throughout your game. Those elements will play against one another and eventually present as game intelligence to the player.

Allow players to mitigate randomness in your game by giving them access to tools that influence probability. For example, if you're building a digital card game that relies on random draws, allow your player to build their own deck. If you're building a war game that detects hits and misses by using a probability table, let players add equipment that improves their probability. This way your player has control and agency over how randomness affects the game state, and their failures won't feel arbitrary.

“When players are imagining that your world is more detailed, more rich, and more complicated than it actually is, don’t talk them out of it.”

LEARN MORE

Read the influential [essay](#) “MDA: a Formal Approach to Game Design and Game Research” by Hunicke, LeBlanc, and Zubek. Consider whether, as a designer, you are more focused on Mechanics, Dynamics, or Aesthetics. Ask yourself how you can strengthen your design in other categories.

ASSIGNMENTS

- Prototype a mechanic for your Capstone Game based on one of these common mechanics and add it to your library:
 - **Push Your Luck:** Players accumulate resources over time and are put in increasingly risky and rewarding situations. If they fail the challenge, they lose all their resources. They can quit and keep what they’ve earned at any time.
 - **King of the Hill:** Players compete to occupy and protect a centralized region. Players gain points when they are the single occupying force in the region. Points freeze when there is more than one occupying force.
 - **Worker Placement:** Players have three action points (workers) per turn and a list of nine available actions. Players take turns assigning their workers and taking the selected action. Only one worker from any player can be assigned to a given action. Workers return to the players after all workers have been placed.
- Use the sheet on the following page to do an MDA analysis of one of your favorite games. As you do so, focus on how you can leverage different kinds of fun to improve the aesthetic experience of your game.

MDA ANALYSIS

TASK: Revisit the influential paper “[MDA: A Formal Approach to Game Design and Game Research](#)” by Hunicke, LeBlanc, and Zubek. Then follow the steps below to do an MDA analysis of your favorite game in your Concept Book.

STEP 1: Recognizing Game Aesthetics.

Under the MDA framework, “Aesthetics” represent the various kinds of fun a game can produce. The essay isolates and describes eight types of fun.

Play your favorite game and describe what is fun about it in your Concept Book. Then, rank the eight kinds of fun below from “most” to “least” prevalent within the game experience.

Sensation: Game as sense-pleasure

Fantasy: Game as make-believe

Narrative: Game as drama

Challenge: Game as obstacle course

Fellowship: Game as social framework

Discovery: Game as uncharted territory

Expression: Game as self-discovery

Submission: Game as pastime

STEP 2: Observing Game Dynamics.

Game “Dynamics” are produced when players begin operating a game and set it in motion. In a practical sense, the dynamics are the repeating moments of fun within the game, such as jumping over a chasm in *Mario*.

Describe your favorite game’s three primary dynamics in your Concept Book. Rank them in order from “most” to “least” important to the core experience of gameplay.

STEP 3: Finding Game Mechanics.

Game “Mechanics” are the rules of the game, the objective nuts-and-bolts algorithms. In the *Mario* games, a common mechanic is “if Mario falls in a chasm, then the player must restart the level.”

Write out the objective rules that create the primary dynamics you described in Step 2. Be as objective as you can in your language. Use “if, then” statements if possible.