

Five Rings of Video Game Design

A Practical Approach to Video Game Design Analysis

A computer is an electronic machine with a predefined set of functions. When those functions are variable, a person-machine interface can provide access to the functions in the form of a list. From this perspective, all computer programs are the same.

A computer video game is a well-disguised menu.

The effectiveness of a computer video game then depends on its ability to convince a computer user that "a game" is happening. Similarly, the quality of a video game is in its ability to let a computer user imagine themselves as "the player" in that game, such that the game itself can disappear from the consciousness of the computer user. The game can become "a story", and the player can become "the hero" in that story. The overall success of a video game in creating the illusion of "a hero in a story" then depends on its combined effectiveness and quality.

The Player experiences a video game program during the linear, real-world passage of time. The game developer is not present. The game-design itself is never played. The Player must discern the imaginary game-world using only their own faculties, with clues from a computer-controlled story-telling robot, that was trained by programmers.

Only the player plays the game, and only the game is played.

While playing a video game, the original game-design can only be presumed. A game and its design are related, but not the same. The concepts presented here are a way of thinking about a game-design both as a construction plan, and the final product. The transformation during development of a game-design into a playable video game may be seen as a separate set of concepts. That process is worth being addressed separately and on its own.

For simplicity, here are five principles, each with two aspects that make up the principle. These principles and their aspects are not intended to cover all elements of game-design, and they are not intended to dictate what is right or wrong. Instead, their selection and sequence broadly track how the illusion of a video game is assembled, and the aspect pairs represent the dynamics within the principles. The intention is to improve the effectiveness of a game-design by emphasizing strengths and weaknesses, and suggesting ways to address them. Across these five principles, the quality and effectiveness of a game-design can be evaluated by describing it from its center outward, where the center is the Player's perceptions. In this way, these principles can be used as a kind of rubric for examining a game, or its presumed design.

Video game design is an inherently creative process, and personal style is required for a design to be a human expression. The principles presented here should be seen not as simple dogma, but as inspiration for new ideas and perspectives about the assembly of the illusion called a computer video game.

The Five Rings

Identity: The Avatar and Its Behavior

Within their mind, the Player¹ locates an Identity² to inhabit, and through the various elements of Identity, they will recognize the Avatar³ and anticipate its expected Behavior.

Pursuit of Identity is a natural impulse for a person and so the chasing of an Identity will occur spontaneously. Location of Identity can happen outside of the video game, including in advertising, reviews, and discussions about the game. Identity is an abstraction of the combined Avatar and its Behavior, as it is perceived by the Player. The Avatar is a concrete manifestation of Identity within the game-world. It is characterized by the degree of control that the Player has over it compared to other elements in the design. Behavior is the full collection of intentions and actions performed by the Avatar.

Narrative emerges where the Identity is predefined, and the Player acts as an observer. Interactivity emerges when the Identity is divided into parts--the Avatar and its Behavior--where they are not automatically connected. It is the Player's responsibility to synchronize the two. When the Player acts to address this responsibility, it is called "gameplay".

Identity can be either well- or loosely-defined. A loosely-defined Identity benefits from a multitude of elements in the game-design that afford the Player a "mosaic" Identity. In contrast, a well-defined Identity benefits from a mosaic of Behaviors. In either case, when the balance favors the Player's sense of agency⁴ over the Avatar, any form of mosaic can be used and in any combination.

Cosmology: Mechanics and Rules

Through the invented physics of the game-world, the Player acts to connect the Avatar to its expected Behavior.

Mechanics are the immutable machinery, as defined by hardware, whereby the Player informs the game program of their intentions. The program interprets the mechanical input as the most direct means for the Player to manipulate the Avatar. It is through this manipulation that Behavior is manifested in the game-world.

Rules are the instructions followed by the video game, as defined by the programming and informed by the game-design. Rules are used to expand the meaning of Mechanics, and thereby broaden the agency of the Player in connecting the Avatar to its Behavior.

¹ The term "Player" is used to refer to the person playing the game. It is differentiated from the "Avatar", which is a form of identity represented in the video game program.

² "Identity" as used here is an abstraction, and can be found anywhere. It is differentiated from "Avatar" which is found within the game-world. See [https://en.wikipedia.org/wiki/Identity_\(social_science\)](https://en.wikipedia.org/wiki/Identity_(social_science))

³ "Avatar" as used here is the game element or elements over which the Player has the most influence.

⁴ See https://en.wikipedia.org/wiki/Sense_of_agency

It is important to note the distinction between Mechanics and Rules, even if they overlap. While Mechanics are governed by the real-world physics of a person interfacing with a computer machine, Rules are fully abstract and can be created without limit, even when they are contradictory. Together, Mechanics and Rules represent the complete Cosmology⁵ of the game-world.

Policy: Permissiveness and Restrictiveness

Mechanics and Rules are Permissive or Restrictive in their nature. The balance between the two is a message to the Player as to where their responsibilities lie.

Mechanics tend toward being inherently Permissive in that they afford the Player access to the Avatar's Behavior. The Player can turn expectations into manifestations. The core of video game interactivity lies in the Mechanics, as they are used by the Player to connect Avatar to Behavior. In contrast, Rules are unconstrained from the physics of input devices. They can be devised without limit, and they can create connections between the Identity and the broader game-world.

Permissiveness or Restrictiveness of Rules implies either a loosely-defined, or well-defined game-world, respectively. The strength of the Identity's definition is guided by this Cosmological Policy, or balance between Permissiveness and Restrictiveness, and therefore guides the Player's expectations of the Avatar's Behavior. In most circumstances, a successful game-design gives the Player a sense of game-world Permissiveness, where Mechanics afford them agency over the Avatar. A Policy of Restrictiveness creates a narrowing of agency, and therefore must be used consciously, due to its strong effect on the Player's sense of their role.

Destiny: The Mission and Its Campaign

The Player performs the repeating cycles of the Mission⁶ as a set of tasks, while the Campaign is a super-scale task that defines the overall goal.

The nature of, and relationship between, the Mission and its Campaign is a message to the Player that suggests or defines a sense of purpose. The Player references the Campaign to identify the Mission's place in the game-world, and so informs the expected Behaviors. The clarity or ambiguity of the Mission and its Campaign guides the Player toward the connection of Avatar to Behavior.

There is always at least one Mission in a video game, and a successful game-design also provides the Mission with its Campaign. The purpose of the Campaign is to answer the question of why the Mission exists. In order to absorb the inherent repetitiveness of the Mission, the Player should always have that answer available whenever the question arises. Any number of Missions can be provided, and at any multitude of scales--where any Campaign can also be a

⁵ See <https://en.wikipedia.org/wiki/Cosmology>

⁶ "Mission" and "Campaign" are used here in the abstract scale sense, similar to the scale relationship between "tactics" and "strategy". See [https://en.wikipedia.org/wiki/Tactic_\(method\)](https://en.wikipedia.org/wiki/Tactic_(method))

Mission for a larger Campaign--so long as a Mission is paired with a Campaign. Together, the Mission and its Campaign provide the Player with a continuing sense of Destiny.

Story: Additive and Subtractive

The arc through time of the Player's experience is constructed by Additive and Subtractive presentation, such that the growth and reduction of elements in the game-design give the Player a sense of progression.

The Story⁷, the arc of experience, is a reference to the unique passage as seen by the Player while playing the game. The Story, in this sense, is an abstraction that only the Player experiences. It is not entirely dependent on the concrete narrative of a game-design, and is independent of its linearity or non-linearity. As the Player passes through the concrete narrative, they will remember that singular experience as their personal Story within the game-world.

Successful arcs will also allow for alteration of the progression itself, through the individual choices that the Player makes, such that the Player perceives that the progression has its own progression. This "progression of the progression" is what creates dynamicism⁸ in the Story.

Where the Player has the most influence over the progression, they sense the most agency over the Identity, and vice versa. Inclusion or removal of elements over time will modify the Player's sense of agency.

Where there is growth in the Story progression, the Player will sense an increase in access to the Avatar's Behavior. When the position of the Story is felt to be regressed, and access to the Avatar's Behavior has been reduced or removed, the Player will sense a loss of agency.

If the Player senses a reduction of access at the outset of the Story, then the game-design construction is Subtractive in nature. The Player will sense the need to "recover" access, even when it has not yet been granted. When the Player senses a pre-existing level of access, which grows with the Story progression, then the game-design is Additive in nature.

A Subtractive construction must consciously match the Identity to the existing state of the Avatar, and the Player's access to its Behavior, in order to satisfy the expectations of Identity. The Player's sense of agency should always be high, regardless of the degree of access.

An Additive construction should be aware of the balance between the early state of access as compared to the end state of access, such that there is room over time for the progression.

In any case of Story construction--Additive, Subtractive, or a combination--the Player should always have a sense of completeness in the Identity when compared to the current state of the Avatar in the progression. When the Player feels agency and influence over a progression, they will engage with, mold, and create their own dynamic Story.

⁷ See https://en.wikipedia.org/wiki/Hero%27s_journey

⁸ See <https://en.wiktionary.org/wiki/dynamicism>