

Game Design Glossary

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Avatar: game component controlled by the player.

Behaviors: Rules that describes the action of a game component. A game character might be able to run or jump, for example—two different kinds of behavior. A door might be assigned an “invisible” behavior, which means that it cannot be seen on screen. Behaviors have certain qualities as well, like randomness, or a motion path, or intelligence. A behavior is therefore made up of an action and the qualities that define that action.

Challenge: an important way to shape the experience of play. If the challenge of a game is too high for a player’s skills, they might become anxious or frustrated. If there is not enough challenge, boredom results. Ideally games provide a balanced challenge at all moments.

Choice: games present players with choices. Choices can be micro-choices of moment-to-moment activity or macro-choices, which concern the long-term progress of the game. A game designer might give a player the choice to choose the red or blue door, to discard or draw a card, to use a knife or a bow, to talk to an NPC or to ignore them. Designing choice is one of the biggest parts of the design of any game.

Collaborate: to work together. Game designers collaborate with other game designers and members of their game design team to design games.

Competitive: all games are competitive in that players struggle against each other or against a game system as they play. Without this sense of competition players would not be able to judge their progress through the game.

Conflict: all games embody a contest of powers. Conflict is central to games and arises naturally from interaction between components in a game. The player is actively pursuing a goal and obstacles prevent this from happening easily. Game conflict comes in many forms. Conflict can be individual or team-based, cooperative or non-cooperative, direct or indirect. Many games mix and match forms of conflict within a single game structure.

Core mechanic: the experiential building blocks of player interactivity, which represent the essential moment-to-moment activity of the player, something that is repeated over and over throughout the game. During a game, the core mechanic creates patterns of behavior, and is the mechanism through which players make meaningful choices. Mechanics include activities like trading, shooting, running, collecting, talking, capturing territory, etc. Game design relies on the design of compelling core mechanics.

Critique: to review or discuss critically. During playtesting game designers ask players to critique their game design, giving them feedback on what is and isn't working well.

Damage state: A game component's health status indicating the level of damage (if any) it has currently sustained and how close it is to elimination.

Decision Trees: a branching tree-style diagram that outlines all of the possible moves a player can make in a game. Decision trees are a common way of flow-charting interactive experiences. For example, if you are designing an interactive story that has a hypertext structure, you might draw a diagram that shows all of the links between the different parts of your story.

Degenerate strategy: a way of playing a game that ensures victory every time. Usually degenerate strategies are to be avoided in games because they diminish uncertainty and the overall quality of play.

Design: the iterative process by which a designer conceives of and plans a system to be encountered by a participant, from which meaning emerges.

Discernable: Actions and outcomes in a game must be discernable, meaning that a player can perceive the immediate outcome of an action.

Dynamic system: Games change in response to decisions made by players and are therefore considered to be dynamic, interactive systems. The design of the rules that guide how, when, and why a player interacts with the system, as well as the kinds of relationships that exist between its parts, forms the basis of a game design practice.

Emergent systems: a type of system that generates unpredictable patterns of complexity from a limited set of rules. In an emergent system, the whole is greater than the sum of the parts. For example, the limited set of the rules of grammar cannot account for all the possible statements that might be made in a language.

Exploit: a weakness in a game's design that allows a player to win every time.

Game: a system in which players engage in artificial conflict, defined by rules, which results in a quantifiable outcome.

Game components: Games are made up of game components, which include all of the objects that make up a game world. Components include game characters or markers, the game space, the scoring system, and other objects defined as part of the game system.

Game design: Game design is a complex, multilayered design activity, whereby systems of meaning (games) are created through the design of rule sets resulting in play. Consider a game of Tag. *Without* game design we would have a field of players scampering about, randomly touching each other, screaming, and then running in the other direction. *With* game design we have a carefully crafted experience guided by rules, which make certain forms of interaction explicitly meaningful. *With* game design a touch becomes meaningful as a “tag” and whoever is “it” becomes the one to avoid.

Game Designer: a particular kind of designer, much like a graphic designer, an industrial designer, or architect. The focus of a game designer is designing game play, conceiving and designing rules and structures that result in play for players. A game designer is not necessarily a programmer, visual designer, or project manager, although sometimes she or he can also play these roles in the creation of a game. A game designer might work alone or as part of a larger team. A game designer might create card games, social games, videogames, or any other kind of game.

Game interface: the sum total sum of means by which players interact with the game. The interface provides means of *input*, allowing the player to manipulate a system and *output*, allowing the system to produce the effects of the player’s manipulation. In a board game, the interface includes the board and tokens a player uses to move around the board. In a digital game, the interface is often graphical, allowing players to select areas of the screen to activate or to sort and organize inventories.

Game theory: a branch of economics that studies rational decision-making. It often looks at game-like situations but it is not a general theory of games or game design.

Game review: a written report describing a game, which includes strong and weak points, as well as information on genre, name of the designer, and date it was made.

Game Rules: (see *Rules*)

Game space: the area defining the space of play. In non-digital games the game space might be the board or field on which the game is played. In digital games, the game space is the area in which game action occurs on screen.

Game systems: sets of components that can be used to design or play different games. Game systems can be digital or non-digital, like a deck of cards.

Game tuning: the game design process where a game designer balances the degree of challenge in a game or across levels of a game.

Genre: A game's classification or type as broken down into two broad subcategories: turn type (real-time, turn-based, asynchronous, etc.) and category (action, strategy, sports, shooter, role-playing, adventure, etc.).

Goal: The condition that must be met to win the game or beat the level. Choice is related to the goal of a game, which is often composed of smaller sub-goals a player must meet to win the game.

Integrated: Actions and outcomes in a game must be integrated, meaning that the outcome of a chosen action is woven into the game system as a whole. Game designers must design the rules of a game in such a way that each decision a player makes feels connected to previous decisions, as well as to future decisions encountered in the course of play.

Iterative design: Game design uses an iterative design process: a game is designed through an iterative sequence of modifications to the rules and to the behaviors of game components. Game design follows a cycle of design—playtest—evaluate—modify—playtest—evaluate—modify. It is through iteration that game designers achieve the right balance between challenge, choice, and fun.

Level: A game level is a section or part of a game. Many console or PC games are so large that they are broken up into levels, so only one portion of the game needs to load at one time. To complete a game level, a player usually needs to meet specific goals or perform a specific task to advance to the next level. In puzzle games, for example, levels may be similar but more difficult as you progress through the game.

Level design: a game design activity involving the design of levels for a game. A game designer must work to create a system of levels that feel like they are part of the same game, all the while tuning or balancing each level to manage the degree of challenge in each.

Level designer: an individual game designer involved with the creation of game levels.

Level editor: a software application used to design levels, maps, or campaigns for a digital game. Level editors are sometimes integrated into the game; at other times, it is a separate part of the game.

Loss condition: Defines what game state causes the game to end. For example, time runs out or the avatar loses all available lives. Because all games must have some kind of quantifiable outcome to be considered a game by traditional definitions, defining the loss state for a game is critical feature of a game's design.

Lusory attitude: the state of mind required to enter into the play of a game. To play a game, a group of players accepts the limitations of the rules because of the pleasure a game can afford.

Maze game: a videogame genre characterized by movement through a complex, puzzle-like space. Maze games often challenge players to manage limited resources and may contain a series of connected rooms.

Meaningful play: Meaningful play in a game emerges from the relationship between player action and system outcome; it is the process by which a player takes action within the designed system of a game and the system responds to the action. The meaning of an action in a game resides in the relationship between action and outcome.

Media: A game's presentation platform as broken down into two broad subcategories: digital (PC, platform, web-based, hand-held, cell phone, etc.) and analog (board, card, miniatures, physical, social, etc.).

Mod: a game modification. Game designers often practice their craft by modifying the rules or content of existing games, as a way to gain more knowledge about how games work. Mods that add new content to the underlying game are often called partial conversion mods, while mods that create an entirely new game are called total conversion mods.

Non-digital game: a game made without digital technology. Non-digital games include board games, card games, physical games like *Tag*, social games like *Mafia*, and crossword puzzles.

NPC (non-player character): characters that are not controlled by the player.

Outcome: the result or consequence of a choice or set of choices in a game. Game designers must consider the outcomes of choices they are giving players within the overall system of the game. For example, if a designer creates a game where the player can pick up a weapon or a key,

he or she must consider what the consequence of this action might be: does the key open a door? If so which one?

Platformer: a videogame genre characterized by jumping to and from suspended platforms or over obstacles. The most common unifying element to these games is a jump button.

Play: When rules are combined in specific ways, they create forms of activity for players, called “play.” Play in a game occurs as the game rules are set into motion and experienced by the players.

Players: a game is something that one or more participants actively play. Players interact with the system of a game in order to experience the play of the game.

Player cooperation: refers to games in which players all work together to achieve the stated game goal. Not all games exhibit player cooperation.

Playtest: Playing a game in order to diagnose its strengths and weaknesses. Playtesting happens throughout the game design process and is a fundamental to creating good games.

Player Character: a character controlled by the player.

Postmortem: A document written after a game design is complete, documenting what went right and what went wrong along the way. The purpose of a postmortem is to communicate your design thinking to other designers, so they can learn from your experience. A good postmortem gives specific examples of design decisions that were made, and discusses whether these were good or bad decisions for the game overall.

Prototype: A version of a game that is in early development. Prototypes generally express the core idea of a game, and undergo playtesting to discover the strengths and weaknesses of the basic design before moving toward refinement.

Puzzle: a puzzle is a special kind of game in which there is a single correct answer or set of correct answers.

Quantifiable outcome: games have a quantifiable goal or outcome. At the conclusion of a game, a player has either won or lost or received some kind of numerical score. A quantifiable outcome is what usually distinguishes a game from less formal play activities.

Randomness: Degrees of randomness and chance are two tools that a game designer has at his or her disposal to balance the amount of strategic choice a player has in a game.

RPG: Role-playing game.

Rules: Rules are a fundamental part of any game. They provide the structure out of which play emerges, by defining what a player can and cannot do, as well as the relationships between components in the system. Defining the rules of a game and the many ways the rules fit together is a key part of a game designer's practice. Rules define interaction between game components and describe what happens when these components interact. Does the ball (component) bounce (rule) off the wall (component) or smash (rule) a hole (object) in it?

Rule set: all of the rules that make up a game.

Scoring system: a game component that tracks the number of points earned by a player.

Second order design: Because rules, when enacted by players, are embodied as the experience of play, game design can be considered a *second-order* design problem. A game designer only indirectly designs the player's experience by directly designing the rules of play.

Sequence of play: The order in which things occur in a game.

Space of possibility: the space of all possible actions and meanings that occur in the course of the game.

Special abilities: A unique ability or behavior that is assigned to a particular creature or class of creatures.

System: a set of parts that interrelate to form a complex whole. Games are designed systems.

Systems of meaning: Game design is the design of systems of meaning. Like letters in the alphabet, objects and actions within a game gain meaning through rules that determine how all of the parts relate. A game designer is responsible for designing the rules that gives these objects meaning.

Transformative Play: a special kind of play that occurs when the free movement of play alters the rigid structure of rules in which it takes shape. Not all play is transformative but all forms of play contain the potential for transformation.

Turn type: describes how players interact with a game and other players in relation to the element of time. Examples include real-time, turn-based, asynchronous, etc.

Uncertainty: a key component of every game. If a game is predetermined, the player's actions will not have an impact on the outcome of the game. Designing uncertainty into a game means that a player always has the ability to affect its outcome.

Victory condition: The game's goal or objective. That is, how to win the game.

Win condition: All games have a win condition, which indicates what must be achieved in order to win the game. Because all games must have some kind of quantifiable outcome to be considered a game by traditional definitions, defining the win and loss states for a game is critical feature of a game's design.

Workaround: (see *Exploit* and *Degenerate Strategy*)

Zero-sum game: a game in which the winnings of the victor are equal to the losses of the loser. Games such as Chess with a single winner and loser are zero-sum games.