

Design - What Are the Rules of Play?

Your concept provides a framework and starting point for the design process. Game design is the development team's responsibility, with regular feedback from key decision makers. An understanding of the design process and what designers think about when creating games will help you to help make choices and, ultimately, be useful to your designers. Together with the video from Eric Zimmerman and Frank Lantz, this guide offers an introduction to some fundamentals of game design.

Most people don't fully understand "game design" as a concept. Many people imagine it means some combination of digital art and programming—something that any dedicated gamer can figure out how to do. Not so. Game design is a highly specialized and extremely challenging discipline. Game design takes a long time and special talent to master. Do not go it alone. Partner with game design professionals—people who have years of experience making and playing digital games. Otherwise you'll risk creating something that no one will want to play. If no one wants to play, you lose your opportunity to reach and affect your target audience.

What makes a good game? Meaningful play.

Meaningful Play

Creating meaningful play is the goal of successful game design. According to Katie Salen and Eric Zimmerman, meaningful play in a game emerges from the relationship between player action and system outcome. Meaningful play requires that players be given opportunities to take nonrandom actions or make decisions that have a discernible (immediately clear) and integrated (makes "big-picture" sense) effect on the game.

An abstract game, like chess, may be highly "meaningful" to players (and observers) and yet have no theme or external message. Within the system of chess, the shapes and colors of pieces define powers and relationships. An 8x8 grid of squares represents the space of possible action, "the battlefield," as well as the game's current state of play. These aspects all confer particular meanings and add to the experience of "meaningful play" that chess fosters when a player takes a turn. Chess can also be considered from "outside" the system, as a cultural artifact with an ancient pedigree and a long history interwoven with human achievements and struggles. Considerations at that level may figure in individual games, especially in high visibility, high stakes competitions, like World Chess Champion Garry Kasparov vs. Deep Thought (a computer designed to play chess).

Successful games for change create situations where meaningful play "inside" the game's system mirrors and reinforces something meaningful "outside" in the world.

Goals

Games have goals, and players must understand them—they must know what they're working to achieve, whether it's scoring points, building something, or simply surviving. Any game with a win condition makes the goal explicit. Some games have no explicit goals but provide a system allowing players to create their own goals. In SimCity, for example, players often try to build the largest possible metropolis, or one that relies solely on mass transit, or set some other objective.



Rules

A game is “a system in which players engage in artificial conflict, defined by rules, that results in a quantifiable outcome,” write Salen and Zimmerman. All games have rules. Rules structure the game; they enforce hard limits on permitted behavior within the system of the game. This might not sound fun—a constrained set of rules controlling your behavior—but it’s precisely these constraints that create meaningful play.

Imagine a variety of chess in which every piece can move like a queen—that is, a game with far fewer restrictions on player behavior. It might be an easier game, but it would not be a better game. In fact, it would lose chess's single greatest strength as a game: the complexity of strategic problems it poses for players; rules make chess a meaningful and engaging game.

Challenge and Reward

Just as stories require conflict, games require challenge. Players gain little satisfaction from completing a game if they don’t struggle to win. Games that are too difficult to play, however, are merely frustrating. Every well-designed game achieves a balance of challenge and reward.

To provide a range of challenges, you can allow the user to choose— many games have "easy" and "expert" modes. Another option is dynamic difficulty adjustment, a common feature in racing games: The game monitors how well the player is doing by ratcheting difficulty down if poorly and up if too well.

Games present challenges in three basic forms, often combined: physical, mental, and opponents.

Physical

Games providing primarily physical challenges are often called "skill and action" games. They require mastery of the interface, quick reflexes, and timing; examples include first-person shooters, sports, and pinball games.

Mental

Games can present any number of mental challenges—from the deep strategic thinking of chess, to the simple pattern recognition of Bejeweled, to the complex comprehension and manipulation of simulation games like Civilization IV. Many games require players to analyze and choose resource trade-off—posing problems with no obvious right answer. Others require leaps of imagination about how to use or combine things in the game world to achieve their objectives.

Opponents

Anticipating and thwarting opponents caters to competitive instincts, and can pose more interesting challenges than static systems. Opponents may be other live players or computer-generated characters and entities, i.e., artificial intelligence (AI).

Objects, Actions, and Interface

Game design essentially involves choices about three things: objects, actions, and interface. The "nouns" of the game are the objects with which players interact—characters, settings, objects, maps, representations of cities, playing pieces, etc. The “verbs” of the game are the player’s allowable actions, the things he or she can do—moving, shooting, negotiating, capturing, blocking, etc.



The interface integrates nouns and verbs; it is the visual representation of the game world and the means of interaction. In digital games, actions typically map directly to interface features, such as keys, mouse clicks, or icons on the game's display. Designers strive for clear, intuitive ways of mapping actions to interface features.

Different platforms are better suited to certain types of action. Home consoles have joysticks and directional keypads that are excellent for navigating characters through 3D space. Lack of a pointing device like a mouse, however, makes them less effective for games requiring players to select and organize objects onscreen.

Player interaction is built on algorithms, or rules encoded in the game. In some cases, this is straightforward—e.g., when a player clicks an arrow, it changes the position of his avatar in the game world. In other cases, the algorithms are complex—e.g., when a player clicks a button to select a policy option in *Peacemaker*, it affects the opinion of every interest group in the game with a different value.

Design Constraints

Constraints are not a bad thing; they help developers focus on what is achievable and workable, and they help everyone make important choices. Every game is designed within constraints—budget and schedule are the most obvious.

Other constraints may be technical and depend on your game's platform. (See "Production" for discussion of platforms.) Flash, for example, has many advantages—wide support by web browsers and a large community of developers—but, it runs more slowly and consumes more system resources than other platforms. 3D applications and complicated simulations that update continuously in real time often run very slowly in Flash. If you choose Flash as a platform, it is important to be mindful of the constraints it imposes—and consider an alternative platform for complex games.

Subject matter, or content, poses an additional constraint on game design, as you translate real-world issues into the game environment.

Conclusion

Game design is a highly specialized and challenging discipline; that takes a long time and special talent to master. The goal of game design is to create meaningful play by designing goals and rules that govern objects, actions and interface. An understanding of the design process and what designers think about when creating games will help you to make choices and, ultimately, be useful to your designers. You should consider and begin to answer the following questions:

- What does the player do, i.e., what actions does she take?
- What are her goals, i.e., what is she striving to achieve?
- What challenges does she face and what makes achieving them a struggle?
- What are the rules?



- What are the possible outcomes?
- How do players discern rules, actions, and outcomes?
- How does meaningful play emerge?

