

# Chapter 14

## The Mechanic is the Message: How to Communicate Values in Games through the Mechanics of User Action and System Response

Chris Swain

*USC Games Institute and University of Southern California School of Cinematic Arts, USA*

### ABSTRACT

*Humans learn through play. All games are learning devices—though most teach the player how to play the game itself and do not strive to communicate information with utility in the real world. This chapter is for designers seeking to design game mechanics to communicate learning objectives, values, and ethical messages. The term “mechanic” describes both a) the actions a player takes as she interacts in the context of a game (e.g., run, jump, shoot, negotiate) and b) the response of the system to player actions. In other words, the mechanics are the essence of the player interacting with the game. When the mechanics of a game align with the values the game’s designer strives to communicate, then the player is learning those values experientially. Learning science shows us that this type of experiential learning is a powerful and natural type of learning for humans. Designing game mechanics as described above is easier said than done. This chapter includes six best practices for achieving success, which are supported by case study examples from leading designers in the field.*

### INTRODUCTION

*“For the things we have to learn before we can do them, we learn by doing them” - Aristotle (2002)*

When Marshall McLuhan coined the phrase “the medium is the message” in his book *Understanding*

*Media* (1964), he meant that the form of a medium is integrated with the message it communicates. Any given medium, by its structural particulars, has a large effect on how the messages conveyed through it are understood. For example, print media is good at communicating complex, nuanced messages that may take many hours to consume. This is because the user can carry print media around, start and stop reading at her leisure, and so forth. In contrast, broadcast television is not as good at com-

DOI: 10.4018/978-1-61520-845-6.ch014

municating complex, nuanced messages because its structure is different, for example, the user is more likely to consume it in short snippets, or consume it when not applying her full attention. Print is different from television, which is different from film, which is different from hypertext, which is different from games. The structural differences in each medium beget presentation styles that are attuned to their strengths. The types of messages that the mediums can convey is also affected. The title of this chapter is a play on McLuhan's phrase in specific context to games as a medium, but the big-picture meaning is the same. That is, the interactive, goals-based structure of games greatly affects how messages that are embedded in games are understood by users. The title emphasizes "mechanics" because what the user does when interacting with a game is at the heart of how messages are understood, learned, and internalized. And they are at the heart of what makes games unique from other media.

Good games have the power to communicate nuanced messages in ways that linear media simply are not capable of conveying. Take the example of the driving simulation game *Gran Turismo 4*. Users are able to learn and practice fine points of race car driving including the advanced physics of racing—such as drift, weight transfer, grip angle, and many others—by actually doing those things performatively.

The stated objective of *Gran Turismo 4* is to be "the real driving simulator" (Sony Computer Entertainment, 2005). The developer, Polyphony Digital uses game mechanics—in this case steer, brake, and accelerate—to communicate that objective to the player. The point of this chapter is to show how game developers can custom design mechanics to best communicate analogously rich and subtle messages from other fields to players.

Ethics are the moral standards by which people judge behavior (Agnes, 2001). Linear media are very restricted in how they can communicate ethical messages in contrast to games. Games,

because of their interactive nature, have the potential to allow users to receive ethical messages experientially. The best practices listed herein are intended to enable designers to create interactive systems that communicate sophisticated messages, particularly in the area of values and ethics.

## Understanding Mechanics

*"Games are a series of interesting choices" Sid Meier, (Diamante, 2008)*

There is a generic core mechanic in all games that can be described as (a) player makes a choice, (b) system responds to that choice, (c) repeat. This genericized description is true for all types of games including single player games, multi-player games, turn-based games, and real-time games (Fullerton, Hoffman, Swain, 2004). When people utilize the mechanics of the game, they are inherently learning how the system of the game works. When building a game for purposes beyond entertainment designers often create mechanics that communicate concepts, values, and ethics from the real world to our players.

As an example, consider *Gran Turismo 4* again. It's a driving simulation game: to play this game a race session starts and players make choices that affect their on-screen racecars. Typically, at the start of a racing game the player chooses to "press accelerate button." The game system responds to this choice with fluid visual and aural feedback to each player. The cars move forward, engines roar, and tires squeal. Each minute choice about steering, accelerating, and braking the on-screen racecars is communicated back to the players and is part of the game state held in the software. As the players practice these simple mechanics in fluid response cycles with the game system, they are able to experience and learn aspects of auto racing that range from basic to advanced.

These lessons about automobile racing are afforded by the mechanics in *Gran Turismo 4*.

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/mechanic-message-communicate-values-games/41321](http://www.igi-global.com/chapter/mechanic-message-communicate-values-games/41321)

## Related Content

---

### The Social Facilitation of Performance, Engagement and Affect in a Complex Videogame: Opponent Identity

Russell Blair Williams (2019). *International Journal of Gaming and Computer-Mediated Simulations* (pp. 1-17).

[www.irma-international.org/article/the-social-facilitation-of-performance-engagement-and-affect-in-a-complex-videogame/228146](http://www.irma-international.org/article/the-social-facilitation-of-performance-engagement-and-affect-in-a-complex-videogame/228146)

### Can Pre-Service Teachers Create Digital Game-Based Activities without Coding Knowledge?

Phu Vuand Martonia Gaskill (2016). *Handbook of Research on Gaming Trends in P-12 Education* (pp. 380-393).

[www.irma-international.org/chapter/can-pre-service-teachers-create-digital-game-based-activities-without-coding-knowledge/139815](http://www.irma-international.org/chapter/can-pre-service-teachers-create-digital-game-based-activities-without-coding-knowledge/139815)

### The Play of Persuasion: Why "Serious" Isn't the Opposite of Fun by Nicholas Fortugno

Nicholas Fortugno (2009). *International Journal of Gaming and Computer-Mediated Simulations* (pp. 81-88).

[www.irma-international.org/article/play-persuasion-serious-isn-opposite/3961](http://www.irma-international.org/article/play-persuasion-serious-isn-opposite/3961)

### Mini-Games with Major Impacts

Peter A. Smith and Alicia Sanchez (2010). *Serious Game Design and Development: Technologies for Training and Learning* (pp. 1-12).

[www.irma-international.org/chapter/mini-games-major-impacts/41064](http://www.irma-international.org/chapter/mini-games-major-impacts/41064)

### Games, Simulations, and Simulation Games for Learning: Definitions and Distinctions

Louise Sauv , Lise Renaud and David Kaufman (2010). *Educational Gameplay and Simulation Environments: Case Studies and Lessons Learned* (pp. 1-26).

[www.irma-international.org/chapter/games-simulations-simulation-games-learning/40871](http://www.irma-international.org/chapter/games-simulations-simulation-games-learning/40871)