

Notes

2 Games and Culture

1. Carel P. von Schaik et al., "Orangutan Cultures and the Evolution of Material Culture," *Science* 299, no. 5603 (2003): 102–105.

3 Uncertainty

1. Caillois, Roger, *Les jeux et les hommes* (Paris: Librarie Gallimard, 1958), pub. in English as *Man, Play, and Games*, trans. by Meyer Barash (Glencoe, IL: The Free Press of Glencoe, 1961).

2. Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (Cambridge, MA: MIT Press, 2003).

3. Thomas Malaby, "Beyond Play: A New Approach to Games," *Games and Culture* 2, no. 2 (2007): 95–113.

4 Analyzing Games

1. How they succeed or fail as games qua games, I mean; my interest is in their aesthetic merits, not their commercial ones.

2. Patrick Curry, "Everything I Know about Game Design I Learned from Super Mario Bros.," *Well Played 1.0: Videogames, Value, and Meaning*, ed. Drew Davidson (Pittsburgh, PA: ETC Press, 2009), 13.

3. Chris Crawford, *The Art of Computer Game Design: Reflections of a Master Game Designer* (Berkeley, CA: McGraw Hill/Osborne Media, 1984).
4. Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper & Row, 1990).
5. Per private discussion with Romero.
6. Salen and Zimmerman, *Rules of Play*.
7. Russia's apparent advantage—four starting units—is more than redressed by a strategic disadvantage: its provinces are large, each adjacent to many smaller provinces, meaning that opponents can more easily mount an attack, with multiple supports, on Russia's home areas. In truth, England and Turkey are the most powerful positions, since they are at board corners and cannot easily be attacked from the rear.
8. This is also why the study of boardgames is useful for students of game design; the systems of a tabletop game are directly perceivable, whereas it's often hard to figure out what a digital game is doing and why.
9. Alas, it is far from the most interesting variety and is popular solely because it is more easily televisable than other versions of the game.
10. Greg Costikyan, "Randomness: Blight or Bane," a presentation at GDC Austin 2009, available at <http://playthisthing.com/randomness-blight-or-bane>.

5 Sources of Uncertainty

1. "Ameritrash" is a back-formation from "Eurogame" and typically refers to games that are (a) more chance dependent, (b) involve direct conflict among the players, and (c) have longer play times than Eurogames.
2. Stewart Culin, *24th Annual Report of the Bureau of American Ethnology: Games of North American Indians* (Washington, DC: US Government Printing Office, 1907).

3. David Parlett, *The Oxford History of Board Games* (Oxford: Oxford University Press, 1999).
4. When it was being playtested at the Simulations Publications Inc. (SPI) offices, the necessary forms needed to track the game's data were kept in manila envelopes thumbtacked to the walls of the playtest room. Some was added another envelope containing the "Form Requisition Form." This should indicate the complexity of the system—as well as, of course, why so complex a system was not necessarily a good idea, however much it may replicate the system of a bureaucracy at war.
5. I've written about this issue in "Games, Storytelling, and Breaking the String" in *Second Person: Role-Playing and Story in Games and Playable Media*, ed. Pat Harrigan and Noah Wardrip-Fruin, 5–13 (Cambridge, MA: MIT Press, 2007).
6. More properly, the Internet existed at the time but was restricted to academic and government use, so normal people who wanted access to online services had to subscribe to one of the COLS—Prodigy, AOL, CompuServe, and so on.
7. <http://www.1up.com/news/minecraft-sales-exceed-4-million>.
8. Thomas Malaby, "Beyond Play: A New Approach to Games," *Games and Culture* 2, no. 2 (2007): 95–103.

6 Game Design Considerations

1. You can find a print-and-play version at <http://playthisthing.com/night-grain>, but it is pretty bad.
2. The game's credits simply list all developers, without ascribing design to any individual or group.