Notes

Prelude: Play at a Distance

1. Donna J. Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies* 14, no. 3 (1998): 583.

2. Albert Einstein, Boris Podolsky, and Nathan Rosen, "Can Quantum-Mechanical Description of Physical Reality Be Considered Complete?" *Physical Review* 47, no. 10 (1935): 777–780, https://doi.org/10.1103/PhysRev.47.777.

3. The influence of technical media on humans is a central question of media theory after Friedrich Kittler. In one of the texts devoted to the work of Kittler, Jussi Parikka emphasizes the role of media processes and procedures in shaping the human, who is no longer seen as a self-governing subject but rather is subjected to media. See Parikka, "Friedrich Kittler—A Media Anthropology without the Man?," published online by the European Association of Social Anthropologists, 2012, https://www.easaonline.org/downloads/networks/media/39p.pdf.

4. To get acquainted with the history of the player-piano, see Arthur W. J. G. Ord-Hume, *Player Piano: The History of the Mechanical Piano and How to Repair It* (London: George Allen and Unwin, 1970).

5. See Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture*, trans. Richard Francis Carrington Hull (London: Routledge & Kegan Paul, 1949 [1938]); Roger Caillois, *Man, Play, and Games*, trans. Meyer Barash (Urbana: University of Illinois Press, 2001 [1958]); Chris Crawford, *The Art of Computer Game Design* (New York: McGraw-Hill, 1984); Jesper Juul, "The Game, the Player, the World: Looking for a Heart of Gameness" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), https://www.jesperjuul.net/text/gameplayerworld/; Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (Cambridge, MA: MIT Press, 2003).

6. Espen Aarseth, *Cybertext: Perspectives on Ergodic Literature* (Baltimore: Johns Hopkins University Press, 1997).

7. See Crawford, *The Art of Computer Game Design*; Laura Ermi and Frans Mäyrä, "Fundamental Components of the Gameplay Experience: Analysing Immersion" (paper, 2005 DiGRA International Conference, Vancouver, BC, Canada, June 16–20, 2005), http://www.digra.org/wp-content/uploads/digital-library/06276.41516.pdf.

8. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 71.

9. An aesthetic concept developed by Samuel Taylor Coleridge in the nineteenth century with regard to literature.

10. This crucial difference goes beyond pure rhetoric. Being *in the (game) world* presupposes the existence of it on the one hand, and the "invading" subject on the other. Being *of the (game) world* means being part of it, being co-constructed and co-constructing at the same time. This distinction has been theorized by Karen Barad in their philosophy of agential realism, taking as its point of reference Bohr's insights about the impossibility of objective physical measurement: "Apparatuses are not mere static arrangements *in* the world, but rather apparatuses are dynamic (re)configurings *of* the world." Barad, "Posthuman Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 816.

11. Brian Sutton-Smith, *The Ambiguity of Play* (Cambridge, MA: Harvard University Press, 1997), 8.

12. John Durham Peters, Florian Sprenger, and Christina Vagt, *Action at a Distance* (Minneapolis: University of Minnesota Press, 2020).

13. Franco Moretti, *Distant Reading* (New York: Verso Books, 2013).

14. Or what Espen Aarseth calls *analytical play*. See "Playing Research: Methodological Approaches to Game Analysis" (paper, 5th International Digital Arts and Culture [DAC] Conference, Melbourne, Australia, May 19–23, 2003), http://www.bendevane.com/VTA2012/herrstubbz/wp-content/uploads/2012/01/02.GameApproaches2.pdf.

15. Brian Sutton-Smith touched on the subject of mediated distance in the video conference session at the 1st DiGRA International Conference, intro. Jeffrey Goldstein, host Eric Zimmerman (Utrecht, the Netherlands, November 5, 2003), video, 49:37, https://digra2003.org/videoconferencing-session-brian-sutton-smith/.

16. Jacques Henriot's concept of distance at play has been revived by contemporary Francophone researchers on the pages of *Sciences du jeu*, a journal dedicated to the so-called science of play. Its first issue in 2013 was devoted to Henriot's theory of play: https://journals.openedition.org/sdj/195.

17. To understand the significance of Benjamin's thinking for the media aesthetic of digital play, it is also important to look into his writings on first and second technology. See Walter Benjamin, "The Work of Art in the Age of Its Technological Reproducibility: Second Version," in *The Work of Art in the Age of Its Technological*

Reproducibility, and Other Writings on Media, ed. Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin, trans. Edmund Jephcott and Harry Zohn (Cambridge, MA: Belknap Press of Harvard University Press, 2008 [1991, 1935]), 19–55.

18. Parikka, "Friedrich Kittler," 2.

19. M. Beatrice Fazi, "Digital Aesthetic: The Discrete and the Continuous," *Theory, Culture & Society* 36, no. 1 (2019): 3–26. Published online ahead of print, May 11, 2018, https://doi.org/10.1177/0263276418770243.

20. Claus Pias, *Computer Game Worlds*, trans. Valentine A. Pakis (Berlin: Diaphanes, 2017). First published in 2002 as *Computer Spiel Welten* by Sequenzia (Munich).

21. Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006).

22. Ian Bogost, *Unit Operations: An Approach to Videogame Criticism* (Cambridge, MA: MIT Press, 2006).

23. Miguel Sicart, *Play Matters* (Cambridge, MA: MIT Press, 2014); see also Sicart's forthcoming monograph on the subject, *Playing Software: Homo Ludens in Computational Culture* (Cambridge, MA: MIT Press, 2023).

24. Brian Upton, *The Aesthetic of Play* (Cambridge, MA: MIT Press, 2015).

25. Another early attempt to define games independently of the medium appears in Jesper Juul's transmedial definition of play. See Juul, "The Game, The Player, The World." The problem with such a perspective is that by thinking outside of the medium, it looks for some external reality not embedded in real, performed ludic situations. These, however, as I argue in this book, are always tied to a certain medium, be it a piece of wood, paper, or a silicon chip.

26. Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012).

27. Matter and materiality are central to Karen Barad's philosophy: "It is vitally important that we understand how matter matters." Barad, "Posthuman Performativity," 803.

28. Jussi Parikka, *What Is Media Archeology?* (Cambridge: Polity Press, 2012), 36.

29. James Vincent, "A Game about AI Making Paperclips Is the Most Addictive You'll Play Today," *Verge*, October 11, 2017, https://www.theverge.com/tldr/2017/10/11/16457742/ai-paperclips-thought-experiment-game-frank-lantz.

30. Ian Cheng, *Emissaries Trilogy: Emissary in the Squat of Gods; Emissary Forks at Perfection; Emissary Sunsets the Self*, 2015–2017, live simulation, prod. Veronica So, MoMA PS1, New York, https://www.twitch.tv/moma.

31. In their monograph, Mia Consalvo and Christopher A. Paul address the problematic of "real games." See Consalvo and Paul, *Real Games: What's Legitimate and What's Not in Contemporary Videogames* (Cambridge, MA: MIT Press, 2019).

32. On participatory culture, see Henry Jenkins with Ravi Purushotma, Margaret Weigel, Katie Clinton, and Alice J. Robison, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century* (Cambridge, MA: MIT Press, 2009). I refer to the "automatic turn" in an editorial to the special issue of the *Journal of Gaming & Virtual Worlds* devoted to automation. See Sonia Fizek and Markus Rautzenberg, "The Work of Game in the Age of Automation," in "Autoplay—Gaming in the Age of Automation," special issue, *Journal of Gaming & Virtual Worlds* 10, no. 3 (2018): 197–201. On the "material turn," see Thomas H. Apperley and Darshana Jayemane, "Game Studies' Material Turn," *Westminster Papers in Communication and Culture* 9, no. 1 (2012): 5–25, http://doi.org/10.16997/wpcc.145.

33. Sigfried Giedion, *Mechanisation Takes Command: A Contribution to Anonymous History* (New York: Oxford University Press, 1948; Minneapolis: University of Minnesota Press, 2013), 3. Page citations refer to the 2013 edition.

34. Giedion, *Mechanisation Takes Command*, 3.

35. Gilles Deleuze, Félix Guattari, and Robert Brinkley, "What Is a Minor Literature?" *Mississippi Review* 11, no. 3 (1983): 13–33, http://www.jstor.org/stable/20133921.

36. I presented on the subject of interpassivity in video games at the annual DiGRA Conference in 2017 and subsequently published an article: "Interpassivity and the Joy of Delegated Play in Idle Games," *ToDIGRA: Transactions of the Digital Games Research Association* 3, no. 3 (2018): 137–163, http://todigra.org/index.php/todigra/article/view/81. To find out more about interpassivity, see the numerous works of Robert Pfaller; for instance, *Interpassivity: The Aesthetics of Delegated Enjoyment* (Edinburgh: University of Edinburgh Press, 2017).

Chapter 1: Beyond Interactivity

1. An ironic example of the choice infrastructure may be found in *Black Mirror: Bandersnatch* (2018), a dedicated interactive film in the Netflix anthology series *Black Mirror*. On a meta-level, it offers the viewer a myriad of choices, yet within the episode itself, reminds the choose-your-own-adventure game programmer that "you are not in control"; somebody else is making the choices for you (the Netflix algorithm or the spectator, in this case). *Black Mirror: Bandersnatch*, directed by David Slade (House of Tomorrow / Endemol Shine UK, 2018). https://www.netflix.com/title/80988062.

2. Aubrey Anable, *Playing with Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018), 49.

3. See Guy Debord, *Society of the Spectacle*, trans. Donald Nicholson-Smith (New York: Zone Books, 1994 [1967]).

4. Marshall McLuhan, *Understanding Media: The Extensions of Men* (New York: McGraw-Hill, 1964); Henry Jenkins, Mizuko Ito, and danah boyd, *Participatory Culture in a Networked Era: A Conversation on Youth, Learning, Commerce, and Politics* (Cambridge: Polity Press, 2016); Chris Crawford, *The Art of Computer Game Design* (New York, McGraw-Hill, 1984).

5. See Chicago School of Media Theory, s.v. "interactive." https://lucian.uchicago.edu/blogs/mediatheory/keywords/interactive/. Also see Margaret Morse, *Virtualities: Television, Media Art, and Cyberculture* (Bloomington: Indiana University Press, 1998), 16, 22.

6. Janet H. Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace* (Cambridge, MA: MIT Press, 1998), 90.

7. Chris Crawford, *The Art of Interactive Design*: *A Euphonious and Illuminating Guide to Building Successful Software* (San Francisco: No Starch Press, 2002), 387.

8. Victor Kaptelinin and Bonnie Nardi, *Acting with Technology: Activity Theory and Interaction Design* (Cambridge, MA: MIT Press, 2006).

9. Friedrich A. Kittler, *Gramophone, Film, Typewriter*, trans. Geoffrey Winthrop-Young and Michael Wutz (Stanford, CA: Stanford University Press, 1999), xxxix.

10. Claus Pias, *Computer Game Worlds*, trans. Valentine A. Pakis (Berlin: Diaphanes, 2017 [2002]), 326.

11. See Seth Giddings, "Events and Collusions: A Glossary for the Microethnography of Video Game Play," *Games and Culture* 4, no. 2 (2009): 144–157.

12. See Jesper Juul, "The Game, the Player, the World: Looking for a Heart of Gameness" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), https://www.jesperjuul.net/text/gameplayerworld/.

13. See Mia Consalvo and Christopher A. Paul, *Real Games: What's Legitimate and What's Not in Contemporary Videogames* (Cambridge, MA: MIT Press, 2019).

14. Espen Aarseth, *Cybertext—Perspectives on Ergodic Literature* (Baltimore: Johns Hopkins University Press, 1997), 51.

15. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 71.

16. Dominic Arsenault and Bernard Perron, "In the Frame of the Magic Cycle: The Circle(s) of Gameplay," in *The Video Game Theory Reader 2*, ed. Bernard Perron and Mark J. P. Wolf (London: Routledge, 2009), 109–131.

17. Brendan Keogh, *A Play of Bodies: How We Perceive Video Games* (Cambridge, MA: MIT Press, 2018), 171.

18. Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (Cambridge, MA: MIT Press, 1977), 8.

19. Jerry Kaplan, "AI's PR Problem," *MIT Technology Review*, March 3, 2017, https://www.technologyreview.com/s/603761/ais-pr-problem.

20. The "notgames" category was subverted in a playful way for the purpose of the exhibition, which took place in 2015 at the Cologne Game Lab under the motto: *Not a category / Not an art movement / Not a genre / Not games*. The festival took a "unique approach to the public (dis)play of games," hosting a variety of experiences to be played or simply watched, including the ambient procedural Mountain or the performative ZYX, among many other games out of joint.

21. Matt Garite, "The Ideology of Interactivity (or Video Games and Taylorization of Leisure)" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), http://www.digra.org/wp-content/uploads/digital-library/05150.15436.pdf.

22. Pias, *Computer Game Worlds*, 134.

23. Charles Bernstein, "Play It Again, Pac-Man," chap. 6 in *A Poetics* (Cambridge, MA: Harvard University Press, 1992), 139.

24. Langdon Winner, "Do Artifacts Have Politics?" *Daedalus* 109, no. 1 (1980): 121.

25. Alexei Shulgin, "Art, Power and Communication," published online, October 6, 1996. Quoted in Lev Manovich, "On Totalitarian Interactivity: Notes from the Enemy of the People," *Telepolis*, April 3, 1996, https://www.heise.de/tp/features/ON-TOTALITARIAN-INTERACTIVITY-3412599.html.

26. Alexander R. Galloway, *Protocol: How Control Exists after Decentralization* (Cambridge, MA: MIT Press, 2004), 147.

27. See Wendy Hui Kyong Chun, *Control and Freedom: Power and Paranoia in the Age of Fiber Optics* (Cambridge, MA: MIT Press, 2006).

28. Winner, "Do Artifacts Have Politics?," 127.

29. Dieter Mersch, "Digital Criticism: A Critique of 'Algorithmic' Reason," trans. Michael Turnbull, *Diaphanes.net* (website), December 10, 2017, https://www.diaphanes.net/titel/digital-criticism-5313.

30. Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: University of Chicago Press, 2006); Mersch, "Digital Criticism," 95.

31. See Vilém Flusser, *Dinge und Undinge Phänomenologische Skizzen* (Munich: Carl Hanser, 1993).

32. Manovich, "On Totalitarian Interactivity."

33. Pias, *Computer Game Worlds*, 193. Pias devoted an entire chapter of his book to the study of time-critical optimization, synchronization, and the rhythm of human–machine interaction as foundations for what he calls action games or time-critical games; see Pias, 101, 110–123.

34. Memex refers to an electromechanical device in a shape of a desk, which was a protohypertext system prototyped by Vannevar Bush in 1945. The device's purpose was to mimic the highly associative way the human mind works. It is often described as an analog precursor to the modern digital computer.

35. Kittler, *Gramophone, Film, Typewriter*, xxxix.

36. Umberto Eco, *Six Walks in the Fictional Woods* (Cambridge, MA: Harvard University Press, 1994), 3.

37. Manovich, "On Totalitarian Interactivity."

38. See Hugo Münsterberg, *The Photoplay: A Psychological Study* (New York: D. Appleton, 1916), in *Hugo Münsterberg on Film:* The Photoplay—A Psychological Study *and Other Writings*, ed. Allan Langdale (New York: Routledge, 2002). Page references are to the 2002 edition.

39. Münsterberg, *The Photoplay*, 97.

40. Münsterberg, 98.

41. Münsterberg, 93.

42. Friedrich A. Kittler, *Optical Media*, trans. Anthony Enns (Cambridge: Polity Press, 2010), 31.

43. Jean-Marc Offner and Agnès Sander, "For a Geography of Trajectories: An Interview with Paul Virilio," *FLUX Cahiers scientifiques internationaux Réseaux et Territoires*, no. 5 (1991): 48–54, 50.

44. Manovich, "On Totalitarian Interactivity."

45. Winner, "Do Artifacts Have Politics?," 121.

46. See Nicholas Taylor and Katreena Alder, "Man Caves and the Fantasy of Homosocial Escape" (abstract, 2018 DiGRA International Conference, Turin, Italy, July 25–28, 2018), http://www.digra.org/wp-content/uploads/digital-library/DiGRA_2018_paper_121.pdf.

47. *Generation ZX(X)* by Mona Bozdog, a mixed-reality performance, is one of very few documented traces of the herstory behind the ZX Spectrum. The project engaged with the heritage of the Timex factory in Dundee, Scotland, where the ZX Spectrum consoles were assembled by a skilled female workforce whose labor has not been acknowledged in the predominantly male-written history of gaming in the United Kingdom. See https://www.performingplay.co.uk/generation-zx-x.

48. Adapted from the following quote: "Is it possible to describe modes of cinematic spectatorship without regard for issues of identity politics?" See Vinzenz Hediger, "The Existence of the Spectator," in *At the Borders of (Film) History: Temporality, Archaeology, Theories*, ed. Alberto Beltrame, Giuseppe Fidotta, and Andrea Mariani, XXI International Film Studies Conference Publication (Udine, Italy: Forum, 2015), 315–324.

49. Keogh, *Play of Bodies*, 172.

50. Melissa Kagen, "Walking, Talking and Playing with Masculinities in *Firewatch*," *Game Studies* 18, no. 2 (2018), http://gamestudies.org/1802/articles/kagen.

51. Kagen, "Walking, Talking and Playing."

52. Melissa Kagen, "Walking Simulators, #GamerGate, and the Gender of Wandering," in *The Year's Work in Nerds, Wonks, and Neocons*, ed. Jonathan P. Eburne and Benjamin Schreier (Bloomington: Indiana University Press, 2017), 275–300.

53. Bonnie Ruberg, "Video Games Have Always Been Queer," NYU Game Center Lecture Series, 2019, https://youtu.be/Hfh_vavSasE.

54. Keogh, *Play of Bodies*, 167.

55. Keogh, 196.

Chapter 2: Interpassive Play

1. Translation by Sonia Fizek. Theodor Fontane, "Aber wir lassen es andere machen," in *Gedichte* (Stuttgart: J. G. Cotta'sche Buchhandlung Nachfolger, 1905), 57. See note 20 in this chapter for the original German text. The poem is cited by Robert Pfaller in relation to interpassivity, and by Claus Pias in "Genießen unterstellen," *Frankfurter Allgemeine Zeitung*, September 2000, https://www.uni-due.de/~bj0063/texte/interpassiv.html.

2. Ian Bogost, "*Cow Clicker*: The Making of Obsession," Bogost.com (blog), July 21, 2010, http://bogost.com/writing/blog/cow_clicker_1.

3. "Grinding" is a term denoting the repetition of certain in-game actions, usually performed in order to level up the character and gather more experience points within the game. Grinding is a controversial practice and has been researched, for instance, within the context of labor and play by Lisa Nakamura. See Nakamura, "Don't Hate the Player, Hate the Game: The Racialization of Labor in *World of Warcraft*," in *Digital Labour: The Internet as Playground and Factory*, ed. Trebor Scholz (New York: Routledge, 2013), 187–204.

4. Simon Parkin, "The Rise of Games You (Mostly) Don't Play," *Gamasutra*, March 3, 2015, http://www.gamasutra.com/view/news/237926/The_rise_of_games_you_mostly_dont_play.php.

5. Roland Barthes, *The Pleasures of the Text*, trans. Richard Miller (New York: Hill and Wang, 1975), 17.

6. See Staffan Björk and Jesper Juul, "Zero-Player Games, Or: What We Talk about When We Talk about Players" (paper, 6th Philosophy of Computer Games Conference, Madrid, Spain, January 29–31, 2012), https://www.jesperjuul.net/text/zeroplayergames/; Stefano De Paoli, "Automatic-Play and Player Deskilling in MMORPGs," *Game Studies* 13, no. 1 (2013), http://gamestudies.org/1301/articles/depaoli_automatic_play; Sebastian Deterding, "Progress Wars: Idle Games and the Demarcation of 'Real' Games" (paper, 1st International Joint Conference of DiGRA and FDG, Dundee, UK, August 1–6, 2016), http://www.digra.org/wp-content/uploads/digital-library/paper_267.pdf; Sonia Fizek, "Człowiek i algorytm. Ku automatyzacji rozgrywki w grach crowsourcingowych" [Towards the Automation of Play: Humans and Algorithms in Crowdsourcing Games], *Teksty Drugie: Dwumiesięcznik Instytutu Badań Literackich PAN*, no. 3 (2017): 15–31; Sonia Fizek, "Self-Playing Games: Rethinking the State of Digital Play" (paper, 11th International Conference on the Philosophy of Computer Games, Kraków, Poland, November 28–December 1, 2017).

7. Pias, "Genießen unterstellen."

8. Parkin, "Rise of Games."

9. Anthony Pecorella, "Idle Games: The Mechanics and Monetization of Self-Playing Games" (talk, Game Developers Conference, San Francisco, CA, March 2–6, 2015), video, 55:20, http://www.gdcvault.com/play/1022065/Idle-Games-The-Mechanics-and.

10. See Nakamura, "Don't Hate the Player"; Bonnie Nardi and Yong Ming Kow, "Digital Imaginaries: How We Know What (We Think) We Know About Chinese Gold Farming," *First Monday: Peer-reviewed Journal on the Internet* 15, no. 6 (2010); José P. Zagal and Roger Altizer, "Examining 'RPG Elements': Systems of Character Progression" (paper, 9th International Conference on the Foundations of Digital Games, Fort Lauderdale, FL, April 3–7, 2014), http://www.fdg2014.org/papers/fdg2014_paper_38.pdf.

11. Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006).

12. Bogost, "*Cow Clicker*."

13. The question of what constitutes "real games" rests at the core of the book *Real Games . . .* by Consalvo and Paul.

14. Mia Consalvo and Christopher A. Paul, "Welcome to the Discourse of the Real: Constituting the Boundaries of Games and Players" (paper, 8th International Conference on the Foundations of Digital Games, Crete, Greece, May 14–17, 2013); Consalvo and Paul, *Real Games*; Sebastian Deterding, "Progress Wars."

15. De Paoli, "Automatic-Play."

16. Bogost, "*Cow Clicker*."

17. Pfaller, *Interpassivity*, 19.

18. Slavoj Žižek, *The Plague of Fantasies* (London: Verso, 1997), 149.

19. Žižek, *Plague of Fantasies*, 113.

20. Fontane, "Aber wir lassen," 57; translated by Sonia Fizek. The original German text reads:

> Ein Chinese, ('s sind schon an 200 Jahr)
> In Frankreich auf einem Hofball war.
> Und die Einen frugen ihn: ob er das kenne?
> Und die Andern frugen ihn: wie man es nenne?
> "Wir nennen es tanzen," sprach er mit Lachen,
> "Aber wir lassen es Andere machen."
>
> Und dieses Wort, seit langer Frist,
> Mir immer in Erinnerung ist.
> Ich seh das Rennen, ich seh das Jagen,
> Und wenn mich die Menschen umdrängen und fragen,
> "Was thust Du nicht mit? Warum stehst Du bei Seit'?"
> So sag' ich: "Alles hat seine Zeit.
> Auch die Jagd nach dem Glück. All derlei Sachen,
> Ich lasse sie längst durch Andere machen."

21. Pfaller, "Little Gestures of Disappearance."

22. Pfaller, "Um Die Ecke Gelacht," 71.

23. Pfaller, *Interpassivity*, 55.

24. Pfaller, 19.

25. Žižek, *Plague of Fantasies*, 109, 111.

26. Pfaller, *Interpassivity*, 56.

27. Žižek, *Plague of Fantasies*, 149.

28. Pfaller, "Um Die Ecke Gelacht," 71.

29. Žižek, *Plague of Fantasies*, 147.

30. McLuhan, *Understanding Media*; Pias, "Genießen unterstellen."

31. See Robert Feustel, Nico Koppo, and Hagen Schölzel, eds., *Wir sind nie aktiv gewesen: Interpassivität zwischen Kunst- und Gesellschaftskritik* (Berlin: Kulturverlag Kadmos, 2011).

32. See Markus Walz, Sean Hingston, and Mikael Andéhn, "The Magic of Ethical Brands: Interpassivity and the Thievish Joy of Delegated Consumption," *Ephemera: Theory and Politics in Organisation* 14, no. 1 (2014): 57–80.

33. See Marzena Falkowska, "Gry wideo jako medium—podstawowe kategorie badawcze," *Kultura i Historia* [Culture and History Journal], no. 19 (2011); Laetitia Wilson, "Interactivity or Interpassivity: A Question of Agency in Digital Play" (paper, 5th International Digital Arts and Culture Conference, Melbourne, Australia, May 19–23, 2003), https://www.academia.edu/1367070/Interactivity_or_interpassivity_A_question_of_agency_in_digital_play; Sarah Thorne, "Perverse and Interpassive Gaming: Enjoyment and Play in Gamespaces," *Psychoanalysis, Culture and Society* 22 (2016): 106–113.

34. Bogost, "*Cow Clicker*."

35. Umberto Eco, *Lector in fabula: La cooperazione interpretativa nei testi narrativi* (Milan: Bompiani, 1979), 52. Citation translated and quoted in Morana Alač, *The Model Reader and the Mundanity of Reading Practices*, in *The Philosophy of Umberto Eco*, vol. XXXV of *The Library of Living Philosophers*, ed. Sara G. Beardsworth and Randall E. Auxier (Chicago: Open Court, 2017).

36. Galloway, *Gaming: Essays*, 10.

37. Martin Seel, *Die Künste des Kinos* (Frankfurt: Fischer Verlag, 2013), quoted in Vinzenz Hediger, "The Existence of the Spectator," in *At the Borders of (Film) History: Temporality, Archaeology, Theories*, ed. Alberto Beltrame, Giuseppe Fidotta, and Andrea Mariani, XXI International Film Studies Conference Publication (Udine, Italy: Forum, 2015), 315–324.

38. Brendan Keogh, *A Play of Bodies: How We Perceive Video Games* (Cambridge, MA: MIT Press, 2018); Aubrey Anable, *Playing with Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018); Fizek, "Człowiek i algorytm"; Fizek, "Self-Playing Games"; T. L. Taylor, *Watch Me Play: Twitch and the Rise of Game Live Streaming* (Princeton, NJ: Princeton University Press, 2018).

39. Björk and Juul, "Zero-Player Games."

40. Pfaller, *Interpassivity*, 43.

41. T. L. Taylor, *Raising the Stakes: E-sports and the Professionalization of Computer Gaming* (Cambridge, MA: MIT Press, 2012), 183.

Chapter 3: Ambient Play

1. E. M. Forster, "The Machine Stops" (1909), in *Selected Stories*, ed. David Leavitt and Mark Mitchellby (New York: Penguin Books, 2001), 121.

2. Forster, "The Machine Stops," 116.

3. The term *ambient* comes from the Latin *embient-*, the stem of *ambiēns* and present participle of *ambīre* ("to go around").

4. Mike Elgan, "Ambient Computing Is in the Air," *Computerworld*, December 15, 2018, https://www.computerworld.com/article/3328545/ambient-computing-is-in-the-air.html.

5. Wendy Hui Kyong Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, MA: MIT Press, 2016), 1.

6. See Nicholas Taylor and Jessica Elam, "People Are Robots, Too: Expert Gaming as Autoplay," *Journal of Gaming and Virtual Worlds* 10, no. 3 (2018): 243–260.

7. Chun, *Updating to Remain the Same*.

8. Larissa Hjorth and Ingrid Richardson, *Ambient Play* (Cambridge, MA: MIT Press, 2020).

9. Melissa Kagen, *Wandering Games* (Cambridge, MA: MIT Press, 2022).

10. Hyperreal, "Music for Airports Liner Notes," accessed February 28, 2022, http://music.hyperreal.org/artists/brian_eno/MFA-txt.html.

11. Lewis Gordon, "The Rise of the Ambient Video Game," *Outline* (blog), April 17, 2018, https://theoutline.com/post/4181/ambient-video-game-legend-of-zelda.

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13. Endel Sound GmbH, Endel app homepage, accessed February 10, 2022, https://endel.io.

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16. Axel Stockburger, "Listen to the Bulk of the Iceberg: On the Impact of Sound in Digital Games," in *Space, Time, Play: Computer Games, Architecture and Urbanism: The Next Level*, ed. Friedrich von Borries, Steffen P. Walz, and Matthias Böttger (Basel: Birkhauser, 2007), 111.

17. Anna McCarthy, *Ambient Television: Visual Culture and Public Space* (Durham, NC: Duke University Press, 2001).

18. UWE Bristol, Bath Spa University, and the University of Birmingham, Ambient Literature project, accessed February 10, 2022, https://research.ambientlit.com.

19. Tom Abba, "A Manifesto for Ambient Literature," talk given at Ambient Literature Symposium, Bristol, UK, May 4–5, 2017. Edited version available online at https://research.ambientlit.com/index.php/a-manifesto-for-ambient-literature.

20. See Jens Schröter et al., eds., *Ambient: Ästhetik des Hintergrunds* (Wiesbaden, Germany: Springer, 2018).

21. Larissa Hjorth and Ingrid Richardson, "Ambient Play," chap. 5 in *Gaming in Social, Locative and Mobile Media* (London: Palgrave Macmillan, 2014), 59–75.

22. Sebastian Deterding et al., "Gamification: Toward a Definition" (paper, ACM CHI Conference on Human Factors in Computing Systems, Vancouver, BC, Canada, May 7–12, 2011), http://gamification-research.org/wp-content/uploads/2011/04/02-Deterding-Khaled-Nacke-Dixon.pdf; Mathias Fuchs et al., eds., *Rethinking Gamification* (Lüneburg, Germany: meson press, 2014); Anne Dippel and Sonia Fizek, "Ludification of Culture: The Significance of Play and Games in Everyday Practices of the Digital Era," in *Digitalisation: Theories and Concepts for Empirical Cultural Research*, ed. Gertraud Koch (London: Routledge, 2017), 276–292; Joost Raessens, "The Ludification of Culture," in Mathias Fuchs et al., *Rethinking Gamification*, 91–114; Julian Kücklich, "Precarious Playbour: Modders and the Digital Gaming Industry," *Fibreculture Journal*, no. 5 (2005), https://five.fibreculturejournal.org/fcj-025-precarious-playbour-modders-and-the-digital-games-industry; Anne Dippel and Sonia Fizek, "Laborious Playgrounds: Citizen Science Games as New Mode of Work/Play in the Digital Age," in *The Playful Citizen: Civic Engagement in a Mediatized Culture*, ed. René Glas et al. (Amsterdam: Amsterdam University Press, 2019), 255–272; Pablo Abend et al., eds., "Laborious Play and Playful Work (I/II)," double special issue, *Digital Culture & Society* 5/6, no. 2/2 (2019/2020).

23. Paolo Ruffino, "Games to Live With: Speculations Regarding NikeFuel," *Digital Culture & Society* 2, no. 1: "Quantified Selves and Statistical Bodies" (2016): 153–160.

24. See Larissa Hjorth and Ingrid Richardson, *Ambient Play* (Cambridge, MA: MIT Press, 2020).

25. *Dreeps* development team official website, accessed February 10, 2022, http://dreeps.net.

26. Ian Bogost, "The Video Game That Claims Everything Is Connected," *Atlantic*, March 23, 2017, https://www.theatlantic.com/technology/archive/2017/03/a-video-game-about-everything/520518/.

27. Kat Brewster, "*Everything* Review: A Joyfully Expansive Dream of a Game," *Guardian*, March 24, 2017, https://www.theguardian.com/technology/2017/mar/24/everything-review-david-oreilly-game.

28. Ian Bogost, "You Are Mountain," *Atlantic*, July 17, 2014, https://www.theatlantic.com/entertainment/archive/2014/07/you-are-mountain/374543/.

29. See Paul Virilio, *Speed and Politics*, trans. Mark Polizzotti, new ed. (1977; Cambridge, MA: MIT Press, 2006).

30. See Lars Hallnäs, "On the Philosophy of Slow Technology," *Acta Universitatis Sapientiae-Social Analysis* 5, no. 1 (2015): 29–39, http://www.acta.sapientia.ro/acta-social/C5-1/social51-03.pdf; Miguel Sicart, *Beyond Choices: The Design of Ethical Gameplay* (Cambridge, MA: MIT Press, 2013), 73.

31. Lars Hallnäs and Johan Redström, "Slow Technology—Designing for Reflection," *Personal and Ubiquitous Computing* 5, no. 3 (2001): 201.

32. Hallnäs, "Philosophy of Slow Technology."

33. Paul Roquet, *Ambient Media: Japanese Atmospheres of Self* (Minneapolis: University of Minnesota Press, 2016).

34. Roquet, *Ambient Media*, 89.

35. Roquet, 106.

36. Roquet, 92.

37. Claus Pias, *Computer Game Worlds*, trans. Valentine A. Pakis (Berlin: Diaphanes, 2017). First published in 2002 as *Computer Spiel Welten* by Sequenzia (Munich).

38. Aubrey Anable, *Playing with Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018).

39. Roquet, *Ambient Media*, 99.

40. See Markus Rautzenberg, *Framing Uncertainty*: *Computer Game Epistemologies* (London: Palgrave Macmillan, 2020).

41. Media and air have a lot in common. Paul Roquet traces the ambient character of media in Newtonian physics, which sees air as a medium. Media and air took different paths just to reunite conceptually again.

42. Gordon, "Ambient Video Game."

43. Coziness in games is usually discussed within the context of ambience and affect. Coziness is a term describing a video game aesthetic that creates worlds in which players can satisfy their needs for safety. It refers to "how strongly a game evokes the fantasy of safety, abundance, and softness." For more on coziness in games, see Agata Waszkiewicz and Martyna Bakun, "Towards the Aesthetics of Cozy Video Games," *Journal of Gaming & Virtual Worlds* 12, no. 3 (2020): 225–240, https://doi.org/10.1386/jgvw_00017_1.

44. Roquet, *Ambient Media*, 21.

45. Christoph Ernst, "Achtsames Ambient: Über Ambient-Ästhetik, Medienökologie und Medienpraktiken der Achtsamkeitsmeditation," in *Ambient: Ästhetik des Hintergrunds*, ed. Schröter et al. (Wiesbaden: Springer Fachmedien, 2018), 221.

46. Ernst, "Achtsames Ambient," 223.

47. Susanna Paasonen, Kylie Jarrett, and Ben Light, "What Does 'NSFW' Mean in the Age of Social Media? On the Protean, Problematic Humor of the Internet," *Literary Hub*, November 8, 2019. https://lithub.com/what-does-nsfw-mean-in-the-age-of-social-media.

48. Tim Wu describes the current human species as one characterized by the ever-shorter attention span manifesting itself in compulsive use of technology. See Wu, *The Attention Merchants: The Epic Scramble to Get Inside Out Heads* (New York: Vintage Books, 2017), 6.

49. N. Katherine Hayles, "Hyper and Deep Attention: The Generational Divide in Cognitive Modes," *Profession* (2007): 187–199, https://www.jstor.org/stable/25595866.

50. Hayles, "Hyper and Deep Attention," 187.

51. Benjamin, "Work of Art," 39–40.

52. Benjamin, 40.

53. See Miriam Hansen, "Early Cinema, Late Cinema: Permutations of the Public Sphere," *Screen* 34, no. 3 (1993): 197–210.

54. Petra Löffler, *Verteilte Aufmerksamkeit: Eine Mediengeschichte der Zerstreuung* (Berlin/Zürich: Diaphanes, 2014), 227.

Chapter 4: Automated Play

1. A modified translation of Walter Benjamin's quotation regarding "first and second technology" has been provided by Jan Sieber in "Walter Benjamin's Concept of Technique," *Anthropology & Materialism: A Journal of Social Research*, no. 4 (2019), http://journals.openedition.org/am/944. For the original version, see Walter Benjamin, *Gesammelte Schriften: Nachträge*, vol. VII, bk. 1, ed. Rolf Tiedemann and Hermann Schweppenhäuser with Christoph Gödde, Henri Lonitz, and Gary Smith (Frankfurt am Main: Suhrkamp, 1989), 359.

2. The *Emissaries Trilogy* is the latest in a series of live simulations by Ian Cheng, preceded by *Entropy Wrangler* (2013), *Metis Suns* (2014), or *+–Human* (2013).

3. Andrea K. Scott, "Watch the Absorbing and Tedious Simulations of Ian Cheng," *New Yorker*, May 16, 2017, https://www.newyorker.com/culture/culture-desk/watch-the-absorbing-and-tedious-simulations-of-ian-cheng.

4. Gregor Jansen, Elodie Evers, and Irina Raskin, eds., *Ian Cheng: Live Simulations*, exh. cat. (Kunsthalle Düsseldorf; Leipzig: Spector Books, 2015), 111.

5. Marshall McLuhan discussed the significance of labor automation in the electrical age in the 1960s in his monograph *Understanding Media: The Extensions of Man*. For a contemporary analysis of the influence of automation on labor practices, see Erik Brynjolfsson and Andrew McAfee, *Race Against the Machine: How the Digital Revolution Is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy* (Lexington, MA: Digital Frontier Press, 2011); and Jeremy Rifkin, *The End of Work*: *The Decline of the Global Labor Force and the Dawn of the Post-market Era* (New York: G. P. Putnam's Sons, 1995).

6. Some of the examples that found wider media coverage include Sony's first fully AI-produced music album; J. Walter Thompson's 3D-printed Rembrandt "created" by deep learning algorithms; *Sunspring*, a sci-fi film co-written by an AI; and Google's experiments with natural language learning and poetry.

7. Frieder Nake, "There Should Be No Computer Art," *Page: Bulletin of the Computer Arts Society*, no. 18 (1971): 1–2.

8. A selection of scholarly and popular science works about AI and automation within the context of video games: Julian Togelius, *Playing Smart: On Games, Intelligence, and Artificial Intelligence* (Cambridge, MA: MIT Press, 2019); Michael Mateas and Mark J. Nelson, "Towards Automated Game Design," in *AI*IA 2007: Artificial Intelligence and Human-Oriented Computing*, ed. Roberto Basili and Maria Teresa Pazienza, vol. 4733 of *Lecture Notes in Computer Science* (Berlin/Heidelberg: Springer, 2007), 626–637; Georgios N. Yannakakis and Julian Togelius, *Artificial Intelligence and Games* (Cham, Switzerland: Springer International Publishing, 2018).

9. Seth Giddings was one of the leading voices in the technocultural interpretation of digital play as a network of distributions and delegations of agency between technologies and players engaged in the act of play. He saw technological agency as a necessary condition for understanding digital play. See Giddings, "Playing with Non-Humans: Digital Games as Techno-Cultural Form" (paper, 2005 DiGRA International Conference, Vancouver, BC, Canada, June 16–20, 2005), http://www.digra.org/wp-content/uploads/digital-library/06278.24323.pdf; and "Events and Collusions: A Glossary for the Microethnography of Video Game Play," *Games and Culture* 4, no. 2 (2009): 144–157. Another well-known interpretation of the digitality of digital games is Alexander Galloway's *Gaming: Essays on Algorithmic Culture*, in which he interpreted a variety of so-called gamic actions, some undertaken by human players, other executed by the game software itself. See Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006), 1–38.

10. For a recent media theoretical analysis of automation within the context of digital play, see Anne Dippel, "Play in the Age of Automated Reproducibility" (keynote address, 2018 DiGRA International Conference, Turin, Italy, July 25–28, 2018).

11. Although this chapter focuses on automated gameplay, there is a huge subfield in game design concerned with automating the game design process via the use of diverse AI models. I do not cover it in this chapter, but it is worth noting that the very design of games or parts of games by an automated system may also influence their aesthetic reception.

12. The first example points to a longer tradition of and fascination with mechanizing and automating cognitive processes, which are echoed in Deep Mind's self-playing AlphaGo algorithm of 2016. The second example of an automated musical instrument emphasizes the capacity of technical media to evolve into automated systems, opening a certain technology to a wider unskilled audience that would otherwise be excluded from hands-on experience. I want to draw the reader's attention to those media technologies of the past to highlight certain tendencies and draw some historical continuities. I should note, however, that I am not trying to conduct a fully fledged media archeological analysis here but rather demonstrating the potential for a media archeological analysis to open the horizon to understand the video game far beyond its own time line. An excellent example of such an in-depth analysis is Claus Pias, *Computer Game Worlds*, trans. Valentine A. Pakis (Berlin: Diaphanes, 2017). First published in 2002 as *Computer Spiel Welten* by Sequenzia (Munich).

13. E. R. Truitt, *Medieval Robots: Mechanism, Magic, Nature, and Art* (Philadelphia: University of Pennsylvania Press, 2015), 2.

14. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 32.

15. Michael Mateas, "Expressive AI: Games and Artificial Intelligence" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), http://www.digra.org/wp-content/uploads/digital-library/05150.02104.pdf.

16. Kaplan, "AI's PR Problem."

17. Giddings, "Playing with Non-Humans."

18. Mateas, "Expressive AI," 3.

19. The anthropomorphizing of AI has been discussed in Anne Dippel, "Metaphors We Live By: Three Commentaries on Artificial Intelligence and the Human Condition," in *The Democratization of Artificial Intelligence: Net Politics in the Era of Learning Algorithms*, ed. Andreas Sudmann (Bielefeld: transcript, 2019), 33–42.

20. Christopher Livingston, "The Sim Settlements Mod for *Fallout 4* Is So Good It Should Be an Official Part of the Game," *PC Gamer*, March 27, 2017, http://www.pcgamer.com/the-sim-settlements-mod-for-fallout-4-is-so-good-it-should-be-an-official-part-of-the-game.

21. Jim Rossignol, "Idle Musing: Watching the AI Fight," *Rock Paper Shotgun* (blog), March 2, 2012, https://www.rockpapershotgun.com/idle-musing-watching-the-ai-fight.

22. Giddings, "Playing with Non-Humans."

23. Jan Stasieńko, "Automaty, hybrydy, afekty—posthumanistyczne konteksty aparatu gry komputerowej i praktyk grania," *Teksty Drugie*: *Dwumiesięcznik Instytutu Badań Literackich PAN*, no. 3 (2017): 32–50.

24. Automata were already built in antiquity and described in the treatises of the Hero of Alexandria, alluding to self-moving water clocks, automatic theatres, and many other self-moving hydraulic wonders. See Jessica Riskin, "The Defecating Duck, or, The Ambiguous Origins of the Artificial Life," *Critical Inquiry* 29, no. 4 (2003): 599–633; Truitt, *Medieval Robots*; Adelheid Voskuhl, *Androids in the Enlightenment: Mechanics, Artisans, and Cultures of the Self* (Chicago: University of Chicago Press, 2013).

25. Among those who visited the court of the empress Maria Theresa were the French illusionist François Pelletier, who presented his experiments on magnetism, and the German mechanic Friedrich von Knaus (1724–1789), who presented the "Miracle Writing Machine" (*Allesschreibende Wundermaschine*) to the empress in 1760.

26. BBC Newsnight, "AlphaGo and the Future of Artificial Intelligence," March 9, 2016, YouTube video, 7:44, https://youtu.be/53YLZBSS0cc.

27. John von Neumann's machines, which would be able to self-replicate in an automatic and evolutionary manner, were described in *Theory of Self-Reproducing Automata*, ed. and compl. Arthur W. Burks (Urbana: University of Illinois Press, 1966).

28. J. C. R. Licklider, "Man–Computer Symbiosis," *IRE Transactions on Human Factors in Electronics* HFE-1, no. 1 (1960): 4–11.

29. Quoted in Ian Sample, "'It's Able to Create Knowledge Itself': Google Unveils AI That Learns on Its Own," *Guardian*, October 18, 2017, https://www.theguardian.com/science/2017/oct/18/its-able-to-create-knowledge-itself-google-unveils-ai-learns-all-on-its-own.

30. John Cohen, *Human Robots in Myth and Science* (New York: A. S. Barnes, 1967), 120.

31. Cohen, *Human Robots in Myth and Science*, 121.

32. "Reinforcement learning is a field of machine learning in which an agent learns to perform tasks by trial-and-error, while receiving feedback in form of reward signals." University of Oxford Department of Computer Science, "Deep Reinforcement Learning," accessed February 15, 2022, https://www.cs.ox.ac.uk/activities/drl/.

33. As Sherry Turkle argues, the move from a modernist culture of computation to a postmodernist culture of simulation rests on two very different aesthetics of the computer—the first one is founded on linearity and logics, whereas the second one

embraces complexity and decentering. Intelligence is no longer programmed into computers but rather is supposed to emerge from a set of interactions. See Turkle, "Who Am We?," *Wired*, January 1996, https://www.wired.com/1996/01/turkle-2/.

34. Riskin, "Defecating Duck," 605–606.

35. Anonymous, *Observations on the Automaton Chess Player: Now Exhibited in London, At 4, Spring Gardens* (London: Printed for J. Hatchard, 1819), 32.

36. Truitt, *Medieval Robots*, 19.

37. Jean Paul, "Menschen sind Maschinen der Engel" (1785), quoted in Adelheid Voskuhl, *Androids in the Enlightenment* (Chicago: University of Chicago Press, 2013); and Voskuhl, "Motions and Passions: Music-Playing Women Automata and the Culture of Affect in Late Eighteenth-Century Germany," in *Genesis Redux: Essays in the History and Philosophy of Artificial Life*, ed. Jessica Riskin (Chicago: University of Chicago Press, 2007), 293–320.

38. Ayhan Aytes, "Cognitive Labor, Crowdsourcing, and Cultural History of the Mechanization of the Mind," *Leonardo Electronic Almanac* 17, no. 1 (2011): 118–127.

39. The Progressive Automation mod was originally developed during the 2014 Modjam4 competition. For more information, see https://ftb.gamepedia.com/Progressive_Automation.

40. Blizzard Entertainment, "Recent Actions against Botting in WoW" (statement posted on the company's official forum, May 13, 2015). Quoted in GR Staff, "Blizzard Bans over 100,000 *World of Warcraft* Players," *GameRant*, May 15, 2015, https://gamerant.com/blizzard-bans-100000-world-warcraft-players/.

41. "Starting today, Pokémon caught using third-party services that circumvent normal gameplay will appear marked with a slash in the inventory and may not behave as expected. This is one small part of our continued commitment to maintaining the integrity of our community and delivering an amazing *Pokémon Go* experience." Quoted in Patricia Hernandez, "*Pokémon Go* Starts Giving Cheaters Marks of Shame," *Kotaku*, June 21, 2017, https://kotaku.com/pokemon-go-starts-giving-cheaters-marks-of-shame-1796297049.

42. Huizinga, *Homo Ludens*.

43. Benjamin, "Work of Art," 40.

44. Benjamin, 40.

45. Although this often-repeated assertion expresses the primary view of video gaming culture, it should be put into a broader perspective. In its early days, gaming was depicted as a social activity in which entire families could participate, gathering around a TV set connected to an electronic console (see, for instance, 1972 advertisements for the Magnavox Odyssey).

46. De Paoli, "Automatic-Play."

47. Ord-Hume, *Player Piano*, 29.

48. Wilcox and White Co., advertisement for the Angelus Orchestral, *AMICA News Buletin: Automatic Musical Instrument Collector's Association* 27, no. 6 (1990): 247. https://stacks.stanford.edu/file/druid:pv060bw2313/27-06.pdf.

49. One of the earliest attempts to find an essentialist definition of (video) games appears in Jesper Juul's paper at the first conference of the Digital Games Research Association. Based on a rather narrow selection of previous interdisciplinary definitions of games and play, Juul conjures five characteristics of archetypical or core games, among others "player's effort." The examples that do not fit the definition entirely are classified as "borderlines" cases and "not games." In the latter category, we can find John Horton Conway's *Game of Life*, a zero-player cellular automaton. In a 2012 conference paper, Juul and his coauthor Staffan Björk dismiss zero-player games as games based on the assertion that every game needs a human player. See Juul, "The Game, the Player, the World: Looking for a Heart of Gameness" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), https://www.jesperjuul.net/text/gameplayerworld/; Björk and Juul, "Zero-Player Games."

50. Pias, *Computer Game Worlds*, 273.

51. Giddings, "Playing with Non-Humans."

52. McKenzie Wark, *Gamer Theory* (Cambridge, MA: Harvard University Press, 2007), viii.

53. Karen Barad, "Posthuman Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 807.

Chapter 5: Intra-active Play

1. Gregory Bateson, *Steps to an Ecology of Mind*: *A Revolutionary Approach to Man's Understanding of Himself* (New York: Ballantine 1977), 249.

2. To learn more about the term "ambient state of the machine," see Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis: University of Minnesota Press, 2006).

3. Usually, the player immersed in user-friendly transparent interfaces does not notice the gamepad as such. It remains an integral part of the bodily configuration, enabling the player to negotiate their way within and through the game world. It is the game world, which is the object of focus and analysis, not the gamepad. In the moment of the power cut, however, the controller manifests its own existence

as an object external to the player's body, no longer seemingly merged with it or extending it. Depending on the local gaming situation, the boundary between the subject and the object shifts. When the gameplay progresses fluidly, the gamepad belongs to the player's cyborgian configuration. The moment the habitual use of the medium is interrupted; the gamepad all of a sudden becomes a distinct entity with an empty battery exposing its mattering materiality. To find out more about habitual media, see Wendy Hui Kyong Chun, *Updating to Remain the Same: Habitual New Media* (Cambridge, MA: MIT Press, 2016).

4. The well-known subject–object conundrum has been a perplexing phenomenological puzzle for many thinkers, including Martin Heidegger, Maurice Merleau-Ponty, the physicist Niels Bohr, and, more recently, Karen Barad.

5. Karen Barad, "Posthuman Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 803.

6. Although, as Friedrich Kittler, a German media theorist, has argued: software does not exist. It all boils down to matter and voltage differences, which provide the foundation for the entire content-based culture. See Friedrich Kittler, "There Is No Software," *Friedrich A. Kittler Essays: Literature, Media, Information Systems*, ed. John Johnston (Amsterdam: Overseas Publishers Association, 1997), 147–155.

7. See Galloway *Gaming: Essays*; Ian Bogost, *Unit Operations: An Approach to Videogame Criticism* (Cambridge, MA: MIT Press, 2006); Jesper Juul, "The Game, the Player, the World: Looking for a Heart of Gameness" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), https://www.jesperjuul.net/text/gameplayerworld/.

8. This problematic has been discussed in Aubrey Anable, *Playing with Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018).

9. Espen Aarseth differentiates between the internal code and the external skin in "Define Real, Moron! Some Remarks on Game Ontologies," *DIGAREC Keynote–Lectures 2009/10*, ed. Stephan Günzel, Michael Liebe, and Dieter Mersch (Potsdam, Germany: University Press, 2011), 50–69, https://publishup.uni-potsdam.de/opus4-ubp/frontdoor/deliver/index/docId/5044/file/digarec06_S050_069.pdf.

10. See Juul, "The Game, the Player, the World."

11. The "material turn" has also emerged in game studies. One of the most prominent examples of this is the initiation of platform studies by Ian Bogost and Nick Montfort. Although their project focuses on the materiality of gaming platforms and on the complex forms in which this materiality influences design, they too fall into the Cartesian trap by separating code from platform. For an interpretation of the material turn in game studies, see Thomas H. Apperley and Darshana Jayemane,

"Game Studies' Material Turn," *Westminster Papers in Communication and Culture* 9, no. 1 (2012): 5–25, http://doi.org/10.16997/wpcc.145.

12. Barad, "Posthuman Performativity," 807.

13. Niels Bohr (1885–1962) was a physicist best known for his foundational contributions to quantum theory, which won him the 1922 Nobel Prize in Physics. He is associated with the most widely accepted interpretation of the quantum theory, known as the Copenhagen interpretation. Bohr's framework has become the starting point for Karen Barad's natural philosophy known as "agential realism." In Barad's view, Bohr's work takes a protoperformative perspective on the scientific practice.

14. Developed by Michel Callon, Bruno Latour, and John Law, actor–network theory is a methodological and theoretical approach in science and technology studies, mapping out material-semiotic relationships among diverse actors, human and nonhuman. For an in-depth discussion of the subject, see Bruno Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Cambridge, MA: Harvard University Press, 1987).

15. Michel Foucault's dispositif (also dispositive or apparatus) describes a heterogeneous ensemble of elements, such as: "discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions—in short, the said as much as the unsaid." Foucault, "The Confession of the Flesh," in *Power/Knowledge: Selected Interviews and Other Writings 1972–1977*, ed. Colin Gordon, trans. Colin Gordon, Leo Marshall, John Mepham, and Kate Soper (New York: Pantheon Books, 1980), 194.

16. See Bateson, *Ecology of Mind*.

17. Some of the most prominent work in posthumanism: Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013); Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury Academic, 2019); Cary Wolfe, *What Is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010).

18. Barad, "Posthuman Performativity," 803.

19. The metaphor of wave interference has been used to illustrate another media theoretical and cultural phenomenon—that of work/play interference; see Anne Dippel and Sonia Fizek, "Laborious Playgrounds: Citizen Science Games as New Mode of Work/Play in the Digital Age," in *The Playful Citizen: Civic Engagement in a Mediatized Culture*, ed. René Glas et al. (Amsterdam: Amsterdam University Press, 2019), 255–272.

20. I would like to draw a line between the ambiguity of nature and ambiguity of play by reading Brian Sutton-Smith's discussion on the ambiguity of play through Karen Barad's philosophy underpinned by quantum theory. Depending on the lens through which it is being examined, play manifests itself as a concrete, localized

phenomenon, as either a surplus of energy, a creative outburst of energy, or a functionalist survival category of a glue that holds society together. In other words, any attempt to provide a top-down, absolutist perspective on play is as futile as the conviction that light is a wave, to stick to our physico-philosophical reading.

21. Rick Dolphijn and Iris van der Tuin, "Matter Feels, Converses, Suffers, Desires, Yearns and Remembers: Interview with Karen Barad," in *New Materialism: Interviews & Cartographies* (Ann Arbor: University of Michigan Library / Open Humanities Press, 2012), 62.

22. Barad, "Posthuman Performativity," 803.

23. Barad, 806.

24. Barad, 807.

25. See Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008).

26. An *agential cut*, according to Karen Barad's philosophy, is a momentary stabilization that creates a boundary in a particular context and situation within a particular phenomenon. Boundaries, however, do not sit still, so they are open to reconfiguration. The discursive-material arrangements remain relational and thus the agential cuts may be placed anew, depending on the theoretical perspective at hand. Barad's agential cut stands in opposition to a *Cartesian cut*, which makes an attempt to disentangle mental and material phenomena.

27. Justyna Janik, "Meaningful Transformation: Intra-Activity and Video Games" (paper, 2019 DiGRA International Conference, Kyoto, Japan, August 6–10, 2019), http://www.digra.org/wp-content/uploads/digital-library/DiGRA_2019_paper_416.pdf; Janik, "Intra-Acting Bio-Object: A Post-Human Approach to the Player–Game Relation" *Journal of Gaming & Virtual Worlds* 13, no.1 (2021): 21–39.

28. See World Encyclopedia of Puppetry Arts: https://wepa.unima.org/en/tadeusz-kantor.

29. Conor Mckeown, "Playing with Materiality: An Agential-Realist Reading of Sethbling's *Super Mario World* Code-Injection," *Journal of Information, Communication and Society* 21, no. 9: "Work and Play" (2018): 1234–1245.

30. Seth Giddings, "Playing with Non-Humans: Digital Games as Techno-Cultural Form" (paper, 2005 DiGRA International Conference, Vancouver, BC, Canada, June 16–20, 2005), http://www.digra.org/wp-content/uploads/digital-library/06278.24323.pdf.

31. Alenda Y. Chang, *Playing Nature: Ecology in Video Games* (Minneapolis: University of Minnesota Press, 2019), 124.

32. Jan Stasieńko, *Niematerialne Galatee w wehikułach rozkoszy i bólu* (Wydawnictwo Katedry Etnologii i Antropologii Kulturowej Uniwersytetu Wroclawskiego, Poland: 2015); Stasieńko, *Media Technologies and Posthuman Intimacy* (London: Bloomsbury, 2021).

33. Paolo Ruffino, "Nonhuman Games: Playing in the Post-Anthropocene," in *Death, Culture & Leisure: Playing Dead*, ed. Matt Coward-Gibbs (Bingley, UK: Emerald Publishing, 2020).

34. Frans Mäyrä, "The Player as a Hybrid: Agency in Digital Game Cultures," *GAME: The Italian Journal of Game Studies* 8 (2019), https://www.gamejournal.it/the-player-as-a-hybrid-agency-in-digital-game-cultures/.

35. Design supported or driven by game analytics could be regarded as a meta-game in itself. It develops play scenarios not on the spur of the creative moment but as a result of precise measurement. The tokens of the meta-game are strategically placed on the board to maximize the "endgame" results and extend the longevity value of the service, to put it in marketing terms. In that sense, the majority of freemium mobile games are developed as predictable measurement systems. In an ideal case, they are supposed to yield optimal aesthetic experience for each player to keep their retention for as long as possible.

36. Game analytics can be used to optimize a variety of factors, such as "the time needed to complete a specific task, the price of a specific virtual item or the power of a specific weapon." Matti Mäntymäki, Sami Hyrynsalmi, and Antti Koskenvoima, "How Do Small and Medium-Sized Game Companies Use Analytics? An Attention-Based View of Game Analytics," *Information Systems Frontiers* 22, no. 5 (2020): 1164, https://doi.org/10.1007/s10796-019-09913-1.

37. Bohr's philosophy-physics has been discussed in detail by Karen Barad. See Barad, "Posthumanist Performativity," 813.

38. Claus Pias, *Computer Game Worlds*, trans. Valentine A. Pakis (Berlin: Diaphanes, 2017), 18. First published in 2002 as *Computer Spiel Welten* by Sequenzia (Munich).

39. Norbert Wiener defined cybernetics in 1948 as "the scientific study of control and communication in the animal and the machine." See Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (New York: John Wiley & Sons; Paris: Hermann, 1948). The Greek etymological roots of cybernetics point toward governance and steering.

40. See Brendan Keogh, *A Play of Bodies: How We Perceive Video Games* (Cambridge, MA: MIT Press, 2018).

41. Brian Sutton-Smith, "Play Theory: A Personal Journey and New Thoughts," *American Journal of Play* 1, no. 1 (2008): 82.

42. A selection of foundational contributions to making sense of video games: Espen Aarseth, "Playing Research: Methodological Approaches to Game Analysis" (paper, 5th International Digital Arts and Culture [DAC] Conference, Melbourne, Australia, May 19–23, 2003), http://www.bendevane.com/VTA2012/herrstubbz/wp-content/uploads/2012/01/02.GameApproaches2.pdf; Mia Consalvo and Nathan Dutton, "Game Analysis: Developing a Methodological Toolkit for the Qualitative Study of Games," *Game Studies* 6, no. 1 (2006), http://gamestudies.org/06010601/articles/consalvo_dutton; Lars Konzack, "Computer Game Criticism: A Method for Computer Game Analysis" (paper, Computer Games and Digital Cultures Conference, Tampere, Finland, June 6–8, 2002), http://www.digra.org/wp-content/uploads/digital-library/05164.32231.pdf.

43. In an introductory and foundational paper, Espen Aarseth proposes to study the aesthetic of games in virtual environments, taking into account three dimensions: gameplay, game structure, and game world (see Aarseth, "Playing Research"). While the first one takes into account the player (their actions, strategies, and motives), the third one examines the world manipulated by the player, including its fictional content, textures, and level design. What combines both is the system's behavior; that is, the rules of the game. This well-established way of making sense of games and play rests on the dualistic assumption of a clear-cut Cartesian division existing between the player as a subject and the game as an object manipulated in accordance with set rules.

44. Illusion already includes play in its Latin root word, *illudere*, which means "in play" or "at play." We could say that an illusion literally opens up room for play.

45. See Aarseth, "Define Real, Moron!"; Aarseth and Paweł Grabarczyk, "An Ontological Meta-Model for Game Research" (paper, 2018 DiGRA International Conference, Turin, Italy, July 25–28, 2018), http://www.digra.org/wp-content/uploads/digital-library/DIGRA_2018_paper_247_rev.pdf.

46. Bateson, *Ecology of Mind*, 249.

47. A succinct interpretation of the Baradian *together/apart* compound may be found in Mirko Nikolić, "Apparatus × Assemblage," *New Materialism Almanac*, March 28, 2018, https://newmaterialism.eu/almanac/a/apparatus-x-assemblage.html.

48. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007), 179.

49. See Sutton-Smith, *The Ambiguity of Play*(Cambridge, MA: Harvard University Press, 1997).

50. Barad, *Meeting the Universe Halfway*, 174.

51. Barad, 33.

52. Darshana Jayemanne, *Performativity in Art, Literature, and Videogames* (London: Palgrave Macmillan, 2017).

53. Andrew Pickering, "The Mangle of Practice: Agency and Emergence in the Sociology of Science," *American Journal of Sociology* 99, no. 3 (1993): 562.

Chapter 6: Spectated Play

1. Vilém Flusser, *Into the Universe of Technical Images*, trans. Nancy Ann Roth, intro. Mark Poster (Minneapolis: Minnesota University Press, 2011), 33. First published in 1985 as *Ins Universum der technischen Bilder* by European Photography (Göttingen).

2. As introduced in the prelude to this book, to *dis-play* is to be at a distance from a direct action of play, to participate in the algorithmic spectacle and to witness the game unfold on the screen. The hyphen is to be understood not as a dividing line but as a connector between the visual and the operational aspect of computer mediated play.

3. For Twitch statistics and charts, see https://twitchtracker.com/statistics.

4. Jussi Parikka, *What Is Media Archeology?* (Cambridge: Polity Press, 2012), 38.

5. Parikka, *What Is Media Archeology?*, 38.

6. Aubrey Anable, *Playing with Feelings: Video Games and Affect* (Minneapolis: University of Minnesota Press, 2018), 50.

7. See Flusser, *Into the Universe*.

8. Frieder Nake, "We Find Aesthetics in Between: A Remark on Algorithmic Art," *Zeitschrift für Ästhetik und Allgemeine Kunstwissenschaft* 59, no. 2 (2014): 288.

9. Frieder Nake's work on the twofold image has been reinterpreted within the context of video games in Stephan Schwingeler, "Simulation of Arbitrary Perspectives in Video Games" (paper, Ludotopia II Conference and Workshop, Greater Manchester, UK, February 24–25, 2011).

10. See Gonzalo Frasca, "Ludologists Love Stories, Too: Notes From a Debate That Never Took Place" (paper, 2003 DiGRA International Conference, Utrecht, the Netherlands, November 4–6, 2003), http://www.digra.org/wp-content/uploads/digital-library/05163.01125.pdf.

11. Frans Mäyrä, *An Introduction to Game Studies: Games in Culture* (London: Sage Publications, 2008), 17–18.

12. Espen Aarseth, "Define Real, Moron! Some Remarks on Game Ontologies." In *DIGAREC Keynote–Lectures 2009/10*, edited by Stephan Günzel, Michael Liebe, and Dieter Mersch, 50–69. Potsdam, Germany: University Press, 2011. https://publishup

.uni-potsdam.de/opus4-ubp/frontdoor/deliver/index/docId/5044/file/digarec06_S050_069.pdf.

13. Anable, *Playing with Feelings*, 50.

14. "If and when games and especially computer games are studied and theorized, they are almost without exception colonised from the fields of literary, theatre, drama and film studies." Markku Eskelinen, "The Gaming Situation," *Game Studies* 1, no. 1 (2001), http://www.gamestudies.org/0101/eskelinen/.

15. See Frieder Nake, "Das doppelte Bild," in *Digitale Form*, Bildwelten des Wissens: Kunsthistorisches Jahrbuch für Bildkritik (Berlin: De Gruyter, 2006).

16. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 45–46.

17. I have provided a more extensive discussion on Cartesian dualism within the context of video games in chapter 6.

18. Friedrich Kittler, "There Is No Software," *Friedrich A. Kittler Essays: Literature, Media, Information Systems*, ed. John Johnston (Amsterdam: Overseas Publishers Association, 1997), 147–155.

19. Kittler, "There Is No Software," 148.

20. The concept of interference was originally used in physics to denote the superposition of waves and has been used within the context of work and play to demonstrate how those two qualities permeate and transform each other. See Anne Dippel and Sonia Fizek, "Laborious Playgrounds: Citizen Science Games as New Mode of Work/Play in the Digital Age," in *The Playful Citizen: Civic Engagement in a Mediatized Culture*, ed. René Glas et al. (Amsterdam: Amsterdam University Press, 2019), 255–272.

21. See the concept of "performative multiplicity" introduced by Darshana Jayemanne in *Performativity in Art, Literature, and Videogames* (London: Palgrave Macmillan, 2017).

22. Flusser, *Into the Universe*, 12.

23. Flusser, 7.

24. Frieder Nake, "The Algorithmic Art Manifesto," in *Nevertheless: 17 Manifestos*, ed. Andrea Sick (Hamburg: Textem Verlag, 2018), page 70 of 83, PDF, http://17.manifestos.de/.

25. "Technical images are images at all only if they are seen superficially. To be images they require that the viewer keep his *distance*." Flusser, *Into the Universe*, 34.

26. ". . . technical images and traditional images arise from completely different kinds of *distancing* from concrete experience." Flusser, 7.

27. Flusser, 22.

28. Flusser, 48.

29. Mark C. Marino, *Critical Code Studies* (Cambridge, MA: MIT Press, 2020).

30. Aud Sissel Hoel, "Operative Images: Inroads to a New Paradigm of Media Theory," in *Image—Action—Space: Situating the Screen in Virtual Practice*, ed. Luisa Feiersinger, Kathrin Friedrich, and Moritz Queisner (Berlin: De Gruyter 2018), 12.

31. Harun Farocki, "Phantom Images," *Public, no*. 29: "New Localities" (2004): 17, https://doi.org/10.25969/mediarep/12195.

32. Trevor Paglen, "Operational Images," *e-flux Journal*, no. 59 (2014), https://www.e-flux.com/journal/59/61130/operational-images.

33. Aud Sissel Hoel demonstrates this shift using the example of computer-generated medical imagery: "At once artificial and real, medical images do not fit the commonplace distinctions between natural and arbitrary signs. More than signs and representations, they are instruments." Hoel, "Images as Active Powers for Reality: A Simondonian Approach to Medical Imaging," in *Dynamis of the Image: Moving Images in the Global World*, ed. Emmanuel Alloa and Chiara Cappelletto, vol. 5 of Contact Zones: Studies in Global Art, ed. Lars Blunck, Bénédicte Savoy, and Avinoam Shalem (Berlin: De Gruyter, 2020), 309, https://doi.org/10.1515/9783110530544.

34. See Hoel, "Operative Images," 14.

35. Farocki, "Phantom Images," 17.

36. Aud Sissel Hoel provides an overview of the concept of operationality as used in image and media theory; see Hoel, "Operative Images." The question of operationality has become central to German media theory and in the past few years has invited scholars to think along the lines of *operative ontologies*.

37. Nake, "Algorithmic Art Manifesto," page 69 of 83, PDF.

38. William Uricchio, "The Algorithmic Turn: Photosynth, Augmented Reality and the Changing Implications of the Image," *Visual Studies* 26, no. 1 (2011): 26.

39. Manovich, *Language of New Media*, 118.

40. Ian Bogost, *Unit Operations: An Approach to Videogame Criticism* (Cambridge, MA: MIT Press, 2006), ix.

41. The description for the exhibition at the Museum of Modern Art in New York City can be viewed at https://www.moma.org/calendar/exhibitions/3656.

42. Ian Cheng, "A Portal to Infinity," interview by Kasper Bech Dyg, Louisiana Channel, Louisiana Museum of Modern Art, September 2017, video, 17:07, https://channel.louisiana.dk/video/ian-cheng-portal-infinity.

43. A succinct description of *Kulturtechniken* may be found in the online wiki *Monoskop*, which is devoted to the arts, media, and humanities: https://monoskop.org/Cultural_techniques.

44. See Sebastian Möring and Marco de Mutiis, "Camera Ludica: Reflections on Photography in Video Games," in *Intermedia Games—Games Inter Media: Video Games and Intermediality*, ed. Michael Fuchs and Jeff Thoss (New York: Bloomsbury Academic, 2019), 69–94.

45. Anable, *Playing with Feelings*, 107.

46. Anable, 107.

47. Mark Hansen, "Algorithmic Sensibility: Reflections on the Post-Perceptual Image," in *Post-Cinema: Theorizing 21st-Century Film*, ed. Shane Denson and Julia Leyda (Falmer: REFRAME Books, 2016), 786.

48. See Conor Mckeown, "Videogame Ecologies: Interaction, Aesthetics, Affect" (PhD diss, University of Glasgow, 2018), http://theses.gla.ac.uk/8878/1/2018mckeownphd.pdf.

49. Mckeown, "Videogame Ecologies," 94.

50. Kittler, "There Is No Software," 150.

51. See Philip Z. Maymin, "Smart Kills and Worthless Deaths: eSports Analytics for *League of Legends*," *Journal of Quantitative Analysis in Sports* 17, no. 1 (2021): 11–27, https://doi.org/10.1515/jqas-2019-0096.

52. Machines watching and interpreting visualizations of gameplay bring to mind the algorithm-driven method of "distant reading" discussed in chapter 1.

53. M. Beatrice Fazi, "Digital Aesthetic: The Discrete and the Continuous," *Theory, Culture & Society* 36, no. 1 (2019): 2. Published online ahead of print, May 11, 2018, https://doi.org/10.1177/0263276418770243.

Postlude: Distance at Play

1. Brendan Keogh, *A Play of Bodies: How We Perceive Videogames* (Cambridge, MA: MIT Press, 2018), 196.

2. M. Beatrice Fazi and Matthew Fuller, "Computational Aesthetics," in *A Companion to Digital Art*, ed. Christiane Paul (Oxford: John Wiley & Sons, 2016).

3. Video conference session with Brian Sutton-Smith, intro. Jeffrey Goldstein, host Eric Zimmerman (1st DiGRA International Conference, Utrecht, the Netherlands, November 5, 2003), video, 49:37, https://digra2003.org/videoconferencing-session-brian-sutton-smith.

4. Marc C. Marino, *Critical Code Studies* (Cambridge, MA: MIT Press, 2020).

5. Miguel Sicart, "*Homo Ludens* Reloaded: The Ethics of Play in the Information Age," in *Games and Ethics*, ed. Maike Groen et al. (Wiesbaden, Germany: Springer, 2020), 7.

6. Seth Kim-Cohen, *Against Ambience* (New York: Bloomsbury Publishing 2013).

7. M. Beatrice Fazi, "Digital Aesthetic: The Discrete and the Continuous," *Theory, Culture & Society* 36, no. 1 (2019): 3–26, https://doi.org/10.1177/0263276418770243

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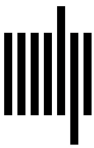

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