

# Videogame Criticism and Games in the Twenty-First Century

Patrick Jagoda\*

## 1. Introduction: Videogame Criticism

It may seem an extraordinary and unlikely fact that videogame criticism has developed into a vibrant area of serious academic study. As Ian Bogost, one of the field's most important contributors, observes, "Like a toaster, a game is both appliance and hearth, both instrument and aesthetic, both gadget and fetish. It's preposterous to do games criticism, like it's preposterous to do toaster criticism." Yet Bogost quickly adds that games are hardly unique in this respect. Indeed, nothing has entirely escaped cultural criticism in our time: "Not literature, not film, nor theater, art, food, wine. We just stopped noticing that the criticism of forms like these are just as bonkers as critiques of toasters or milk or videogames" (xii). For all of the inherent absurdity of game criticism, it is also increasingly evident that what a "game" or "videogame" has become in 2017 is more diverse and complicated than whatever we might call a toaster—even if we allow for the considerable differences, for instance, between standard toasters and toaster ovens.

Fueled in part by the enlarged parameters of the term "game," the field of videogame studies has expanded considerably in the second decade of the twenty-first century. Among scholars, if not journalists, we are no longer in a moment in which it is still noteworthy merely to trumpet the economic success of the multibillion-dollar videogame industry that now outpaces book publishing, music, and even film. Similarly, it no longer seems adequate to express wonder at the possibility of videogames operating as an art form—even if the *New York Times* still publishes headlines, in 2016, that make

\*Patrick Jagoda is an associate professor of English and Cinema & Media Studies at the University of Chicago. He is the coeditor of *Critical Inquiry* and cofounder of the Game Changer Chicago Design Lab. For more information, see <http://patrickjagoda.com/>.

*American Literary History*, vol. 29, no. 1, pp. 205–218

doi:10.1093/alh/ajw064

© The Author 2017. Published by Oxford University Press. All rights reserved.

For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com)

declarations such as “An Exhibition That Proves Video Games Can Be Art” (Reese). In his 2015 book *Works of Game*, game designer John Sharp notes, “The status of games is on the rise, if for no other reason than their ubiquity” (115). Yet within this “ubiquity,” there is also a growing diversity of aesthetics, histories, applications, design approaches, and sociopolitical orientations. Even if we restrict ourselves to the two years prior to this essay, the field has yielded a broad range of publications. Even a fraction of these books and edited volumes runs the gamut topically from play and aesthetic theory (Upton), to the role of emotions in videogames (Isbister), to the history of American arcades and their production of masculinity (Kocurek), to transnational differences in videogame production and consumption (Wolf, Consalvo, Penix-Tadsen), to histories of war games (Harrigan and Kirschenbaum), to real-world uses of gamification (Gilbert, Schrier), to varied forms of artistic games (Maizels and Jagoda, Sharp), and even to the self-reflexive project of game criticism itself (Bogost).

Even as both gameplay cultures and videogame studies are developing on a transnational scale, I will limit my focus in this essay primarily to the US context. Since the 1960s, videogames in the US have been shaped by forces ranging from counterculture to military R&D. The cultural form of videogames emerged during the Cold War, beginning with Steve Russell’s 1962 game *Spacewar!*, and expanded with arcade games and Atari-led home videogame consoles in the 1970s. After rebounding from the videogame industry crash of 1983, an interest in videogames grew in the mid-1980s through the 1990s, reenergized in large part by Japanese developers such as Nintendo, Sega, and Sony. During this period, videogames remained a largely niche market, with most products targeted at a homogeneous, if extremely enthusiastic, group of so-called hardcore gamers. By the twenty-first century, videogames had evolved into an increasingly heterogeneous form with a more diverse audience. While videogame criticism was not the primary factor in enabling this diversity, tracking this field’s recent developments may help us better understand the significance and meaning of digital games in our time.

## 2. Videogames in the Early Twenty-First Century

Through the late twentieth century, videogames were still largely an entertainment form. Myriad factors in the early twenty-first century—cultural, aesthetic, and technological—have precipitated a multiplication of what is now meant by “videogame.” While there are various histories that offer insight into the form’s

development, it is worth highlighting a recent moment around 2007. This period saw a visible growth of the separate, though related, phenomena of “indie games,” “artgames,” “serious games,” “Do-It-Yourself (DIY) game making,” and “casual games,” as well as the expansion of the more instrumental area of “gamification.” These categories opened up many previously unavailable, often experimental avenues for games that exceeded merely economic motivations.

Even a brief review of the changing landscape of videogame production, distribution, and consumption offers some insight into the expansion of videogame form and the corresponding field of game studies. For instance, the successful release of the Nintendo Wii console in late 2006 precipitated the production of such “casual games” as *Wii Sports* (2006) and *Animal Crossing: City Folk* (2008) intended for a mass audience rather than skilled or hardcore gamers. Alongside this process of democratization, the years between 2007 and 2009 brought a new focus on auteur-style star game designers such as Jonathan Blow, Mary Flanagan, and Jason Rohrer. As Felan Parker notes, these same years gave rise to a number of widely recognized art games, including *Passage* (2007), *The Marriage* (2007), *The Graveyard* (2008), *Braid* (2008), *Flower* (2009), and *Every Day the Same Dream* (2009). In these same years, mainstream companies also produced a range of narratively complex videogames with multifaceted characters, including *BioShock* (2007), *Mass Effect* (2007), and *Fallout 3* (2008), which reenergized discussions about games and narrative that had fallen out of favor in earlier debates about ludology versus narratology. Institutionally, during this period, the discussion about games as an art form was also expanded through visible art exhibits (such as the Smithsonian’s *The Art of Video Games* exhibit and MoMA’s Video Games collection exhibits in 2012) and new government funding to support game production such as the National Endowment for the Arts grants. Technologically, the rise of videogames as a form also has to do with the development and spread of game engines and production tools (Unity and Twine, for example) and the availability of online distribution platforms for games like Steam, PlayStation Network, and Xbox Live. An institutional factor in this change has also been the growth of both independent and art game conferences such as Indiecade, Games for Change Festival, Different Games Conference, and the Independent Games Festival at the Game Developers Conference.<sup>1</sup>

These various developments occasioned the continuation and evolution of game criticism, including a greater diversity of methodologies, many of which mirror approaches adopted across the longer history of literary criticism. Even in the years before 2007, numerous scholars undertook historical (Kent), formalist (Murray), and

phenomenological (Sudnow) studies of videogames.<sup>2</sup> With an expansion of game forms and genres, scholarship that relies on these types of methods has multiplied. Additionally, other scholars have shifted their attention from games themselves to particular practices of and responses to play. Such books have included areas of inquiry such as the nature of player representations and identifications with videogame characters (Shaw), theories of play as they impact mass culture (Upton), emotional possibilities of game design (Isbister), and affective responses among players in networked videogames (Jagoda *Network Aesthetics*). Other work has explored intersections between design and criticism, especially regarding the impact of games outside of the videogame industry (Schrier). The early twenty-first century thus saw a coproductive expansion of videogame form and game criticism.

### 3. The Changing Meanings of “Game”

The existing field of videogame studies already demonstrates a notable range of methodologies and objects, just as it also continues to grow and change across multiple platforms (e.g., personal computer, console, mobile, and mixed reality games) and genres. Amidst this transformation, there has been growing uncertainty, manifesting alternately as ambivalence and sharp disagreement, about what precisely, at this time of rapid mutation and proliferation of the form, constitutes the object of inquiry. As an example, consider Christine Love’s *Analogue: A Hate Story* (2012). This work can be read as an illustrated epistolary novel in which the reader interacts with two artificial intelligence programs on an interstellar starship while navigating a complex history of textual diaries and letters written by members of several prominent families in a distant future. At the start of the experience, the ship’s language-parsing system malfunctions and leaves the player with only the capacity to offer binary responses to questions posed by the AIs. Along the way, the experience adopts game conventions when players type precise instructions into a command line interface in order to solve puzzles and, in one case, race against the clock to prevent a nuclear reactor meltdown. Despite *Analogue*’s primarily novelistic dimensions, critic Leif Johnson (of the game-focused entertainment website *IGN*) describes it as a “game-like experience.” Another critic, Phill Cameron (of the UK-based videogame site *Eurogamer*), describes *Analogue* repeatedly as a “game” that deviates from “interactive fiction.” Across the popular reception of *Analogue*, then, we see the category of “game” previously dedicated to abstract strategy games

*Amidst this transformation, there has been growing uncertainty, manifesting alternately as ambivalence and sharp disagreement, about what precisely, at this time of rapid mutation and proliferation of the form, constitutes the object of inquiry.*

such as chess or Go being applied to multimedia and transmedia works.

In reviews of works such as *Analogue*, the designation of “game” arguably serves more as a marketing category than an occasion for nuanced formalist analysis. Notably, while uncertainty about the boundaries of videogames is sometimes glossed and passed over quickly, it has also sparked intense cultural debates that have impacted recent videogame criticism. A particularly visible game within these debates has been *Depression Quest* (2013), a work designed by Zoë Quinn (in collaboration with Patrick Lindsey and Isaac Schankler). Unlike many graphically oriented games, Quinn created *Depression Quest* using the Twine engine—open-source software that enables the creation of branching, hyperlinked, and nonlinear narratives that can be published directly to HTML. Its designers describe *Depression Quest* as “an interactive fiction game where you play as someone living with depression” (Quinn). Formally, this work combines elements of many previous art forms—including hypertext fiction, electronic literature, text adventure games, and role-playing games—with branching decision points. At the end of passages that describe episodes in the life of the character (expressed in second person), there are a series of choices, with the most desirable options usually made unavailable in order to reflect formally the effects of depression. Along with these choices, the work gives regular feedback to convey the degree of depression that the character experiences, the status of therapy, and any medication being used. Along with text, the work also includes photographs (covered with static) and a basic soundtrack with atmospheric sound effects.

From the standpoint of form and genre, *Depression Quest* is a hybrid of interactive narrative and a role-playing game. While the experience consists primarily of textual narrative, it also includes elements such as decision-making and regular feedback that are characteristic of games. I bring up the example of this piece, however, not to elaborate some version of this formal argument, but to highlight the debates surrounding the question of whether or not *Depression Quest* is a game. In fact, *Depression Quest* became infamous in the gaming community when it emerged as a central point of reference for the much discussed “GamerGate” controversy that erupted in the summer of 2014. As a brief overview, the hashtag #gamergate became shorthand for a number of different online discussion threads about topics that included journalistic ethics in the games industry, the status of serious games, gender and race inclusiveness in game culture, the demographics of game designers, gamer identity, and the changing cultural status of videogames more

broadly. Far from a friendly online debate, GamerGate occasioned one of the most toxic (if hardly unprecedented or unique) eruptions of sexism and discrimination online (Kocurek “Gamers”; Massanari). Early in the onslaught of harassment that primarily targeted women, several commentators focused on Quinn, accusing her of threatening videogame culture and undermining the ethics of game journalism by having a relationship with a writer who had given her positive press (an accusation shown to be false). Quinn subsequently received a number of credible rape and death threats, many of them very detailed, graphic, and vicious.

Among the many functions of GamerGate was a negotiation of what constitutes a gamer identity and what marks the boundaries of videogame culture. A common refrain during this movement was the impassioned insistence that *Depression Quest* was not a game. For example, in one critique articulated in a widely circulated post on Reddit (a post with 1,192 upvotes and 779 comments as of June 2016), the user “butterworthy101” expresses a frequently repeated observation, “It’s not a game so much as it is a ‘choose your own adventure’ short story.” Purportedly unrelated to the more extreme forms of sexism and misogyny animating some of the most heated episodes of GamerGate, such accusations often used the smoke-screen of a formalist debate to mask a conservative cultural impulse to police the boundaries of gamer culture and defend it from encroachment by perceived outsiders. Such outsiders included, in particular, creators of serious, art, and DIY games that did not neatly align with dominant examples of videogames. Indeed, in the case of Twine productions, many of the most notable contributors to the form include women (especially queer and trans women), like Quinn, Anna Anthropy, Merritt Kopas, and Porpentine, rather than the primarily white, male, and heterosexual engineers who have historically made up the majority of the videogame industry.

#### 4. Games Beyond Entertainment

Much can be said of the vocal and relentless resistance to the transformation of videogames by some members of the GamerGate community. Certainly, in light of the dramatic changes that videogame form has *already* undergone in the early twenty-first century, the impassioned defenses of gamer identity feel belated. More homogeneous eras of the arcade and of hardcore gamer culture have passed us by long ago. Moreover, game designers have also reached beyond the realm of entertainment.<sup>3</sup> Certainly entertainment-oriented videogames have grown in popularity with titles such as the open-world, third-person action game *Grand Theft Auto V* (2013),

the first-person shooter game *Call of Duty: Black Ops 3* (2015), and the third-person action-adventure treasure hunting game *Uncharted 4: A Thief's End* (2016), which sold hundreds of millions of copies in their first-week sales. To be sure, these games are as vital to making sense of videogame form as Hollywood films are to understanding cinematic form. Even so, it is important that the ecology of what we consider a “videogame” has changed dramatically since the era of the early arcade and the Atari VCS when the majority of videogames were developed to occupy the leisure time and the attention of their players. Now, we also find videogames designed to change consumer behaviors and to enable participatory interventions into public health, as well as to convey interactive autobiographical narratives and appear in prominent fine art galleries.

One of the most evident indicators of the growth of videogame form is the proliferation of ludic genres that make the signifier “game” increasingly slippery. As I have argued elsewhere, although videogames usually take on narrative genres such as science fiction or romance, videogame genre is fundamentally defined by action-oriented mechanics, play modes, and interactive elements (“Digital Games”). Thus, videogames carry genre categories such as “platforming” and “racing” games. Experimentation with game mechanics, as well as new affordances that come with expanded memory, graphics systems, and other technical developments, has also introduced genres that exceed the range of the arcade-style games so dominant in the 1970s. Since that time, experiments with genres have yielded robust genres, such as “stealth,” “tower defense,” “survival horror,” and “dating simulation.” Technical developments in input devices, such as the motion-sensing Kinect, and networking capabilities have also enabled the growth of genres such as “dance games” and “Massively Multiplayer Online Role-Playing Games,” or “MMORPGs.”

Beyond game genres, we can also think of the varied functions of games and new domains into which they have moved. Even a partial review of areas beyond entertainment into which contemporary games have migrated offers a sense of this significant transformation in “games” and “videogames.” For example, there has been rapid expansion of the category of “serious games,” a term coined by Clark Abt in 1970. Abt explains that serious games “have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement” (9). Abt was an early innovator and advocate for this type of game, whose many early examples included tabletop role-playing and analog games. In the twenty-first century, there has been an increase in serious videogames, in particular. Notably, the Games for Change foundation was established in 2004 and, since that time, has sought to create and distribute games

that contribute to participatory advocacy. Certainly, serious games have spread far beyond a single organization. For example, *Darfur Is Dying* (2006) addresses the Darfur war and refugee crisis through multiple gameplay genres, including an action-oriented water retrieval mode and management simulation of a refugee camp. The *McDonald's Videogame* (2006) and *Oil God* (2006) operate as critical simulation games that parody corporate greed. Games such as *Cart Life* (2011) and *SPENT* (2011) explore underemployment and poverty in the US. Outside of solely human affairs, *Fate of the World* (2011) and *Bioharmonious* (2013) address issues of climate change and environmental balance.

Beyond serious games dedicated to raising social and political consciousness, other games actively attempt to change player behaviors. In particular, the design movement known as “gamification” names the use of game mechanics in traditionally nongame activities that seek to impact consumer behaviors, employee training, health and exercise habits, education, and other areas. In gamification, perhaps more than any other area, one sees the seepage of medium-specific elements of videogame form into various aspects of everyday life. Such designs include *Khan Academy* (2006), an educational online toolset that encourages students to set learning pathways that lead to specific academic goals. Another example that targets adults is *F-12* (2013), an employee-training game that DirecTV created to encourage workers to learn from failures. Closely related to gamification are games that tackle scientific and intellectual problems by inviting contributions from experts and amateurs alike. Videogame scholar Karen Schrier explores a number of such games (most of them digital) that fit into subcategories that include “citizen science games,” “crowd science games,” “games with a purpose,” “social participation games,” “crowdsourcing games,” “applied problem solving games,” “human computation games,” and “knowledge games” (6). Games such as *Foldit* (2008) and *EteRNA* (2010) invite players to play a game that builds knowledge databases or offers solutions to large-scale problems.

Even as some of these games address broader, systemic issues, videogames have also become a medium of expression increasingly capable of addressing personal topics. Such works include both autobiographical and biographical games. For instance, Mary Flanagan’s *[domestic]* (2003) uses a first-person shooter engine to reflect upon a childhood memory of a house fire. Anna Anthropy’s *ohmygod are you alright?* (2015) begins with an experience of being hit by a car and explores the challenges of navigating the hospital and medical care as a trans woman lacking adequate financial resources. Other games also use interactive and participatory resources to produce biographies of historical figures. For instance, Peter Brinson and



Kurosh ValaNejad's *The Cat and the Coup* (2011) stages events surrounding a 1953 CIA coup aimed at bringing down Mohammad Mossadegh, the first prime minister of Iran to be elected through democratic means.

Videogames have also started to impact the more specialized art world. "Artgames," a term coined by game designer Jason Rohrer in 2005, describes games, such as Jonathan Blow's *Braid* (2008), that use medium-specific properties to explore artistic and philosophical issues. John Sharp's term "game art" shifts the emphasis from gameplay to traditional art forms in capturing "art made of games" (14). This category includes works such as Cory Arcangel's *Super Mario Clouds* (2002), a "mod" or modification of *Super Mario Bros.* (1985) that retains only the background of clouds and sky, sans foreground or gameplay. Sharp also proposes the category of "artists' games" to capture digital, analog, and mixed-reality games that privilege play and audience interactions as the key site of their artistic intervention, as in some of Flanagan's work or by the group Blast Theory. Rather than demonstrating that all games are artful, the point of such games is to bring gaming into conversation with museum spaces, aesthetic theories, and artistic practices.

## 5. Methods in Videogame Criticism

Videogames, then, are not a uniform and coherent contemporary form but, as a mass medium, they manifest a form of sociopolitical intervention, an element of everyday life, a form of personal expression, and a medium for artistic production. Videogame criticism responds to this multiplicity through a variety of interdisciplinary methods. Three recent books might help highlight some differences in existing approaches, which can be separated heuristically into scholarship focused on videogame aesthetics and form, culture and history, and practice and design.

The first category of scholarship that concerns game aesthetics and form is exemplified by John Sharp's *Works of Game: On the Aesthetics of Games and Art* (2015). Sharp adopts ecological psychologist James Gibson's idea of "affordances" that describes "the qualities of an object that suggest its use" (4). Focusing on conceptual, formal, and experiential affordances, Sharp performs readings of avant-garde games ranging from Jodi's 2002 *SOD* (an abstract modification of id Software's popular first-person shooter *Wolfenstein 3D*) to Brenda Romero's 2009 *Síochán Leat* (a board game about Oliver Cromwell's seventeenth-century invasion of Ireland). The analysis of such games is formalist insofar as it attends to qualities such as graphics and narrative, as well as

medium-specific elements such as game mechanics, rules, and objectives. Yet a careful consideration of different communities of practice also informs the book. Contrasting two perspectives on chess, for example, Sharp writes, “For game-minded communities, chess is a thing unto itself, whereas for art-minded communities, chess is an idea space and a material from which art can be made” (8). This situated aesthetic engagement with games builds on fields that include art history and visual design.

A second area of research is focused on videogame culture and its histories. A compelling example of such work is Carly Kocurek’s *Coin-Operated Americans: Rebooting Boyhood at the Video Game Arcade* (2015). The book explores how videogames and arcades in the 1970s and early 1980s enabled a form of American masculinity. As she argues,

These games prepared players to serve both as laborers in the emergent white-collar service economy, where computers would be at the center of professional activity, and as investors/players in an increasingly deregulated marketplace. They introduced a generation of young men to computers as approachable, everyday technologies, just as the workplace was entering a period of massive computerization. (12)

Kocurek’s method, which derives from American studies and cultural theory, leads her to focus on arcade spaces, photographs, and other historical documents, rather than videogames or game art as such. Indeed, the book belongs to a growing field of study dedicated to game culture. Emerging avenues for videogame scholarship include viewer communities of thousands who follow particular players on Twitch TV and spectators who watch eSports and Multiplayer Online Battle Arena games. Some 27 million viewers streamed the 2014 Riot Games world championship of *League of Legends*, thereby rivaling the NCAA basketball finals that year and exceeding the average viewership of the World Series (Boonton). Increasingly, an engagement with these modes of spectatorship is informing game studies, including in social scientific fields such as anthropology and communications.

A third major area of work in the study of videogames has to do with practical design. Unlike a discipline such as English—in which there is often a wide gap between literary criticism and creative writing—game studies regularly eschews divisions between theory and practice. For instance, one of the most widely used and oft-cited books in the field, Katie Salen and Eric Zimmerman’s *Rules of Play: Game Design Fundamentals* (2003), is filled with both formal theory and practical design advice. A more recent book that blurs

this divide is Schrier's *Knowledge Games: How Playing Games Can Solve Problems, Create Insight, and Make Change*. Schrier notes that the book draws "from diverse fields, including games, citizen science, and crowdsourcing, as well as a range of disciplines, such as psychology, education, critical theory, computer science, design, human-computer interaction, media studies, history, and economics" (10). Given the relative newness of "knowledge games," which attempt to create knowledge and solve problems in the world outside of the videogame, Schrier analyzes limited examples to propose best practices for designers working in this field.

Even as these three areas of study and their associated methods represent a significant portion of game studies, they do not account for the entire field. There are also books that use videogames to discuss problems within philosophy and critical theory (Wark), to explore the software and platforms of digital games (Montfort and Bogost), and to study the behaviors of actual players through ethnographic and qualitative research (Shaw). Moreover, some of the most important contributors to game studies in the early twenty-first century, including Bogost and Flanagan, attend to the forms, cultures, and histories of games, while also building robust careers as game designers themselves. Interdisciplinarity may still be an option in some fields, but it is fundamental and even unavoidable within game studies.

## 6. Conclusion: Videogames as Cultural Dominant

Despite the variety of game genres and social scenes discussed here, videogames obviously remain a cultural form that has had considerably less time to develop than forms like poetry, the novel, painting, or film. Many of the cultural, artistic, and technical developments enabling the category to grow are, in the middle of the 2010s, scarcely a decade old. If we think about the diversity of games from the standpoint of designers and developers, however, the picture is far less heterogeneous. While approximately 44% of videogame players were women in 2015, the industry and design culture are still overrepresented by white, male, and heterosexual creators (Entertainment Software Organization). In the Gamasutra Salary Survey 2014, women in the game industry made up only 5% of the programmers and engineers, 9% of artists and animators, and 13% of game designers (2–3). Inequalities across demographic categories, including gender and race, have an impact on the future of how we design, play, and study games. Already genres such as the first-person shooter are splintering into innovations such as the first-person puzzle-platformer (e.g., *Portal*), first-person runner

(e.g., *Mirror's Edge*), and first-person walker (e.g., *Dear Esther* and *9.03m*). A radically different community of game designers would be likely to further expand available genres, styles, and values.

In his "Manifesto for a Ludic Century," Eric Zimmerman declares that if "in the 20th Century, the moving image was the dominant cultural form," the importance of digital media in the twenty-first century has already initiated a process through which "game-like experiences replace linear media" (2). Whether or not games are now *the* cultural dominant is a claim that remains to be observed. Arguably, the contemporary transmedia ecology privileges the merging and copresence of cultural forms (facilitated by the metamedium of the digital computer) over an obsolescence or replacement model. Moreover, if videogames are already notably polyvalent, what would it mean to claim that so diverse a form is dominant? Regardless, games are a crucial metaphor for our time, and videogames, in particular, will continue to be a central form of aesthetic production. It is a testament to the importance and robustness of game studies that it offers so many methods for approaching game form and that it already takes seriously the broad range of what is now meant by "game" and "videogame." Particularly in light of the expansion of the category of games in the early twenty-first century, game criticism appears considerably less preposterous than it once might have seemed. After all, in the US, we commonly frame even financial derivative trading and national election contests as games. Moreover, videogames monopolize many of our omnipresent screens. Thus, in our time, videogame history, culture, and form promise to play an important part in the evolving humanities, not to mention social and political life *as such*.

### Notes

1. For more details on these transformations in game culture, see for instance Anna Anthropy, *Rise of the Videogame Zinesters: How Freaks, Normals, Amateurs, Artists, Dreamers, Dropouts, Queers, Housewives, and People Like You Are Taking Back an Art Form* (2012); and Emma Westecott, "Independent Game Development as Craft," *Loading*. . . . 7.11 (2013): 78–91.
2. Though I do not address it here, the history of scholarship on nondigital games and the role of play in culture is even more expansive, reaching back to systematic studies by scholars that include the work of Johan Huizinga and Roger Caillois. See Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (1950); and Caillois, *Man, Play, and Games* (2001).
3. I am not implying that early videogames were simple or homogeneous, merely that the range and reach of the form has expanded since the 1970s. A number of texts have already explored complex and diverse developments throughout game history. Exemplary here are Montfort and Bogost (2009).

## Works Cited

- Abt, Clark C. *Serious Games*. New York: Viking Press, 1970.
- Bogost, Ian. *How to Talk About Videogames*. Minneapolis: U of Minnesota P, 2015.
- Booton, Jennifer. "27 million watched this video game tournament—matching NCAA final audience." *Market Watch*, 29 July 2015.
- butterworthy101. "Have people bothered to play Depression Quest? No I mean it." *Reddit*, 2 Sept. 2014. Web.
- Cameron, Phill. "Analogue: A Hate Story Review." *Eurogamer*. 4 May 2012. Web.
- Consalvo, Mia. *Atari to Zelda: Japan's Videogames in Global Contexts*. Cambridge, MA: MIT P, 2016.
- Entertainment Software Organization. "Essential Facts about the Computer and Video Game Industry: 2015." *Gamasutra Salary Survey 2014*, 1–8.
- Gilbert, Sari. *Designing Gamified Systems: Meaningful Play in Interactive Entertainment, Marketing and Education*. New York: Focal P, 2016.
- Harrigan, Pat and Matthew G. Kirschenbaum. *Zones of Control: Perspectives on Wargaming*. Cambridge, MA: MIT P, 2016.
- Isbister, Katherine. *How Games Move Us: Emotion by Design*. Cambridge, MA: MIT P, 2016.
- Jagoda, Patrick. "Digital Games and Science Fiction." In *The Cambridge Companion to American Science Fiction*. Ed. Eric C. Link and Gerry Canavan. New York: Cambridge UP, 2015.
- . *Network Aesthetics*. Chicago: U of Chicago P, 2016.
- Johnson, Leif. "Analogue: A Hate Story Review." *IGN*. 11 May 2012. Web.
- Kent, Steven L. *The Ultimate History of Video Games: From Pong to Pokémon and Beyond: the Story Behind the Craze That Touched Our Lives and Changed the World*. Roseville, CA: Prima Pub, 2001.
- Kocurek, Carly A. "Gamers vs. Tropes vs. Women in Video Games." *Journal of Digital Media Literacy*, 15 Dec. 2014. Web.
- . *Coin-Operated Americans: Rebooting Boyhood at the Video Game Arcade*. Minneapolis: U of Minnesota P, 2015.
- Love, Christine. *Analogue: A Hate Story*. Videogame. 2012.
- Maizels, Michael and Patrick Jagoda. *The Game Worlds of Jason Rohrer*. Cambridge, MA: MIT P, 2016.
- Massanari, Adrienne. "#gamergate and the Fappening: How Reddit's Algorithm, Governance, and Culture Support Toxic Technocultures." *New Media & Society* (2015).
- Montfort, Nick and Ian Bogost. *Racing the Beam: The Atari Video Computer System*. Cambridge, MA: MIT P, 2009.
- Murray, Janet. *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York: Free P, 1997.
- Parker, Felan. "An Art World for Artgames." *Loading*. . . . 7.11 (2013): 41–60.

- Penix-Tadsen, Phillip. *Cultural Code: Video Games and Latin America*. Cambridge, MA: MIT P, 2016.
- Quinn, Zoë. *Depression Quest*. Videogame. 2013.
- Reese, Nathan. "An Exhibition That Proves Video Games Can Be Art." *New York Times*. 10 Feb. 2016.
- Salen, Katie and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT P, 2003.
- Schrier, Karen. *Knowledge Games: How Playing Games Can Solve Problems, Create Insight, and Make Change*. Baltimore: Johns Hopkins UP, 2016.
- Sharp, John. *Works of Game: On the Aesthetics of Games and Art*. Cambridge, MA: MIT P, 2015.
- Shaw, Adrienne. *Gaming at the Edge: Sexuality and Gender at the Margins of Gamer Culture*. Minneapolis: U of Minnesota P, 2014.
- Sudnow, David. *Pilgrim in the Microworld*. New York: Warner Books, 1983.
- Upton, Brian. *The Aesthetic of Play*. Cambridge, MA: MIT P, 2015.
- Wark, McKenzie. *Gamer Theory*. Cambridge, Mass: Harvard UP, 2007.
- Westcott, Emma. "Independent Game Development as Craft." *Loading*. . . . 7.11 (2013): 78–91.
- Wolf, Mark J. P. *Video Games Around the World*. Cambridge, MA: MIT P, 2015.
- Zimmerman, Eric. "Manifesto for a Ludic Century." *ericzimmerman*, 2013. Web.