We the Gamers (book excerpt)

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GAMES IN THE TIME OF A CORONAVIRUS

The COVID-19 pandemic has upended how we do almost everything—teach, work, play, socialize, connect, give care, and even civically engage. It also upended how the public thinks about games. In 2019, the World Health Organization (WHO) added "gaming disorder" to their list of recognized psychological disorders.3 For years, pundits, parents, and public officials denounced games for a litany of civic problems—such as addiction, gun violence, and more.4

It's surprising what a difference a pandemic can make.

Only one year later, in 2020, media outlets, companies, and social organizations were telling people to stay home and play games, touting playing as if it were an act of good citizenship.5 The #PlayApartTogether movement encouraged players to avoid transmitting the virus (and social isolation) by being together virtually through games. And in March 2020, the WHO reversed their previous anti-games stance and backed the #PlayApartTogether movement. While people have always played games,

and many teachers have been innovatively using games for teaching, the collective stigma around them started to dissipate.6

Moreover, during the pandemic, games were used as virtual civic and social spaces. When people could not be physically together in classrooms, corporate offices, and community centers, teachers and professors held classes through games, colleagues held conferences and meetings through games, friends chatted and interacted through games, and grandparents and grandkids shared time and nonphysical space together through games. People celebrated birthdays and graduations through *Minecraft*, baby showers in *Animal Crossing*: *New Horizons*, and weddings in *World of Warcraft*. Games have always been places where people have connected, engaged, expressed themselves, or healed, but they became *the* place.7

Games also were communities where civic deliberation, public demonstration, and values sharing took place. People did not only go to the streets—they also went to the games. In 2020, members of the US House of Representatives livestreamed their play of the online imposter game *Among Us* on Twitch, with over 400,000 viewers watching. The US President Joe Biden and Vice President Kamala Harris created their own islands in *Animal Crossing: New Horizons* to support their election campaign. Gamers mounted demonstrations, rallies, protests, and debates through *The Sims*, *Grand Theft Auto*, *Fortnite*, and many other games.

Games have always been places where norms and values are negotiated, and they often have their own unique cultures that players need to learn to be able to fully participate.8 But the pandemic helped to ratify this. In the absence of physical civic spaces where ethics and values could be shared, games served as communal spaces where players could navigate the rapidly changing norms of our everyday, public lives. Through games, players were able to think and talk about how we should collectively behave beyond the game, such as whether to wear masks in public. Through games, players could practice these choices before enacting them in the real world. Or, they could enact risky behaviors in the game (like holding social events), which they could not do as safely in the physical world.

There are other ways that people were engaged in gaming during the

pandemic. In-person classes were rapidly transformed to hybrid and virtual configurations. Students participated in more distance learning, online courses, and at-home activities. Simultaneously, educators of all types more frequently assigned and used games to teach. What was once perhaps an in-class bonus or side jaunt became much more central to the curriculum. Games have been used to teach everything from math facts to art history to civic institutions.9 But they have now become more frequently adapted and modified to be used at home, virtually, and from a distance to learn, connect, and share. For instance, iCivics, an organization that creates games to teach about civics and the US government, created a remote learning toolkit to support at-home learning.10

Games themselves also continued to help people to understand and learn about pandemics as well as viruses and their spread.11 *Pandemic* is a board game where players work together playing different roles related to containing a pandemic (e.g., medic, field operative, researcher). The players all play against "the board" to "save humanity" and conquer a viral illness, which rapidly and exponentially jumps from city to city. Leacock, creator of *Pandemic*, wrote that his board game teaches us that the solution to a pandemic is that we all work together "to play to our strengths, balance short-term threats against long-term goals and make sacrifices for the common good. If we can communicate, coordinate and cooperate effectively we might better overcome this uncaring, relentless and frightening opponent."12 Likewise, the games *Plague Inc.* and *Plague Inc.: Evolved* are pathogen simulators, where players intentionally spread a virus or other pathogens such as fungi and bacteria. During the COVID-19 pandemic, the *Plague Inc.* developers created a new version of the game that flips this around. In *Plague Inc.: The Cure*, players instead "try to save the world by controlling the global pandemic response," through mitigating the outbreak, creating a vaccine, and making economic and social policies (see more in chapter 11). Moreover, Lofgren and Feffernan looked at a virtual viral outbreak in the game *World of Warcraft*, which helped them to model epidemiological responses to real-world pandemics. Researchers then used these results to better understand the COVID-19 pandemic.13

Games also served as a form of communication, helping to spread information on the coronavirus, and helping us to understand what we

should do as a society to collectively solve the problem of its proliferation. *The Washington Post* posted simulations of the spread of the virus to help its audience visualize what would happen if we quarantine people or enforce social distancing: Would it flatten the curve?14 Likewise, Ahuja, Huang, Kovach, and Woods created simulations of viral spread, and applied it to college classrooms.15 Salathé and Case created "What Happens Next?," a series of playable simulations about COVID-19 and its possible epidemiological spread.16 Kirby took a narrative approach, and used a Twine game to expose what it would feel like as a college student attending class in person in fall 2020.17 Game players also took collective real-world action, and worked together to try to solve the problem of COVID-19 through games like *Foldit* and *EteRNA*.18

Games have always mattered and do not need to be legitimized, but the pandemic further showed us that games can serve as publics: as places and communities for learning, for connecting, for problem-solving, and for ethical and civic engagement. This book acknowledges and observes all the ways that people are *already* engaging in and learning about civics and ethics through games. It explores *how* educators can make the best use of games for teaching ethics and civics, given their limitations and strengths. It shares strategies and examples of using games in educational settings. It also imagines possibilities for how we might use games to reshape, repair, and remake our world, together.19

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WHAT ARE GAMES?

The world—and humanity—is messy, and that may be why we need games.

First, what is a game? Typically, games are described as having a number of characteristics: goals, and actions that players can take to reach goals, and players, as well as a tacit agreement from players that they are playing a game, where the differential outcomes of that game matter. The definitions and uses of games vary tremendously, however. Games have been labeled as tools, media, experiences, art, and systems. They come in all different genres and styles, shapes, sizes, communities, and platforms. In this book

I discuss augmented reality (AR) games, which are games that integrate virtual gameplay such as virtual objects, clues, or characters, with real-world locations, interactions, and people. I also look at analog (nondigital) games such as card games, board games, and larps (live action role-playing games). I talk about virtual reality (VR) games, in which the whole experience is virtual, the players' entire visual field is virtually generated, and the players are interacting with virtual objects, people, and locations (though some VR games may incorporate players who are not virtually participating). I also investigate digital and online games, which are games that are played using personal computers, mobile devices, game consoles, internet browsers, livestreaming platforms, or other connected devices or platforms.37

These games can come in all different genres, such as adventure, puzzle, first-person shooter, battle royale, or walking simulator. They can involve one person playing by themselves in their home or multiple people playing across many different locations around the world. They may be played only in a specific location, such as Lexington, Massachusetts in the United States or Karachi in Pakistan. Or they might be played anywhere, with any type of object that is available to the players.

Moreover, all different types of games are being played by all different people.38 The latest Entertainment Software Association (ESA) statistics on game-playing explains that 75% of Americans have at least one gamer in their home, and that 57% of parents say they play video games with their kids at least once per week.39 Since the COVID-19 pandemic, game-playing has increased even further. A report from Unity explains that there was a 46% increase in daily active users of PC and consoles and a 17% increase in mobile device use. Mobile game installations increased 84%. Video game spending overall rose 22% from 2019 to 2020.40

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WHAT ARE GAMES FOR CIVICS AND ETHICS?

So what do I mean by games for ethics and civics?

Raphael et al. explain that games for learning civics "help players to

develop knowledge, skills, and dispositions that players then apply to public matters in the world outside the game."52 We could add ethics to this definition and say that these games help to support the knowledge, skills, and dispositions necessary for ethical, public, and societal matters.53

Games that teach ethics and civics can vary tremendously, from acting like the "President of the United States in iCivics' *Executive Command* to understanding what it's like to be the parent of a terminally ill young son in *That Dragon, Cancer*."54 Sometimes a game is the primary part of a classroom lesson, such as deliberating and voting on historic proposals in *VoxPop*, or collaboratively crafting a historical building like the Taj Mahal in *Minecraft*.55 Other times games may be played to support further deliberation, such as using the game *Immigration Nation* to kick off a discussion on immigration, or the digital game *Acceptance* to reflect on gender expression, identity, and belongingness.56 Civics and ethics games could involve playing a simple rhyming game in a preschool or be "as complex as transforming an entire class module into an alternate reality game (ARG), such as Darvasi did to teach *One Flew over the Cuckoo's Nest* for his English literature students."57 These games may aim to make real-world change in one's community, such as *Macon Money* or *Participatory Chinatown*.58 They can also take place in real-world locations, such as *Pokémon Go*, *Time Trek*, or *Jewish Time Jump*.59 They could be raw, unpolished games made in one night by one person (such as Kirby's *September 7, 2020* Twine game), or multimillion dollar games made and updated over the course of many years (such as *Fortnite*, *Overwatch*, or *World of Warcraft*).

There are a number of ways that games can share and express civics and ethics topics and enable the practice of relevant skills:

1. **Real-world knowledge and action.** Games can enhance knowledge of real-world issues and topics; encourage the understanding of real-world concepts, institutions, processes, and policies; and enable real-world action and change. For instance, in Abbott's high school civics course at a public school in North Carolina, she teaches concepts such as the US government's three branches and the Bill of Rights. To provide foundational knowledge she may use the iCivics game *Do I Have a Right?*, in

which players run their own law firm and decide whether to take on a client who may have had a constitutional right violated. Or she may have students learn about real-world concepts like the US Electoral College through games such as *Win the White House*, where players campaign to win a fictional US presidential election 60

2. **Community and connection.** Games are civic communities. They can help to strengthen social interactions, communication, and a sense of belongingness in a community of learners. They can help people to better understand themselves, their identities, and their roles as members of a society as well as to respect, empathize with, and have compassion for others.61 (Just like all communities, however, they can also do the opposite and foster hate, harassment, bullying, exclusion, and toxicity.) Games like *Animal Crossing: New Horizons* can encourage community among people who are physically distanced from each other. Games may also support an in-class community more deliberately, like in *VoxPop*, where players work together to discuss and negotiate different proposals, views, and values. Moreover, games themselves are forms of human expression and as such can communicate a perspective on humanity, such as *SweetXheart,* which tells of a Black woman's experiences ..., or *A Woman Goes to a Private Games Industry Party*, which expresses perspectives on harassment in the game development community.62

3. **Critical thinking and critical inquiry.** Games are ethical systems, and players are moral actors who engage in them. Games can help people practice relevant critical thinking and inquiry skills such as reasoning, decision-making, problem-solving, systems thinking and analysis, interpretation, evaluation, information gathering, and design and creation. They can pose problems and quests or act like morality tales and ethical case studies, where the player can enact part of the story to help them practice making decisions or analyzing outcomes.63 For instance, in *Planet Planners*, a mobile ecology simulation game,64 players practice resource management skills; in *Max*, a board game about helping creatures avoid a hungry kitty, kids learn how to

collaboratively make decisions. The online digital games *Bad News*
and *Harmony Square* seek to teach players how to identify
disinformation and political manipulation techniques. Games can
also serve as arguments about the world by enabling players to
interact with systems, such as how we might learn about the
oppressiveness of bureaucracy through *Papers, Please* or of
systemic bias in *Parable of the Polygons*.65

Games have been and can continue to be used for all different parts of
ethics and civics education.66 To further give you a sense of the breadth
and variety of the types of games that could be used, here are some
brief examples of how games can be included in the classroom, after-
school program, home, remote learning environment, or other educational
contexts.

- In *Factitious*, a mobile and browser-based game, players decide if
  an article is "authentic" and based on vetted facts and interviews,
  or "fake" and based on made-up quotations, misinformation, or
  satire. Teachers can use the game to foster information literacy
  skills, such as reading articles, checking sources, and vetting facts.

- The VR game *Along the River of Spacetime* helps to express and
  communicate Anishinaabeg teachings and cultural practices
  related to ecology, space, and the environment …. Teachers can
  use the game to share Indigenous perspectives on land and
  place.67

- In *Buffalo*, a card game, players need to name characters or
  people who match combinations of characteristics. There is an
  orange deck (made up of adjectives) and a blue deck (with nouns).
  Players flip over one of each and have to come up with any type
  of figure who matches the two words. The game was designed to
  help players become more aware of their biases and
  prejudices.68

- *Quandary*, an online and mobile digital game, invites players to
  decide the best solutions to problems faced by a new society,
  Braxos. Players need to solicit input from Braxos citizens, mount
  arguments, weigh pros and cons, and iterate through choices and

consequences to make the best decisions. Teachers can use this to support ethical decision-making, such as holding an in-class deliberation around the strategies and tactics used in the game. "They can also extend the lessons of *Quandary* to real-life dilemmas suggested by students."

- In *The Migrant Trail*, a browser-based game, players take on the roles of two different sides of an immigration issue. They play as a migrant who is trying to cross the border and escape the border patrol officers. Or they play as a border control agent, who is trying to find the illegal immigrants. Teachers can use this game to show multiple perspectives on an issue, and to help students explore the complexities of representing an issue like immigration through games.69

- Using a series of plastic (about 8 feet by 8 feet) floor games in Indian community workshops, researcher Khanna teaches issues such as electoral literacy or child rights to different audiences.70

- In the VR game *Keep Talking and Nobody Explodes*, players must defuse a virtual bomb. One player has the virtual headset and can see the virtual bomb, along with some tools. The other set of players has a manual but no access to the bomb, and needs to communicate with the VR headset-wearing player to figure out how to defuse the bomb before time runs out. Teachers can use this to support collaboration and dialogue, as well as cooperative problem-solving under pressure.71

- In the short indie digital game *Loneliness*, players move a white square piece toward other squares, and the other squares move away. Though the game is brief, players can discuss how emotion can be evoked by a game, even a game that is abstract and simple.

- In *Mission US*, players take on the role of a fictional adolescent and explore a historic moment, while making decisions for them, going on missions, and completing goals. In the *Mission US: City of Immigrants* module they play as Lena Brodsky, a Jewish immigrant who just arrived in New York City at the turn of the twentieth century.72

- In the online multiplayer game *Among Us*, a group of players needs to figure out who the imposter(s) are and collectively vote to remove them from the game before the imposter(s) eliminate them instead. Students could use this game to practice communication and deliberation, and to reflect on the ethics of deciding which fellow players to eject from the game.
  Time Trek is a series of augmented reality (AR) games played at Harpers Ferry National Historical Park in Harpers Ferry, West Virginia, a US Civil War site .... In these games players explore the physical site while interacting with virtual historic and fictional characters. They learn about personal struggles and stories related to enslavement and emancipation, and meet characters such as Joseph, a free Black person who is helping runaway slaves escape on a ferry he operates.73

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WHAT TO EXPECT

This is a book about games, and it is a book about learning. Yet I am not trying to argue that games *should* be used for educational purposes. Games are not universally bad, nor always good, at teaching ethics and civics. This book is not going to laud games as the panacea, nor is it going to only point out their problems. And just because something is a game does not necessarily make them fun nor functional.

The reality is much more nuanced. Rather, I will question games and consider the circumstances under which they may help us to better engage with, support, and inspire each other. I will cheerlead for games, but I will also problematize them by pointing out their limitations, weaknesses, ethical challenges, and idiosyncrasies.74 I will assert that they are often awkward worlds that embed in them their designers' and players' own biases, prejudices, heuristics, and assumptions. I will help to reveal how games matter.

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NOTES:

(3.) Not totally dissipated, as many people still see the need to limit and confine game-playing rather than seeing it as part and parcel of being human. For more about the WHO decision see, for instance, WHO, *Addictive Behaviours: Gaming Disorder*, *2018,* https://www.who.int/news-room/q-a-detail/addictive-behaviours-gaming-disorder (accessed December 28, 2020) explaining that the classification describes people who make gaming too much of a priority in their lives over other so-called healthier activities—such as real-world socializing and going to school and work.

(4.) See, for instance ADL, July 2019, *Free to Play? Hate, Harassment, and Positive Social Experiences in Online Games*, https://www.adl.org/media/13139/download; ADL, November 2020, *Free to Play? Hate, Harassment, and Positive Social Experiences in Online Games 2020*, https://www.adl.org/free-to-play-2020#results (accessed January 12, 2021). I was a fellow at the ADL but did not work on this particular study. Note, ADL was formerly known as the Anti-Defamation League.

(5.) For instance, Riot CEO Nicolo Laurent said, "Let's stay physically apart—and take other public health steps such as hand hygiene—to help flatten the curve and #PlayApartTogether to help power through this crisis. For Rioters, playing games is more than just a game; it's a meaningful life pursuit. And now, for the billions of players around the world, playing games could help the pursuit of saving lives. Let's beat this COVID-19 boss battle together." See G. Torbet, "The World Health Organization Wants you to Stay Home and Play Video Games," Digital Trends, March 29, 2020, https://www.digitaltrends.com/gaming/who-video-games-playaparttogether/.

(6.) P. Suderman, "The World Health Organization Classified Video Game Addiction as a Disorder. Now It's Telling People to Play Video Games," *Reason Magazine*, March 31, 2020, https://reason.com/2020/03/31/the-world-health-organization-classified-video-game-addiction-as-a-disorder-now-its-telling-people-to-play-video-games/. See also Good Games Podcast, May 18, 2020, https://art19.com/shows/good-game-podcast/

episodes/26c80ab1-ce1a-48be-a3ee-8dbc9f266bea. It's also possible the public will go back to demonizing games once the pandemic is over. Moral panic over screentime during the pandemic has persisted. See, for instance, M. Richtel, "Children's Screen Time Has Soared in the Pandemic, Alarming Parents and Researchers," *New York Times*, January 16, 2021, https://www.nytimes.com/2021/01/16/health/covid-kids-tech-use.html. A moral panic is a feeling of fear spread over the public about a new technology or phenomenon, and its possible corruption or erosion of society, such as widespread fears about how television or games ("screens") may addict and corrupt youth.

(7.) Nintendo, *Animal Crossing: New Horizons*, 2020; Blizzard, *World of Warcraft*, 2004; Mojang Studios/Microsoft, *Minecraft*, 2011.

(8.) Alexandria Ocasio-Cortez and Ilhan Omar participated in this livestreamed event, meaning it was shared and broadcast live for people with internet-enabled computers to watch via a livestreaming platform called Twitch. Joshua Rivera, "AOC Played *Among Us* and Achieved What Most Politicians Fail at: Acting Normal," *The Guardian*, October 22, 2020, https://www.theguardian.com/games/2020/oct/22/alexandria-ocasio-cortez-ilhan-omar-among-us-twitch-stream-aoc; Alaa Elassar, "Joe Biden Has His Own Island on '*Animal Crossing*' Where You Can Learn About His Campaign," CNN, October 18, 2020, https://www.cnn.com/2020/10/18/business/biden-animal-crossing-island-trnd/index.html; Kristina Reymann-Schneider, "How Politicians Use Games for their Own Gains," *DW*, October 19, 2020, https://www.dw.com/en/how-politicians-use-video-games-for-their-own-gains/a-55286753. Gideon Dishon and Yasmin B. Kafai, "Connected Civic Gaming: Rethinking the Role of Video Games in Civic Education," *Interactive Learning Environments* (2019), p. 1–11, DOI: 10.1080/10494820.2019.1704791; M. Sicart, *The Ethics of Computer Games* (Cambridge, MA: MIT Press, 2009); K. Schrier, "Designing and Using Games to Teach Ethics and Ethical Thinking," in *Learning, Education & Games Vol. 1: Curricular and Design Considerations*, ed. K. Schrier (Pittsburgh: ETC Press, 2014), p. 143–160.

(9.) See, for instance, the Learning, Education & Games book series: Schrier, *Learning, Education & Games Vol. 1*; Schrier (ed.), *Learning, Education & Games Vol. 2: Bringing Games into Educational Contexts* (Pittsburgh: ETC

Press, 2016); and Schrier (ed.), *Learning, Education & Games Vol. 3: 100 Games to Use in the Classroom and Beyond* (Pittsburgh: ETC Press, 2019). For instance, the educational game *Quandary* almost doubled in usage in 2020 than over the same period in 2019, according to information shared during a meeting with Shannon Meneses and the *Quandary* team. Specifically, in December 2019 to December 2020, the number of users increased by 77% and gameplays increased by 17%.

(10.) iCivics, Toolkit, Spring 2020, https://www.icivics.org/toolkit?gclid=EAIaIQobChMItby0p-HK6QIVJYFaBR0EzAPFEAAYASADEgKSpPD_BwE.

(11.) Games such as *Plague Inc*. (a virus simulator) and *Pandemic* (a cooperative board game) skyrocketed in downloads and sales. See for instance Leslie Katz, "Coronavirus Leads to Sales Spike of *Plague Inc.*, a Game about Pandemics," CNET, January 25, 2020, https://www.cnet.com/news/coronavirus-leads-to-sales-spike-of-plague-inc-a-game-about-pandemics/.

(12.) M. Leacock, "No Single Player Can Win This Board Game: It's Called *Pandemic*," *New York Times*, March 25, 2020, https://www.nytimes.com/2020/03/25/opinion/pandemic-game-covid.html. As another example, the Tiltfactor Lab created *Pox: Save the People* (https://tiltfactor.org/game/pox/) and *ZombiePox* (https://tiltfactor.org/game/zombiepox/) to help stop the spread of disease. See also K. Andersen and M. May, "Playing Against the Virus," *The World*, March 8, 2013, https://www.pri.org/stories/2013-03-08/playing-against-virus

(13.) Players can change parameters to spur the pathogen on more rapidly. They are in development for a new version of the game where players play as the medical professionals and aim to contain a virus like Sars-CoV-2. See more at Ndemic Creations, *Plague Inc*., https://www.ndemiccreations.com/en/ (accessed June 10, 2020). See also Ndemic Creations, *Plague Inc.: The Cure*, https://www.ndemiccreations.com/en/news/184-plague-inc-the-cure-is-out-now-for-ios-and-android (accessed November 11, 2020); E. Lofgren and N. Feffernan, "The Untapped Potential of Virtual Game Worlds to Shed Light on Real World Epidemics," *The Lancet*, 7(no. 9), 2007: 625–629; J. Elker, "*World of Warcraft* Experienced a Pandemic in 2005, Which May Help

Coronavirus Researchers," *Seattle Times*, April 10, 2020, https://www.seattletimes.com/business/technology/world-of-warcraft-experienced-a-pandemic-in-2005-which-may-help-coronavirus-researchers/—about when *World of Warcraft* accidentally unleashed the Corrupted Blood plague.

(14.) H. Stevens, "Why Outbreaks Like Coronavirus Spread Exponentially and How to 'Flatten the Curve,'" *Washington Post*, March 14, 2020, https://www.washingtonpost.com/graphics/2020/world/corona-simulator/.

(15.) R. Ahuja, C. Huang, S. Kovach, and L. Woods, "Modeling the Spread of COVID-19 in UCLA Classrooms," May 12, 2020, https://stack.dailybruin.com/2020/05/12/covid-model/.

(16.) Marcel Salathe and Nicky Case, "'What Happens Next?' COVID-19 Futures, Explained with Playable Simulations," NCase, https://ncase.me/covid-19/ (accessed November 12, 2020).

(17.) Cait S. Kirby, September 7, 2020, https://caitkirby.com/downloads/Fall 2020.html. There is also a version about faculty perspectives, which can be found at Cait S. Kirby, October 1, 2020, https://caitkirby.com/downloads/October1st2020.html. The games were created in the summer of 2020, a few months prior to campuses reopening. When speaking to my students about the first game on September 9, 2020, they said the game was even more intense than what they are experiencing in person at a residential college in the northeast of the United States, but that it shared a perspective on what it was like if you are having underlying health conditions as a student, and in a more regimented residential situation.

(18.) UW Game Center, *Foldit*, https://fold.it/ (accessed June 10, 2020). In *Foldit*, players and computer work together to solve real-world "protein" puzzles. Human beings help manipulate 3-D versions of proteins to try to give a computer the algorithm or steps to being able to understand the structures of real protein. See also Carnegie Mellon University, *EteRNA*, https://eternagame.org/ (accessed June 10, 2020). In *EteRNA*, players develop new possible RNA protein molecules to solve real-world problems. See more about *EteRNA* in chapter 5. See more about both games in K.

Schrier, *Knowledge Games: How Playing Games Can Solve Problems, Create Insight, and Make Change* (Baltimore: Johns Hopkins University Press, 2016).

(19.) This refers all types of analog and digital games, including virtual reality (VR) and augmented reality (AR) games. Games are yet another way to help support the practice of essential skills related to ethics and civics, in addition to (but not replacing) other instructional experiences such as lectures, case studies, books, films, worksheets, expository writing, debate, field trips, or maps. However, games are not simply analogous to a worksheet or a book; and they are more than a standalone tool.

(37.) J. Juul, *Half Real: Video Games between Real Rules and Fictional Worlds* (Cambridge, MA: MIT Press, 2005), pp. 13. Jesper Juul defines games as having a "rule-based formal system; with variable and quantifiable outcomes; where different outcomes are assigned different values; where the player exerts effort in order to influence the outcome; the player feels emotionally attached to the outcome; and the consequences of the activity are optional and negotiable." However, I tell my students that we can read, accept, and even embody a definition of a game, but as soon as we define games we should be seeking ways to push on the boundaries of that definition, such as by finding examples that defy the definition, and inventing new forms that subvert it. See more about the contours of what counts as a game in M. Consalvo and C. Paul, *Real Games* (Cambridge, MA: MIT Press, 2019).

(38.) What is deemed a real game and who is deemed a real gamer is also needing clarification and affects our identity as a game player or the identification as something as a game. See more about this in Consalvo and Paul, *Real Games*. Real-world interactive games are ones where participants interact with each other in shared physical environments, though they could be adapted for a remote learning environment. In digital games, most of the game play happens in a digital or virtual environment, where the goals, obstacles, and rewards are embedded in that environment. Online games enable some type of connectivity, such as among devices and players. A battle royale game is a multiplayer game where players compete to be the "last person standing," after surviving various obstacles—and each other.

(39.) Entertainment Software Association (ESA), *Essential Facts About the Games Industry*, May 2019, https://www.theesa.com/wp-content/uploads/2019/05/ESA_Essential_facts_2019_final.pdf. Also, only 21% of all gamers are under 18 years old.

(40.) See for instance B. Francis, "Unity Report Shows Massive Spike in Video Game Business Due to COVID-19," *Gamasutra*, June 10, 2020, https://www.gamasutra.com/view/news/364543/Unity_report_shows_massive_spike_in_video_game_business_due_to_COVID19.php?elq_mid=97698&elq_cid=12458567. See also, M. Hume, M. Klimentov, E. Favis, G. Park, and T. Amenabar, "The Biggest Questions Facing the Gaming World in 2021," *The Washington Post*, December 30, 2020, https://www.washingtonpost.com/video-games/2020/12/30/2021-video-game-outlook/.

(52.) C. Raphael, C. Bachen, K. M. Lynn, J. Baldwin-Philippi, and K. A. McKee, "Games for Civic Learning: A Conceptual Framework and Agenda for Research and Design," *Games and Culture* 5, no. 2 (2010): 199–235. Cited in Dishon and Kafai, "Connected Civic Gaming."

(53.) Likewise, S. S. Adams and J. Holden call this "civic engagement gameplay as play that is based upon civic content such as politics, economics, and society; play that encourages democratically oriented skills such as communication, negotiation, and problem-solving; play that fosters responsibility to cocreate the game; and play that provides advocacy opportunities." Sharman Siebenthal Adams and Jeremiah Holden, "Games Ethics and Engagement: Potential Consequences of Civic-Minded Game Design and Gameplay," in *Designing Games for Ethics: Models, Techniques and Frameworks*, ed. K. Schrier and D. Gibson (Hershey, PA: IGI Global, 2011).

(54.) Schrier, "Guiding Questions for Game-Based Learning," p. 3.

(55.) C. Weitze, "*Minecraft* with Second Graders," in Schrier, *Learning, Education, & Games Vol. 2*; "Gigantic Mechanic," *VoxPop*, https://www.voxpop.io/ (accessed November 11, 2020).

(56.) K. Schrier, "Introduction," in *Learning, Education, & Games Vol*. 2. See more at, Laura Kate Dale, *Acceptance*, 2015, https://laurakindie.itch.io/

acceptance-jam-for-leelah-entry. This game may not be appropriate for younger students due to content about sexual assault and other forms of violence. See more at, M. Evans, "A Video Game Showed Me Who I Really Am," Polygon, April, 12, 2019, https://www.polygon.com/2019/4/12/18306040/acceptance-game-identity-gender

(57.) Schrier, "Guiding Questions for Game-Based Learning," p. 3, citing P. Darvasi, "Gone Home as an English Text," in Schrier, *Learning, Education, & Games Vol.* 1.

(58.) See work by B. Stokes, *Locally Played* (Cambridge, MA: MIT Press, 2020) and S. Schirra, "Playing for Impact: The Design of Civic Games for Community Engagement and Social Action," S.M. thesis, Massachusetts Institute of Technology, 2013.

(59.) See more about each of these in Schrier, *Learning, Education & Games Vol*. *3*.

(60.) Schrier, "Guiding Questions for Game-Based Learning"; Valencia Abbott, personal interview, Spring 2019.

(61.) Dishon and Kafai, "Connected Civic Gaming"; M. Ito, K. Gutiérrez, S. Livingstone, B. Penuel, J. Rhodes, K. Salen, J. Schor, J. Sefton-Green, and S. Craig Watkins, *Connected Learning: An Agenda for Research and Design* (Irvine, CA: Digital Media and Learning Research Hub, 2019); M. Ito, E. Soep, N. Kliger-Vilenchik, S. Shresthova, L. Gamber-Thompson, and A. Zimmerman, "Learning Connected Civics: Narratives, Practices, and Infrastructures," *Curriculum Inquiry* 45 (2015): 10–29.

(62.) R. Carbo-Mascarell, *A Woman Goes to a Private Games Industry Party*, https://moreelen.itch.io/a-woman-goes-to-a-private-games-industry-party; C. Small, *SweetXHeart*, http://www.gamesforchange.org/game/sweetxheart/; see also games by P. Pedericini and J. Stiles, Mollendustria, such as, P. Pedericini, *Everyday the Same Dream*, https://www.molleindustria.org/everydaythesamedream/everydaythesamedream.html, or Porpentine, such as *Howling Dogs*, http://slimedaughter.com/games/twine/howlingdogs/.

(63.) K. Schrier, "EPIC: A Framework for Using Video Games for Ethics

Education," *Journal of Moral Education* 44, no. 4 (2015): 393–424; Schrier, "Guiding Questions for Game-Based Learning"; and *Learning, Education, & Games Vol. 1*.

(64.) *Planet Planners*, http://www.lauravila.com/planet-planners. See more about ethical decision-making in games from: M. Sicart, *The Ethics of Computer Games* (Cambridge, MA: MIT Press, 2009); K. Schrier, "Designing and Using Games to Teach Ethics and Ethical Thinking," in *Learning, Education & Games Vol. 1: Curricular and Design Considerations*, ed. K. Schrier (Pittsburgh, PA: ETC Press, 2014). M. Sicart, *Beyond Choices: The Design of Ethical Gameplay* (Cambridge, MA: MIT Press, 2013); K. Schrier and D. Gibson, eds., *Designing Games for Ethics: Models, Techniques, Frameworks* (Hershey, PA: IGI Global, 2010); K. Schrier and D. Gibson, eds., *Ethics and Game Design: Teaching Values through Play* (Hershey, PA: IGI Global, 2010); M. Flanagan and H. Nissenbaum, *Values at Play* (Cambridge, MA: MIT Press, 2014).

(65.)   *Max*, https://www.amazon.com/Family-Pastimes-Max-Co-operative-Game/dp/B00000IUFD; *Bad News*, https://www.getbadnews.com/#intro; *Harmony Square*, https://www.harmonysquare.game/en/play; *Papers, Please*, https://papersplea.se/; *Parable of the Polygons*, https://ncase.me/polygons/.

(66.) This includes commercial, popular, and mainstream digital games, as well as short, in-person analog games. It includes below-the-radar indie games, student-designed games, and card games, as well as mobile, virtual reality, and augmented reality games. See more about the breadth of gaming and labeling games in M. Consalvo and C. Paul, *Real Games*. Also, as Dishon and Kafai explain, these categories are not dichotomous, but are useful for understanding the different ways games and play can contribute to our understanding of civics: "First, in light of the emphasis on the development of civic practices through youth's interest-driven pursuits, we distinguish between (i) games that enable players to learn about the civic sphere, focusing on civic knowledge, and (ii) games that aspire to facilitate opportunities for interactions simulative of civic participation. Second, we identify the relationship between the game context and civic ones, distinguishing between (i) games that focus on the development of players' reflection concerning civic issues, and (ii) those that strive to offer more

concrete connections to the civic sphere. Importantly, rather than strict dichotomies, these distinctions are laid out in order to offer useful categories that tease out the diverse contributions video games can offer to civic education." Dishon and Kafai, "Connected Civic Gaming." See also Schrier, *Knowledge Games* and Schirra, "Playing for Impact."

(67.) An Indigenous people in what is now Canada and the United States. For more about the games listed: Elizabeth LaPensée (Design and Art), Exquisite Ghost (Music and Sound), in *Along the River of Spacetime*, https://www.spacetimeriver.com/ (accessed on November 12, 2020); American University Game Lab, *Factitious*, http://factitious.augamestudio.com/#/.

(68.) S. Biswas and P. Gestwicki, "*Buffalo*," in Schrier, *Learning, Education & Games Vol. 3*; see also Tiltfactor Lab, *Buffalo: The Name Dropping Game*, https://tiltfactor.org/game/buffalo/ G. Kaufman and M. Flanagan, "A psychologically "embedded" approach to designing games for prosocial causes." *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 9, no. 3, (2015): Article 1. doi: 10.5817/CP2015-3-5

(69.) Learning Games Network, *Quandary*, https://www.quandarygame.org/ ; Gigantic Mechanic, *The Migrant Trail*, https://theundocumented.com/. An open question around *The Migrant Trail* game is whether the two sides (migrants and border patrol officers) should be equated, or whether it is problematic to play a role such as that of oppressors in this game, so teachers should reflect on this game and its use further. See more about this in chapter 8. Information on *Quandary* and its usage was supported by the *Quandary* team and correspondence with them in winter, 2021. Quotation by the *Quandary* team, Winter 2021.

(70.) Aparna Khanna, researcher in India, personal interview, Spring 2019.

(71.) O. Jimenez, "*Keep Talking and Nobody Explodes*," in Schrier, *Learning, Education & Games Vol. 3*. There are also non-VR versions of this game. See more at Steel Crate Games, *Keep Talking and Nobody Explodes*, https://keeptalkinggame.com/, 2018.

(72.) Another module in *Mission US* is "A Cheyenne Odyssey," where players

play as Little Fox, a Cheyenne boy in post–Civil War America, and there is a module around slavery as well. Some educators have boycotted these games because they feel these modules further stereotypes. Educators should reflect further on this game and the context of its use, and how to best represent different types of histories and identities through games. See more at WNET/Thirteen and Electric Funstuff, *Mission US*, https://www.mission-us.org/. See more in chapter 8.

(73.) L. Gillepsie, A. Chenoweth, and D. Frye, "*Time Trek*," in Schrier, *Learning, Education & Games Vol. 3*.

(74.) For instance, research suggests that games are not the bastions of aggressive behavior and violence that media reports may purport. A 2019 study from the Oxford Internet Institute, led by Andrew Przybylski, investigated information from parents and caretakers to help in evaluating the aggressiveness of the children in the study. The researchers also used specific ratings criteria to judge the violence in a particular game, rather than the subjective views of the players. They found no correlation between playing the games and aggressive behavior in teenagers, and even if they had found a correlation, it would not have meant that the games specifically caused the behavior to occur. A. K. Przybylski and N. Weinstein, "Violent Video Game Engagement Is Not Associated with Adolescents' Aggressive Behavior: Evidence from a Registered Report," Royal Society Open Science, February 3, 2019, https://royalsocietypublishing.org/doi/10.1098/rsos.171474. However, the connection between violence and games is not the focus of this book. All types of antisocial or potentially harmful behaviors may be happening online and through social media, such as the spread of disinformation, trolling, name calling, sexist and racist remarks, or trash talking, and sometimes these activities are happening in and through games and gaming communities just as they are on other platforms, offline communities, and societal interactions. Harmful and destructive behaviors are not limited to games but may be designed and algorithmically allowed, invited, and even propagated to foment, as on other online social media platforms and communities (e.g., Facebook, Twitter, Twitch, Discord). That said, we should avoid moral panics and consider instead the complexities of how these platforms enable community and care, as well as hate and

cruelty. This is an opportunity for us to rethink about how we govern publics, whether in-person or through virtual worlds. Finally, the panacea comment is inspired by an interview with Kelli Dunlap and Susan Rivers, Spring 2019.