game environments

global network player authority PewDiePie guild god Let's Play angel undead wtf authentic mediatization skill PvP dungeon contest digital
game rule system gameplay avatar WoW noob kills demon race body fight people spell experience S4d discussion wedding
religion gamer analysis representation he o religio-scape soul diablo class tradition with rebirth genesis clan gamer
simulation lol ludology The Last of Us death resurrection funeral runes virtual identity buff priest salvation mago XBox 360PVE
narrative immersion community symbols

Untitled. Illustration by Gabriel Alayza Moncloa.

Special Issue

Revisiting Teaching and Games. Mapping out Ecosystems of Learning

edited by

Björn Berg Marklund, Jordan Loewen-Colón and Maria Saridaki

Issue 15 (2021)

reports

Report

Spreading Learning through Fake News Games

Karen Kat Schrier

Abstract
To enhance news and information literacy skills for college students, I used three games related to the spread of disinformation, *Harmony Square* (2020), *Fake it to Make it* (2017), and *Troll Factory* (2019). I found that the simpler games with a series of scaffolded, meaningful choices better supported student engagement. I also found that some students engaged more with a game, *Harmony Square*, which has strong fictional elements (characters, world-building, and humor), while others engaged more with a game, *Troll Factory*, which has more realistic, raw elements (using real-world posts). In all three games, players played as the *villain*, which was engaging for students but may have longer-term problematic implications. Finally, students critiqued the design of these games, and made their own games, which helped them to further practice their critical literacy skills.

362

Games are civic communities that can empower citizens to participate further in public discussions, public activities, knowledge sharing, policy-making, and governance (Schrier 2021, Dishon and Kafai 2019). Games can be used to communicate with, and inform, others (Schrier 2021, Yee 2014), but they can also be used to spread disinformation, spur violence, and foment hate (ADL 2020, Cary, Axt and Chasteen 2020, Ortiz 2019). Additionally, games have been used to *teach us*

netwo play r authority white e ir go Le: s Pla inoel ndead wh nentic r ml S PV
an ar op s a n e u fi b ts le or to 30 fr p ae nr i lai
y rh L fc U oure o p O d o la a v pl no
ati eath su ct n eral s irt l an v P aq xen

critical perspectives about disinformation. Some games have done this by inviting us to (fictionally and playfully) spread disinformation through a game (Roozenbeek and van der Linden 2020, Schrier 2021).

In this short paper, I will discuss my experiences of using a trio of games related to the spread of disinformation: *Harmony Square* (2020), *Fake it to Make it* (2017), and *Troll Factory* (2019). I used these games to enhance the practice of critical literacies, such as news and information literacy, for undergraduate students in a Reality Media course at a North American university. I also used these games to explore the techniques implemented to ignite the spread of fake news, such as the types used to help spread misinformation about COVID-19 (van der Linden, Roozenbeek and Compton 2020). Finally, I used these three games to reveal how information is *designed* – whether through a social media platform like Facebook, or even through these games themselves. I will describe what was more successful, and less successful, about using these games in my teaching in the spring of 2021.

363

Using Games to Teach

Games have been explicitly used to teach content and skills, and to change attitudes and behaviors (Schrier 2016, 2019, 2021). For instance, iCivics games like *Do I Have a Right?* (2017) and *Win the White House* (2020) are explicitly designed to convey information on United States civics-related topics, such the Bill of Rights and the electoral college, while also teaching skills like argumentation, perspective-taking, and decision-making. Perspective-taking, for instance, involves the act of taking on another's point of view, opinion, or stance, or viewing a situation from another person's standpoint. Other games may not necessarily be specifically made for educational purposes, but adapted or modified to teach specific learning objectives.

Jones (2019), for example, used *Life is Strange* (2015) to teach ethical analysis, Cooke (2019) used *NBA2K* (1999-2021) to teach systems thinking, and Shah (2019) used *Minecraft* (2009) to teach English Language Arts, though these games were made primarily for commercial and entertainment purposes. The games that I describe in this paper were intentionally made to educate and inform, while also engaging, the players. To achieve their educational goals, these games were designed using a variety of principles and elements, such as using scores and other rewards, currency systems, feedback and nudges, timers, and narrative and fantastical elements like avatars, characters, and immersive worlds. Including narrative and fantastical elements may help students better remember and apply content (Kaufman and Flanagan 2015, Kaufman, Flanagan and Seidman 2015). But, the connection between the fun of games and learning has been shown to be contradictory and complex (Schrier 2016, Higgins 2012).

The Three Games Used

I used three games in my course, *Reality Media*, with the purpose of helping students explore disinformation, and the techniques and tools that *bad actors* use to spread it. I chose these games as they explore disinformation techniques and include important 2021 issues, like the COVID-19 pandemic and Islamophobia. They are also targeted toward high school and university students and young adults. To meet the goals of revealing misinformation techniques, the designers of these three games decided to put the player in the role of someone who is the *villain* and trying to sow discord or spread misinformation.

These games may particularly appeal to a younger audience, like adolescents, because they use fictional story elements (e.g., characters, conflict, meaningful stakes, plot, world-building), humor, and role-playing techniques. It may also be particularly fun to play as the villain in an educational setting – which can be a subversion of the way students are usually expected to act in classroom activities. But it is important to question whether these games lead to beneficial changes, or whether they may spur more misinformation or even lead to training *more* bad actors (Schrier 2021).

Harmony Square

The game designers' goals for *Harmony Square* are "to expose the tactics and manipulation techniques that are used to mislead people, build up a following, or exploit societal tensions for political purposes" (DROG, University of Cambridge n.d.). The game sets out to *inoculate* players from being swayed by actual misinformation by giving them a taste of what a real *villain* might do (DROG 2018). Players need to take on the role of the Chief Disinformation Officer of a small fictional town called Harmony Square. Through four levels of gameplay, the player needs to make choices about the types of news to share, and how to share it, in ways that will "disturb the square's peace and quiet by fomenting internal divisions and pitting its residents against each other" (DROG, University of Cambridge n.d.). The news headline choices are all fictional, for instance, "The Harmony Square Swan Has Escaped Again" or "Why Are Hoverboards Called Hoverboards? They're Not Boards and They Don't Hover. What Are They Hiding From Us?" (*Harmony Square*, 2020). Or, players need to choose from among a few different social media posts, such as ones like "Tried some of Grandma Kate's 'famous' Harmony Pastries. They're saltier than I was after the last season of Game of Thrones. Embarrassing" (*Harmony Square*, 2020). You can choose to start flame wars, create fake news sites, or troll people and spread disinformation in other ways. The interface tells you how many likes you have earned, and

depending on your choices, the likes may go up (or way up). The style is very joyful, with bright cartoon drawings, clear text, and humorous prompts, like "Oh we get to be baddies?" (*Harmony Square*, 2020).

Figure 1. *Harmony Square.*
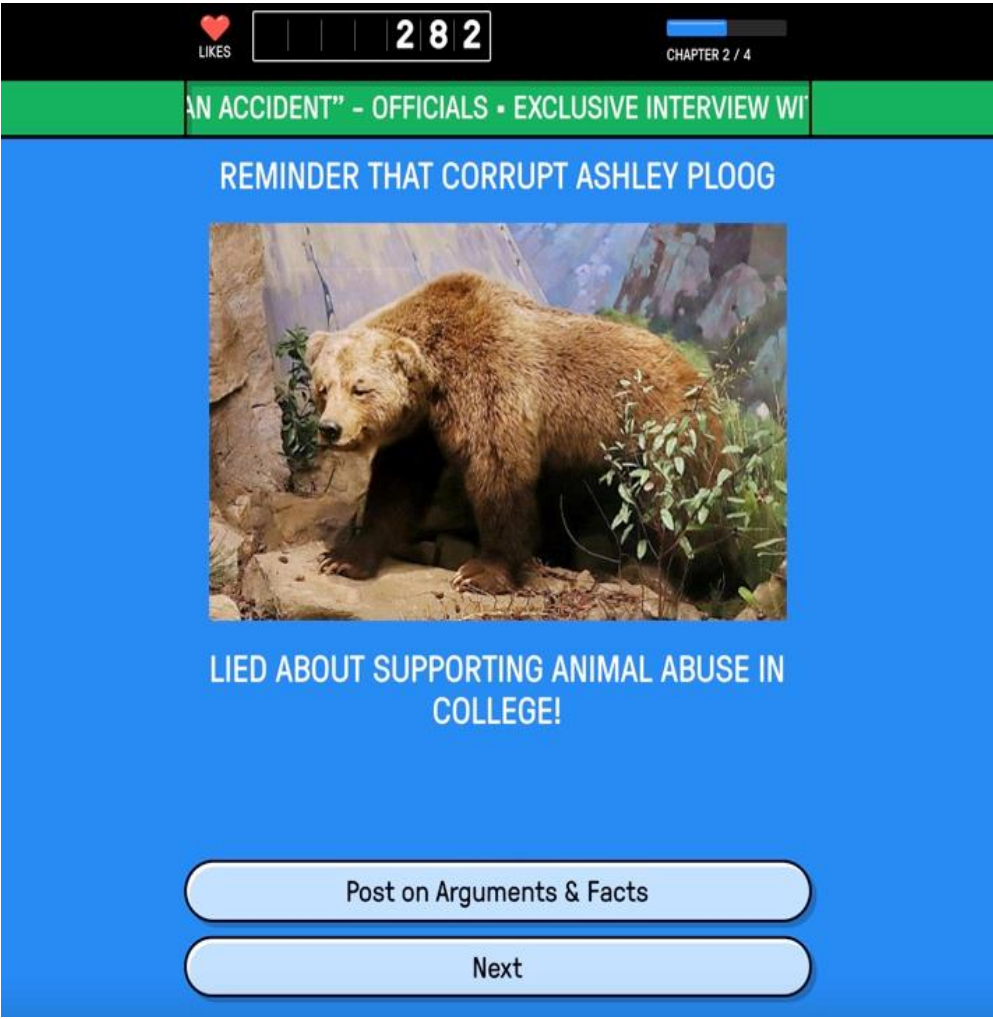
The game creators also developed another disinformation game, *Bad News* (2018). Just as with Harmony Square, in *Bad News* the player needs to respond to a series of prompts related to choosing topics and headlines for articles to share. As the player cycles through the prompts, the game reveals different techniques that bad actors might use, like impersonation, emotion, or discrediting.

Troll Factory

Similar to *Harmony Square* and *Bad News*, the game *Troll Factory* (Yle and Yle News Lab n.d.) places the player in the role of someone who is spreading fake news. Through doing this, players learn more specifics regarding the techniques and strategies that people use to spread hate and disinformation. You can, for example, buy bots to boost your social media accounts, and the game tells you how many followers and shares you have collected. However, rather than using a fictional context like Harmony Square, this game uses real social media posts, memes, and other news items for players to select. The player clicks on prompts (styled as text messages on a phone interface), and chooses which of the (real) social media content to post. The style of the game is realistic and raw, and the game uses authentic anti-immigration content that is problematic, offensive, hateful, or harmful, such as a post about defending Europe from the Islamic immigration. This type of raw content is based on content that the designers found in Europe, Asia and the Americas, and perhaps many students may have seen these types of posts in the social media and gaming communities that they follow and participate in. But, this type of material could also, understandably, be traumatic to students. Is this hate speech being repeated in a new context? Should we be propagating the hate that is present in our everyday world? Is it educationally sound to share this information and acknowledge its presence in our mediasphere, or is it doing undue harm?

367

Fake It to Make It

Finally, *Fake It to Make* It is a more complex sandbox-type game where players need to balance a number of different variables (e.g., expenses and credibility rating) related to being a fake news practitioner. Players need to set up a name for their online news platform, pick a logo, figure out the theme of their website, and earn revenue from ads on their site. They need to make choices about what types of

netwc play r authority while le lr go Le s Pla nael ndead wt entc muudfe ic" PV
2 r p st a n e ls e or to o e nr mi S la
an v rh L fe U death su ct n eral irt m v pr no xn
ati

articles to write, what types of forums to post them in, and how to best reach an audience and enrich the number of social media likes, shares, views, and revenue. Rather than linear prompts, there are multiple different goals that the player has to meet, like creating a site that has enough credibility, add articles to their site, or reach their goal of buying a big purchase from the ad revenue earned. The game first asks you to decide which item you want to buy (e.g., music equipment, car) as your financial goal. Like in the other games, the player takes on the role of a bad actor – but there are a lot more decisions to make, a lot more variables to consider, and less direction when it comes to deciding what to prioritize and do with their website. Thus, the game does not provide the types of scaffolding that *Bad News* and *Harmony Square* have. In the other two games, they clearly spell out the techniques that fake news spreaders might use and how they might use it. *Fake It to Make It* also does not include recent headlines or current news such as ones related to the COVID-19 pandemic, which makes it feel less relevant. In *Fake It to Make It*, you may learn to use disinformation techniques through trial and error, or through the feedback mechanisms in the game (by observing when you gain more followers or ad revenue, for instance). But it is less clear to the player which strategies might work best, and the correlation between different choices and outcomes, until they have played the game for a while.
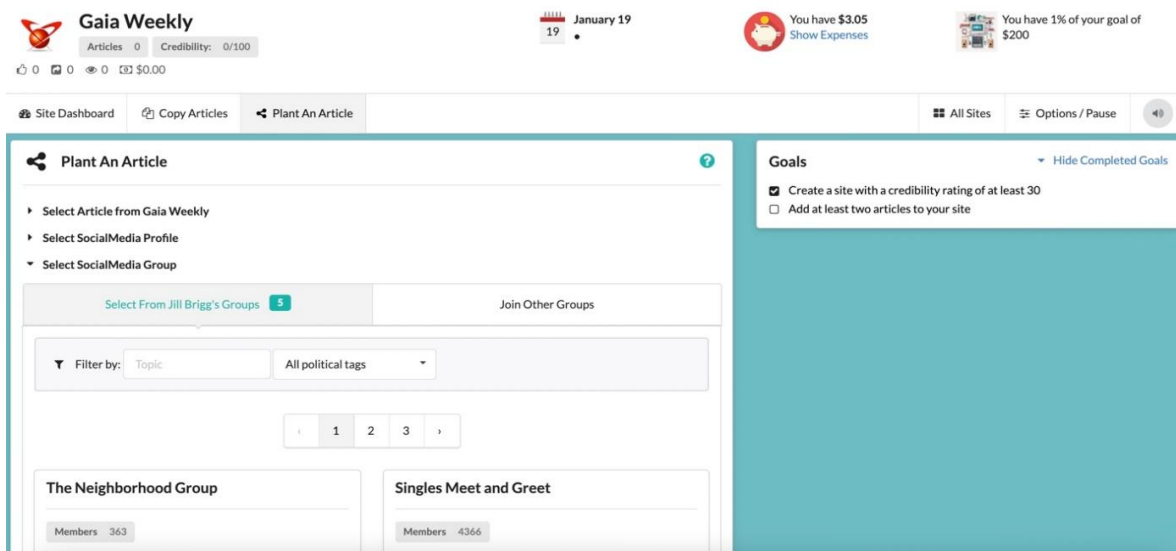
Figure 2. *Fake It to Make It*.

Observations of the Games in the Classroom

Context for the Lesson

The games were used in a class session in a course called *Reality Media*, which asks students to analyze intersections among the real and virtual, authenticity and performance, and news and fiction, and how these intersections shape our understanding of ourselves and our society. In this course, we dive into reality show texts like *The Bachelor* (2002 - ongoing)*, What Would You Do?* (2008 - ongoing), and *Top Chef* (2006 - ongoing), while also investigating virtual and augmented reality games, newsgames, esports, and alternate reality games.

The games were assigned to students to play prior to attending the class. The class lesson began with a full class discussion on disinformation as a concept (what it is, how we define it), and the issues, consequences, and problems with disinformation. We talked about why having valid, reliable and accurate information is useful, and how it may affect our decision-making process. I then provided a presentation about the different ways that games may feature and share perspectives on news, issues,

current events, and teach skills like information literacy. We defined what news games are, and shared examples of games like *Factitious* (2017), a game about spotting fake news articles, *September 7, 2020* (2020) a game about returning to school during the COVID-19 pandemic, and *Bury Me, My Love* (2017), a game about Syrian immigration. These games may be *fictional* but they share viewpoints on real-world events, topics, and peoples. We also talked about the types of events and topics that we may be able to share through games, like a severe weather event, a global problem like COVID-19, or a political event like an election. I gave the example of creating a game about the power outages in Texas, where a game might be about trying to get power to as many houses as possible, or what it feels like to lose power and not be able to keep warm. We continued to play and discuss different examples of news games.

Discussion of the Three Games

A goal in using the three games is not just to have the students play the games and discuss them, but to really dig into the design of these games, and use this as a way to enhance their understanding of how information is communicated, crafted, and shaped. The learning unfolds as students unfold the game. As they analyze the design decisions behind the game, they gain an understanding of how we can convey and contort information through news and social media platforms, but also through games themselves.

Thus, after the initial discussion of the games, the students were asked to break out into small groups to discuss and compare the three games they had played prior to class: *Fake it To Make It*, *Troll Factory* and *Harmony Square*. They needed to consider what the game is trying to teach us, why we might use a game to support this, and

netwo play r authority while e air go Le s Pla inoel ndead wh entic th ublis igi PV
an al rop se a n e bu sir fi b ts le or to 30 f op ae nr mi S a
y rh L t U ou e o ip O du o la x cp ienra wt b mi lai
ati th eath su ct n eral es w irt pr th Q Xon

what they might change about the game to better meet its intended goals. After students spent time discussing the game in smaller groups, we then all dived into each of the games, and their goals, gameplay, and the effectiveness of the game in reaching these goals.

I surveyed the students to better understand their interest and engagement with the three games. Around half the students felt that they learned more effectively with *Harmony Square* because it created a new, friendly, cartoon world, using humor and characters to teach the persuasive techniques bad actors might use. Students said things like the characters were adorable and silly, and the story context made the game more engaging and palatable. Students felt that there were more options in this game than in *Troll Factory,* in that they could sometimes write something neutral or good, rather than just doing the *villain* option. Students also critiqued this game, explaining that it was repetitive and that they lacked agency over the game. Some students critiqued that the lack of real issues in *Harmony Square*, as well as the lack of realism in how many followers the player was getting, detracted from the game.

371

The other half of the students reflected that they learned more effectively with *Troll Factory*, a more gritty, realistic game, that used real-world social media posts, news clippings, memes, and situations to meet their goals. Students said things like the interface better, and that the choices felt more authentic because it was based on real social media posts and memes that actually were circulated. The game also used more edgy humor and impactful visuals. They felt like they had more agency over the outcome of the game, rather than Harmony Square, which felt more linear and *on rails*. Agency is the feeling that you have some responsibility to the choices you are making in a game, and that what you do in a game matters and that you have an impact on the game. However, other students said that despite the realistic context of

Troll Factory, *Harmony Square* was able to convey its messages in a clearer way. Students also explored the disturbing nature of the real messages and memes in Troll Factory, such as ones that foment hate among ethnic groups, and how that may be particularly problematic depending on how the game is used.

Students also critiqued both games and felt that they should have had more meaningful choices and options, and more realistic consequences. For example, they felt that the games were not as effective because they cannot make mistakes in the game – no matter what you choose, you will increase followers or likes somewhat and no one will stop you from continuing to post or wreak havoc. The choices and consequences both needed to matter. For instance, there were no spam detectors, account suspensions, or *Facebook* jail for the player. And, the games were not progressively offering greater and greater challenges, but rather, conveying information without necessarily ensuring mastery of the information. On the other hand, limiting the choices and consequences in these games may help the students to focus on what types of knowledge they need to know, and may enable a more accessible design.

Finally, none of the students reflected that they learned most effectively with *Fake it To Make it.* To them, the game was too detailed and complex, and while it may have simulated the task of spreading information more realistically, students found it overwhelming and tedious. Students liked that they had to practice strategic thinking in the game, but that the game's design spurred them to focus more on gaming the system, rather than learning about the disinformation techniques.

Reflections and Next Steps

I used three games that teach about disinformation techniques, *Harmony* Square, *Troll Factory*, and *Fake It To Make It*, in a university setting. After using these three games, I found that while all had similar goals, the execution mattered in whether they were successful or less effective, and this often depended on student interest. Students did not want agency over an entire, complex system; rather, they were more interested in games that gave them many choices, but with scaffolding and a clear, linear path. I observed that the more simple, direct games were more effective, and that students may connect differently with these games depending on their interests.

Although *Fake It To Make It* is useful in that it explores a system of disinformation, in a future class, based on student responses, I will use only *Harmony Square* and *Troll Factory*. I will also allow students to choose which one they want to play, given the games' themes and strengths and weaknesses. Then, students will have the opportunity to teach the other students about their chosen game, why they chose it, and how it met (or did not meet) the learning objectives.

In this course, I also used the playing of the three games as a springboard for students to develop their own games about fake news and the spread of disinformation. For instance, one group made a game where players were given headlines – all of them real and one fake. Players had to convince the others that they had the real headline and had to choose which one was the actual fake one. Students then spent a number of weeks designing and playtesting these games.

As next steps, educators may want to consider how student interests intersect with games. If there is a list of possible games with similar goals, review them with students to see which might match their own preferences. Educators may want to

consider how to select games that are simple and effective, rather than too complex or didactic. Further, teachers should consider how to ensure that students are learning effectively from a game. In this example of games that teach disinformation techniques, are students learning how to counter these techniques, or to use them maliciously? Finally, helping students to not only play games, but to consider the design of these games, may help them to put into practice their burgeoning information literacy skills. Educators may want to ask questions as to why a game may have been designed how it was – or how it could be designed differently. How did the design affect how information was shared or crafted? Inviting students to make their own games on the topic may further the practice of these literacy skills.

Designers may also learn from the findings in this article. For instance, elements like humor, strong storytelling and worldbuilding, and the ability to make meaningful choices may be useful for effective learning games. Placing players in the *villain* role is subversive, and may help students to explore what *bad actors* may do – and how to counter them. Further, creating a game with direct goals, clear directions, and supportive feedback may help students learn better than designing a more complex game. Even if the complex game is more accurate in terms of including all the different variables of a problem, it may not be as effective in helping students to learn concepts or practice necessary skills. Testing games with different types of students may help in revising designs. Finally, designers may want to *lift under the hood* of their games by providing a map or outline of their design decisions. By making transparent their choices, designers may help students to better understand that there are multiple ways to solve problems – and that even their own game could have been designed differently.

References

ADL, 2020. *Free to play? Hate, harassment, and positive social experiences in online games 2020*. Available at https://www.adl.org/free-to-play-2020, accessed 1 July 2021.

Bad News, 2018. [video game] (Web Browser) DROG, Cambridge University, Gusmanson.

Bury Me, My Love, 2017. [video game] (multiplatform) The Pixel Hunt, ARTE France and Figs, Plug In Digital and Dear Villagers.

Cary, L., Axt, J., and Chasteen A., 2020. The Interplay of Individual Differences, Norms, and Group Identification in Predicting Prejudiced Behavior in Online Video Game Interactions. *Journal of Applied Social* Psychology, 50(11), 1-15.

Cooke, L., 2019. NBA2K. In: Schrier, K. ed. *Learning, Education & Games: 100 Games to Use in the Classroom & Beyond*. Pittsburgh: Carnegie Mellon/ETC Press.

Dishon, G. and Kafai, Y. B., 2019. Connected Civic Gaming: Rethinking the Role of Video Games in Civic Education. *Interactive Learning Environments*. DOI: https://doi.org/10.1080/10494820.2019.1704791.

Do I Have a Right?, 2017. [video game] (iOS, Android) ICivics Inc.

DROG, 2018. *Fact Sheet.* Available at https://www.getbadnews.com/wp-content/uploads/2019/03/Bad-News-Game-info-sheet-for-educators-English.pdf, accessed 21 November 2021.

375

DROG, University of Cambridge, n.d. *Website*. Available at https://harmonysquare.game/en, accessed 21 November 2021.

Factitious, 2017. [video game] AU Game Lab, JoLT program.

Fake It to Make It, 2017. [video game] (Web Browser) Amanda Warner.

Harmony Square, 2020. [video game] (Web Browser) U.S. Department of State's Global Engagement Center (GEC), U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA), DROG, University of Cambridge.

Higgins, E. T., 2012. *Beyond Pleasure and Pain: How Motivation Works*. New York: Oxford University Press.

Jones, S., 2019. *Life is Strange*. In: Schrier, K., ed. *Learning, Education & Games: 100 Games to Use in the Classroom & Beyond*. Pittsburgh: Carnegie Mellon/ETC Press

Kaufman, G. and Flanagan, M., 2015. A psychologically "embedded" approach to designing games for prosocial causes. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 9(3). DOI: 10.5817/CP2015-3-5.

376

Kaufman, G., Flanagan, M. and Seidman, M., 2015. *Creating Stealth Game Interventions for Attitude and Behavior Change: An 'Embedded Design 'Model*. DIGRA 2015, Proceedings of the Digital Games Research Association (DiGRA) 12, May 2015. Available at http://www.digra.org/digital-library/publications/creating-stealth-game-interventions-for-attitude-and-behavior-change-an-embedded-design-model/, accessed 21 November 2021.

Life is Strange, 2015. [video game] (multiplatform) Square Enix, Dontnod Entertainment, Square Enix.

Minecraft, 2009. [video game] (multiplatform) Mojang Studios, Microsoft.

NBA2K, 1999-2021. [video game] (multiplatform) Visual Concepts, Cat Daddy Games, Sega, 2K Sports.

Ortiz, S., 2019. "You Can Say I Got Desensitized to it": How Men of Color Cope with Everyday Racism in Online Gaming. *Sociological Perspectives*, 62(4), 572–588.

Roozenbeek, J. and van der Linden, S., 2020. Breaking *Harmony Square*: A game that "inoculates" against political misinformation," *MisInformation Review*, [online] November 6. Available at https://misinforeview.hks. harvard.edu/article/breaking-harmony-square-a-game-that-inoculates-against-political-misinformation/, accessed 21 November 2021.

Schrier, K., 2016. *Knowledge Games: How Games Solve Problems, Create Insight, and Change the World*. Baltimore: Johns Hopkins University Press.

Schrier, K., 2021. *We the Gamers: How Games Teach Ethics & Civics*. New York: Oxford University Press.

Schrier, K., ed., 2019. *Learning, Education & Games: 100 Games to Use in the Classroom & Beyond*. Pittsburgh: Carnegie Mellon/ETC Press.

September 7 2020, 2020. [video game] (Twine) Cait Kirby.

Shah, M., 2019. *Minecraft*. In: Schrier, K. eds. *Learning, Education & Games: 100 Games to Use in the Classroom & Beyond*. Pittsburgh: Carnegie Mellon/ETC Press.

The Bachelor, 2002-ongoing. [TV program] Warner Bros. Television.

Top Chef, 2006-ongoing. [TV program] NBC Universal Television.

Troll Factory, 2019. [video game] (Web Browser) Yle Finnish Broadcasting Company.

van der Linden, S., Roozenbeek, J. and Compton, J., 2020. Inoculating Against Fake News About COVID-19. *Frontiers in Psychology*, 11, 2928.

What Would You Do?, 2008-ongoing. [TV program] Disney, ABC Domestic Television.

Win the White House, 2020. [video game] (iOS, Android] ICivics Inc.

Yee, N., 2014. *The Proteus Paradox: How Online Games and Virtual Worlds Change Us – And How They Don't*. New Haven: Yale University Press.

Yle and Yle News Lab, n.d. *Website.* Available at https://trollfactory.yle.fi/, accessed 21 November 2021.