'Is This a Joke?': The Delivery of Serious Content through Satirical Digital Games

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ABSTRACT:
Games that utilize satire have largely been unexplored despite their potential to be used as learning supplements or tools to foster conversations around difficult large-scale topics. To what game genre do these games belong, and what are the uses and benefits for learning from such games? In this exploration study, we examine six popular and culturally relevant digital games (5 directly, 1 indirectly) utilizing satire as part of their narrative and gameplay. The range of games covers topics such as global overpopulation, the use of artificial intelligence for surveillance, and the process of mass capitalist production and the manner of its consumption. Satirical digital games serve both the purposes of serious games and entertainment games, pointing to the problematic connotations of the term *serious games*. It is suggested that the name *satirical games* is used to describe digital games created for entertainment with underlying political messages and to make a statement and/or commentary on society. Satirical games have potential as powerful learning tools to help facilitate discussion around difficult topics about society's functions and practices. Future studies should examine additional digital game titles that rely on satire in their narrative and gameplay and investigate the relationship between satire and its role in the learning goals of the games.

KEY WORDS:
digital games, game-based learning, informal learning, satire, serious games.

Introduction

In 2011, a digital game by the name of *Phone Story*[1] was banned from the Apple store. The gameplay involved taking on different roles, but mostly entailed the supervision and management of manual labourers as they gather resource, assemble, and sell smartphone devices. A spokesman for Apple stated, "We removed the app because it violates our developer guidelines" and declined to elaborate.[2] There were no comments regarding the politically charged design or its critique of smartphone manufacturing practices, such as the factory facility manager's responsibility to prevent suicides among assembly line workers. What is the genre of digital games like Phone Story that utilize satire as part of their narrative and gameplay? What are the uses and benefits for learning from digital games that operate with satire? Serious game is a term that is still being contested today and which has been defined in a multitude of ways. The term 'serious games' has been critiqued for being limited in scope and difficult to translate across disciplines. One proposed definition refers to serious games as "Entertainment Games with Non-Entertainment Goals," while others counter with the idea that serious games prioritize education rather than entertainment. Another definition is that serious games serve purposes while experimental games are at the opposite end of the spectrum with minimal to no gaming

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1   MOLLEINDUSTRIA: *Phone Story*. [digital game]. Pittsburgh : Molleindustria, 2011.
2   WORTHAM, J.: *Game that critiques Apple vanishes from app store*. Released on 13th September 2011. [online] [2020-03-18]. Available at: <https://bits.blogs.nytimes.com/2011/09/13/game-that-critiques-apple-vanishes-from-app-store/>.

characteristics for purpose.[3] The commonality of these definitions is the differentiation and identification of the creator intent behind the game, a question of whether or not the game serves the player beyond the purpose of entertainment. These authors deliberately use 'serious' as a term associated with education and learning. However, does learning always have to be considered a 'serious' affair? Is there no value for learning beyond entertainment for games labelled outside 'serious'? There have already been arguments to change the term altogether from serious games to the more general term of applied games.[4] In this paper, we argue that games created for entertainment can be used for teaching and learning regardless of the game's initial intent through the genre of proposed *satirical games*. Our intent is not to replace 'serious games' with 'satirical games,' but to illustrate that the characteristics of serious games (e.g., the educational aspects) can be applied to games made for entertainment, with an emphasis on the use of satire. We desire to build a theoretical background to the use of games made for entertainment for learning to motivate the development of further research on this topic.

In the words of William Shakespeare, "There is nothing good or bad, but thinking makes it so".[5] Humour can be an effective tool to learn and experiment with values, push boundaries, and create meaningful experiences. Satire utilizes humour, irony, exaggeration, and ridicule to highlight and criticizes human actions and behaviours, particularly in politics and topical issues.[6] Satire can be as much a cultural commentary or statement as it is a technological product. Initial research has shown that game developers who contribute to building a game with a political message enhance their everyday political engagement, impact their knowledge and opinions on the political issue(s), and construct the idea of a 'political self' through the act of play.[7] This work also builds on I. Bogost's idea of anti-*advergames*, or games that were created to criticize a company rather than support it,[8] and G. Ferri's initial work on the examination of digital storytelling of political, satirical, and propagandistic discourses in digital games.[9] Discussions around satirical games have potential to spark interest in the inequal access to technologies, the financial power necessary to obtain and sustain such technologies (even actions such as micro-purchases), and the product inclination to appropriated narratives.[10] While the label of satirical games was used in the past, there has been a lack of a clear, generalizable definition and arguments advocating the genre. Satirical games are unique in that the genre straddles the fence between serious games and digital games designed for entertainment. We suggest the name of *satirical games* for digital games that utilize satire to entertain an audience with underlying political messages and/or commentary on the functions of society. These messages can be hidden and subtle but serve as critical proponents to the game objective and narrative. Satirical games are a genre that has vast potential to grow on the market and as a tool for learning, ultimately both enlightening and educating the public masses on critical issues in society.

3   MARSH, T.: Serious games continuum: Between games for purpose and experiential environments for purpose. In *Entertainment Computing*, 2011, Vol. 2, No. 2, p. 62-63.; MICHAEL, D. R., CHEN, S. L.: *Serious games: Game that educate, train, and inform*. Mason : Course Technology PTR, 2005, p. 3-44.; JOHANNES, B., BENTE, G.: Why so serious? On the relation of serious games and learning. In *Eludamos: Journal for Computer Game Culture*, 2010, Vol. 4, No. 1, p. 9-21.
4   SCHMIDT, R., EMMERICH, K., SCHMIDT, B.: Applied Games – In Search of a New Definition. In CHORIANOPOULOS, K., DIVITINI, M., BAALSRUD, H. J., JACCHERI, L., MALAKA, R. (eds.): *Proceedings of International Conference on Entertainment Computing*. Tronheim : Springer, 2015, p. 105-109.
5   SHAKESPEARE, W.: *Hamlet*. New York : Simon and Schuster, 2003, p. 99.
6   *Satire*. [online]. [2020-03-18]. Available at: <https://www.lexico.com/en/definition/satire>.
7   NEYS, J., JANSZ, J.: Political interest games: Engaging an audience. In *European Journal of Communication*, 2010, Vol. 25, No. 3, p. 228-230.
8   BOGOST, I.: *Persuasive games: The expressive power of videogames*. Cambridge : The MIT Press, 2007, p. 29-30.
9   FERRI, G.: Satire, Propaganda, Play, Storytelling. In KOENITZ, H. et al.: *Proceedings of International Conference on Interactive Digital Storytelling*. Istanbul : Springer, 2013, p. 174-175.
10   WALTON, M., PALLITT, N.: 'Grand theft South Africa': Games, literacy, and inequality in consumer childhoods. In *Language and Education*, 2012, Vol. 26, No. 4, p. 357.

Methodology

This exploratory study aims to provide more insight about digital games that utilize satire and their potential for teaching and learning. The first research goal is to examine digital games that utilize satire in their narrative and gameplay. Satire as a literal device has seldom been examined within digital environments. The most recent work we located was conducted by G. Ferri in 2013, who examined *Oiligarchy*[11] (a flash-based game) and Phone Story (a mobile game) from a critical lens of 'ludic satire', or possessing the elements of being ludic within satire. Ferri proposed that games such as Oiligarchy and Phone Story, which were both developed by one company, amount to more than just 'gamified' political statements. He argued that these games that utilize satire illustrate the potential in the overlap between "simulation, playful elements and rhetorical persuasion".[12] We want to examine satrical games beyond the scope of one developer, and to better understand the landscape of games that effectively use satire and are accessible to the public we propose:

- RQ1: What are the existing digital games that utilize satire and what is the dominant game genre?

To our knowledge, there have been no attempts to examine a multitude of games relying on satire thus far, and it is our endeavour to contribute to literature examining digital games, learning, and the role and impact of satire within those spaces. The second research goal focuses on the use and benefits for learning from digital games that heavily rely on satire in their narrative and gameplay in both formal and informal learning settings:

- RQ2: What are the learning benefits from digital games that rely on satire in their narrative and gameplay?

Ferri questioned the meaning of the player's participation in the proposed satire, the consequence of leading players to an undesirable state, and whether the target of ludic satire would be the simulated system or, to some capacity, the player.[13] While we cannot answer all of his questions in this theoretical paper, our effort to capture the potential learning benefits of satirical games examines the player's role, the storyline of popular satirical games, and some of the potential learning opportunities and outcomes that stem from this experience. We suspect there are learning benefits from satirical games based on the nature of satire. D. H. Griffin, a professor emeritus of English, described the design of satire as an attack on vice or folly through wit or ridicule.[14] P. Fabbri, a semiotician, argued that satire's effect relies on evoking strong emotions, and that satirists usually channel their indignation or anger through humour to embarrass or shame the intended target.[15] We investigate how these critical messages are presented in digital games and also their general reception by the public. We approach the data using qualitative content analysis for the purpose of identifying themes and patterns to provide knowledge and understanding about what is being studied.[16] Though qualitative content analysis is traditionally thought of as analyzing text, we believe that the approach is fitting for digital games as well, as the selected digital games all rely on text for narrative and satire.

11   MOLLEINDUSTRIA: *Oiligarchy*. [digital game]. Pittsburgh : Molleindustria, 2008.
12   FERRI, G.: Rhetorics, Simulations and Games: The Ludic and Satirical Discourse of Molleindustria. In *International Journal of Gaming and Computer-Mediated Simulations*, 2013, Vol. 5, No. 1, p. 37.
13   Ibidem, p. 47.
14   GRIFFIN, D. H.: *Satire: A Critical Reintroduction*. Lexington : The University Press of Kentucky, 1994, p. 1.
15   FABBRI, P.: *Satira*. [online]. [2020-05-20]. Available at: <https://www.alfabeta2.it/2012/06/13/satira/>.
16   HSIEN, H. F., SHANNON, S. E.: Three approaches to qualitative content analysis. In *Qualitative Health Research*, 2005, Vol. 15, No. 9, p. 1278-1279.

Games can be defined as a form of text[17] and categorized for content analysis. We were most interested in who wrote these texts (developers) and the game genre, their popularity (number of players) and accessibility (platform), the game's general reception (consumer rating, number of reviews), and how players perceived game content (frequently used user-generated tags). The terms 'satire', 'satire games', and 'satirical games' were searched on Steam, a popular game portal for PC and Mac downloads.

Analysis

Pay A Better Life describes their own game as " a serious game about AI, PRISM, big data, privacy, and free speech" and addresses how data is collected, analyzed, and its impact on consumers. The title of *Big Brother Is Shaping You*[18] fittingly references George Orwell's *1984*[19], a political satire about a totalitarian state where the government's surveillance reach extends to listening devices and cameras, and where Big Brother is the head of the regime. The plot in Big Brother Is Shaping You takes place in a ficticious dystopian world, where user data from all online platforms is handed to the National Survelliance Agency using artificial intelligence. The player takes the role of a worker who interacts with his daily platforms of virtual networks and focuses on issues of information filtering, algorithms, and data tracking that suppress the protagonist. The American visual novel *Doki Doki Literature Club!*[20] emulates the traditional format of a Japanese single-player visual novel, akin to a choose-your-own novel (think *Black Mirror: Bandersnatch*[21]). The player takes the role of the male protagonist, who is typically presented with an array of eligible bachelorettes, and then tasked with pursuing her as the sole romantic interest by selecting a series of actions throughout the narrative that eventually lead to one of multiple endings. The plot turns awry when the protagonists discovers one of the bachelorettes, having admitted to the protagonist that she struggles with depression, has hung herself at home. The player is then sent back to the game's main menu with all previous save files erased. Ultimately the player discovers that one of the characters, Monika, has become self-aware of her situation as a videogame character. She declares her love to the player directly and not the protagonist of the game, and sabotages other characters to make herself the most appealing romantic candidate to the player. Scenes from this narrative invoke feelings of horror and uncertainty that are not found in traditional visual novel formats (Picture 1).

Human Resource Machine[22] is a 40-level puzzle game that pivots the player as an office worker who must complete tasks to keep his or her job from robot replacements, all the while being monitored by a superior. The office space has three components that resemble assembly language: simple instructions on each task that are like opcodes, the player holding items sprawled across the floor like a processor register, and the spaces on the office floor are akin to main memory. Human Resource Machine educates the player on a graduate scale, starting with basic programming concepts like loops and jumps, then on to more advanced topics such as memory addresses. The player's superior offers hints on how to complete the puzzle, and at the end of each level the player is shown the

average time that it took other players to complete the puzzle. Gameplay is intermitted by cutscenes showing that the city where the story takes place is under attack by robots, who slowly begin to replace other workers with robots.

Picture 1: Screenshots from Doki Doki Literature Club! that emulates traditional romance visual novels (left), and showing the self-aware character Monika 'hacking' the game files to tarnish the chances of other eligible bachelorettes (right)

Source: Doki Doki Literature Club!. [online]. [2020-03-22]. Available at: <https://store.steampowered.com/app/698780/Doki_Doki_Literature_Club/>.; JACKSON, G.: Doki Doki Literature Club Scared Me Shitless. Released on 1st October 2017. [online]. [2020-03-22]. Available at: <https://kotaku.com/doki-doki-literature-club-scared-me-shitless-1819361548>.

Phone Story is a product of Molleindustria, an independent game developer who are direct in their use of satire in game products. The following passage follows the definition of 'molleindustria' as a project of appropriation of digital games and a call for the radicalization of popular culture: "Since 2003 we produced artisanal remedies to the idiocy of mainstream entertainment in the form of free, short-form, online games. Our products range from satirical business simulations (McDonald's Video game, Oiligarchy) to mediations on labour and alienation (Every day the same dream, Tuboflex, Unmanned), from playable theories (the Free Culture Game, Leaky World) to politically incorrect pseudo-games (Orgasm Simulator, Operation: Pedopriest)".[23] The goal of Phone Story is to show the life cycle of smartphones from their creation to their disposal. A narrator's voice plays over each minigame to explain what is happening in the scene and presents reasons for the player to care. The game features four minigames: mining in the Democratic Republic of the Congo where the player must control guards to ensure labourers do not rest; moving back and forth to catch leaping workers from a factory to prevent suicide; slinging phones into the hands of customers at a phone store; and lastly, breaking down old phones and splitting them among Ghanaian workers and salvaged in unsafe ways.

7 Billion Humans[24] is a 60-level puzzle game developed by the same company that produced Human Resource Machine, available in eleven languages, and presents similar dystopian themes. The story posits that robots have replaced humans in all areas of work and people are then free to pursue whatever interests they want. However, the people demand well-paying jobs, thus prompting a machine to create jobs for all seven billion people in a towering office building that is visible from outer space. Even those with 'useless skills', such as doctorates in medieval history, can be put to work. Human Resource Machine focuses on assembly language and one single office worker, whereas 7 Billion Humans focuses on parallel processing language represented by swarms of office workers. In cases where the player fails to solve the puzzle, office workers willingly jump into shredders or explode where they stand as the nearby superior angrily says, 'All your workers have died!'.

17 AARSETH, E. J.: *Cybertext: Perspectives on ergodic literature*. Baltimore : John Hopkins University Press, 1997, p. 2-3; 95.
18 PABL: *Big Brother Is Shaping You*. [digital game]. China : Pabl, 2019.
19 For more information, see: ORWELL, G.: *1984*. San Diego : Harcourt Brace Jovanovich Publishers, 1977.
20 TEAM SALVATO: *Doki Doki Literature Club!*. [digital game]. New Jersey : Team Salvato, 2017.
21 SLADE, D. (Director): *Black Mirror: Bandersnatch*. [VOD]. Los Gatos : Netflix, 2018.
22 TOMORROW CORPORATION: *Human Resource Machine*. [digital game]. Chesterfield : Tomorrow Corporation, 2015.

23 *About Molleindustria*. [online]. [2020-03-18]. Available at: <https://www.molleindustria.org/blog/about/>.
24 TOMORROW CORPORATION: *7 Billion Humans*. [digital game]. Chesterfield : Tomorrow Corporation, 2018.

The player works for a company that owns *We Happy Restaurant*[25] and the goal is to make as much money as possible, which is a message reiterated throughout the course of the game. Consumable products include burgers made from radioactive material, sushi made out of floppy discs and USB's, and sundaes consisting of mercury. Unknowing customers can be 'persuaded' off the street by money to visit the player's restaurant, where they continue to consume food until they begin to mutate, and ultimately explode in a mess of green goo and leave behind a pile of money. The off-putting company representative, with noticeable scars on his wrists and his neck, pleasantly justifies the company's use of toxins, plastics, and other deceptive methods at every turn. Later stages of the game even include three hospital-like units across from the restaurant for behavioural correction (Picture 2). The purpose of this particular lot, including emergency care (e.g., scams proclaiming to heal any illness) and head massage (i.e., modify consumer memories), is to free customers of sickness and paranoia when it occurs and to enable customers to return to their cycle of consuming.
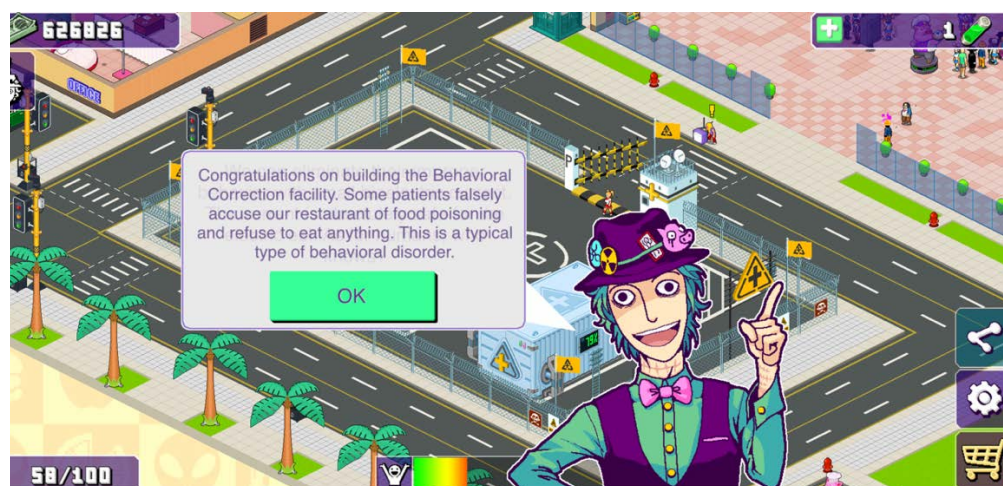
Picture 2: A We Happy Company representative explaining game mechanics
Source: author's screenshot; CHILLY ROOM: *We Happy Restaurant.* [digital game]. Guangdong : Shenzhen Shengxunda Technology Co., 2019.

Results

Six game titles created prior to December 2019 were found related to satire (Table 1). They were selected through a search for satricial games on Steam or for their existing reputation as controversial games. Mobile games Phone Story and We Happy Restaurant were added as they inspired this research. All titles were single-player games created by independent developers, and these games received mostly positive ratings from consumers. There was no consistent game genre across these titles, ranging from visual novel to simulation.

25   CHILLY ROOM: *We Happy Restaurant.* [digital game]. Guangdong : Shenzhen Shengxunda Technology Co., 2019.

Table 1: A summary of games, which directly utilize satire as part of its game narrative and gameplay features and consumer reviews as of December 2019

Game title	Developer	Platform	Number of players	Consumer rating	Number of reviews	Popular user-defined tags on Steam
Big Brother Is Shaping You	Pay A Better Life	Windows	Single-player	87% positive on Steam	456	Indie, satire, dystopian, dark humour
Doki Doki Literature Club!*	Team Salvato	Windows, Mac OS X	Single-player	96% positive on Steam	120,367	Psychological horror, anime, visual novel, horror
Human Resource Machine	Tomorrow Coporation	Windows, Mac OS X, Steam OS + Linux	Single-player	94% positive on Steam	1,553	Programming, puzzle, indie, casual, simulation
Phone Story	Molleindustria	Android, iOS (banned)	Single-player	3.7/5 (74%) on Google Play	576	N/A
7 Billion Humans	Tomorrow Corporation	Windows, Mac OS X, Steam OS + Linux	Single-player	95% positive on Steam	598	Programming, indie, puzzle, simulation, logic
We Happy Restaurant	ChillyRoom	Android, iOS	Single-player	4.2/5 (84%) on Google Play	18,644	N/A

* indirectly related to satire
Source: own processing

Discussion

Satirical games can address societal, political, and cultural issues with tact and humour. There is potential for satirical games to be used as tools to facilitate discussions around perfectionism, consumerism, capitalism, overpopulation, and more both in classrooms and at home. Digital games can be powerful learning tools on both the individual and communal level. First, immersion is one of the main motivational factors for digital gameplay.[26] Digital games offer experiences for players to participate in roles and activities otherwise unavailable to them (e.g., managing a restaurant, dating multiple people at once). Once an individual is immersed in the digital game experience, there is

26   SHERRY, J. L., GREENBERG, B. S., LUCAS, K., LACHLAN, K. A.: Video game uses and gratifications as predictors of use and game preferences. In *Playing Video Games: Motives, Responses, and Consequences*, 2006, Vol. 24, No. 1, p. 217-218.; QUICK, J. M., ATKINSON, R. K.: A data-driven taxonomy of undergraduate student videogame enjoyment. In STEINKUEHLER, C., CRYSTLE, M. (eds): *Proceedings of the 7th International Conference on Games + Learning + Society Conference*. Pittsburgh : ETC Press, 2011, p. 185.; YEE, N.: Motivations of play in MMORPGS. In DE CASTELL, S., JENSON, J. (eds.): *Proceedings of DiGRA 2005 Conference – Changing Views: Worlds in Play*. Vancouver : Digital Games Research Association, 2005, p. 773-774..

the likelihood of entering a flow state,[27] which is marked by characteristics of intense concentration, merging of action and awareness, loss of self-consciousness and the passing of time, and perceiving the activity as intrinsically rewarding. While all the games in this study are single-player, those who have played the game can collectively assess their individual experiences and create a shared experience through peer-to-peer dialogue. Peer interactions can help facilitate learning[28] and can lead to the development of interest in the digital game's domain.[29] Evidence of the existing relationship between single-player games and a larger community of fans can be found in the organic development of fan-made and fanmaintained content shared online (e.g., fanart[30], fanfiction[31], websites[32]) organized by dedicated communities. Researchers have referred to these activities within youth as "geeking out," in which participants hold meaningful roles, are interest-driven, and develop areas of expertise within communities around shared interests.[33]

The digital games that exist and are discussed in this article seem to be well-received for both their narrative and gameplay. The range of satirical game genres speaks to the flexibility of the videogame medium and how satire can manifest itself in a narrative in multiple, differentiating ways. Phone Story received the lowest rating with consumers highlighting that the game itself is too short or too repetitive despite appreciation for the political message of the game. Consumers expressed that the value of the game and gameplay did not match its monetary value of 1.99 USD and others added that the game needed an update to run properly on newer smartphones.[34] Molleindustria digital games place the political message of the game at the forefront (i.e., in the game title or direct voiceover narrative explaining the political message), whereas other companies like Tomorrow Corporation artfully incorporate the message into the gameplay and overarching narrative. For example, Human Resource Machine and 7 Billion Humans both focus on learning a programming language. The umbrella for both these stories is automatization, calling to the rising need for STEM workers in America and the need to understand programming language, including which jobs are considered "useless skills" and what is being valued in American society. The digital games also make a commentary on large corporations' use of robots to free workers of mundane labour so that they may pursue their passions, but those who were now jobless demand well-paying jobs to survive. The solution comes from machines who create low-level entry jobs for everyone in the world, and in this scenario human beings literally become the cogs in the wheel of a big machine, becoming easily dispensable, replaceable, and their lives have little to no value. It then raises questions on the effects of capitalism and large corporatization on the well-being of the people, and these reflections do not need to rely on an upfront narrative explanation as in Phone Story.

The use of satirical games for learning can draw our attention to phenomena often overlooked. Doki Doki Literature Club! added an element of horror to dating visual novels by adding a consciousness to one of the 2D videogame characters. The usual control that the player has in these digital games is stripped away; the player is forced to evaluate the fantasy relationships with these perfectly crafted personalities designed to fall in love with the player and accept his or her advances, inevitably face the loss of control over the plot, and continue with the unpredictability and horror that ensues from the events that occur. The digital game has the potential to disrupt the lifestyle of a *hikikomori*,[35] someone who chooses to socially withdraw for extended durations and who is often overlooked or looked down upon in Japanese society, and possibly inspire positive change as the player reflects on the status of their own relationships. Doki Doki Literature Club! may also serve as a supplementary learning tool in a curriculum for mental health, identifying patterns and signs of mental instability, depression, and abusive and controlling behaviours in romantic relationships. Satirical games allow for dystopian or exaggerated versions of the future if we continue down the same path of unawareness. They can portray the helpless state of consumers in the food industry, a world where people have no power over the government or corporations (sometimes forced to work for the corporations themselves to survive), and no matter where people turn, there is no escape from predestination. These visions can be upsetting and terrifying, but also humourous, and the possibility of their reality is much closer than we would like to think if the public remains unaware of how their strings are being drawn. Overall, the satirical digital games in this article forewarn players of being puppets for larger, uncontrollable entities that have their own priorities first and do not have the player's well-being in mind. In turn, these digital games can serve as a shared experience for learning the functions of society and its critiques and serve to illustrate the consequences of our collective actions and passivity, as well as the impact of governing policies. Our definition of satirical games elaborates on Bogost's proposed term of *anti-advergames*[36] by not limiting the scope only to companies, but rather societal practices and infrastructures at large.

Lastly, we believe categories and genres are necessary to distinguish the nuances that exist between game titles. However, we remain unconvinced that 'serious' is the best term to describe digital games with learning goals within target content, and 'educational' digital games have a history of disengagement from younger audiences and low excitement.[37] The term 'serious games' presents several problems when received by those outside the gaming community and by the public: it assumes that digital games made for entertainment do not involve learning goals and undermines their effective and established design for learning, it creates an unnecessary dichotomy between game titles, and posits conflict between the factions in favour or not in favor of serious games. The near antonym of 'serious' in the dictionary is riddled with words like 'comical,' 'light,' 'ridiculous,' and 'absurd'.[38] The definition of 'serious' contributes to the misguided division of play from learning and contributes to the common belief that digital game play is an unproductive use of time and impairs our youth's development.[39] However, it is likely from the current

27   NAKAMURA, J., CSIKSZENTMIHALYI, M.: The concept of flow. In CSIKSZENTMIHALYI, M. (ed.): *Flow and the Foundations of Positive Psychology*. London, New York : Springer, 2014, p. 240.
28   PLASS, J. L., O'KEEFE, P. A., HOMER, B. D., CASE, J., HAYWARD, E. O., STEIN, M., PERLIN, K.: The impact of individual, competitive, and collaborative mathematics game play on learning, performance, and motivation. In *Journal of Educational Psychology*, 2013, Vol. 105, No. 4, p. 1059.
29   ROSAS, R. et al.: Beyond Nintendo: Design and assessment of educational video games for first and second grade students. In *Computers & Education*, 2003, Vol. 40, No. 1, p. 89-90.
30   *We Happy Restaurant tagged posts*. [online]. [2020-05-17]. Available at: <https://www.tumblr.com/tagged/we-happy-restaurant>.
31   *The human resource machine*. [online]. [2020-04-15]. Available at: <https://www.fanfiction.net/s/13553612/1/The-Human-Resource-Machine>.
32   *Doki Doki Literature Club! Wiki*. [online]. [2020-05-17]. Available at: <https://doki-doki-literature-club.fandom.com/wiki/Doki_Doki_Literature_Club_Wiki>.
33   ITO, M.: *Hanging out, messing around, and geeking out*. Cambridge : The MIT Press, 2013, p. 65-66.
34   *Google Play: Com-Phone Story Maker*. [online]. [2020-03-18]. Available at: <https://play.google.com/store/apps/details?id=ac.robinson.mediaphone&hl=sk>.

35   FURLONG, A.: The Japanese hikikomori phenomenon: acute social withdrawal among young people. In *The Sociological Review*, 2008, Vol. 56, No. 2, p. 309.
36   BOGOST, I.: *Persuasive games: The expressive power of videogames*. Cambridge : The MIT Press, 2007, p. 223-230.
37   GROS, B.: Digital games in education: The design of game-based learning environments. In *Journal of Research on Technology in Education*, 2007, Vol. 40, No. 1, p. 25-26.; JENKINS, B.: Don't quit playing: Video games in the STEM classroom. In *Techniques: Connecting Education & Careers*, 2014, Vol. 89, No. 1, p. 60.
38   *Serious*. [online]. [2020-03-18]. Available at: <https://www.lexico.com/en/definition/serious>.
39   BOGOST, I.: The rhetoric of video games. In SALEN, K. (ed.): *The Ecology of Games: Connecting Youth, Games, and Learning*. Cambridge : The MIT Press, 2007, p. 120-121.

trends within education literature that the term serious games will remain popular as a form to distinguish between a game meant for learning and a game meant for entertainment. Rather than abandon the term 'serious games' altogether, those who choose to use 'serious games' should stay aware of the debate around the term, consider the necessity of distinguishing digital games (e.g., how is the game genre relevant to research goals?), and tread cautiously as we continue the dialogue around the need and the development of 'game literacy'.[40] Researchers, practitioners, and game developers should continue to foster dialogue across disciplines and collaborate more with each other on game projects. We must work towards a consensus on the meaning of 'serious games' and perhaps replace the term altogether to avoid further confusion (especially in multidisciplinary teams and conversations), and towards more fruitful collaborations that focus on meaningful learning rather than on how to market digital games. We consider that game utilization itself may be within the parameters of serious games even without the label 'serious'.

Conclusion

We contributed to the theoretical foundations of games that utilize satire by assessing such games that are available on Steam in addition to two mobile games that inspired the research, summarized their characteristics, and hypothesized on the future use of such games in learning. We proposed such games be referred to as satrical games, a genre of its own that critiques real-world problems and situations that can be as much a political statement as an interactive game experience. Satirical games allow for creative and political expression about *culturally relevant, time-sensitive topics* through the act of play. It is through exploration and play that we are led to question the manner in which we live, reflect on our roles and participation in society, and have our attention drawn to our relation to others. It is no coincidence that satirical games are being produced by indie game companies. Large established entities, such as EA Entertainment or Blizzard Entertainment may want to stay as politically neutral as possible. One misuse of satire may result in losing millions of dollars in revenue for large companies, not to diminish the financial pressures of indie companies, but there is a vast difference in pressure on reputation and consumer expectations where indie companies have more leeway to express unconventional ideas. The genre of satirical games and digital games in general should be taken more seriously by practitioners and researchers as tools for learning, and as a media receive the same level of critiques as film, television, and music. Arguably, digital games embody the theatrical and narrative aspects of film and television shows, utilizing music artfully, with the addition of free play through a crafted, hypothetical world. Future studies should examine additional digital game titles that were created for entertainment, or those traditionally considered 'non-serious' digital games and examine how satire is used to achieve learning goals within games. There is much potential for using satirical digital games for learning, such as utilizing one or more games mentioned in this study for additional empirical studies:

- What age group would benefit from the use of satirical games for learning?
- What is a method of introducing these games for learning purposes that would appeal to the appropriate audience in both formal and informal learning contexts?
- How well are these popular games received in an academic vs. home context?

- What are the learning gains from individual and shared play experiences, as well as follow-up discussions across different populations? It would be beneficial to run a study using experimental group design to isolate these variables.
- What are the best practices for follow-up discussions? How should follow-up discussions be structured and facilitated?

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