

Imagining Cities Through Play

Immersive, Playful Video Game Experiences and the Liberation of Civic Imaginations

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Introduction

Video games do not have to be useful in a measurable way. They can happily keep on existing as a popular form of entertainment but are most certainly not expected to improve us as a species, provide us with specific skills, or teach us science. They are a popular art form¹ with mainstream appeal, and thus theoretically in a position to enlighten, inspire, start discourses, and, in certain cases, spread ideas regarding the betterment of humanity. Massively popular video games like *BioShock*² openly discuss politics, and the medium as a whole aspires for immersion to create believable, yet mostly imaginary, worlds for players to experience as convincingly as possible. It is the nature and design sensibilities of video games that allows them to present convincing synthetic worlds and spaces, and to thus enrich imaginations.

Playing and interacting in radically different, often impossible, and commonly urban environments usually populated by clever automatons sounds like an idea that would have been enthusiastically adopted by the utopian thinkers of the 19th century. And, I argue, such a powerful

1. Chris Melissinos, "Video Games are One of the Most Important Art Forms in History," *Time*, September 22, 2015, <https://time.com/collection-post/4038820/chris-melissinos-are-video-games-art/>.
2. 2K Boston, 2K Australia, *BioShock*, 2K Games, Microsoft Windows, 2007

medium can indeed liberate or at the very least trigger our imaginations to the point of picturing the unthinkable. Perhaps not necessarily collectively—Karl Marx,³ the grandfather of modern revolution, was adamant that revolutionary thought can only be widespread during turbulent times—but at the very least on a minority level.

I claim that games and utopian thought are compatible; that the immersive, interactive, navigable urban worlds of gaming inform the way we look at cities, urbanism, and society as a whole. Video games can convey utopian ideas and crucially help to imbue these concepts with concrete—albeit digital—forms. Games and utopias both do, after all, pay attention to urban environments. *Grand Theft Auto V*,⁴ for example, one of the most successful games in history, has an impressive city at its heart; whereas both classical utopias, and most contemporary dystopias, have been almost exclusively urban, the latter has also directly influenced countless game settings.

Humans at Play

Play, in all its varied guises, and whether acknowledged or not, has been at the core of human evolution and culture for millennia, albeit often only encouraged in heavily restricted or ritualized contexts. The famous *Children's Games*⁵ painting by Bruegel the Elder from 1560 showcases over two-hundred children playing roughly eighty games. Depicted as completely absorbed in their frivolous activities, the children are directly contrasted to the painting's adults who are occupied with obviously more important matters. *Children's Games* suggests that during the 16th century, play was perceived as the exclusive domain of children, yet it showcases a rich tapestry of all the toys and games already available to humans, from inflated pig bladders, water guns, and dolls to marbles and spinning tops.

3. Karl Marx, *The Eighteenth Brumaire of Louis Bonaparte* (New York: Cosimo Classics, 2008).

4. Rockstar North, *Grand Theft Auto V*, Rockstar Games, PS3, 2013.

5. Bruegel the Elder, *Children's Games*, 1560, oil on panel, 118 cm × 161 cm, Vienna Kunsthistorisches Museum.

Adults, of course, never stopped playing either. Sports, card and dice games, gambling, games such as the Egyptian metaphysical⁶ senet, the Royal Game of Ur, nine men's morris (which dates at least as far back as the Roman era⁷), as well as the still popular checkers, go, and chess, were all mainly aimed at adults. Playing games even survived the strict moral doctrines of the Protestantism, mercantilism, and early capitalism it—as Max Weber⁸ demonstrated—directly influenced. Adults and older children were expected to focus on work in an era when productivity was regarded as a moral duty, yet, neither games nor sport vanished. Eventually, games even thrived: Parker Brothers, the American toy and game manufacturer, was founded in 1883,⁹ Christian virtues in the early 19th century were taught via The Mansion of Happiness board game, and the political Landlord's Game by anti-monopolies activist Lizzie Magie was self-published in 1906¹⁰ before eventually being turned into the hugely popular board game of Monopoly by Parker Brothers.

Monopoly, this strangely enduring board game that has been reskinned to fit such diverse themes as *Star Wars* and *Peppa Pig*, also serves to highlight the subtle but continuous relationship of urban space and play. Monopoly allows players to buy avenues and roads and wants them to understand the rules that govern the real estate market and the inherent inequalities of the untaxed urban land market. Even if Monopoly is not as central to the contemporary, daily civic experience as the amphitheater was in the Roman city, it carries on a long tradition of games that interact with the urban fabric: football stadiums¹¹ have been important social nodes of the British industrial city, horse-back *Chovgan* was played

6. Christian Donlan, "Why did ancient Egypt spend 3000 years playing a game nobody else liked?," *Eurogamer*, October 29, 2017, <https://www.eurogamer.net/articles/2016-06-01-why-did-ancient-egypt-spend-3000-years-playing-a-game-nobody-else-liked>.

7. Friedrich Berger, "From Circle and Square to the Image of the World: A Possible Interpretation for Some Petroglyphs of Merels Boards," *Rock Art Research* 21, no.1 (2004): 11–25.

8. Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (New York: Oxford University Press, 2011).

9. Kathy McCabe, "For love of the games," *The Boston Globe*, December 7, 2003, http://archive.boston.com/news/local/articles/2003/12/07/for_love_of_the_games/.

10. Philip E. Orbanes, *Monopoly: The World's Most Famous Game—and How it Got that Way* (Cambridge, MA: Da Capo Press, 2006).

11. Juan Luis Paramio, Babtunde Buraimo, and Carlos Campos, "From Modern to Postmodern: The Development of Football Stadia in Europe," *Sports in Society* 11, no. 5 (2008): 517–534.

for centuries on the Naqsh-e Jahan square¹² in Isfahan, Persia, and *Pokémon GO*¹³ brought thousands of unexpected users to countless civic sites across the world and encouraged citizens to discover new sections of their cities.

What Friedrich Schiller described as the play-drive,¹⁴ a pure, necessary moment in human development, might explain why we are indeed one of those species who simply cannot stop playing. *Homo Ludens*—the defining 1938 work by historian Johan Huizinga¹⁵ which still influences how scholars look at gaming today—destabilized many of the taboos surrounding games and further showcased the importance of the play element in culture and society. Huizinga argued that play is both older than culture and a required condition for it: animals played before humans, thus play and culture are intertwined. Snakes and Ladders, for instance, a game with ancient Hindu roots originally called Moksha Patam, featured strong religious symbolism before being sanitized and adapted for an English audience by the Milton Bradley company in 1943.¹⁶

Interestingly, Huizinga also noted that play doesn't necessarily restrict itself to games, and indeed fun—one of the most significant aspects of play—can creep into any type of activity. Fun, or the promise thereof, can make most situations appealing, and so games were employed to make the early, gargantuan computers seem exciting. *OXO*, a simple game of tic-tac-toe (and possibly the first video game ever) ran on the EDSAC mainframe in 1952 and was part of Sandy Douglas's thesis on human-computer interaction.¹⁷ Similarly, the sci-fi action game *Spacewar!* (1962)¹⁸ was designed to show off the entertainment capabilities of com-

12. Zubaidullo Ubaidulloev, "The History and Characteristics of Traditional Sports in Central Asia: Tajikistan," *Bull. Facul. Health & Sci., Univ. of Tsukuba* 38 (2015): 43–58.

13. Shiva Kooragayala and Tanaya Srini, "Pokémon GO is changing how cities use public space, but could it be more inclusive?," *Urban Wire*, August 5, 2016, <https://www.urban.org/urban-wire/pokemon-go-changing-how-cities-use-public-space-could-it-be-more-inclusive>.

14. Friedrich Schiller, *Essays: Friedrich Schiller* (London: Bloomsbury Academic, 1993).

15. Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (Angelico Press, 2016).

16. "Snakes and Ladders," Wikipedia, last modified September 17, 2021, https://en.wikipedia.org/wiki/Snakes_and_ladders.

17. Tristan Donovan, *Replay: The History of Video Games* (Lewes: Yellow Ant, 2010).

18. Steven L. Kent, *The Ultimate History of Video Games* (New York: Three Rivers Press, 2001).

puters to visitors of the Massachusetts Institute of Technology. One could argue that gamification—the process, essentially, of enhancing services with (motivational) affordances in order to invoke gameful experiences¹⁹—was what drove the very first games.

Since those early days, video games moved from vast supercomputers to portable phones, affordable computers at home, and compact consoles, and explosively grew to become a vast, global industry that now dominates much of popular culture. According to the 2021 Global Games Market Report,²⁰ video games generated an estimated \$175.8 billion in revenue in that year alone. Capitalism and its mainstream ideological systems, as well as the culture it generates, can in no way afford to regard video games (and play in general) as an exclusively counterproductive or frivolous pastime meant for children. Video games are nowadays a core pillar of the entertainment industry and have expanded their reach to most social groups, including senior men and women.²¹ The days of Nintendo trying to initially disguise its definitively successful Nintendo Entertainment System as a clever kid’s toy,²² or an 8-bit gaming-focused home computer marketed as being “good for homework,” are far beyond us.

Adults are now encouraged to spend time and money playing and can engage with games without the fear of stigmatization. Entertainment marketing targets adults, and some of the medium’s greatest successes, like *Grand Theft Auto V*, a title that has sold over 150 million units,²³

19. Juho Hamari, Jonna Koivisto, and Harri Sarsa, “Does Gamification Work?—A Literature Review of Empirical Studies on Gamification,” In *2014 47th Hawaii International Conference on System Sciences*, 3025–3034, 2014.
20. “Global Games Market Report,” *Newzoo*, accessed September 27, 2021, https://resources.newzoo.com/hubfs/Factsheets/Newzoo_Global_Games_Market_Report_Fact_sheet.pdf.
21. AARP Research, “Gaming Attitudes and Habits of Adults Ages 50-Plus,” December 2019, https://www.aarp.org/content/dam/aarp/research/surveys_statistics/technology/2019/2020-gaming-trends-older-adults.doi.10.26419-2Fres.00328.001.pdf.
22. Helen A. Lee, “The Untold Truth of R.O.B. The Robot,” *Looper*, October 23, 2020, <https://www.looper.com/266530/the-untold-truth-of-r-o-b-the-robot/>.
23. “Lifetime unit sales generated by Grand Theft Auto V worldwide as of November 2021,” *Statista*, November 2021, <https://www.statista.com/statistics/1247955/gta-v-unit-sales-worldwide-total/#:~:text=As%20of%20November%202021,%20Grand,video%20games%20of%20all%20time.>

can afford to ignore the younger audiences by being rated as “Mature” (17) products. Consuming video game media is not merely a mainstream behavior, rather, it is hailed as a healthy and economically significant activity. Playing action games—first person shooter games in particular—has, for example, been shown²⁴ to produce improvements in sensory, perceptual, and spatial cognitive functions. The psychological benefits²⁵ of playing video games have also been researched, and their use as both educational and exercise tools is widespread.

Success and recognition have led to ideology and culture. Creators of casual games, King, were acquired²⁶ for \$5.9 billion by Activision-Blizzard as their match-3 game *Candy Crush Saga* all but dominated the mobile market charts on platforms like iTunes and Google Play: its profits²⁷ for 2020 reached \$857 million. Parallel to that, geek culture, a culture of enthusiasts traditionally associated²⁸ with media such as video games, Japanese animation, and science fiction, etc., is increasingly celebrated across mainstream media outlets, and thus video games are increasingly studied as an art medium and popular phenomenon. Unsurprisingly, and as the discipline of game studies rose to study video games, Huizinga was effectively rediscovered, this time with a particular interest in his concept of the magic circle, which, according to Gordon Calleja,²⁹ was widely adopted to articulate the spatial, temporal, and psychological boundaries between games and the real world.

24. Ian Spense and Jin Feng, “Video Games and Spatial Cognition,” *Review of General Psychology* 14, No. 2 (2010): 92–104.
25. I. Granic, A. Lobel, and R. C. M. E. Engels, “The benefits of playing video games,” *American Psychologist* 69, no. 1, (2014): 66–78.
26. “Activision Blizzard completes King acquisition becomes the largest game network in the world with over 500 million users,” *Activision*, February 23, 2016, <https://investor.activision.com/news-releases/news-release-details/activision-blizzard-completes-king-acquisition-becomes-largest>.
27. David Curry, “Candy Crush Revenue and Usage Statistics (2022),” *Business of Apps*, January 11, 2022, <https://www.businessofapps.com/data/candy-crush-statistics/>.
28. Jessica McCain, Brittany Gentile, and W. Keith Campbell, “A Psychological Exploration of Engagement in Geek Culture,” *PLOS ONE* 10, no. 11, (2015), e0142200, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0142200>.
29. Gordon Calleja, “Digital Games and Escapism,” *Games and Culture* 5, no. 4, (2010):335–353.

For Huizinga,³⁰ however, this circle referred to social contexts where specific, agreed-upon rules distinguished one type of social space from another: the tennis-court, the chessboard, the arena, the temple, or, indeed, the video game screen. Just as a wedding ritual does not exclusively matter within the confines of the temple as it carries significance within civil society, so do gaming's virtual worlds influence people outside of the screen and in the actual world. Play moves out of the playground's boundaries just as effortlessly as *BioShock*'s critique of Ayn Rand sparked a wider discourse on objectivism. Gaming's magic circle cannot completely separate gameplay from everyday life, mainstream ideas, and politics, as even more emphatically observed with the augmented reality game *Pokémon GO*³¹ that has thousands hunting for cartoon monsters in actual cityscapes worldwide.

Interestingly, such interactions with actual space and comments on its organization did not arise from unorganized play. They sprang from gaming—a type of play with distinct purpose, structure, goals, and rules—as an activity that is enjoyed in virtual spaces by people very obviously residing in actual space, but also whose forms and imagined geographies resemble and have been directly inspired by reality. The principles shaping the construction of mental maps that Kevin Lynch analyzed in *The Image of the City*³² and *Good City Form*³³ and employed in his attempts to make urban spaces navigable, have been extensively referenced³⁴ in level design theory and widely adopted in the creation of playable worlds. Thus, exploring video games worlds such as *Cyberpunk 2077*'s³⁵ Night City reveals a clear system of landmarks, paths, districts, and nodes.

30. Huizinga, *Homo Ludens*.

31. Niantic, Nintendo, and The Pokémon Company. *Pokémon GO*. Niantic. Android. 2016.

32. Kevin Lynch, *The Image of the City* (Cambridge, MA: The MIT Press, 1960).

33. Kevin Lynch, *Good City Form* (Cambridge, MA: The MIT Press, 1981).

34. For examples, see in Christopher W. Totten, *An Architectural Approach to Level Design: Second Edition* (Boca Raton, London, New York: CRC Press, 2019), and Chris Bateman, ed., *Game Writing: Narrative Skills for Videogames, Second Edition* (Bloomsbury, 2021).

35. CD Projekt Red. *Cyberpunk 2077*. CD Projekt. Windows. 2020.

Remembering Utopia

The political aspirations of utopian thinking were never really questioned. At its simplest, “utopia” is a proposal that allows us to imagine a better world, to envisage situations that are beneficial for the majority of humankind. Utopia can pithily—and often via an imaginary city—describe such a desired future. It can be symbolic of a political program, critique an existing socioeconomic system, or attempt to envision an alternate political economy—a way out. Whether vaguely described as a class-less society that overcomes divisions of city and countryside, or a meticulously planned federalist union of towns, utopia remains optimistic and elusive. The closer we get to it the farther away it escapes, and even though it can never be achieved, it most definitely is something that keeps us moving forward. Utopia can be very specific, too. It can be precise and aspire to incremental changes or even lie entirely in the eye of the beholder. The depth and width of utopian thought is indeed immense, and that is why I only employ it in its most traditional, classical sense.

Although aspirational political fantasies trace as far back as Plato’s idealistic, perfect city of Atlantis, the word utopia (roughly Greek for “the place that is nowhere”) began to be attached to such visions with Sir Thomas More’s eponymous usage in 1551.³⁶ Utopias were much later described as non-dialectic by Marx and Engels.³⁷ They’ve also occasionally expressed nostalgic urges for an idealized past, and in most cases have been understood as static states of societal flawlessness. Urbanist Lewis Mumford in the definitive *The Story of Utopias*³⁸ presented several of the most important of these fascinating utopian schemes, or, as he put it, all the philosophies, fantasies, rationalizations, projections, images, and opinions on a perfect society, with spatial imaginings like Tommaso Campanella’s religious *City of the Sun* or the Icarian socialism of Étienne Cabet, who founded communities in Illinois and Texas.

36. Sir Thomas More, *Utopia* (New York: Dover Publications, 1997).

37. Karl Marx, Friedrich Engels, *Manifesto of the Communist Party* (Moscow: Progress Publishers, 1977).

38. Lewis Mumford, *The Story of Utopias* (Azafran Books, 2017).

Attaining perfection can only be achieved outside history, but from the hedonistic and meticulously designed structures of Charles Fourier's *phalanstère* to the utopian-yet-applied socialism of Robert Owen, aspects of utopianism did creep into architectural and planning theory. Utopia as architecture—as a reconstructed and thoroughly described world—is, according to Ruth Levitas,³⁹ culturally familiar. Ebenezer Howard's "Garden City"⁴⁰ method of planning, as well as various strands of modernism, turned utopia into something more realistic and more attainable. Perhaps this utopian plan bordered on totalitarian,⁴¹ as in Le Corbusier's brilliant but overbearing *Ville Radieuse*,⁴² or in other instances, though admittedly less so, as in Frank Lloyd Wright's individualistic, futuristic dream for the suburban "Broadacre City."⁴³

It should be noted that utopias are not necessarily to be regarded as spatial schema; not all utopian notions include architecture. Ernst Bloch, one of the last classical utopians, in his seminal work *The Principle of Hope*,⁴⁴ chose to understand utopia as a political program and human impulse instead. But for those visions which do include actual plans of spatial organization and actualization, what is rarely commented upon is that utopias—whether accompanied by vivid maps and detailed architectural concepts or are colorfully narrated in prose—try to support the imaginations of their audience with as concrete forms as possible. Imagining something pithy, understandable, and coherent, is imagining something plausible. Something that can serve as a call to action and perhaps provide the initial blueprints for a new society. Something which can present us with formerly unimaginable options.

39. Ruth Levitas, *Utopia as Method: The Imaginary Reconstitution of Society* (London: Palgrave Macmillan, 2013).

40. Ebenezer Howard, *Garden Cities of To-morrow* (New York: Classic Books International, 2010).

41. David Pinder, "In Defense of Utopian Urbanism: Imagining Cities After the 'End of Utopia,'" *Geografiska Annaler Series B, Human Geography* 84, no. 3/4, (2002): 229–241.

42. Gili Merin, "AD Classics: Ville Radieuse / Le Corbusier," *ArchDaily*, accessed October 1, 2021, <https://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>.

43. "Broadacre City," Wikipedia, last edited July 28, 2021, https://en.wikipedia.org/wiki/Broadacre_City.

44. Ernst Bloch, *The Principle of Hope, Volume 1* (Cambridge, MA: The MIT Press, 1995).

Such hopeful grand narratives were finally pushed away by the rise of postmodernism,⁴⁵ combined with the desperation that Margaret Thatcher condensed into her “There Is No Alternative”⁴⁶ slogan and the temporary collapse of egalitarian dreams following the defeat of the Soviet Union. We were left alone with capitalism, which Francis Fukuyama⁴⁷ gleefully professed as “the end of history.” The complete retreat⁴⁸ from utopian urbanism was unavoidable, as things were now thought to be as good as they could get. Even urban planning’s great projects gave way to the logic of incremental improvements, and notions of a technologically exotic future city that blossomed during the 1950s had all but faded away by the end of the twentieth century.

Dystopia, the reversal of utopia (effectively the “bad place” in Greek) has become prevalent, projecting current problems and anxieties onto a bleak future. The notion dominates much of the popular imagination, especially in the science fiction genre. Huxley’s *Brave New World*,⁴⁹ Orwell’s *1984*,⁵⁰ films such as *Blade Runner*⁵¹ and *Brazil*,⁵² and games like *A Mind Forever Voyaging*⁵³ or *Cyberpunk 2077* all evoke hellish cityscapes brilliantly and warn us of political dangers. Dystopias may be pessimistic but are deeply political and spatial in their critique of the status quo as well. They are never static either, and thus are in direct contrast to the end of history narrative which so spectacularly and quickly collapsed.

Even if the idea of the utopia in its traditional, prescriptive format regaining prominence seems improbable, its methods of conviction via believable, seemingly thorough, depictions of better societies and of reminding humans that their lives should be vastly better, remain valid. Obviously,

45. David Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge, London: Blackwell, 1990).

46. “There Is No Alternative” (TINA) was the phrase that Thatcher commonly used to claim that the free-market economy is the only, and un-debatable, economic option.

47. Francis Fukuyama, *The End of History and the Last Man* (New York: Free Press, 1992).

48. David Pinder, “In Defense of Utopian Urbanism.”

49. Aldous Huxley, *Brave New World* (New York: Harper Perennial Modern Classics, 2006).

50. George Orwell, *1984* (New York: Signet Classics, 1977).

51. *Blade Runner*, directed by Ridley Scott, United States: Warner Bros., 1982.

52. *Brazil*, directed by Terry Gilliam, United States: Universal Pictures, 1985.

53. Steve Meretzky, *A Mind Forever Voyaging*, Infocom, MS-DOS, 1985.

rethinking utopia or utopian urbanism is outside the scope of this essay but sparking imaginations with better alternatives most definitely is not. Sketches, models, fantastic maps, and detailed descriptions were employed by early utopians exactly because they were aware of the fact that an idea becomes concrete and palpable only when it is possible to be imagined. While discussing the imaginary In *The Seeds of Time*, Jameson⁵⁴ famously stated that it is easier to imagine the end of the Earth than it is to imagine the end of capitalism, thus pointing out that the problem might indeed be a crisis of the imagination.

Immersion and Video Game Imaginations

Crucially, video games are especially good at constructing and helping us imagine ourselves in entirely new places in what can only be described as an interesting dialogue between interactive virtuality and reality. One of the most important aspects of the video gaming medium is its ability to induce immersive experiences.⁵⁵ As players suspend their disbelief and experience different places, they can then transport their in-game sensations and thoughts into the real world, potentially demanding or taking part in the latter's evolution. After all, video games have been shown to nurture creativity⁵⁶ and imagination.⁵⁷

Video games are indeed a medium that can spark imagination in novel ways, as well as a rare medium that demands the participation of audiences. Players of games must think, react appropriately, and explore. They must understand interlocking systems. A movie will never cease its progress if you are not paying attention or fail to get its themes, and a book is not able to stop inattentive readers from making it to the final

54. Fredric Jameson, *The Seeds of Time*, (New York: Columbia University Press, 1994).

55. Lazaros Michailidis, Emili Balaguer-Ballester, and Xun He, "Flow and Immersion in Video Games: The Aftermath of a Conceptual Challenge," *Frontiers in Psychology* 9, no. 1682 (2018).

56. "Video game playing tied to creativity," *MSU Today*, November 2, 2011, <https://msutoday.msu.edu/news/2011/video-game-playing-tied-to-creativity>.

57. Kym Buchanan, "How Video Games Engage the Imagination Muscle," *Pop Matters*, February 2, 2016, <https://www.popmatters.com/how-video-games-engage-the-imagination-muscle-2495454604.html>.

chapter. A game, however, can do exactly this. It graces audiences with agency, teaches them its rules, trains them in its mechanisms, and then enforces attention and demands problem solving, thus further engaging and immersing them in its world.

Simultaneously, video games are firmly rooted in neoliberal capitalism, as Slavoj Žižek argues in Jon Bailes's *Ideology and the Virtual City*,⁵⁸ though this does not say much about them. It is mostly a historical observation: video games are products of their time as they express popular anxieties, and, admittedly, are aimed at commercial success, yet they can simultaneously also be freeware, anti-establishment, wildly experimental, personal or propagandist, and, in a nutshell, art. Interestingly, video games and utopias share certain common traits too: both are adept in imagining alternate societies in novel urban environments, both are deeply spatial, and both strive to prove their cohesiveness.

By bringing play to their spatial medium, video games liberated the concept from the constraints of actual space. The limits of gaming need no longer adhere to the constraints of the lines of a pitch, the edges of a table, or even the area of a square. In video games, reality's physical rules can easily be bent. Buildings and settlements can ignore physics, size restrictions, and costs. Vast expanses can be provided to players. Impossible, gravity defying buildings and irrational, fluid spaces can be conjured. To organize and shape such spaces, the disciplines of architecture⁵⁹ and urban design are important, and do indeed influence the important disciplines of level design⁶⁰ and even narrative design.⁶¹ Virtual architecture and urbanism may not have to adhere to the constraints of physics or the

58. Jon Bailes, *Ideology and the Virtual City: Videogames, Power Fantasies and Neoliberalism* (Winchester, Washington: Zer0 books, 2019).

59. Christopher W. Totten, *An Architectural Approach to Level Design, Second Edition* (Boca Raton, FL: CRC Press, 2019).

60. Rudolf Kremers, *Level Design: Concept, Theory, and Practice* (Natick: AK Peters, 2009).

61. Konstantinos Dimopoulos, "The Tales Cities Tell," in *Game Writing: Narrative Skills for Videogames*, ed. Chris Bateman (New York: Bloomsbury, 2021), 339–363.

laws and needs of actual people, but, even in their most exotic applications, they need to heavily borrow from reality to create spaces that are easy to grasp and feel somewhat familiar to players to create believable, seemingly sensible illusions.

Virtual worlds⁶² are still bound by rules as they attempt to emulate the physical world without ever losing their flexibility. Games set in convincing yet outlandishly urban illusions are of particular interest, as they manage to achieve suspension of disbelief in environments with little resemblance to those we experience in our daily lives. The city of Anor Londo in *Dark Souls*,⁶³ for instance, is an urban centre with a perpetually setting sun and undead inhabitants and consists almost exclusively of gothic cathedrals. Yet, it retains enough familiarity to attract its audiences: the city features a central axis and walls, and at its center lies a structure directly inspired by the *Duomo di Milano*. Similarly, the evolving dystopian city of Rockvil (the setting of classic text adventure game *A Mind Forever Voyaging*⁶⁴) may feature flying buses, 130 story buildings, and black marble temples run by cults, but is also based on an almost stereotypically US urban structure pattern. By allowing players to act upon such a virtuality, real-life rules can be believably re-imagined in novel environments. As our brains are brilliant at thinking in patterns, when introduced to a seemingly plausible environment it can fill in the blanks, evaluate, and understand it. We can then discern how a world without disease could make sense and can experience moving around a virtual city that does not cater to private automobiles.

Interactivity is a core characteristic of video games, and player choices are key in engineering the emotions that drive the game experience.⁶⁵ This sense of agency amplifies player feelings and piques their interest in their surroundings. Interactivity and choice force audiences to engage on a deeper level as they learn to be attentive of their environments and recognize the relationships governing them. When things work the way they

62. Richard A. Bartle, *Designing Virtual Worlds* (Berkeley: New Riders, 2004).

63. From Software, *Dark Souls*, Namco Bandai Games, PlayStation 3, 2011.

64. Meretzky, *A Mind Forever Voyaging*.

65. Tynan Sylvester, *Designing Games: A Guide to Engineering Experiences* (Sebastopol, CA: O'Reilly, 2013).

are expected to, video games become immersive, and their immersion is further supported by requiring the player to understand the rules of the world they are temporarily inhabiting. Indeed, video games exercise almost all the cognitive and social skills required in real life.⁶⁶ According to Bryant and Davies,⁶⁷ the cognitive, emotional, and kinesthetic feedback loop that is formed between game process and player makes games a particularly powerful media for affecting moods and emotional states. Players occupy spaces and experience within them an intense, simulated form of existence where interaction is the active drive of emotion. The engrossing cityscapes of video games are actively demanding their audience's attention.

Immersion is a major aspect to a game's popularity,⁶⁸ and all game spaces, with their hopefully legible, abstracted realities, are constructed to achieve exactly that. As games remain interconnected systems of constraints that limit how players are able to interact with them,⁶⁹ hiding such constraints is another design problem. In order to maintain immersion—which makes a game's themes and ideas more persuasive—constraints require obfuscation. Ian Bogost⁷⁰ speaks of this procedural rhetoric of the art, that is, of persuading through rule-based representations and interactions within a specific theme, where players literally fill in missing portions of the game by interacting with it. These rules and available interactions are what imbue games with meaning and bring them to life in a unique new way.

66. Spense and Feng, "Video Games and Spatial Cognition."

67. Jennings Bryant and John Davies, "Selective Exposure to Video Games," in *Playing Video Games: Motives, Responses, and Consequences*, ed. P. Vorderer, J. Bryant (Lawrence Erlbaum Associates Publishers, 2006), 181–194.

68. James Babu, "Video Game HUDs: Information Presentation and Spatial Immersion," Master's Thesis, Rochester Institute of Technology, 2012.

69. Stefano Gualeni and Nele Van de Mosselaer, "Ludic Unreliability and Deceptive Game Design," *Journal of the Philosophy in Games*, Online First Issue (2021), last accessed October 1, 2021, <https://journals.uio.no/JPG/issue/view/415>.

70. Ian Bogost, *Persuasive Games: The Expressive Power of Videogames* (Cambridge, MA: MIT Press, 2007).

To consciously utilize the urban worlds of gaming to inform the way we look at cities and urbanism, we must stop regarding video games as merely a type of escapism sealed within its digital magic circle, itself surrounded by a society that mostly regards escapism as a negative phenomenon.⁷¹ Reality is a complex beast, often influenced by individual or collective imaginings. Nothing exists outside it, yet briefly escaping its imposed ideologies may allow us a glimpse at utopia. Besides, playing games does not automatically imply some sort of retreat from society. Games are not any more escapist than any other engaging activity,⁷² and, whether persuasive or not, are an active force in culture.⁷³ As for their persuasive power, the effect of games, in the vein of *SimCity*,⁷⁴ is easily noticed in physical reality regarding mainstream perceptions of what urban planning is.

The cities of games are thoroughly planned, yet often fragmented, virtual spaces evoked through geometry, texture, sound, and prompts for interactions. They provide us with a completely new lens through which to appreciate urban realities and configurations. This is not a lens necessarily applicable to the scientific analysis of actual geography, but one of a still growing artistic medium: it doesn't have to be pragmatic when it's able to render spatial imaginations palpable in a believably concrete manner. This is a lens that transforms text and two-dimensional plans—the domain of the engineer and the architect—into interactive 3D digital spaces that are much closer to how we perceive physical space. No specialized knowledge or map-reading skills are required to experience and understand such spaces, and the addition of layers of interactivity as well as simulation sub-systems (such as flows of pedestrians) further support the illusion of being there.

71. Calleja, "Digital Games and Escapism."

72. Ibid.

73. Luis Navarrete-Cardero and Juan J. Vargas-Iglesias, "Can We Programme Utopia? The Influence of the Digital Neoliberal Discourse on Utopian Videogames," *Journal for a Global Sustainable Information Society* 16, no. 2 (2018), 782–804.

74. Will Wright et al., *SimCity*, Maxis Software, MS-DOS, 1989.

Uniquely, several of the worlds video games have to offer can be explored and played in a collective fashion. Multiplayer games like *Fortnite*⁷⁵ or *World of Warcraft*⁷⁶ act as very real social hubs, and, fascinatingly, as types of virtual space meant to be shared by many. These are digital settings limited by rules, yet are still able to entertain infinite possibilities, as cooperative sharing is required for gameplay.⁷⁷ It could, and indeed has been, argued that such video games can act as limited laboratories to simulate the consequences of different social, political, and economic policies.⁷⁸ Obviously, the scientific outcomes from such odd laboratories would be highly questionable, and, depending on the particular assumptions a virtual world was built upon, deeply biased, but, admittedly, they could perhaps approach the matter of the feasibility of certain utopian organizational suggestions or, based on their collective nature, offer up unexpected imaginings.

Alexander Galloway⁷⁹ argues that all video games are, at a certain level, utopian projects anyway, due to them featuring worlds that pick and mix the laws and rules they are simulating. This freedom to shape rules is, according to Galloway, utopia's scaffolding. Admittedly though, the creation of an imaginary world does not a priori imply a utopia;⁸⁰ this would at least demand a utopian intent, too, which is relatively rare in gaming. Even games like the eponymously titled pioneering, islandic nation builder *Utopia*⁸¹ for the Intellivision and the 16-bit city builder *Utopia*⁸²

75. Epic Games, *Fortnite: Battle Royale*, Epic Games, Windows, 2017. *Fortnite* is a player versus player battle royal game where the last man standing wins. The game encourages in-game communication, and even gives players gestures and dance routines to enhance its social function.

76. Blizzard Entertainment, *World of Warcraft*, Blizzard Entertainment, Windows, 2004. *World of Warcraft* is a massively multiplayer online role-playing game set in an expansive fantasy universe populated with strange races, nations, and buildings.

77. Alexander R. Galloway, "Warcraft and Utopia," *1000 Days of Theory* (2006), last accessed October 3, 2021, <https://journals.uvic.ca/index.php/ctheory/article/view/14501/5342>.

78. Michał Kłosiński, "Games and Utopia," *Acta Ludologica* 1, no.1 (2018), 4–14.

79. Galloway, "Warcraft and Utopia."

80. Kłosiński, "Games and Utopia."

81. Don L. Daglow, *Utopia* (Sears, Roebuck, and Co. Intellivision, 1981).

82. Celestial Software, *Utopia: The Creation of a Nation*, Gremlin Graphics, Amiga, 1991.

lacked such intent, despite allowing players to effectively pursue utopian creations. Actually, all city-building games, often despite their underlying assumptions, can be appropriated to entertain both utopian and dystopian civic notions.

What games and their urban environments have successfully and intentionally done so far, instead, has been in creating socio-spatial critiques. Extreme divisions, new types of racism, environmental deterioration, and civic authoritarianism have been common themes for gaming's urbanism. Even when social antagonisms are symbolically personified in alien overlords, supernatural beings, evil businessmen, or corrupt politicians, rather than institutional inefficiencies or systemic contradictions,⁸³ emphatic class structures both remain and define the vast majority of major video games.⁸⁴ Gaming's critique of modern ideologies and spatial structures, however, is often presented in a pulpy or whimsical way. I am also convinced that in many cases it manifests itself unconsciously, as designers tackle and research the inherently political social space in order to craft believable virtual cities themselves. Any good world builder will study reality and thus represent classes in their cities while probably also realizing their inherent narrative dynamic.

Jon Bailes⁸⁵ examines some of the more iconic attempts to unconsciously resolve social issues in the video game cities of *Saints Row IV*,⁸⁶ *Grand Theft Auto V*, *No More Heroes*,⁸⁷ and *Persona 5*.⁸⁸ According to Bailes, *Saints Row IV*'s utopian hedonism offers consumerism without the exploitation in an outrageous setting, whereas *Grand Theft Auto V* creates a more cynical critique of capitalist metropolitan life in a corrupt, hopeless, greedy big city. The town of Santa Destroy from *No More Heroes* is an abstracted

83. Bailes, *Ideology and The Virtual City*.

84. Konstantinos Dimopoulos, *Virtual Cities: An Atlas & Exploration of Video Game Cities* (London: Unbound, 2020).

85. Bailes, *Ideology and The Virtual City*.

86. Deep Silver Volition, *Saints Row IV*, Deep Silver, Windows, 2013.

87. Grasshopper Manufacture, *No More Heroes*, Marvelous Interactive, Nintendo Wii, 2007.

88. Atlus, *Persona 5*, Atlus, PlayStation 3, 2016.

representation of North American urban sprawl, where neither change nor riches are attainable, whereas *Persona 5*'s Tokyo is, for all intents and purposes, a prison city that is to be reformed to a proper city, but not quite desirable one, at the end of the game.

Reforming dystopia, or saving it from further decline, is a rather common theme, and thus urban dystopia is regularly visited by games. Dystopia's built-in plot hooks and the immersive powers of the medium, as well as its attention to the design of space, have created an impressive variety of highly memorable and often didactic cities over the past 40 years. The apathetic gray of the city of Neutropolis in *Normality* (1996),⁸⁹ the failed utopia of *BioShock*, the mercantilist steampunk horror of *Dishonored*'s⁹⁰ Dunwall, the corporatist Terrapolis from sci-fi adventure *B.A.T.*,⁹¹ and the cruel cyberpunk cities of *Deus Ex*⁹² are all characteristic examples thereof. The evils of capitalism projected on them in exaggerated and imaginative ways have created memorable places, though, admittedly, dystopia is sometimes merely used as a fictional façade,⁹³ as seen in the otherwise brilliant City 17 of *HALF-LIFE 2*.⁹⁴

Towards A Virtual Utopian Urbanism

Despite the inherent strengths of the medium, urban utopias remain incredibly rare in video games. Understandably, a perfect society doesn't offer interesting, inherent contradictions, but there really is no reason to stick with the static utopianism of old or even, as Asimov's *Foundation*⁹⁵ showcased decades ago, focus exclusively on internal threats. Besides, I cannot imagine many would find the flying cities of Georgii Kru-

89. Gremlin Interactive, *Normality*, Gremlin Interactive, Ms-DOS, 1996. *Normality* is a 3D adventure game about a teenager's rebellion in a dull, polluted, police state of the future.

90. Arkane Studios, *Dishonored*, Bethesda Softworks, Windows, 2012. *Dishonored* is an action-adventure that takes place in a plague-ridden, steampunk, industrial city and revolves around a royal murder and the ensuing coup.

91. Computer's Dream, *B.A.T.*, UbiSoft Entertainment, Atari ST, 1989. *B.A.T.* is an early point-and-click game in deep-space cyberpunk universe involving cosmic terrorists and unique aliens.

92. Ion Storm, *Deus Ex*, Eidos Interactive, Windows, 2000. *Deus Ex* is a cyberpunk role-playing thriller and one of the games that created the immersive sim genre. It takes place in a near-future dystopian Earth.

93. Navarrete-Cardero and Vargas-Iglesias, "Can We Programme Utopia?"

94. Valve. *HALF-LIFE 2*. Sierra Entertainment. Windows. 2004.

95. Isaac Asimov, *Foundation* (New York City: Gnome Press, 1951).

tkov⁹⁶—emblematic of early utopian planning in the Soviet Union—dull places to visit or think that their splendor is better appreciated on paper than in an interactive 3D environment susceptible to simulated weather and social tensions.

In reality, the virtual cities of gaming can offer convincing, memorable, and even persuasive utopias, provided they chose to do so. The technical capabilities and design methodologies are already well tested, documented, and in place. Civic, imaginary worlds that have the potential to produce alternative hopes and desires⁹⁷ can be manufactured and should enter the discourse regarding possible futures. Or as Marie-Laurie Ryan⁹⁸ put it, there are two perspectives on the virtual: fake virtual and potential virtual. A virtual city then must be seen as realized potential virtual, and this potentiality can attempt to convey the images of a better world and, hopefully, positively influence its audience.

Video games provide us with unending digital space to experiment with. It is a space that will never run out, can be arranged in virtually any way, and is supported by a menagerie of systems that make it feel real and behave in ways we perceive as plausible. What's more, and unlike previous utopian schemes, such systems can theoretically show the evolution of a proposed utopian scheme. An immersive digital utopia no longer has to be a static description, but a type of predictive tool that takes player choice into consideration. A game world can evolve along both deterministic and procedural lines in an endlessly iterative fashion. One could even attempt—within well-defined constraints—to construct a playful workspace to test out concepts of urban utopianism.

Video games provide us with fascinating opportunities to construct storytelling, and the thematic and immersive civic spaces can provide structure and form to dreams of social change. The technical ability, theory, and design vocabulary are already in place, but it is the design and nar-

96. Selim Omarovich Khan-Magomedov, *Georgii Krutikov: The Flying City and Beyond* (Barcelona: Tenov Books, 2015).

97. Kłosiński, "Games and Utopia."

98. Marie-Laurie Ryan, *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*, (Baltimore: Johns Hopkins University Press, 2001).

rative challenges that are the main obstacles. The imagination of the artists will undertake such work. Regarding the available tools, many of them have been homed in architecture and planning, due to their increasing incorporation of game technologies in their interactive visualizations, though we do have to remember that game tools, such as game engines, lack the precision demanded by the CAD and GIS programs that the designers of physical reality employ.

What's more, games as mainstream mediums should progress beyond building utopian-flavoured cities for players to experience and be inspired by. Games may be perfectly situated to let us imagine the utopia and its spaces anew by combining their spatial eloquence, persuasiveness, and interactivity, but it is the latter that could help them explore even more intriguing directions without limiting imaginations to the pre-imagined by the designers. In-game building tools supported by clever systems, moral choices that can make or break utopia, and player agency can bring dialectics and dynamism into the discourse. Maybe, as Kłosiński⁹⁹ claims, utopia in video games may have to also question whether what it depicts can be changed by the player. Or, perhaps, video gaming's finest utopias can only be collaboratively—and organically—imagined on massive servers by thousands of active, engaged players.

No matter the means, attempting to liberate the popular imagination of cities is a noble goal. It is one worth at least attempting to reach, as experiences in interactive, virtual spaces could shape how we perceive real space and thus what we perceive as possible. And as both game engines and games themselves become more accessible, utopia may have even found a new medium through which to present, enrich, and explain itself.

99. Kłosiński, "Games and Utopia."

Bibliography

- 2K Boston, 2K Australia. *BioShock*. 2K Games. Microsoft Windows. 2007
- Arkane Studios. *Dishonored*. Bethesda Softworks. Windows. 2012.
- Asimov, Isaac. *Foundation*. New York City: Gnome Press, 1951.
- Atlus. *Persona 5*. Atlus. PlayStation 3. 2016.
- Babu, James. "Video Game HUDs: Information Presentation and Spatial Immersion." Master's thesis, Rochester Institute of Technology, 2012.
- Bailes, Jon. *Ideology and The Virtual City: Videogames, Power Fantasies and Neoliberalism*. Winchester, WA: Zer0 books, 2019.
- Bartle, Richard A. *Designing Virtual Worlds*. Berkeley: New Riders, 2004.
- Bateman, Chris, ed. *Game Writing: Narrative Skills for Videogames, Second Edition*. New York: Bloomsbury, 2021.
- Berger, Friedrich. "From Circle and Square to the Image of the World: A Possible Interpretation for Some Petroglyphs of Merels Boards." *Rock Art Research* 21, no.1 (2004): 11–25.
- Blizzard Entertainment. *World of Warcraft*. Blizzard Entertainment. Windows. 2004.
- Bloch, Ernst. *The Principle of Hope, Volume 1*. Cambridge, MA: The MIT Press, 1995.
- Bogost, Ian. *Persuasive Games: The Expressive Power of Videogames*. Cambridge, MA: The MIT Press, 2007.
- Bruegel the Elder. *Children's Games*. 1560, oil on panel, 118 cm × 161 cm, Vienna Kunsthistorisches Museum.
- Bryant, Jennings, and John Davies. "Selective Exposure to Video Games." In *Playing Video Games: Motives, Responses, and Consequences*, edited by P. Vorderer and J. Bryant, 181–194. Lawrence Erlbaum Associates Publishers, 2006.
- Buchanan, Kym. "How Video Games Engage the Imagination Muscle." *Pop Matters*, February 2, 2016. <https://www.popmatters.com/how-video-games-engage-the-imagination-muscle-2495454604.html>
- Calleja, Gordon. "Digital Games and Escapism." *Games and Culture* 5, no. 4, (2010): 335–353.
- CD Projekt Red. *Cyberpunk 2077*. CD Projekt. Windows. 2020.
- Celestial Software. *Utopia: The Creation of a Nation*. Gremlin Graphics. Amiga. 1991.

Computer's Dream. *B.A.T.* UbiSoft Entertainment. Atari ST. 1989.

Curry, David. "Candy Crush Revenue and Usage Statistics (2022)." *Business of Apps*, January 11, 2022, <https://www.businessofapps.com/data/candy-crush-statistics/>.

Daglow, Don. *Utopia*. Sears, Roebuck, and Co. Intellivision, 1981.

Deep Silver Volition. *Saints Row IV*. Deep Silver. Windows. 2013.

Dimopoulos, Konstantinos. "The Tales Cities Tell." In *Game Writing: Narrative Skills for Videogames*, edited by Chris Bateman, 339–363. New York: Bloomsbury, 2021.

———. *Virtual Cities: An Atlas & Exploration of Video Game Cities*. London: Unbound, 2020.

Donlan, Christian. "Why did ancient Egypt spend 3000 years playing a game nobody else liked?" *Eurogamer*, October 29, 2017, <https://www.eurogamer.net/articles/2016-06-01-why-did-ancient-egypt-spend-3000-years-playing-a-game-nobody-else-liked>.

Donovan, Tristan. *Replay: The History of Video Games*. Lewes: Yellow Ant, 2010.

Epic Games. *Fortnite: Battle Royale*. Epic Games. Windows. 2017.

From Software. *Dark Souls*. Namco Bandai Games. PlayStation 3. 2011.

Fukuyama, Francis. *The End of History and the Last Man*. New York: Free Press, 1992.

Galloway, Alexander. "Warcraft and Utopia." *1000 Days of Theory* (2006), last accessed October 3, 2021, <https://journals.uvic.ca/index.php/ctheory/article/view/14501/5342>.

Gilliam, Terry, dir. *Brazil*. 1985. United States: Universal Pictures, 1985.

Granic, I., A. Lobel, and R. C. M. E. Engels. "The Benefits of Playing Video Games." *American Psychologist* 69, no. 1 (2014): 66–78.

Grasshopper Manufacture. *No More Heroes*. Marvelous Interactive. Nintendo Wii. 2007.

Gremlin Interactive. *Normality*. Gremlin Interactive. Ms-DOS. 1996.

Gualeni, Stefano, and Nele Van de Mosselaer. "Ludic Unreliability and Deceptive Game Design." *Journal of the Philosophy of Games*, Online First Issue (2021), last accessed October 1, 2021, <https://journals.uio.no/JPG/issue/view/415>.

Hamari, Juho, Jonna Koivisto, and Harri Sarsa. "Does Gamification Work?—A Literature Review of Empirical Studies on Gamification," In *2014 47th Hawaii International Conference on System Sciences*, 3025–3034, 2014.

Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Cambridge, MA: Blackwell, 1990.

Howard, Ebenezer. *Garden Cities of To-morrow*. New York: Classic Books International, 2010.

Huizinga, Johan. *Homo Ludens: A Study of the Play-Element in Culture*. Angelico Press, 2016.

Huxley, Aldus. *Brave New World*. New York: Harper Perennial Modern Classics, 2006.

Ion Storm. *Deus Ex*. Eidos Interactive. Windows. 2000.

Jameson, Fredric. *The Seeds of Time*. New York: Columbia University Press, 1994.

Kent, Steven. *The Ultimate History of Video Games*. New York: Three Rivers Press, 2001.

Kłosiński, Michał. "Games and Utopia." *Acta Ludologica* 1, no.1 (2018), 4–14.

Kooragayala, Shiva, and Tanaya Srin. "Pokémon GO is changing how cities use public space, but could it be more inclusive?" *Urban Wire*, August 5, 2016, <https://www.urban.org/urban-wire/pokemon-go-changing-how-cities-use-public-space-could-it-be-more-inclusive>.

Kremers, Rudolf. *Level Design: Concept, Theory, and Practice*. Natick: AK Peters, 2009.

Lee, Helen. "The Untold Truth of R.O.B. The Robot." *Looper*, October 23, 2020, <https://www.looper.com/266530/the-untold-truth-of-r-o-b-the-robot/>.

Levitas, Ruth. *Utopia as Method: The Imaginary Reconstitution of Society*. London: Palgrave Macmillan, 2013.

Lynch, Kevin. *The Image of the City*. Cambridge, MA: The MIT Press, 1960.

———. *Good City Form*. Cambridge, MA: The MIT Press, 1981.

Marx, Karl, and Friedrich Engels. *Manifesto of the Communist Party*. Moscow: Progress Publishers, 1977.

Marx, Karl. *The Eighteenth Brumaire of Louis Bonaparte*. New York: Cosimo Classics, 2008.

McCabe, Kathy. "For Love of the Games." *The Boston Globe*, December 7, 2003, http://archive.boston.com/news/local/articles/2003/12/07/for_love_of_the_games/.

McCain, Jessica, Brittany Gentile, and Keith Campbell. "A Psychological Exploration of Engagement in Geek Culture." *PLOS ONE* 10(11), (2015): e0142200, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0142200>.

Melissinos, Chris. "Video Games are One of the Most Important Art Forms in History." *Time*, September 22, 2015, <https://time.com/collection-post/4038820/chris-melissinos-are-video-games-art/>.

Meretzky, Steve. *A Mind Forever Voyaging*. Infocom. MS-DOS. 1985.

Merin, Gili. "AD Classics: Ville Radieuse / Le Corbusier." *ArchDaily*, accessed October 1, 2021, <https://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier>.

Michailidis, Lazaros, Emili, Balaguer-Ballester, and Xun He. "Flow and Immersion in Video

- Games: The Aftermath of a Conceptual Challenge.” *Frontiers in Psychology* 9, no. 1682 (2018).
- More, Thomas. *Utopia*. New York: Dover Publications, 1997.
- Mumford, Lewis. *The Story of Utopias*. Azafran Books, 2017.
- Navarrete-Cardero, Luis, and Juan Vargas-Iglesias. “Can We Programme Utopia? The Influence of the Digital Neoliberal Discourse on Utopian Videogames.” *Journal for a Global Sustainable Information Society* 16, no.2 (2018): 782–804.
- Niantic, Nintendo, and The Pokémon Company. *Pokémon GO*. Niantic. Android. 2016.
- Omarovich Khan-Magomedov, *Selim*. *Georgii Krutikov: The Flying City and Beyond*. Barcelona: Tenov Books, 2015.
- Orbanes, Philip. *Monopoly: The World’s Most Famous Game—and How it Got that Way*. Cambridge, MA: De Capo Press, 2006.
- Orwell, George. *1984*. New York: Signet Classics, 1977.
- Paramio, Juan Luis, Babtunde Buraimo, and Carlos Campos. “From Modern to Postmodern: The Development of Football Stadia in Europe.” *Sports in Society* 11, no. 5 (2008): 517–534.
- Pinder, David. “In Defense of Utopian Urbanism: Imagining Cities After the ‘End of Utopia.’” *Geografiska Annaler Series B, Human Geography* 84, no. 3/4, (2002): 229–241.
- Ran, Marie-Laurie. *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore: Johns Hopkins University Press, 2001.
- Rockstar North. *Grand Theft Auto V*. Rockstar Games. PS3. 2013.
- Schiller, Friedrich. *Essays*. London: Bloomsbury Academic, 1993.
- Scott, Ridley, dir. *Blade Runner*. United States: Warner Bros., 1982.
- Spense, Ian, and Jin Feng. “Video Games and Spatial Cognition.” *Review of General Psychology* 14, no. 2 (2010): 92–104.
- Sylvester, Tynan. *Designing Games: A Guide to Engineering Experiences*. Sebastopol, CA: O’Reilly, 2013.
- Totten, Christopher. *An Architectural Approach to Level Design, Second Edition*. Boca Raton, FL: CRC Press, 2019.
- Ubaidulloev, Zubaidullo. “The History and Characteristics of Traditional Sports in Central Asia: Tajikistan.” *Bull. Facul. Health & Sci., Univ. of Tsukuba*, 38 (2015): 43–58.
- Valve. *HALF-LIFE 2*. Sierra Entertainment. Windows. 2004.
- Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. New York: Oxford University