Block by Block: The Use of the Video Game "Minecraft" as a Tool to Increase Public Participation

By Tim McDaniel

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Abstract: *Mojang and UN Habitat have formed Block by Block, an organization with the sole purpose of using Mojang's game, Minecraft, to increase community input in planning projects around the world. This use of Minecraft in such a tangible way is fairly new in gaming and urban planning contexts, as previous games that may have been useful in the urban planning field weren't necessarily powerful enough to be of use to planners.*

The purpose of this research project is to explore the Block by Block program in order to examine whether the methodologies employed by the Block by Block team can increase participation in marginalized communities. This research project analyzes the Block by Block program through a review of manuals and other materials released by the program itself, and finds preliminary evidence that the program may be useful in increasing participation in marginalized communities.

About the Author

Tim McDaniel has a B.A. in Political Science from the University of Texas of the Permian Basin, as well as a Masters in Public Administration from Texas State University. His interests include urban planning, LGBT policy and advocacy, meteorology, and political activism. He has worked on numerous local, state, and national campaigns in Texas, and has made sure to use his voice on all of those levels both during and after campaign season.

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Acknowledgements

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Chapter 1: Introduction

Public participation is a cornerstone in any functional democracy. While many people feel like their job is complete once they submit their ballot every 4th November, there is clearly much more involved in running a functional government. This lack of interest in governmental policy has led to great apathy, but also a louder voice for those who show just the smallest bit of interest in local politics. Public participation in government has become an activity largely populated by older and wealthier people. This increase in participation has much to do with the amount of free time and resources available to these people. While their intentions are generally good, they may not be the best representatives for lower income people, younger people, or many other generally disenfranchised groups of people. (Foster-Bey, 2008) It then becomes important for anyone working in government to ask themselves how to diversify their public meetings.

Communities of Inquiry

Shields (2003) discusses the concept of "Communities of Inquiry" in the context of participatory democracy. There she discusses ideas from many scholars on the subject. These scholars touch on the idea that democracy doesn't just take place at the ballot box, but through cooperation toward equality for all citizens and a shared faith in others. Indeed, it should be the goal for public participation processes to aim more for this "community of inquiry" model and less as a formality to satisfy a legal requirement.

Age

A large concern in Public Administration fields is the low turnout of younger citizens for workshops and public meetings. (Passon, et al., 2008) In their paper, Passon, et al, discuss concerns with the fact that youth members of the community are generally excluded on the basis of perceived maturity of the entire age group. It's also worth noting that many of the youngest members of the community don't feel like they have a place where they are welcome. (Osborne, et al, 2017) Youth members of the community generally will live the longest with decisions made about the city around them, but are most often left out of the process due to a societal belief that their input isn't needed. In their paper, Osbourne, et al (2017) found that the subjects of their study showed an interest in meeting with their local officials, but weren't properly educated on who represented them on a local level. This meant that if these younger citizens had some constructive criticism or new ideas for their local government, they wouldn't know who to reach out to. This systemic failure to include the voices of the youngest members of the community is worth addressing.

Socioeconomic Status

The history of urban planning being used as a tool of segregation is quite clear. The practice of redlining and the demolition of historically black neighborhoods in the name of fixing "urban blight" led to an inherited lack of wealth being passed down through generations in communities of color. (Grove, et al. 2018; Rutan and Glass, 2017) The scars from these racist policies in the past persist to this day and repairing these wounds in the city needs to be at the

forefront of any planner's mind when they begin a project. Often, the experts in how to repair these divides are those who have been affected the most.

Education can also play a major role in the ability or interest for those in lower socioeconomic statuses to participate in local governments. Ross and Leigh (2000) discuss the fact that planning can be exclusive due to the need for some technical knowledge that may be required in planning contexts, but isn't widely available to those who attended schools of a lower caliber. This lack of accessibility can be easily overcome with some extra time, but for those who may be living paycheck to paycheck, that time may be at a premium that they can't afford.

Gender

Women and girls also find their voices drowned out in favor of the voices of men quite often as well. Reeves (2014) discusses many missed opportunities to integrate women's voices in urban planning documents, specifically the UN's Global Report on Human Settlement, while touching on the broader exclusion of female voices in the field. Women in urban planning have often been ignored or left out for whatever reason, and their participation in government is essential for proper inclusion and representation. Some organizations, such as Col·lectiu Punt 6 in Spain have developed methods to combat this problem head on. (Ortiz Escalante and Gutierrez Valdivia, 2015)

Block by Block

Block by Block describes itself as "a charity set up in 2016 by Mojang [developer and publisher of Minecraft] and Microsoft to support UN-Habitat's work with public space and

Minecraft. The purpose of Block by Block is to raise funds for the improvement of public spaces worldwide, with a focus on poor communities in developing countries." (blockbyblock.org) Through this program, UN Habitat can model proposed project spaces in game and then allow local citizens the ability to manipulate the current spaces into something that they would see fit. (UN Habitat, 2015a)

Research Purpose

The purpose of this research project is to explore the Block by Block program in order to examine whether the methodologies employed by the Block by Block team can increase participation in marginalized communities, particularly younger citizens, members of lower socioeconomic classes, and women.

Summary of Chapter Contents

Chapter 2 gives a history of video gaming and urban design, and also describes the setting of the Block by Block program as a digital space. In this chapter, "Minecraft" is studied as a virtual place through elaboration on how the game is played, how it can be used in urban planning settings, and how it can be modified to expand the functionality of the game.

The Conceptual Framework for the analysis of the Block by Block program is built in Chapter 3. This chapter focuses on the key issues that form the foundation of the research in this paper. This research is focused on the issues of equity and voice, and whether Block by Block's methods provide a distinct positive boost to these issues.

Chapter 4 builds a methodology around the conceptual framework from Chapter 3. This chapter uses the basic pillar questions introduced in previous chapters to discuss how the study will use documents provided by Block by Block, along with a "co-thesis", to help better paint a picture of the success or failure of the Block by Block program.

Chapter 5 takes the methodology introduced in the previous chapter and uses them to examine the Block by Block program. This chapter uses the methodologies from Chapter 4 to interpret data from 3 pieces written by members of the Block by Block program, as well as a "co-thesis" written about one of Block by Block's method.

Chapter 6 concludes this paper. This chapter summarizes the findings from the results chapter and suggests further research questions to answer in future research.

Chapter 2: Setting

Chapter Purpose

This chapter introduces the complex world of Minecraft and the intersections of urban planning and video gaming since the late 80's to those who may be unfamiliar. The use of Minecraft in urban planning requires understanding the game, both as a virtual place and as a tool for input. This chapter offers a short history on the "city-builder" genre in video gaming as it relates to urban planning, a short history of Minecraft, a basic walkthrough of the mechanics of the game, and the availability of "mods" and their potential uses in this application. Minecraft is quite literally an infinite world where players are able to gather resources and build whatever they choose. The ability to understand how this infinite world can be translated into the real world becomes extremely important for anyone to implement this idea in any serious manner.

The Use of "City Builder" Games in Urban Planning

The majority of the literature referenced in this section is in reference to the pedagogical benefits of video gaming in urban planning fields. While the literature does not discuss the use of these games in the context of community participation, it does reflect the fact that these games were taken seriously by the community and had some role in creating future urban planners.

<u>SimCity</u>

The first major game in the "city-builder" gaming genre was SimCity. SimCity was created by Will Wright and released by his publishing company, Maxis, in February of 1989 for PC. The basic premise of the game was to channel the player's inner L'Enfant, as the player is given a blank plot of land to lay out roads, transit systems, power lines, and to zone the land in between. (Moss, 2015) Because the game was released in 1989, there were obvious limitations to the ability of the game to simulate anything seriously. Indeed, a review from a 1991 edition of "Professional Geographer" states the following:

"The game is devastatingly realistic, but limited in its applications as a teaching tool."[1]-

(Gordon, 1991) (p. 367)

Of course, by today's standards, the original iteration of Sim City was not "devastatingly realistic" but it was quite groundbreaking.

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[1] The author did seem optimistic about the future of the game, however, as they stated, "The positive side is that, apart from being enjoyable, Sim City shows us in no uncertain terms that the science of planning involved art and a good deal of luck."

Figure 2.1 Gameplay screenshot from GameFAQs.com

The game was restricted to a grid with no variance in size of zones or road. Home computers at the time were severely restricted in processing power, and were unable to simulate the intricacies of a city in an accurate fashion. In a presentation to the American Political Science Association, Kenneth Kolson listed many shortcomings to the simulation at the time, including an "over-reliance on mass transit," a lack of "interaction of the simulation city with the surrounding region," and "the neglect of race as one of the most salient features of U.S. urban life" to name a few. (Kolson, 1994) (p.1) Despite these obvious limitations, the game proved to be quite popular. It was ported to different operating systems and even Nintendo got involved by releasing a version of the game on their Super Nintendo Entertainment System (SNES). This version even came with its very own built in urban planner of sorts, named Dr. Wright. [2]

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[2] Dr. Wright might have been the first urban planning "professor" that many in the field may have encountered.

Figure 2.2: Dr. Wright running from Bowser, the main villain from the Mario universe. Screenshot from GameFAQs

SimCity 2000 and 3000

In 1994, Maxis released the second iteration of the game under the name *SimCity 2000.* (Moss, 2015) This newer version of the game featured some enhancements from the previous game, most notably the ability to zone areas to the player's liking, but generally was not able to overcome most of the obstacles that kept the game from being very useful as a learning tool. Adams phrased his thoughts very plainly when he stated:

"SimCity 2000 is best described as a sophisticated game, rather than a scientifically accurate simulation model."(Adams, 1998)

Throughout his paper, Adams studies an introductory geography course where students used SimCity 2000. The end of semester survey showed that there was a statistically significant difference between urban planning majors and nonmajors (60% vs. 89%) (Adams, 1998) in appreciation for the game. Adams theorized that the urban planning majors may not have

appreciated the lack of realism, but admitted that more testing would be necessary to prove his

point.

Figure 2.3: A dense downtown area in SimCity 2000. Screenshot from GameFAQs

SimCity 3000, released in 1999 (Moss, 2015), saw even more improvement in its ability

to model a city. It was, however, still found to be inadequate as a modeling software for the

innerworkings of a city. (McCue and James, 2008)

Figure 2.4 Screenshot of SimCity 3000. Screenshot from Mobygames

SimCity 4

SimCity 4 was released in 2003 (Moss, 2015), with a focus on regional planning vs. planning on a

local level. Players could build connections to neighboring towns and work out deals to sell

utilities and services to their neighbors. Traffic would also flow from one town to another,

creating problems for the player's in-game neighbors. The game was highly popular, but was

also panned for being too demanding on PCs at the time as well as too difficult. (Kosak 2003,

Blevins 2003) The universal criticism of these issues highlights their ability to be useful in

modeling. The sorts of calculations needed to properly model traffic were still not achievable on

a home computer at the time, but the basic traffic planning that was done "under the hood" of

the game was quite useful for basic education. (Minnery and Searle 2014) Some literature also

criticized the hydrology in the game, as it had an unlimited supply of water underground, and

pollution of the underground water could be mitigated by the placement of water treatment

plants. (D'Arrista and Hellweger 2007)

SimCity 4 was highly modified ("modded") by the community, which allowed fans to add

functionalities to the game that were unforeseen by Maxis. The mods breathed new life into

the game for roughly another decade, but there isn't much literature referencing the use of

mods in any sort of public program, due to the flexible and admittedly unreliable nature of

modding.
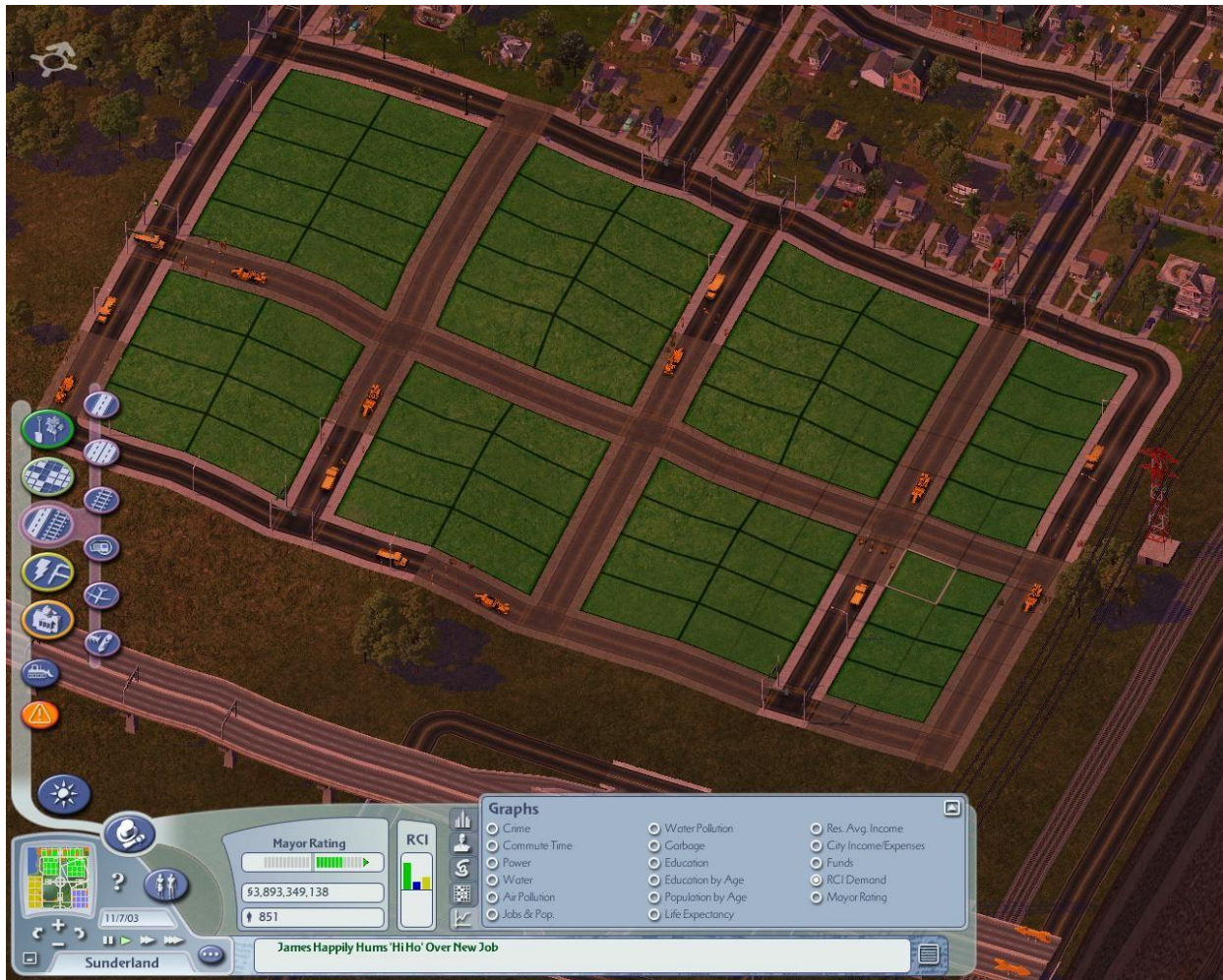
Figure 2.5- Green residential zones ready for development in SimCity 4. Screenshot from MobyGames

Cities: Skylines

In 2015, Colossal Order and Paradox Interactive released Cities: Skylines, a spiritual successor to SimCity (Moss, 2015). The game is much more powerful than its predecessors, and is currently being tested as a reliable model for urban planning. (Johansson 2016) This game has quite a bit of promise for use in the field of planning. There are some drawbacks to using Cities: Skylines in public participation settings, however. The simulation still isn't robust enough to provide reliable data for transportation policy decisions, nor does the crew behind the game intend to provide such a software. (Korppoo 2017) That said, the game may be useful for large

scale sketching and design where older games in this field have fallen short. Mods might also help make the game more useful or robust in urban planning. This would require further research in the future.

Figure 2.6 Island city in the rain in Cities: Skylines. Personal screenshot

<u>Minecraft</u>

Minecraft is a the second-highest selling video game in history—Only behind Tetris—with over 100,000,000 copies sold since its release in Nov. 2011. (Tassi, 2016) Created by Markus Persson (aka Notch), the game was originally released on computers before being released on mobile phones and subsequent home video game consoles. In 2014, Microsoft purchased Minecraft's parent company, Mojang, from Markus for $2.5 billion. (Molina, 2014) Microsoft has continued to allow Minecraft to develop for competing home consoles (Microsoft produces the Xbox line of gaming consoles) as well as kept the funding available for continued

development of the game. The latest large update, dubbed the "World of Color" update, released more colored blocks to use in the game, as well as some new patterned blocks, all of which will be useful in the future.

Basic Walkthrough of Minecraft[3]:

Minecraft is set in a virtual, randomly generated world made up of $1m^3$ blocks. These blocks can be collected (mined) and used to craft newer and more exotic blocks. These blocks can be refined into simple machines, and can even become complex enough to create a proper working calculator in-game, using the game's "redstone" functionality, which operates similarly to electricity.

Figure 2.7: Screenshot from a personal server displaying the block shapes.

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[3] This section is written based on knowledge the author has gained from playing Minecraft recreationally.

There are two basic modes in Minecraft. The first one, survival, is set up in an aptly-named survival style. This mode requires players to start with nothing and slowly find materials they need to build shelters, craft tools, and hunt food. Players can be injured by creatures in the world, and can craft materials to protect themselves. Based on this, Survival mode isn't useful in the context of this paper, as it takes much longer than a couple of hours to properly find the materials needed for any sort of proper modelling in the context of this idea.

The second (and much more useful) mode of play in Minecraft is Creative Mode. This mode allows players access to all types of block available in the game and in unlimited quantities. This removes the need for participants to scavenge for the materials needed to properly model their ideas in game. This mode also allows players to fly around their world so that they aren't constrained by gravity in the creation of their ideas. This is particularly important in modeling walls or larger objects that the character would not generally be able to reach. Any discussion of Minecraft gameplay in this paper refers to the use of this mode of the game.

Figure 2.8: A screenshot of the different colors of concrete blocks available to players in Creative mode.

The control scheme on computers is a standard "WASD" scheme[4], with the mouse

controlling the camera angles and use of tools. This method is a relatively easy control scheme

in gaming, though it may be hard for some people at first. It may be a good idea to have

participants start out in a "sandbox" area, where they can practice playing the game for a few

minutes before finally starting on the main project area.

Implementation of this process would potentially be done in two methods: The

individual method or the group method. The game has both single-player and multi-player

modes. When planners are intent upon gathering individual ideas for improvements at a

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[4] A WASD control scheme uses the W key on the keyboard to move the character up/forward, the A key to move left, S is to move down/backward, and D is to move right.

project site, they might consider using the single-player mode, with a copy of the current

project site installed on each copy of the game used for each participant. This would allow each

participant the sole ability to make changes to their vision of the project area as they see fit.

The planners would then be able to take each participant's game save and analyze the designs

submitted by the participants, before pulling those ideas together for consolidation and more

discussion. If planners are instead interested in getting a collaborative vision of the project

area, they would instead set up a local server for all of the participants to make collaborative

changes in. Either method is acceptable, and neither is explicitly favored in this paper, as each

has its own strengths and weaknesses.

Modding the game:

Mods (short for modifications) are also quite prevalent in Minecraft, and these may be

of some use to planners using the game as a tool. Mods can change just about any part of the

game to work in any fashion. There are mods that can greatly improve the look of certain blocks

in game, as well as some that allow you to explore pixelated versions of the other planets in our

solar system. All of these mods are done by individuals who just love the game and have the

ability to write the code necessary for modification of the game. While this leads to a large

variety of mods available, it also restricts the use of most large-scale mods to older versions of

the game. This could make it hard for a mod to be useful if planners need a block from a later

version of the game and a function from a mod at the same time. These sorts of short-comings

make mods a potential risk, though not inadvisable if planners understand how these problems

can be solved. It is also worth noting that there are tools that exist outside of the game to make

the game easier. Because Minecraft exists as a pixelated version of the world, it is quite

possible that GIS raster data may be (relatively) easily converted to a Minecraft and back, and there are tools that would bridge that gap and potentially save planners some time when it comes to modelling a work site in Minecraft.

Block by Block

The Block by Block program created by UN Habitat and Mojang uses Minecraft to model project areas that UN Habitat is studying for improvements. The workshop facilitators take GIS and satellite data, as well as photographs of the work area, to create a model in-game for the participants in the workshop to edit to their liking. Workshop leaders then lead a multi-day workshop that includes training on how to use the software, what may or may not be a reasonable suggestion for the worksite[5], and a tour of the work site. They then give the modeled project area to members of the surrounding community to change in whatever way that they see fit. These modeled ideas are then taken and translated into plans for further implementation. (UN Habitat, 2015a)

This program seems to be the natural next step from the use of gaming as a tool for education to gaming as a tool for modelling. While gaming still isn't able to properly model things like traffic flow, the ability to use a game for 3D modelling is very useful and worth exploring further. Study of the efficacy of this program is worth researching through the lens of pillar questions that are designed to put the Block by Block program into proper context. These questions will be built in the following section.

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[5] This helps cut off the inevitable rollercoaster design for work in the city park.

Chapter 3: Conceptual Framework

Chapter Purpose

This chapter explores the relationship between technology and engaged public participation, with a particular focus on underrepresented groups in public participation. It also creates a conceptual framework used to assess Mojang and UN Habitat's Block by Block program.

Conceptual Framework

This chapter develops the framework used to explore the Block by Block program run by Mojang and UN Habitat. This section of the chapter ties outcomes from the Block by Block to existing literature using the following questions. The framework used in this chapter – the Pillar Question format introduced by Shields and Rangarajan (2013) – is linked to supporting literature (also see Shields and Travis, 2017).

Pillar Question 1: Public Engagement

It is quite difficult for planners to have a representative group of participants at any public meeting. There are many reasons as to why this may be the case, but to properly plan a city and provide services to its citizens, ample opportunity must be afforded to capture the voices of those who are not normally represented. Public participation has been on the decline for quite some time. One of the many factors to blame is that many members of the public may simply be unable to attend meetings due to economic factors. Jois (2008) discusses the general decline in overall civic health in America since the 60's, with voter turnout, social activity, and family ties all taking a hit over time. Desouza (2015) notes the increase in the number of

Americans that are now working more than 40 hours a week. Many people are also working second and even third jobs. As such, they may be using their limited free time for more important obligations or even just taking care of standard necessities like sleep or food. A 2-hour meeting at 7 PM on a Wednesday is not something that plays quite as nicely with the schedules of people with such limited time. These problems cause participation to skew toward retirees, wealthier members of the community, those who are highly educated, and those who work a standard 9-5 schedule. It's possible that a program that uses Minecraft would be able to be run via an online server that the planning department can set up for willing members of the community to participate. This could be supplemented with online videos for these adults to get a basic understanding of what the planning department would want from the workshop. This would allow working adults the flexibility to model their ideas in their free time. Therefore, it would be helpful to know: PQ1: *What does the UN Habitat and Mojang's Block by Block program do to encourage authentic public engagement?*

Pillar Question 1a: Public Participation

One factor to consider in public turnout is that the public may not feel engaged. Williamson (2014) stated "having done their duty by voting, citizens are then free to go about their day-to-day business without taking the time or effort to become directly involved in governance." These citizens feel like they played their part and can move on through the day. Indeed, these citizens might just find themselves overwhelmed if they were to participate in every meeting or comment period that pertained to them. This lack of interest in public participation could potentially be mitigated by potentially making the process more interesting – or even fun – by introducing Minecraft into the process.

A shift to more digital involvement in planning processes is worth noting. Lopez-Ornelas, et al. (2017) discuss public participation in planning in a piece on the integration of social media into the urban planning process. They found that social media is an effective tool in participation, but that inclusion of all groups of the community is important and should be encouraged. That's not to say that digital participation methods are without their flaws. For example, during the summer of 2017, the FCC opened up a digital comment period on the issue of net neutrality. After a tumultuous comment process and controversial vote, their public comments are being challenged by the New York Attorney General (Naylor, 2017). It is alleged that "astroturf" – as in "fake grassroots" – is common in the comment period. Finding the middle ground between exposure to "trolls" or exclusion of important populations is important.

Considering the fact that the general concern for public participation is very real in public planning, it it worth considering the following: PQ1a: *How does Block by Block's use of Minecraft affect overall participation in meetings?*

Pillar Question 1b: Public Voice

Currently, many planning meetings are susceptible to the biases and opinions of the planners who organize them. Much of this comes down to the fact that the participants do not have a background in planning. Kleinschmit (2015) argues that members of the general public may not be able to give useful input, as they may not have the proper training or understanding of the subject at hand. Danilović-Hristić and Stefanović (2013) offer a similar critique when they discuss the continuous tension between a planning professionals – who view the citizens as uneducated on the issues that are being discussed – and the citizenry – who perceive the planners as extensions of the government who are the source for all of the social ills in the city.

The planners' sense of superiority can lead to a reputation of public meetings being more of a formality and less of a civic responsibility. It is true that planners will have a higher degree of knowledge on the topic at hand due to training and experience on the job, however it is not the job of the planner to tell the public what it wants in a public meeting. Instead, the job of the planner is to take the input of the public and turn it into something that satisfies the public while still satisfying the parameters set on the project.

Biliger, et al. (2016) also discuss the question "who develops for whom?" This fundamental question addresses many of the concerns with modern urban planning and participation. Many of the digital tools that are designed for the purpose of urban planning are designed for professionals in the field. Software such as AutoCAD or GIS require training in a classroom for proper learning and implementation. This puts citizens at a disadvantage when trying to model their ideas for a planner.

The introduction of Minecraft into this process would no longer require planners to insert their vision of the project space into the meeting. Instead, planners would be tasked with training members of the public with what may be practical from a funding and spatial standpoint, as well as to what may or may not be compliant with zoning law. Minecraft can help level the 3D modelling playing field between participants and the planners.

Public input is largely treated as an obligation rather than a necessity, but the method of input can act as a barrier or facilitate further discussion. With the concern of planner biases and a high barrier of entry into modelling, it becomes important to ask: PQ1b: *How does the Block by Block program enable members of the community to express their opinions?*

Pillar Question 2: Equity

The second pillar question focuses on the issue of equity. Proper public participation includes the voices of all segments of society. Many people are, unfortunately, unheard in the planning process. This may be due to many reasons (lack of child care available, working during meeting, transportation issues, etc.) but they all are important. With this in mind, it is worth asking: PQ2: *What does Block by Block do to encourage equity and access to public debate?*

Pillar Question 2a: Socioeconomic Status

Many of the issues faced by those in poverty are not addressed adequately due to poor participation amongst those with little means. This poor representation can lead to "solutions" that may not actually solve the problem, as those closest to the problem aren't heard. These may mitigate the concern in the short term, but may not fully address the concerns in the long-term. This is addressed by Kravchenko (2009) where she discusses the participation of the impoverished in environmental impact studies around the world. Her findings show that participation rates amongst those who are impoverished are extremely low, even in countries where laws are friendly toward this goal. She calls for new thinking on this topic because old practices aren't working.

Andrews (2008) discusses the role that Socioeconomic status can have on the platform and genre when someone chooses a game to play. The study showed that people from a lower socioeconomic background were much more likely to play sports games, and they were more likely to play those sports games on dedicated consoles. Meanwhile, those of a higher

socioeconomic status were more likely to play what the author deemed "computer games (non-casual)."[6] There is a bit of a cultural rift between the worlds of dedicated home consoles and PC gamers within the community, so the divide between socioeconomic classes fits quite well in that wedge. One possible explanation is that socioeconomic status can play a role in the availability of video games. This basic concern comes down to the high entry cost for dedicated gaming consoles and PCs powerful enough to play games well. As such, children in poorer families may participate at different rates due to lack of availability of gaming hardware or software. Andrews also discusses the fact that education level actually has a strong correlation to your interaction with technology, and thus has an impact on your willingness and ability to play games on what is perceived to be a harder platform (PC).

Andrews (2008) found in their study that "genre and platform preferences, social play groups, and literacy practices are often divided along gender and socioeconomic lines. When we study, develop, or teach with games, we have to account for these very real differences."(p. 209) With this in mind, the first subquestion in this category is: PQ2a: *Does socioeconomic status have an effect on participation within Block by Block's projects?*

Pillar Question 2b: Women and Gaming

The gaming community has quite a sexism problem. Women face many challenges in becoming prominent in the gaming community. Indeed, many women were targeted by the "#gamergate" movement which was organized under the goal of promoting unbiased gaming journalism, but ended up threatening violence against female gaming journalists. (Freed 2017,

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[6] This overall category included games in the Simulation, RPG and MMO genres.

Gray, et. al. 2017) Many genres in gaming that have become dominated by female players are

no longer considered to be "real" amongst male gamers. People who play these games, by

extension, are not considered to be "real gamers." Paaßen, et al. (2016) discuss this difficulty in

quantifying who to consider is a "real" gamer, as most statistics available from trade

organizations considered gamers from all genres. Many of those who consider themselves to be

"real gamers" find themselves playing games that fulfill stereotypically "masculine" roles.

Indeed, Walkerdine (2004) specifically compares popular games to old Westerns and action

films from Hollywood. Andrews (2008) surveyed high schoolers and found a statistically

significant difference in genre preferred by male and female students. The data showed that

overall, male students were more likely to play sports games, while female students were more

likely to play "casual"[7] games. Andrews also found that female students were significantly

more likely to play video games alone, while male students were much more likely to play

games with a friend or online.

All of these issues are reflective of the fact that women are excluded and dissuaded

from playing games that are anything different from puzzle games and games on phones. This

focus on masculinity and male spaces in the gaming world has been shown to have a negative

effect on the ability of female gamers to play games. Kaye and Pennington (2016) found that

negative perceptions of women in gaming can potentially affect gaming performance. The

exclusion of women from these spaces may make them less likely to show interest or feel

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[7] Casual games would be games that have an easier learning curve, and that can be picked up and played for short bursts of time. Games like Angry Birds or Candy Crush fall into this category.

confident enough to deliver a similar performance as their male counterparts. This exclusion

and effect on gaming skill could be problematic in workshops that use Minecraft as a tool.

Another factor to consider in this realm is that women are often objectified in

advertising for games. Behm-Morawitz (2017) discusses the objectification of women through

revealing outfits. (see figure 2.7) Entire games were released based on women as objects. *Dead

or Alive: Xtreme Beach Volleyball* is essentially a game that exists to display what Maxim

Magazine (2003) called "jiggle physics." This sort of objectification runs rampant and has a

direct effect on the participation of women in video games.

Figure 3.7: Grand Theft Auto V Loading Screen. Screenshot from GameFAQs.com

While it is important to discuss women in gaming, it is also important to address the

relationship between women and urban planning. Ortiz Escalante and Gutierrez Valdivia (2015)

state, "It is essential to include gender perspective in participatory processes to be able to

respond to the diversity of people and practices, and break hierarchies." (p. 116) They argue

that they believe that male members of the urban planning field are open to female input and inclusion, but they get hung up in their own expertise and instead fail to consider outside input that doesn't align with their perspective.

Feminist critiques of urban planning in the 1980s focused on the increased building of the city around male needs. Hayden (1981) discusses the creation of a "masculine" downtown and a "feminine" suburb. These gendered areas were largely designated as such due to the standard gender roles of the "breadwinner" and the "housewife." In this instance, downtown areas might have been more tailored toward men, with bars and pubs being quite common. Meanwhile, suburban businesses may have been more tailored toward housework, such as retail and grocery. While these roles have largely diminished in the subsequent decades due to two-income households and a return to the city-center, they do speak volumes to the dominance of the male perspective in planning.

The literature suggests that women find themselves more fearful of cities than men. Spain (2014) specifically cites the fear of sexual assault in a city, and the subsequent increase in of women in "gayborhoods" where the fear of sexual assault is diminished. She further states that when a woman alters her daily routine to avoid areas of a city that she perceives to be dangerous, she misses out on opportunities to interact with her fellow citizens. These interactions are important in the fabric of an urban life and creation of an urban identity. These perspectives and issues are generally not heard in planning meetings.

The concerns of women in gaming lead to the following question: PQ2b: *Does gender have an effect on participation within Block by Block's projects?*

While participation overall in planning is low, planners particularly ignore the youth in their area. The opinions of children are dismissed before they even get a chance to speak, or are not considered to be worth the trouble. Simpson (1997) discusses the concept of "citizen or future-citizen" where he breaks down the concerns of maturity and citizenship for children when it comes to urban planning. He theorizes that children were much more involved in civic life before the advent of child labor laws and compulsory school attendance, as they would become part of the work force at an earlier age. He states that at the time, they were valued as members of society due to their labor value. Once that labor value disappeared, they were "segregated" from society.[8] With this segregation, it has become easier to exclude children and youth from civic life and instead consider them to be what Simpson would consider future-citizens.

Wilks and Rudner (2013) state that society tends to "automatically associate younger age with spontaneity, immaturity, and lack of experience, rather than recognise the diversity of children's and young people's personalities, skills, knowledge and experience." (p.2) One might ask why youth deserve a voice at the table, despite their lack of experience in these areas or their ability to be taken seriously by society. Derr, et al. (2013) as well as Wilks and Rudner (2013) and Simpson (1997) all discuss the UN Convention on the Rights of the Child as a solid foundation for the inclusion of children in urban design and planning. This treaty has been signed by all members of the UN, and ratified by all but the United States. Article 12 specifically

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[8] Simpson is not actively advocating for the removal of child labor laws and compulsory education, but rather, he is pointing out that these things made it much easier to keep children out of every day civic life.

calls for children to be able to be "heard in any judicial and administrative proceedings affecting the child, either directly, or through a representative or an appropriate body". (UN CRC, Article 12) Spier (2013) discusses the inclusion of younger citizens in urban planning by discussing ontological reasons for youth participation. He argues that including youth in the discussion "creat[es] opportunities for young people to live out a fundamental 'ontological vocation' of co-acting upon and transforming their worlds." (p. 14)

Video games in general have been used to engage children in education and public services for years. Cilauro (2015) discusses the efficacy of a Minecraft day on library engagement and use. She found that some technological and financial barriers existed, but that the library experienced a large turnout and was able to reinforce the idea that libraries are community spaces for interaction, not just books. This sort of interaction with children helps bring them into the community consciousness and integrate them into the society in which they live.

Cushing (2015 ,2016) discusses a new type of master plan that started in the late 80's, called a "Youth Master Plan" (YMP). These YMPs are created by cities and regional governments to address youth issues and implement youth-driven committees for action in the community. YMPs generally call for a large presence of youth and children in city government, and many of these plans also call for youth boards and inclusion of youth seats on commissions and boards throughout the municipal government. These YMPs may be useful in the implementation of programs that use Minecraft in urban planning settings.

With this in mind, it's quite clear why a planner might want to include children in their workshops. Many of the authors cited in this section call for adults to change their perspective to think of young citizens as meaningful members of society, rather than liabilities or "future citizens." With this in mind, the following question becomes important: PQ2c: *Does age have an effect on participation within Block by Block's projects?*

Conceptual Framework Table

These questions created above are listed in the conceptual framework table below. The following chapter uses these questions to build a methodology to analyze these questions, and Chapter 5 will then use the methodology developed in Chapter 4 to attempt to answer these questions developed above.

Table 3.1: Operationalization Table

Title: Using Minecraft to Increase Public Participation in Planning **Purpose:** to conduct a preliminary exploration and evaluation of the UN Habitat and Mojang's Block by Block program.	
Pillar Question	**Supporting Literature**
Pillar Question 1 -- Engagement -- What does the UN Habitat and Mojang's Block by Block program do to encourage authentic public engagement?	
PQ1a: Overall -- How does Block by Block's use of Minecraft affect overall participation in meetings?	Desouza 2015, Jois 2008, Williamson 2014
PQ1b: Voice -- How does the Block by Block program enable members of the community to express their opinions?	Kleinschmit 2015, Danilović-Hristić and Stefanović 2013, Biliger, et al. 2016
Pillar Question 2 -- Equity -- What does Block by Block do to encourage equity and access to public debate?	
PQ2a: Socioeconomic Status -- Does socioeconomic status have an effect on participation within Block by Block's projects?	Behm-Morawitz 2017, Andrews 2008
PQ2b: Gender -- Does gender have an effect on participation within Block by Block's projects?	Paaßen, et al. 2016, Behm-Morawitz 2017, Kaye and Pennington 2016, Walkerdine 2004, Ortiz Escalante and Gutierrez Valdivia 2015, Andrews 2008, Hayden 1981, Spain 2014
PQ2c: Age--Does age have an effect on participation within Block by Block's projects?	Wilks and Rudner 2013, Derr, et al. 2013, Simpson 1997, Cilauro 2015, Spier 2013, Cushing 2015, Cushing 2016

Chapter 4: Methodology

The previous chapter helped lay a foundation for the use of video games in urban planning, while also linking the "pillar question" conceptual framework to literature surrounding the topic. In this chapter, the sub-pillar questions from the previous chapter are broken down into specific questions for further study and linked to UN and other documents which highlight and report on the Block by Block program. (See Table 4.1)

Pillar Question Format

The Pillar Question format introduced by Shields and Rangarajan (2013) was created as a method of exploratory research for subjects that may not be well researched enough to formulate a working hypothesis. This format allows the researcher to explore broader concepts by focusing on issues and concepts – "pillars" – that are foundational to the core idea that is being researched. In their description of the Pillar Question method, Shields and Rangarajan (2013) state, "Instead of looking for evidence which might support or fail to support a working hypothesis, the student seeks empirical observations which will begin to answer the pillar questions." (p. 150) Due to the lack of internal data from the Block by Block program, this ARP focuses on a subjective review of the official documents from UN Habitat to gain a better idea of what areas of the Block by Block program might need further study, along with a study of potential best practices that could potentially be emulated on a larger scale. Their organization instead supplied the following UN documentation: von Heland, et al, 2015; UN Habitat, 2015; UN Habitat, 2015a. These documents provide a valuable window into the inner-workings of the

Block by Block program. To supplement these documents, further data will be analyzed from a

co-thesis conducted on site by two graduate students who travelled to Nepal for further study

of program implementation.

UN Habitat Publications

This study will focus on three publications from UN Habitat:

<u>Using Minecraft for Youth Participation in Urban Design and Governance</u>
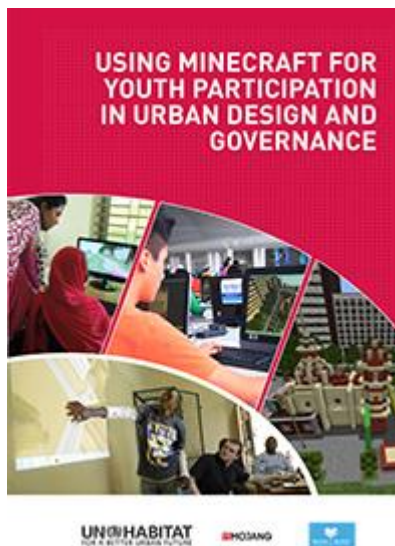
This piece features case studies from four UN Habitat project sites – Nairobi, Kenya; Les Cayes, Haiti; Mexico City, Mexico; and Kirtipur, Nepal – where the Block by Block program was implemented. The authors discuss the successes and lessons of the program, as well as the ways in which the Block by Block can adapt to different scenarios.

(UN-Habitat, 2015)

Manual: Using Minecraft for Community Participation

This document offers a step-by-step walkthrough on how to use Minecraft in an urban planning setting, with technical details such as minimum computer requirements, along with broader details on the timeline and flow of the workshops.
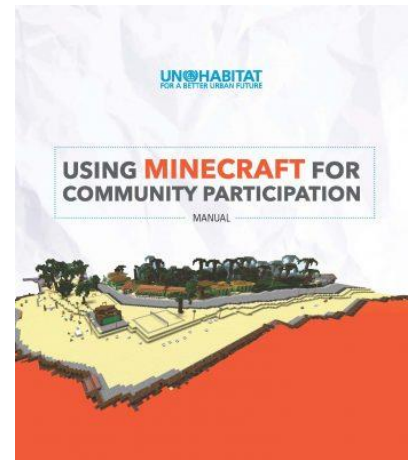
(UN-Habitat, 2015a)

Using Minecraft as a Citizen Participation Tool in Urban Design and Decision Making

"In partnership with UN-Habitat, Ericsson has carried out a social impact assessment of the use of Minecraft as a community participation tool in public space design in Kirtipur, Nepal.

The aim of the study was twofold: First, it explored the potential of Minecraft to foster greater citizen participation in urban design and decision making. Second, it examined social impacts associated with the use of Minecraft, both at and individual and community level."

(von Heland, et al., 2015)

These publications serve as a template for implementation of Minecraft in planning,

provide case studies and pictures, and provide data for quantitative analysis. These publications

will offer an insight into the innerworkings of the Block by Block program, as well as some

insight into the interest levels of the participants involved in these meetings around the world.

Co-Thesis

Alongside the UN Habitat publications, this ARP also analyzes quantitative data provided in a co-thesis written by two graduate students who were fortunate enough and funded enough to travel to Nepal for in-depth analysis of the implementation of this method of public input. These two students were able to survey participants and experience the implementation of this method first hand. Their involvement as observers, rather than planners or UN Habitat employees, help keep their observations more impartial.

(Olesen & Ermeklint, 2015)

Public space are open spaces and areas where people in the city move around, get together and play, regardless of background, age, ethnicity, gender and income. This is particularly important in poor neighborhoods where people have no access to places where to socialize. Well designed and planned public spaces are symbols of several important aspects of a city; health, safety, culture and local economy. UN-Habitat (United Nations Human Settlements Programme) has therefore started the project Block by Block together with Mojang, the developer of the computer game Minecraft. The objective with the project is to develop public spaces in low income countries by using Minecraft as an urban planning tool. Through this project, UN-Habitat wants to involve youths in urban planning.

Table 4.1: Operationalization Table

<table>
<tr><td colspan="3">**Title:** Using Video Games to Increase Public Participation in Planning
Purpose: to conduct a preliminary exploration and evaluation of the UN Habitat and Mojang's Block by Block program.</td></tr>
<tr><td>**Pillar Question**</td><td>**Open Ended Research Questions**</td><td>**Sources**</td></tr>
<tr><td colspan="3">Pillar Question 1 -- Engagement -- What does the UN Habitat and Mojang's Block by Block program do to encourage authentic public engagement?</td></tr>
<tr><td rowspan="2">PQ1a: Overall -- How does Block by Block's use of Minecraft affect overall participation in meetings?</td><td>1. Do participants seem to enjoy using Minecraft during Block by Block's public meetings?</td><td>von Heland, et. al, 2015; Olesen and Ermeklint, 2015</td></tr>
<tr><td>2. How does the use of Block by Block's usage of Minecraft affect turnout in public meetings?</td><td>von Heland, et. al, 2015; UN Habitat, 2015a</td></tr>
<tr><td rowspan="2">PQ1b: *Voice* -- How does the Block by Block program enable members of the community to express their opinions?</td><td>1. How easy is Minecraft for participants to pick up?</td><td>von Heland, et. al, 2015; UN Habitat, 2015a; Olesen and Ermeklint, 2015</td></tr>
<tr><td>2. How does the use of Minecraft by the Block by Block program attempt to minimize planner bias?</td><td>UN Habitat, 2015a</td></tr>
<tr><td colspan="3">Pillar Question 2 -- Equity -- What does Block by Block do to encourage equity and access to public debate?</td></tr>
<tr><td>PQ2a: *Socioeconomic Status* -- Does socioeconomic status have an effect on participation within Block by Block's projects?</td><td>1. How does Block by Block address issues related to lower socioeconomic status?</td><td>von Heland, et. al, 2015; UN Habitat, 2015a; Olesen and Ermeklint, 2015</td></tr>
<tr><td rowspan="2">PQ2b: *Gender* -- Does gender have an effect on participation within Block by Block's projects?</td><td>1. How does Block by Block address the misogyny embedded in "gamer" culture?</td><td>von Heland, et. al, 2015</td></tr>
<tr><td>2. Does Block by Block have success in fostering young female participation in their program?</td><td>von Heland, et. al, 2015; UN Habitat, 2015a; Olesen and Ermeklint, 2015</td></tr>
<tr><td rowspan="2">PQ2c: *Age--Does* age have an effect on participation within Block by Block's projects?</td><td>1. How does Block by Block encourage participation among children within its program?</td><td>UN Habitat, 2015a; UN Habitat 2015; Olesen and Ermeklint, 2015</td></tr>
<tr><td>2. Does Block by Block have trouble with participation within older populations in communities where they operate?</td><td>von Heland, et. al, 2015; UN Habitat, 2015a</td></tr>
</table>

Quantitative Data Sources and Drawbacks

Due to the age of the program and the speed of implementation, the data available are somewhat lacking. This small population and even smaller sample size mean that the results from this ARP will be somewhat more informal and less reliable. This ARP is fully reliant on the data collected at a handful of sites by outside sources, and as such, will be viewing any conclusions reached from these data as tentative at best. This is, however, the best possible data that can be collected without the prohibitive cost of travelling to a city where UN Habitat is implementing this program and interviewing participants personally.

Summary

Due to the superficial nature of the research available on this topic, this paper employs the Pillar Question method introduced by Shields and Rangarajan (2013) to build a foundation for further research into the Block by Block program. Chapter 5 will use the open-ended research questions set forth in the operationalization table (Table 4.1) to analyze documents that Block by Block provided.

Chapter 5: Results

This chapter will use the methodologies developed in the previous chapter to analyze Block by Block's program through the lens of equity and engagement.

<u>Pillar Question 1a</u>

"Overall – How does Block by Block's use of Minecraft affect overall participation in meetings?"

Mojang and UN Habitat are potentially on the cutting edge of public participation because of their use of Minecraft in the Block by Block Program. Because they're in a relatively new field in Public Administration, this question is quite important. As such, this important first pillar question forms the foundation for two open ended research questions:

- Do participants seem to enjoy using Minecraft during Block by Block's public meetings?
- How does the use of Minecraft affect turnout in public meetings?

<u>Do participants seem to enjoy using Minecraft during Block by Block's public meetings?</u>

It seems a bit odd to ask if a member of the public enjoys a method of public input, but as this method is designed to increase participation in an area that is thought of as boring – especially by the age groups that it is targeting – it is quite important to take this into consideration. It is important to note that this question is highly subjective.

With that said, in von Heland, et al., 2015, the participants seemed to be quite fond of this method of participation. One participant said, "Designing in Minecraft improved my confidence and belief in myself – we can do the same job as architects. It gave a sense of empowerment. It was fun to present the design. I felt happy because I could express my ideas

and other people could see it." This particular quote sums up experiences that are evident in the readings. Many of those involved indeed seemed to enjoy their time experimenting with the game. Olesen & Ermeklint (2015) surveyed the participants in the project they observed and found that when asked to rate the statement "I enjoyed building in Minecraft" on a scale of 1 to 5, the median score for boys was 4.5 and 4.0 for the girls. The statement "I enjoyed the workshop" received a 4.3 from girls and another 4.5 from the boys. The data from this small sample show seem to back up the idea that at least youth participants do indeed enjoy the process.

How does Block by Block's use of Minecraft affect turnout in public meetings?

Through thorough review of UN Habitat, 2015a, this question may not necessarily apply. The manual calls for organizers to field members from the community with the following characteristics in mind:

- "Age, ensuring that different ages are represented

- Gender, focusing on the inclusion of women and girls

- Ability, ensuring the inclusion of people with disabilities

- Income, with a special focus on including low-income groups and slum dwellers

- Participants from local authorities/municipalities (partner agencies)

- Representatives from NGOs or other civil society organizations." (p.5)

This leads to a more representative sample, but it doesn't fully allow a glimpse into how this practice affects the overall turnout in the workshops. That said, there is one case study from UN

Habitat, 2015, where Block by Block partnered with Aldea Digital to open the participation up to all who were interested. Their workshop had nearly 7,500 participants over 2 weeks. That sort of participation is quite intriguing and worth further study alone.

Pillar Question 1b

"Voice – How does the Block by Block program encourage participants to express their voice?"

The idea that citizens aren't able to voice their opinions is not a new one, and was discussed thoroughly in Chapter 2. Any solutions proposed to increase participation in the government process need to focus on amplifying the voices of those who participate, or the increased participation is useless.

This pillar question has two open-ended research questions:

- How easy is Minecraft for participants to pick up?

- How does the use of Minecraft by the Block by Block program attempt to minimize planner bias?

How easy is Minecraft for participants to pick up?

One of the concerns with using 3D modelling software (such as AutoCAD, etc.) in planning workshops is the amount of training required for people to understand and properly use the software, as well as the sheer amount of time it takes to model 3D environments in detail. The advantage of using Minecraft is the ease of use over programs such as AutoCAD. The question then becomes, is Minecraft easy enough for participants to avoid frustration during workshops? For the most part, the concerns were minimal in the studies. One student participant in Von Heland, et al., 2015 stated, "The first workshop day was a headache. The

second day was a bit better because then I could design a little bit. The third day when I started

to understand the workshop was over. I had limited opportunity to express my ideas so for me

Minecraft didn't help." While this comment seems to be in the minority amongst participants,

there is a legitimate concern that there may be a small usability issue. In UN Habitat, 2015a,

Block by Block calls for specific training days in their program design. Their model sets aside a

block of time in the second day of a three-day workshop for a quick training in the game. The

data collected by Olesen & Ermeklin (2015) gave fairly positive results on the ability for

participants to use the software. The questions below are from the questionnaire given by

Olesen & Ermeklint, (2015) at their particular study site.

Table 5.1: Selected Responses from Olesen & Ermeklint (2015) Survey in Kirtipur, Nepal

Question	Girls	Boys
I am an experienced user of Minecraft	1.9	2.5
I can transfer my vision about the green space easily into a model in Minecraft	4	4.1
You need computer skills to be able to use Minecraft	4.6	3.3
The workshop gave me enough skills to use Minecraft in a satisfying way	3.9	4.3
I got enough help from the Minecraft Expert	4.2	4.5
I enjoyed the workshop	4.3	4.5
I enjoyed building in Minecraft	4.0	4.5
Minecraft is a good tool for designing public spaces.	4.3	4.3

1=Strongly Disagree; 5=Strongly Agree (Olesen & Ermeklint, 2015) (p. 64)

These data are encouraging when looking at the viability of Block by Block as a program

worth implementing. The initial proficiency of the participants seems to be relatively low, at

1.9/5 and 2.5/5 for girls and boys respectively. However, there is notable improvement in their

skill when the questioners asked "The workshop gave me enough skills to use Minecraft in a satisfying way" to the participants, with a 3.9 for girls and a 4.3 for boys. These numbers are quite promising, especially for implementation in regions that may have higher proficiency in the game Minecraft, due to better access to the game. The participants also seemed fairly confident in their ability to translate their vision of the green space in question to the model in-game, with girls and boys scoring a 4/5 and 4.1/5 respectively.

<u>How does the use of Minecraft by the Block by Block program attempt to minimize planner bias?</u>

While not specifically prescribed as a solution, the entire step by step method given in UN Habitat, 2015a is quite effective in combatting this concern. Organizers of any meeting set up a model of the project site as it is now, and then essentially just leave the participants to model exactly what they envision for the site. This removes the biases that come from standard public meetings with sketches of what the planners envision or 3D models of different alternatives that allow the public to choose from a predetermined slate of options, rather than give their full vision. While this allows members of the community to feel like they have contributed, they have only contributed in the end of the process and not along the entire process. This cursory look at how this method can change the entire input process is promising and fairly clear. Block by Block's method of public input is quite effective at removing planner vision and bias and amplifying citizen voices.

<u>Pillar Question 2a</u>

"Socioeconomic Status – Does socioeconomic status have an effect on participation within Block by Block's projects?"

This pillar question has one open-ended research question:

- How does Block by Block address issues related to lower socioeconomic status?

How does Block by Block address issues related to lower socioeconomic status?

While Block by Block's methodology is almost exclusively rolled out in countries that are, for lack of a better term, "third world", this question is quite important. The good news for members of these communities is that the Block by Block method is extremely cognizant of the ability for members of these communities to properly use their voices. Step 2 of the method in UN Habitat, 2015a specifically calls for "a special focus on including low-income groups and slum dwellers." This attention to marginalized communities helps offset the louder voices of those in better situations and helps bring support to those who need it most.

While representation is important, the access to technology, or lack thereof, due to socioeconomic pressures is also worth consideration. Much of the concern here is, luckily, addressed by the same data presented above in regards to ease of use. The concern from lack of access is that participants may not be able to properly participate due to lack of experience. The relative ease of learning the game (compared to learning software like AutoCAD or GIS) adequately alleviates these concerns and could possibly give these participants access to something they haven't gotten the chance to interact with before. As stated previously in Table 5.1, the participants felt that they were adequately trained in the usage of Minecraft.

As UN Habitat generally operates in poorer countries, this question is an important one. Block by Block does a good job in this area and seems to be a fairly effective tool in giving proper representation to those in lower classes. UN Habitat (2015) states that the workshops

strive to be representative in the areas, as quoted above, by focusing on groups that are underrepresented in programs such as this.

"Gender – Does gender have an effect on participation within Block by Block's projects?"

This pillar question has two open-ended research questions:

- How does Block by Block address the misogyny embedded in "gamer" culture?

- Does Block by Block have success in fostering young female participation in their program?

How does Block by Block address the misogyny embedded in "gamer" culture?

After a thorough review of the documents, there doesn't seem to be a particular policy or practice that intentionally attempts to diffuse the misogyny in "gamer" culture. Admittedly, this question may not be well suited for this program, as much of the misogyny exists online, and connectivity is generally limited in areas where Block by Block conducts these studies. This occasionally does leak out into the "real world" but the concern is that misogyny can exclude women and girls from playing video games and honing their skills, who might have otherwise been good at gaming, thereby affecting their ability to pick the game up quickly and easily. This concern is somewhat assuaged by the design of the workshop as described in UN Habitat (2015a). The UN Manual, as stated above, calls for a representative group of participants based on gender. It also calls for the workshop to take place over a few days, with training included to make sure that anyone of any skillset can participate by the end of the workshop. These steps help alleviate the symptoms of this large divide in the gaming world, but both can't and aren't

designed to help with the root cause. That said, there is some interesting feedback from participants in Von Heland, et al. (2015). One of the young men in the workshop said, "Boys and girls have not before been asked to create and communicate ideas together. In this workshop we worked together and presented together. This is important to break with old traditions that preserve male superiority. Here we had a female influence. This can be very good for breaking gender stereotypes." While this is obviously preliminary, this feedback is quite encouraging for those working to dismantle the misogyny in the community.

Does Block by Block have success in fostering young female participation in their program?

As stated above, getting women and girls into gaming can be somewhat challenging due to the male-dominated culture surrounding the hobby. It can also be culturally difficult to get women or girls to participate in government input, depending on where a similar program is implemented. As such, it is important to ask about the efficacy of the Block by Block program to alleviate these concerns. In UN Habitat (2015a), the Block by Block Method once again specifically calls for a focus on inclusion of marginalized people. The method specifically calls for a focus on inclusion of women and girls in finding workshop participants. This, obviously, isn't a cure-all for the concerns that women and girls may have with having their voices heard. In Olesen & Ermeklint (2015), many of the female respondents called for all-female workshops, as they were concerned that male participants may have talked over the female participants. One particular statement from Von Heland, et al. (2015) was from a male university student who said, "Boys and girls have not before been asked to create and communicate ideas together. In this workshop we worked together and presented together. This is important to break with old traditions that preserve male superiority. Here we had a female influence. This can be very

good for breaking gender stereotypes."[9] (p.10) It is notable that this young man was able to maybe see a perspective that he hadn't considered before. While this isn't some world-saving revelation that will end sexism, it's an important first step and one that should be celebrated as a minor victory.

For proper representation, one would expect that women would make up around half of the participants in these studies. In the studies available, the proportion is still around 2 to 1, give or take. While this isn't ideal, the focus on increasing female participation is quite helpful and positive. Subjectively, this research seems to indicate that Block by Block's model is somewhat effective in including female participants, but could still stand to improve.

Pillar Question 2c

"Age – Does age have an effect on participation within Block by Block's projects?"

This pillar question has two open-ended research questions:

- How does Block by Block encourage participation among children within its program?

- Does Block by Block have trouble with participation in older populations in communities where they operate?

How does Block by Block encourage participation among children within its program?

As stated above in UN Habitat (2015), there is reference to a story of an exercise they ran at Aldea Digital, "the world's largest digital inclusion festival," where they were able to implement a large-scale version of their preliminary Block by Block model. Block by Block

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[9] The irony of a man being quoted regarding female voices is clear, but the quote is relevant.

enlisted the help of the Minecraft Mexico community and was able to make a model of "Plaza Tlaxcoaque" in Mexico City. They were then able to clone that model and place it in multiple virtual "plots" on the same public server. Each participant was given three hours to make over the public square after a quick briefing of how to use the software. The fact that the server was public also allowed Minecraft players from all around the world to observe the process as it was happening. This public spectacle brought in 7,429 participants, with 1,438 submitting ideas and 431 complete submissions. UN Habitat states that "[t]he young people visualized a wide range of urban design features, including outdoor museums, libraries, roller coasters, boat rides, urban gardens and footbridges… The winning entry, submitted by 12 year old Samantha Monroy Sanchez, included a petting zoo, roller coasters, urban gardening, a medical centre, fountain and outdoor games." Now, obviously, this sort of result led to some pretty outrageous expenditures that won't be in the budget for most municipalities. A roller coaster isn't particularly feasible for most Parks and Rec departments. This sort of thing is generally controlled for in the general model put forth in UN Habitat (2015a), but it does highlight the fact that these children are not only interested in their community, but have real, tangible ideas that can be addressed and potentially implemented if reasonable. The number of participants paints a clear picture that Minecraft can clearly bring in participants who become engaged and stay engaged.

Does Block by Block have trouble with participation within older populations in communities where they operate?

Upon review of the documents, it's quite clear that this question isn't an important one with the Block by Block program. It's clear that the use of this method for youth participation is

intended to be used in conjunction with other methods for bringing in older participants. That said, older populations are indeed showing up to these workshops. UN Habitat (2015a) does call for a representative group based on age, and it also calls for local participation from local NGOs and local government entities, all of which trend older. Many of these older participants are finding that they have quite positive feelings about the increased participation amongst younger generations. In Von Heland, et al. (2015), one of the local "community leaders" was quoted as saying, "Youth involvement was a great achievement and learning process for us elders. We community leaders are old-fashion-people and we have old ideas in our minds. Youth created design with wifi, solar panels and eco-toilets. These are ideas and designs for the future. They learned from us and we learned from them." This quote demonstrates that the older residents in this community were excited to hear some younger perspectives on these topics. Olesen & Ermeklint (2015) also told stories of women who did not take the workshops seriously until they saw what their children came up with. By the end of the project, these women chose to present their own design from the game and were able to bring a perspective that had not been present before.

Overall, the Block by Block method seems to be aimed mostly at increasing youth participation over general participation. That said, it seems to be bringing in participants of all ages and seems to be a great conduit for discussion in these communities.

Table 5.2: Summary of Findings

PQ1a: Overall -- How does Block by Block's use of Minecraft affect overall participation in meetings?
- Participants surveyed stated that they enjoyed this method quite a bit.   - Youth turnout is successfully targeted.   - Overall effects on turnout may be hard to determine due to a methodology that aims for representation, but that this representation is important
PQ1b: Voice -- How does the Block by Block program encourage participants to express their voice?
- Minecraft's ease of use is apparent, especially compared to 3D modeling software that is generally used in planning/PA.   - Program methodologies focus on training to shrink gaps in technical ability, especially those caused by gender, socioeconomic status, and age.   - Methodologies don't explicitly state intent to remove planner biases, but still manage to amplify the voices of participants over the vision of architects and planners.
PQ2a: Socioeconomic Status -- Does socioeconomic status have an effect on participation within Block by Block's projects?
- Block by Block is almost exclusively used in underdeveloped countries   - Program methodologies specifically call for poorer members of the community and for slum dwellers to be sought out for participation.
PQ2b: Gender -- Does gender have an effect on participation within Block by Block's projects?
- Women and girls are specifically sought out in program methodologies   - Some girls called for all-girl workshops to be presented   - Men found that they had been missing female perspectives and ideas
PQ2c: Age--Does age have an effect on participation within Block by Block's projects?
- Youth participation is highly sought after in program methodology   - Community "elders" were not as sought after, but found themselves interested in the game and the process.   - Intergenerational dialogue was fostered due to increased input from all ages

The table above offers a summary of the findings in the results chapter. Overall, the results are quite positive for implementation outside of this program. Further testing would be necessary before a widespread rollout, but the future of this method is promising. The Block by Block method addresses concerns with underrepresented groups quite well. Women and girls still report more difficulty and less satisfaction with this method, but some of them did call for

all-girl workshops. This may be useful in allowing a female perspective to be heard more clearly,

rather than spoken over.

Chapter 6: Conclusion

In the previous chapter, an analysis of official and unofficial documents from the Block by Block program were analyzed for a better look at the efficacy of the program. The Block by Block was found to have promise in improving community engagement in the public meeting process, both across the board and for most underrepresented communities. This potential requires more research. This chapter contains suggestions for said further research, suggestions for how to implement this program on a more local level, and offer some closing thoughts.

Further Research

The pillar question method lends itself to the formation of further questions on the topic at hand. As such, there are many questions and potential future hypotheses that arise from this basic research.

Figure 6.1: Further research questions

Q1	How will the Block by Block model perform in more developed countries?
Q2	Are shorter workshops possible in countries where more Minecraft players are present?
Q3	How can the Block by Block model be more culturally sensitive to existing landmarks?
Q4	Can this method remain relevant as the game ages?
H1	Youth participation increases in workshops where Minecraft is used.
H2	Girls and women have a lower participation rate relative to men and boys when Minecraft is used in workshops
H3	Minecraft is a more accessible method of 3D modeling than other planning methods such as AutoCAD.

Q1: How will the Block by Block model perform in more developed countries?

All of the case studies that were reviewed for this paper came from developing countries that have a UN Habitat presence. Block by Block even describes itself as an organization with a focus on impoverished communities. (blockbyblock.org) As such, it is worth exploring whether the strengths of the Block by Block program can be translated to communities in countries that are more developed.

Q2: Are shorter workshops possible in countries where more Minecraft players are present?

In UN Habitat (2015a), the methodology used by the Block by Block program called for an entire day of basic walkthrough of the basic mechanics of Minecraft. With Minecraft being more accessible in communities with more computers and stronger internet connections, would a long introduction to the game still be necessary during the workshop? Could it be optional for participants instead?

Q3: How can the Block by Block model be more culturally sensitive to existing landmarks?

The Block by Block model is usually implemented by people who aren't members of the community in which they're working. As such, it may be hard for the facilitators of the workshop to know what may be culturally significant to the area.

Q4: Can this method remain relevant as the game ages?

As technology ages, many things become irrelevant in short amounts of time. In the gaming industry, many of the biggest "AAA" titles release the next title in the series yearly (see: Call of Duty, Battlefield, Madden, etc.). This is a hard truth that Minecraft has seemed to reject quite well over the years, as it has made its way on to multiple platforms and sold enough

copies to be the second-best selling game of all time. With that said, is the Block by Block method reliant on the popularity of the game, or would it lose efficacy as time goes on? Would it be prudent to keep an eye out for more games in the future that could potentially fill the shoes of Minecraft?

H1: Youth participation increases in workshops where Minecraft is used.

The efficacy of the Block by Block method seemed to be strong, and should be tested accordingly. This potential working hypothesis could help strengthen the arguments for the Block by Block program in the future.

H2: Girls and women have a lower participation rate relative to men and boys when Minecraft is used in workshops.

One of the main communities that was focused on in this paper was the community of women and girls. Generally, the program saw some promising results surrounding female participation in the program, but the results weren't as promising as they were amongst boys and men. A deeper study could potentially identify the reasons behind this problem, or even if there is a statistically significant problem at all.

H3: Minecraft is a more accessible method of 3D modeling than other planning methods such as AutoCAD.

One of the main reasons that the Block by Block program exists is that it's assumed that an approximate model of a citizen's idea would be much better than a more detailed model in a 3D modeling software like CAD. As such, it would be an important step to determine whether this assumption is a valid assumption or not.

Suggestions for implementation

The methodology used by Block by Block is very much tailored to developing countries, as it is employed by UN Habitat. As such, concerns of the voices of those living in slums may not be useful in America. Concerns of access to internet and a copy of Minecraft may also be much lower, as many children in more developed nations have access to both, or may at least be able to pick up the game much faster. This could save valuable time that could either be cut from the workshop altogether, or could be allocated for further refinement of the models that the participants are creating. A focus on NGOs isn't relevant in an American context, but other community organizations may be worth bringing into the mix. The goal when adapting this method to more developed nations is to maintain the intent of including relevant groups in a community alongside marginalized groups in the community.

Closing Thoughts

There are still some concerns with this method that weren't touched upon in the previous chapter, as they weren't related to the main pillar questions. The biggest one was noted as Q3 in Figure 6.1. Many of the elders interviewed in Von Heland, et al. (2015) were concerned somewhat with the younger generation's inability to connect with the culture of the area. This concern is a very real concern in developing nations, as a sort of cultural colonialism is emerging in this increasingly connected world. It is worth examining if using a Western form of media, Minecraft, could exacerbate these cultural concerns, or if allocating time during the workshop could alleviate any of these cultural concerns that the elders expressed. While these

are not concerns that a planner may have in the developed world, a developing nation doesn't

need any help in losing their cultural identity to global cultural exchange.

Overall, the Block by Block method seems to be well tested and consistently refined by

the organization. This refinement can only continue to better the program and the results that

the program yields.

Works Cited:

"About Block by Block." *Block By Block*, www.blockbyblock.org/about.

Adams, Paul C. "Teaching and Learning with Simcity 2000." *Journal of Geography*, vol. 97, no. 2, Mar. 1998, p. 47. EBSCO*host*

Andrews, Gillian. "Gameplay, Gender, and Socioeconomic Status in Two American High Schools." *E-Learning*, vol. 5, no. 2, 01 Jan. 2008, pp. 199-213. EBSCO*host*

Behm-Morawitz, Elizabeth. "Examining the Intersection of Race and Gender in Video Game Advertising." *Journal of Marketing Communications*, vol. 23, no. 3, June 2017, pp. 220-239. EBSCO*host*

Bereitschaft, Bradley. "Gods of the City? Reflecting on City Building Games as an Early Introduction to Urban Systems." *Journal of Geography*, vol. 115, no. 2, 01 Jan. 2016, pp. 51-60. EBSCO*host.*

Billger, Monica, Liane Thuvander, and Beata Stahre Wästberg. "In Search of Visualization Challenges: The Development and Implementation of Visualization Tools for Supporting Dialogue in Urban Planning Processes." *Environment and Planning B: Urban Analytics and City Science* (2016): n. pag. Sage. Web.

Blevins, Tal. "SimCity 4 Review." *IGN*. IGN, 14 Jan. 2003. Web.

Cilauro, R. "Community Building through a Public Library Minecraft Gaming Day." *Australian Library Journal*, vol. 64, no. 2, 03 Apr. 2015, p. 87-93. EBSCO*host*

Cushing, D.F. "Promoting Youth Participation in Communities through Youth Master Planning." *Community Development*, vol. 46, no. 1, 01 Jan. 2015, p. 43-55. EBSCO*host*

Cushing, Debra Flanders. "Youth Master Plans as Potential Roadmaps to Creating Child- and Youth-Friendly Cities." *Planning Practice & Research*, vol. 31, no. 2, Apr. 2016, pp. 154- 173. EBSCO*host*

D'Artista, BR and FL Hellweger. "Urban Hydrology in a Computer Game?." *Environmental Modelling & Software*, vol. 22, no. 11, n.d., pp. 1679-1684. EBSCO*host*

Danilović-Hristić, Nataša and Nebojša Stefanović. "The Role of Public Insight in Urban Planning Process: Increasing Efficiency and Effectiveness." *Spatium, Vol 2013, Iss 30, Pp 33-39 (2013)*, no. 30, 2013, p. 33. EBSCO*host*

Derr, Victoria, et al. "A City for All Citizens: Integrating Children and Youth from Marginalized Populations into City Planning." *Buildings (2075-5309)*, vol. 3, no. 3, Sept. 2013, pp. 482- 505. EBSCO*host*

Desouza, Kevin. "Citizen Disengagement: The Minority Opinion." *Public Management (00333611)*, vol. 97, no. 2, Mar. 2015, p. 12. EBSCO*host.*

Foster-Bey, J. *Do Race, Ethnicity, Citizenship and Socio-Economic Status Determine Civic-Engagement? CIRCLE Working Paper #62*. Center for Information and Research on Civic Learning and Engagement (CIRCLE), Center for Information and Research on Civic Learning and Engagement (CIRCLE), 01 Dec. 2008. EBSCO*host*

Freed, Jeremy. "Gamergate, Violence and Video Games: Re-Thinking a Culture of Misogyny." *Media Report to Women*, vol. 45, no. 3, Summer2017, pp. 6-23. EBSCO*host*

Gordon, Steven. "Sim City." *Professional Geographer*, vol. 43, no. 3, Aug. 1991, pp. 366-367. EBSCO*host.*

Grand Theft Auto V Loading Screen. Digital image. User: TeraPatrick2008, n.d. Web. <https://www.gamefaqs.com/pc/805606-grand-theft-auto-v/images/22>.

Gray, Kishonna L., et al. "Blurring the Boundaries: Using Gamergate to Examine 'Real' and Symbolic Violence against Women in Contemporary Gaming Culture." *Sociology Compass*, vol. 11, no. 3, Mar. 2017. EBSCO*host*

Grove, Morgan, et al. "The Legacy Effect: Understanding How Segregation and Environmental Injustice Unfold over Time in Baltimore." *Annals of the American Association of Geographers*, vol. 108, no. 2, Mar. 2018, pp. 524-537. EBSCO*host*

Hayden, D, et al. "What Would a Non-Sexist City Be Like? Speculations on Housing, Urban Design, and Human Work." *Women and the American City*, 1981. EBSCO*host*.

Johansson, Mats Billberg. *Gaming the Real World*. Lucky Day, 30 Sept. 2016, store.steampowered.com/app/528590/Gaming_the_Real_World/.

Jois, Goutam U., Student author. "Affordable Housing and Civic Participation: Two Sides of the Same Coin." *BYU Journal of Public Law*, vol. 22, no. 1, June 2008, pp. 1-41. EBSCO*host*

Kaye, Linda K. and Charlotte R. Pennington. ""Girls Can't Play": The Effects of Stereotype Threat on Females' Gaming Performance." *Computers in Human Behavior*, vol. 59, June 2016, pp. 202-209. EBSCO*host*

Kleinschmit, Stephen. "Addressing Procedural Bias in Municipal Planning Governance: A Case for Incorporating Citizen Participation within Technical Advisory Committees." *International Journal of Organization Theory & Behavior (Pracademics Press)*, vol. 18, no. 1, Spring2015, p. 1.

Kolson, Kenneth. *The Politics of City Planning Simulations*. Rep. N.p.: n.p., n.d. ERIC Document Reproduction Service No. ED384539. *ERIC*. Web.

Korppoo, Karoliina. "We are Colossal Order, Developers of Cities: Skylines, a game that recently celebrated two years of existence, AMA!." *Reddit*, 17 May 2017, www.reddit.com/r/IAmA/comments/6bpjyb/we_are_colossal_order_developers_of_citi es/dhomvym/?context=10000

Kosak, Dave. "SimCity 4 (PC)." *GameSpy*. GameSpy, 25 Jan. 2003. Web.

López-Ornelas, E., et al. "Social Media Participation in Urban Planning: A New Way to Interact and Take Decisions." *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences*, vol. 42, no. 4/W3, 25 Sept. 2017, pp. 59-64. EBSCO*host*, doi:10.5194/isprs-archives-XLII-4-W3-59-2017.

McCue, Camille and David James. "Future Cities Engineering: Early Engineering Interventions in the Middle Grades." *Advances in Engineering Education*, vol. 1, no. 2, 01 June 2008.

Minnery, John and Glen Searle. "Toying with the City? Using the Computer Game Simcity™4 in Planning Education." *Planning Practice & Research*, vol. 29, no. 1, Feb. 2014, pp. 41-55. EBSCO*host*

Molina, Brett. "Microsoft to Acquire 'Minecraft' Maker Mojang for $2.5B." *USA Today*, USA Today, 15 Sept. 2014, www.usatoday.com/story/tech/gaming/2014/09/15/microsoft-minecraft/15658383/

Moss, Richard. "From SimCity to, Well, SimCity: The History of City-Building Games." *Ars Technica*, 11 Oct. 2015, arstechnica.com/gaming/2015/10/from-simcity-to-well-simcity-the-history-of-city-building-games/.

Naylor, Brian. "As FCC Prepares Net-Neutrality Vote, Study Finds Millions of Fake Comments." *NPR*, 14 Dec. 2017, www.npr.org/2017/12/14/570262688/as-fcc-prepares-net-neutrality-vote-study-finds-millions-of-fake-comments.

Olesen, Ida, and Angelica Stenudd Ermeklint. "Citizen Participation in Development of Public Spaces- A Case Study in Nepal Looking at Minecraft as a Tool in Urban Planning." *Lund University*, 2015. *LUP Student Papers*, lup.lub.lu.se/student-papers/record/7616044.

Ortiz Escalante, S. and B. Gutiérrez Valdivia. "Planning from Below: Using Feminist Participatory Methods to Increase Women's Participation in Urban Planning." *Gender and Development*, vol. 23, no. 1, 02 Jan. 2015, p. 113-126. EBSCO*host*

Osborne, Caroline, et al. "The Unheard Voices of Youth in Urban Planning: Using Social Capital as a Theoretical Lens in Sunshine Coast, Australia." *Childrens Geographies*, vol. 15, no. 3, Jun 2017, pp. 349-361. EBSCO*host*

Paaßen, Benjamin, et al. "What Is a True Gamer? The Male Gamer Stereotype and the Marginalization of Women in Video Game Culture." *Sex Roles*, vol. 76, no. 7/8, Apr. 2017, pp. 421-435. EBSCO*host*

Passon, C., et al. "Implications of Adolescents' Perceptions and Values for Planning and Design."
      Journal of Planning Education and Research, vol. 28, no. 1, 01 Jan. 2008, p. 73-85.
      EBSCO*host*

Porter, Alex. "Dead or Alive Xtreme Beach Volleyball." *Maxim Magazine* n.d.: n. pag. Web.
      <https://web.archive.org/web/20030122141518/http://www.maximonline.com/entert
      ainment/reviews/review_games_4654.html>

Reeves, Dory. "Putting Women and Gender in the Frame – a Consideration of Gender in the
      Global Report on Human Settlement Planning Sustainable Cities 2009." *Habitat
      International*, vol. 43, July 2014, pp. 293-298. EBSCO*host*

Ross, Catherine L. and Nancey Green Leigh. "Planning, Urban Revitalization, and the Inner City:
      An Exploration of Structural Racism." *Journal of Planning Literature*, vol. 14, no. 3, Feb.
      2000, p. 367. EBSCO*host*

Rutan, D.Q. and M.R. Glass. "The Lingering Effects of Neighborhood Appraisal: Evaluating
      Redlining's Legacy in Pittsburgh." *Professional Geographer*, 06 Oct. 2017, p. 1-11.
      EBSCO*host*

Shields, Patricia M. "The Community of Inquiry." *Administration & Society*, vol. 35, no. 5, 2003,
      pp. 510–538., doi:10.1177/0095399703256160.

Shields, Patricia M, and Nandhini Rangarajan. *A Playbook for Research Methods: Integrating
      Conceptual Frameworks and Project Management*. New Forums Press, 2013.

Shields, Patricia M. and Tajalli, Hassan. Intermediate Theory: The Missing Link in Successful
      Student Scholarship. *Journal of Public Affairs Education*. Vol. 12, No. 3, pp. 313-334.
      2006.

Shields, Patricia and Whetsell, Travis Public Administration Methodology: A Pragmatic
      Perspective. In Eds. J. Raadshelders and R. Stillman, Foundations of Public
      Administration. Melvin and Leigh pp. 75-92. 2017

SimCity (1989). Digital image. *GameFaqs*. User: DDJ, n.d. Web. 10 Apr. 2017.

SimCity 2000. Digital image. *GameFAQs*. User: Keyblade999, n.d. Web. 10 Apr. 2017

SimCity 3000. Digital image. *MobyGames*. N.p., n.d. Web.

SimCity SNES Bowser. Digital image. *GameFAQs*. User: Tropicon, n.d. Web. 10 Apr. 2017.

Simpson, Brian. "Towards the Participation of Children and Young People in Urban Planning
      and Design." *Urban Studies (Routledge)*, vol. 34, no. 5/6, May 1997, pp. 907-926.
      EBSCO*host*.

Spain, Daphne. "Gender and Urban Space." *Annual Review of Sociology*, vol. 40, July 2014, pp. 581-598. EBSCO*host*

Spier, Joshua. "A Walk in the Park: An Experiential Approach to Youth Participation." *Youth Studies Australia*, vol. 32, no. 3, 01 Jan. 2013, pp. 13-25. EBSCO*host*

Svitlana, Kravchenko. "The Myth of Public Participation in a World of Poverty." *Tulane Environmental Law Journal*, no. 1, 2009, p. 33. EBSCO*host*

Tassi, Paul. "Here Are The Five Best-Selling Video Games Of All Time." *Forbes*, Forbes Magazine, 8 July 2016, www.forbes.com/sites/insertcoin/2016/07/08/here-are-the-five-best-selling-video-games-of-all-time/#4b18fcd55926.

UN Habitat, 2015, unhabitat.org/books/using-minecraft-for-youth-participation-in-urban-design-and-governance/.

UN Habitat, 2015a, unhabitat.org/books/manual-using-minecraft-for-community-participation/.

United Nations. "Convention on the Right of the Child." *United Nations Treaty Collection.* 1577, New York: United Nations, 1989. Online Collection. Web.

Von Heland, Fanny, et al. "Future of Places." 17 Dec. 2015, www.ericsson.com/en/publications/conference-papers/using-minecraft-as-a-citizen-participation-tool-in-urban-design-and-decision-making.

Walkerdine, Valerie. "Remember Not to Die: Young Girls and Video Games." *Papers: Explorations into Children's Literature*, no. 2, 2004, p. 28. EBSCO*host*

Williamson, Anne R. "Public Meetings as Sources of Citizen Input: Comparing Attendees with Citizens at Large." *The Social Science Journal*, vol. 51, 01 June 2014, pp. 191-200. EBSCO*host*

Wilks, Judith and Julie Rudner. "A Voice for Children and Young People in the City." *Australian Journal of Environmental Education*, vol. 29, no. 1, 01 July 2013, pp. 1-17. EBSCO*host*,