Playing, Mapping, and Power
A Critical Analysis of Using *Minecraft* in Spatial Design

Hamza Bashandy

Investigating the potential of video games as an aid to community mapping and participatory architectural design, the author discusses the use of the sandbox game *Minecraft* by the Block by Block Foundation in collaboration with Mojang Studios, Microsoft, and UN-Habitat for three projects—Model Street (Dandora Phase 2, in Nairobi, Kenya), Mind the Step (Jardim Nakamura, in São Paulo, Brazil) and Former Marketplace (in Pristina, Kosovo). The author offers different perspectives or "lens" from which to view the projects, including as an architect (which he calls a spatial lens) and as a community member (which he dubs a player lens). Favoring agency over participant choices, he claims, the institutional forces at work can prevent true access to space making by either the foundation or the game, each of which suffers from accessibility problems for both players and the communities. He argues for a need to look more closely into the politics of the Block by Block Foundation and *Minecraft* and seeks to make readers explicitly aware of the systemic mechanisms of exclusion. **Key words**: democracy and public space; marginalized communities; *Minecraft*; participatory design; power hierarchies; video games

People around the world use digital media to aid civic participation and promote social justice. Many governmental and community organizations have changed their mission and functions as they adopt new digital tools and practices (Gordon and Mihailidis 2016). Similarly, digital games have been seen as a very potent vehicle adopted by many large-scale institutions such as the United Nations Human Settlement Program (UN-Habitat). This use of games has led some cities to embrace digital games in their participatory design strategies, an important development in city planning over the last century that seeks to include people in democratic space making (De Carlo 2005; Hoskyns 2005; Luck 2018). Here, I look at the participatory model proposed by the Block by Block

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Foundation that integrates the sandbox video game *Minecraft* as an urban participatory mapping tool in collaboration with Mojang Studios (the developer of *Minecraft*), Microsoft, and UN-Habitat. The foundation works with nongovernmental organizations (NGOs), city councils, and government entities in marginalized communities to help them redesign and re-create their public spaces.

Departing from the concept of participatory design that aims to democratize space making using video games in aiding communities mapping their built environment, this research looks at power structures and spatial products that have resulted from such efforts. In this research, I investigate these initiatives from a critical perspective, and I ask questions about the true effectiveness of participatory design through digital games in these projects. Unlike most of the urban participatory games, *Minecraft* promotes itself as a space-design and a space-mapping tool. I consider the produced spaces within *Minecraft's* interface as a map—not an institutionalized cartography inscribed within a certain system but as a plan, a proposition (Wood 2010), and a spatial representation of a space that was, is, or will be (or even a space that will never happen).

Overview of Video Games in Participatory Planning

Serious Games versus Sandbox Games in Participatory Planning

Games have been implicated in the urban-planning and space-making issues of cities since the second half of the twentieth century (Mayer et al. 2009; Tóth and Poplin 2013; Tóth 2015). Digital games specifically have gained attention and been used by local authorities for developing community engagement, including local planning and giving feedback to a city council. The existing research shows a wide diversity of digital games developed especially for participatory planning and offering a different range of control over the played map (Tóth 2015). Games such as *NextCampus* (2012), *B3-Design Your Marketplace* (2014), and *Plan Your Brisbane* (2018) ask for players' opinions about a future urban development: the new location of a university campus in the first case (Poplin 2012), the redesign of the marketplace's public space in the second case (Poplin 2014), and the future urban strategies for the city of Brisbane in the third case. Such games are usually called "serious games."

Serious games aim to provide a playful and engaging environment that embodies knowledge and pedagogical principles (Khaled and Vasalou 2014).

However, these tools are designed to target a specific urban issue in a specific time frame. They are limited in their use in space and time and, consequently, the included map is usually limited in its control. Governments and city councils found in online virtual worlds (i.e., *Second Life* 2003) and sandbox games such as *Minecraft* (2011) an adequate tool to engage citizens in urban decision making. For example, authorities in New York (Tulloch 2007, 2008) and Boston (Gordon and Manosevitch 2011) used *Second Life* to engage citizens in the design process of a proposed public park. Unlike serious games, virtual-worlds and sandbox games are not tailored for a specific urban context but offer a high degree of control over the game space that players can appropriate to map their imaginations. By the game space, here I mean the virtual environment of the game. I see the digital realm, in which the game space is embedded, as an infoscape, a technology that has added a layer to the other scapes of the space of our existence, such as landscape, soundscape, smellscape. All of which shape the body of space and influence other bodies to generate spaces.

Although several studies have praised the integration of digital games into the participatory process, especially the integration of children's voices, many scholars have expressed concerns about such participatory projects. First, planners have often been unprepared to give the public so much power and, second, in other cases "the city might have no intention of using that data because a decision has already been made" (Leorke 2018, 187). Apparently, in participatory workshops that engage play with planning, power disparities become manifest—the power of the spatial professional (architect, urban planner), the power of the city council, and the power of stakeholders. Likewise, game spaces are embedded in power hierarchies—powers of the algorithm, of the server, and of the players (Dyer-Witheford and De Peuter 2009). This power imbalance among those who make their maps or spaces by playing and those who control its infrastructure (game developer or stakeholders) produces a level of spatial hegemony in which the contributor or player could lose power over the map and its spatial representations.

Minecraft *as a Participatory Planning Tool*

Minecraft is a sandbox block-building video game that gives its player an infinite virtual world to explore and exploit. Players can generate an unlimited number of existing worlds or fictional worlds by using uniformly sized 3D blocks. By far, *Minecraft* has one of the bigger market shares in the video games industry with over one hundred million players worldwide (Hoogervorst et al. 2015). My

interest is to understand how game designer Mojang Studios directed public attention to *Minecraft* as a tool that has the potential to remap and redesign the buildings and urban spaces in marginalized communities. I propose two reasons: Outreach efforts and the integration of external modification files (mods) developed by players.

First, *Minecraft* creator Mojang advertised its game as a tool that can socially engage young generations in many fields such as education and city planning. In 2011, using *Minecraft* as a mapping tool even before its official release, Mojang collaborated with Svensk Byggtjänst Swedish building services to engage people living in "the million programme" neighborhoods to imagine a future for their space. They called the project "Mina Kvarter" and presented it during the official release event MineCon 2011. The project influenced city municipalities, NGOs, and architects to use *Minecraft* as a tool to engage citizens in mapping and decision-making processes.

The next year, in 2012, they collaborated with UN-Habitat to integrate *Minecraft* into public space planning with a focus on marginalized communities. Microsoft continued to support the project after acquiring Mojang in 2014 and later initiated the Block by Block foundation. Since then, many institutions and organizations, independently, have proposed similar initiatives. Among these initiatives are the 2014 collaboration between Copenhagen city planners and Aalborg University; they initiated a project to involve young students in deprived areas to redesign their neighborhood (Magnussen and Elming 2015), the 2018 public competition carried by the ministry of territorial cohesion in France to ask citizens to imagine their future cities, and the ongoing 2018 Liègecraft project started by Liege game lab (LGL) to bring local community to re-create and redesign the city center of Liege, Belgium (Hurel et al. 2019).

Second, mods became an important asset in the growth and the longevity of *Minecraft*. Mods is an abbreviation of the word "modifications," and it points to the practice in which players or users modify and create the contents of games. This practice often aims to self-tailor the player's experience. While some game studios forbid the act of modding for copyrights reasons, Mojang encouraged the community to create modification files and plug-ins for the game (Tremblay et al. 2014). Several third-party apps converted the GIS data into the *Minecraft* world such as FME and World Painter. As part of their digitalization strategies, many cities have translated their Geographic Information System (GIS) and Computer-aided design (CAD) data into a *Minecraft* format. The Danish Geodata Agency in Denmark, the Ordnance Survey in the United

Kingdom (UK), and the National Institute of Geographic and Forest Information (IGN) in France offer a ready-to-download city/*Minecraft* map for its citizens (Frémont et al. 2017). Generated maps are usually played in creative mode, one of five game play modes the game offers (the others being survival, adventure, hardcore, and spectator modes). Participatory workshops prefer creative mode because it places no constraints or limits on using materials and resources, and players can move freely or fly in space and build or destroy blocks.

The common premise among these projects is that the *Minecraft* interface has great potential as a relatively simple platform that makes it possible for a wide range of people and players to map their imaginations of the material world. It also allows the import and export of geographic data from other platforms into the game space. The availability of mods is also one of the selling points of *Minecraft* for institutional funders, although in my opinion it does not take into consideration the limited access to the skill set that allows for such control over algorithms, especially among disenfranchised communities.

Moreover, there is a need to look more closely into systematic issues inside the politics of *Minecraft*. Scholars have addressed several issues within its game mechanics. *Minecraft* promises total control over its territories. New terrain contents are generated upon the player's requests (Kreminski and Wardrip-Fruin 2018)—using a computing method called procedural generation. Additionally, and as explained by Dooghan (2019), the game mechanics "encourage players to see the game world as full of resources to be consumed, without concern for ownership or equity, where technological superiority becomes a justification for action, and individual labor is always fairly rewarded" (71). In some scenarios, rails and water canals can transport villagers as slaves for trading or to get rid of them. In fact, *Minecraft* mechanics encourage procedural slavery (Harrer 2019), the reproduction of colonial logic, and neoliberal logic (Dooghan 2019; López et al. 2019). This logic is embedded in almost every online virtual graphic environment like "the logic of exquisite self-craft and appropriation of space" (Nazmeeva 2019). Although these critiques mostly address Minecraft's survival mode and Block by Block relies on creative mode, nonetheless, the creative mode game space—the first developed mode for the game during the beta testing in 2009—was designed and set to be a fertile land for that colonial and neoliberal setting.

The Block by Block Foundation

This article, with its choice of cases, sheds light on the Block by Block initia-

tive. In 2012, UN-Habitat launched the Global Public Space Program aiming to improve the quality of public spaces worldwide. The same year, UN-Habitat partnered with the game developer Mojang to integrate *Minecraft* in their future projects to address the urban issues of marginalized and disenfranchised communities. After the Microsoft's acquisition of Mojang in 2014, they established the Block by Block Foundation in 2015 as a nonprofit organization depending on donations for growth. It is a collaboration between UN-Habitat, Microsoft, and Mojang. In its 2019 annual report, UN-Habitat announced it had run one hundred projects (a third of its 2012 initial plan) in thirty-five countries (Lahoud 2019).

But how does the Block by Block Foundation view *Minecraft*—as a design tool or a tool for communication? In this matter, the Block by Block Foundation narrative, represented in UN-Habitat's published reports and the team's publications and presentations, seems confusing. Sometimes it clearly states that ". . . for us, obviously, and UN-habitat, *Minecraft* is not a game, it is a fantastic communication tool that some people play with" (Minecraft 2013, n.p.), although in other publications it calls *Minecraft* "a game design tool" (Delaney 2020, 282). In the same article, James Delaney—one of the Block by Block team—argues that: "In the right hands, Minecraft transforms from a computer game into a computer-aided design tool" (283). However, UN-Habitat's reports mention that "*Minecraf*t is not a precise architectural design tool" (UN-Habitat 2015) and that "it is not so suitable for architectural projects that require a lot of detail" (Lahoud 2019, 37).

Block by Block advocates *Minecraft* as a potential tool that engages disempowered citizens to redesign and reimagine their neighborhoods. It claims it applies bottom-up methodologies that offer a democratic process by making its decisions more inclusive. It makes the use of *Minecraft* mandatory for receiving funds, indicating an institutional belief in *Minecraft* powers. Which means these organizations and entities would not have these funds without accepting the use of *Minecraft*, regardless of their level of engagement with the game prior to the proposed project.

Methodological Approach

I take a multiple case study approach to find a pattern of theoretical generalization for the use of digital games—and particularly *Minecraft*—in partici-

patory design and planning. To choose the cases, I have conducted extensive research covering the different Block by Block projects. The first criterion I used to make the choice was the execution of all projects' phases; I eliminated cases that uniquely ran a *Minecraft*'s workshop. The second criterion I used was the availability of information and data, including whether it was possible for me to conduct interviews with architects and planners. I analyze three cases: The Model Street (Dandora Phase 2 in Nairobi, Kenya); Mind the Step (Jardim Nakamura in São Paulo, Brazil); and Former Marketplace (in Pristina, Kosovo). The first two cases are intensive cases, used for developing theory and narrative that cover the Block by Block phenomenon. The third case, Former Marketplace, is a comparative case (Järvinen 2000) based on the intensive work of other researchers and organizations. The three projects took place under the umbrella of the Block by Block Foundation, and all three engaged citizens in marginalized communities to redesign an existing, abandoned public space using *Minecraft* as a mapping tool.

Data collection proved challenging because most of the literature about this program offers a single narrative—the Block by Block Foundation narrative. This narrative, in my opinion, lacks transparency. For example, authors, in their academic publications or in UN-Habitat reports, promote *Minecraft* based on quantitative data that lacks accuracy—"fifty percent of the population was online as of 2017" (Delaney 2019, 277) or "Minecraft is one of the world's most popular computer games with over 100 million players worldwide" (von Heland et al. 2015, 3). Such data, which is repeated in almost every online or academic article that addresses the Block by Block project, lacks statistical information on its geographical distribution among marginalized and wealthy communities. This means that, despite the wide reach of the game, no proof exists it has widely reached the marginalized communities Block by Block aims to help.

For another example of the lack of transparency, I turn to the Block by Block Foundation website (figure 1). At first, the photo of the gateway on the left (after) appears as if it were inspired by the *Minecraft* model of the gateway created by players in the photo on the right (before). However, both images belong to two different projects. The way the visuals are represented in this project, even if this act was not intended, distort reality about what exactly each project has achieved. (The Haiti project's website uses the same technique—before and after images. But it uses the correct images)

Obviously, each case used different data collection tools. The three cases relied mainly on netnography, an internet ethnography research method that deals with digital artifacts such as drawings, photography, and audiovisual

Figure 1. Screenshot of the Nairobi projects' webpage on the Block by Block Foundation website.

presentations (Kozinets 2015). The three cases benefited from nentographic methods by visiting the different social media groups, which was helpful to track information such as the project's timeline and to follow the progress of the created visuals.

The first case, the Model Street, relied on netnography methods combined with online interviews and archival data. I contacted six executive members—including the NGOs responsible, the architects, and the urban planners—of the project between 2019 and 2020. I conducted an interview with Cave Bureau, a Nairobi-based architectural studio and the office responsible for executing a part of the Model Street project.

The second case, Mind the Step, relied on ethnographic methods, including netnography combined with online recorded interviews. I conducted the interview with Cidade Ativa, the local organization responsible for the Mind the Step project. Additionally, the research benefited from records and archival data of Cidade Ativa, such as the 2018 detailed report on this project: Mind the Step (Jardim Nakamura, São Paulo, Brazil).

In the third case, Former Marketplace, I used records and archival data on the duration of each phase of the project and the level of involvement of par-

ticipants during the different phases. The case relies also on existing empirical research by scholars like Ton Le's (2017) field study work in Pristina during the construction of the project, the social audit carried by the Group for Legal and Political Studies (GLPS), UN-Habitat's project official Facebook group 'Bllok pas Blloku Prishtinë', and the publications of Rexhepi, Filiposka, and Trajkovik (2016, 2018), in which they discuss the potential of online participation as a development tool and cite the *Minecraft*'s workshop that took place in Pristina, Kosovo, to redesign an abandoned marketplace.

Although I recognize the role these Block and Block projects have played in engaging disempowered groups such as youth, women, and people with disabilities, my aim here is to untangle a different narrative. Instead of understanding the outcomes of players as a separate process, I question *Minecraft*'s impact on the eventual planning decisions. Looking at it from my position as a practicing architect and as a person coming from a developing country—one from the kind of country that is the recipient of all these development schemes—I find myself more relational to the community than to the institution in charge of the project. Therefore, I apply two analytical lenses to assess the potential for *Minecraft* to help democratize space making and aid communities in mapping their built environment—my lens as an architect (spatial lens) and my lens as a community member (player lens).

I use the spatial lens to lay a map on a map. One is the map produced within the game space that relies on the desires and the imagination of the player. The other map is the one materialized in the urban space and controlled by the organization in charge to explore and analyze the power relations between the citizen or player and the institution and to measure the impact the game space had on the planning decisions.

I use the player lens to focus on the depth and breadth of user experience and to gauge the extent to which the game invites the player to use his or her imagination. I also look at the progression of the gaming and mapping experience and track the extent of player involvement through the different phases of the project.

Case Studies: Block by Block Guidelines

The Block by Block Foundation offers twelve-step guidelines (it refers to them as a methodology) on its website for community participation. UN-Habitat details the same methodology in twenty steps in the manual "Using *Minecraft* for Community Participation" (Westerberg and Rana 2016). Because the focus

of this research is to situate *Minecraft* within the whole participatory process, I reformulated these steps under three major phases that are centered on *Minecraft*. These three phases form the base for the questionnaire shared with my interviewees. The three are the phase before the workshop, the phase during the workshop, and the phase after the workshop.

The first phase starts with the application submission process. Although it is not part of the Block by Block methodology, it is a mandatory condition for UN-Habitat to select a project. The local authorities and NGOs must submit an application that includes a description of the project with an estimated budget. If the project is accepted—and depending on the year of submission—the UN could provide the successful applicants with a grant up to $100,000 (UN-Habitat, 2019) or $20,000 for small public spaces intervention (UN-Habitat, 2017). The first application requires that the project's duration shall not exceed twelve months, and the second requires a period between three and six months. The first phase includes the preparation of a *Minecraft* model of the existing site of the project. The foundation prepares the base model, usually created by a *Minecraft* modeling firm (e.g., FyreUK). It also includes the choice of participants. Participants are preferably local residents who use the site every day as well as partner agencies, local governments, and stakeholders. The preferred number is between twenty-five and sixty participants who represent a broad swath of the community, including individuals with disabilities, women, youths, and seniors.

The second phase (workshop) lasts from two to four days. Participants "are given basic training on public spaces issues, theories and design considerations" (Westerberg and Rana 2016, 6). Then participants are invited to walk through the site to document, observe, and share reflections. The group formation should consist of between two and four individuals. After a *Minecraft* teaching session, a build-techniques tutorial, and a brainstorming session, groups develop ideas about *Minecraft* and suggest their preferred changes on the model. Once the models are finalized, the groups then present their model to the other participants and invited stakeholders. Participants and stakeholders collaboratively prioritize the proposed improvements, taking into consideration the cost of the proposed design. By the end of the workshop, participants create a final common model on *Minecraft* for further development.

The third phase consists of the preparation of architectural and detailed drawings by a trained architect. Usually, the city council is included in this phase. The final design should be based on the final *Minecraft* model. According to UN-Habitat guidelines, the final drawings are then shared and discussed by the

workshop participants and all participating organizations. The third phase also aims actively to engage the community in the construction and maintenance of the site.

Model Street, Dandora Phase 2 in Nairobi, Kenya

This project is part of the Making Cities Together, a collaboration between UN-Habitat, Project for Public Spaces, and a Dutch city-planning agency named Placemakers. The project is a successor to the Jeevanjee garden's project that took place in Nairobi's city center (Dandora is a suburb east of the city). To apply for the funds, local community groups presented their projects in May 2015 during an UN-Habitat symposium. The Dandora Transformation League (DTL), a community-based organization in Dandora, won the competition, which offered the group the opportunity to receive funding for the project (Cave Bureau, personal interview 2020). The concept of the Dandora project was to develop a successful "model" that could be replicated in other street blocks in Dandora.

The workshop was organized by teams from DTL, UN-Habitat, Placemakers, and Kuwa, a planning and design consultancy based in Kenya. Twenty-six residents participated in the workshop organized in October 2015 (October 3, 10, 17, and 24) comprising a total of 13.5 hours in addition to 1.5 hours of tutorials. They divided participants into five groups and each group worked on a different node entrance to the street block (Hoogervorst et al. 2015). The groups' objective was to design gateways for each node and to revitalize the street block. Besides their design proposals, they created a matrix of the different proposed elements. The output was shared with Cave Bureau (a local architectural firm based in Nairobi).

The on-site work consisted of two parts—the revitalization of the street and the erection of a gateway. The revitalization's work, which included plantations, street work, and the design of tree pots and painting, was mainly conducted by the Dandora Transformation League (with some assistance from Kuwa and Cave Bureau), which managed to engage the community in the process by organizing over thirteen street building parties between mid-2016 and mid-2018. (Dandora Transformation League 2018). During that time, the work slowed down because of budgetary constraints (Cave Bureau, personal interview 2020). The gateway design and construction were carried out by Cave Bureau. The design of the gateway, according to the firm, was inspired by one of the participants' group propositions (figure 2). The kids proposed the gateway as a pergola to provide shade. The architect interpreted it into a floating street-crossing zebra.

Figure 2. The proposed gateway produced during the *Minecraft* workshop. Players had mainly used oak fence and stone pressure plate as materials to represent their shading concept. Courtesy of Cave Bureau.

Figure 3. Initial gateway proposal. According to Cave Bureau, the design was slightly modified based on discussions regarding the branding of the project. For example, the two side squares were replaced by two triangles that represent the letter D for Dandora. Courtesy of Cave Bureau.

The architect's idea, based on the outcome of the workshop, was to introduce vehicle-slowing traffic mechanisms for a safer street (Cave Bureau 2017).

As presented on its website, the firm proposed a first 3-D model (figure 3). The discussion with the other stakeholders resulted in second and final model. Both models were developed using architectural computer-aided design (CAD) software, and they were hung at the DTL office for the community to review. The development of the early sketches and their architectural and detailed drawings stretched from the end of 2015 through September 2016. The drawings were then submitted for review by city planners (Cave Bureau, personal interview 2020). The construction of the gateway started in the first half of 2017. The project was finally launched around April 2018, almost two years and six months since the *Minecraft* workshop.

Mind the Step, Jardim Nakamura in São Paulo, Brazil

Mind the Step is an initiative composed of several projects and conducted by Cidade Ativa, a nonprofit organization located in São Paulo. The initiative's purpose was to rethink São Paulo staircases as a public space and not just a route for people to pass through. The case that interests this research, the one that integrated *Minecraft* in its process, lies in Jardim Nakamura, São Paulo. Unlike our first case, UN-Habitat was not in direct contact with the local community; The organization awarded this grant to the Healthbridge Foundation of Canada, a partner of UN-Habitat, and its goal was to run several small public spaces interventions in different countries. Cidade Ativa received the grant through the Healthbridge Foundation. A year later, Cidade Ativa tried to apply directly to the UN-Habitat grant but did not receive any funds (Cidade Ativa, personal interview 2020). The initial budget was estimated between $10,000 and $15,000, with added funds from some donations and the local government budget (these latter sources virtually matched the initial budget) (Cidade Ativa, personal interview 2020). An initial meeting took place in March 2018 to explain the project to the local community and to attract the support of stakeholders. On April 17 and April 19, the team collected data about pedestrian traffic on two different staircases and, later, based on the analysis of the number of people affected, chose the Jardim Nakamura site. Cidade Ativa sent photos of the site to the Block by Block team to prepare the base model (Cidade Ativa 2018).

The *Minecraft* workshop, lasting around twelve hours, took place in a school close to the staircase between May 24 and May 26, 2018. The team rented the school's computers for the duration of the workshop, and the Block by Block

Figure 4. Final proposed model by players. The light tiles were for people with visual impairment. Players added two benches and a black table to some wide steps. Courtesy of Cidade Ativa, 2018.

Foundation sent a technician to run the game. Cidade Ativa hoped seniors would participate, but only students did so, seventeen of them in all. The students designed nine different models that they combined by the end of the workshop into one map. The map included benches, lights, and wall art (figure 4). During the workshop, the team did not explicitly speak with the players about the budget. Instead, when players proposed an idea, the team informed them whether it was possible but did not prevent them from adding it to the model (Cidade Ativa, personal interview 2020). As expressed during our interview, since this project was Cidade Ativa's first to include *Minecraft* and the team was not sure of the results, it did not want to rely on *Minecraft* as the only engagement tool. There-

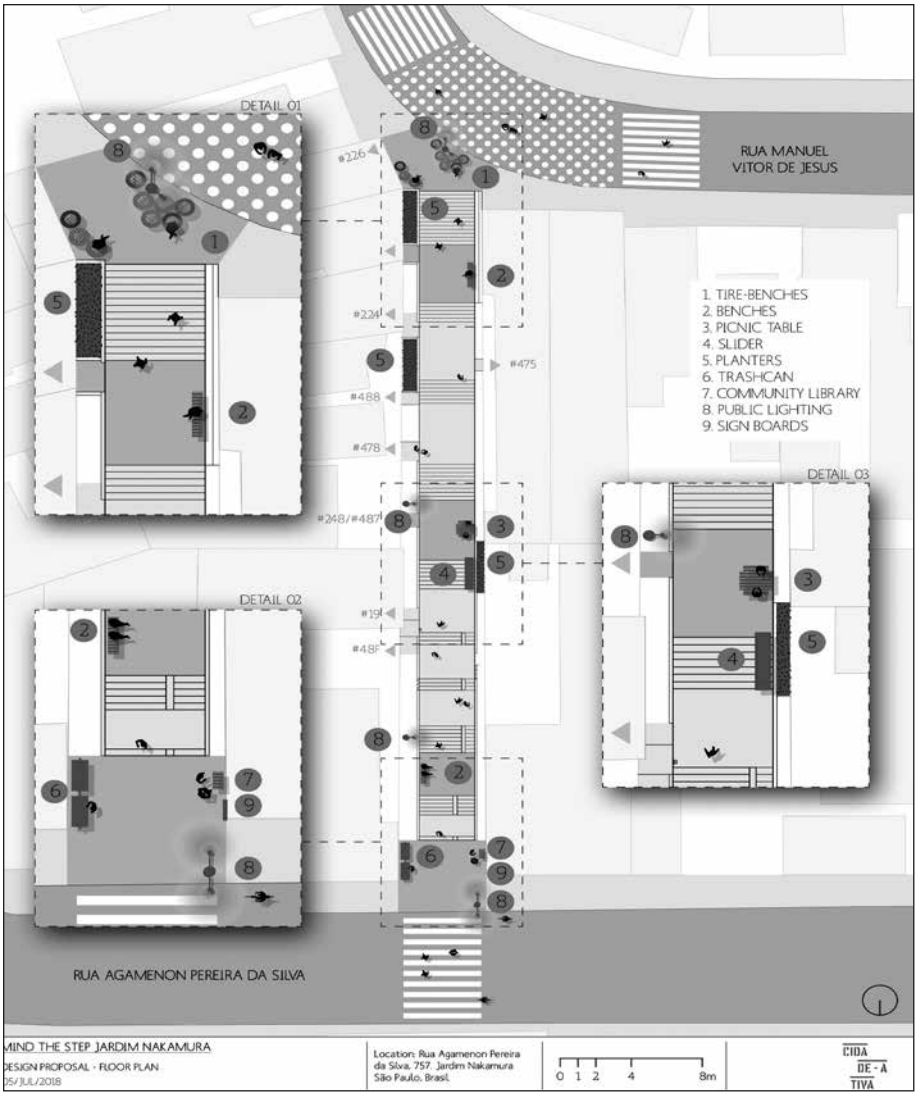

Figure 5. Design proposal developed by Cidade Ativa. Benches and seating were differently organized since some neighbors did not want to have benches in front of their houses. They also added to the design a public library and a slider. Courtesy of Cidade Ativa, 2018.

fore, the organization applied old guidelines from previous projects, hoping also to attract a larger public. It threw an on-site engagement party that took place on May 26, 2018, the last day of the workshop, and it displayed panels on the street's wall through which the neighbors could identify the main urban issues.

On June 19, 2018, three weeks after the workshop, Cidade Ativa presented the architectural draft to the participants of the *Minecraft* workshop and to those at the engagement party, all of whom approved the design with some modifications. (Some neighbors, for example, did not want to have tables and chairs next to their house. See figure 5). On June 28, the firm received the approval for participation in infrastructural work (floor, steps, LED lights, and water drainage) from the local government. As in the first case I discussed, the on-site work consisted of two parts: the infrastructural work and the furnishing work. The furnishing work took place in the form of a workshop on the August 3 and August 4, during which the architects—in collaboration with the community—designed and built the furniture. The infrastructural work by the local government took place before the on-site workshop, and the work took ten days in total (Cidade Ativa, 2018).

Former Marketplace in Pristina, Kosovo

The Municipality of Pristina started the Block by Block project in the Sunny Hill neighborhood in cooperation with UN-Habitat and with an initial budget of €166,274.11 (Matias 2018, 12). It aimed to remap the old market located on Rruga B street.

The city initiated a public information meeting about the project on September 3, 2015. More than seventy residents participated in the fourteen-hour *Minecraft* workshop that took place at a college for four days starting on September 11, 2015 (Bllok pas Blloku Prishtinë 2015). The workshop opened with discussions about urban design and public space. Every team, using *Minecraft*, modeled different solutions. Participants presented seventeen proposals and then voted on which to implement in the final design. Participants' designs included a wide variety of ideas including a footbridge across the street and adding speed bumps for safety, building a small open library, climbing walls, an amphitheater, and even creating space for parking cars (Rexhepi et al. 2016). After the voting, participants cocreated the final design on a multiplayer *Minecraft* server (figure 6). As in the two previous cases I described, the workshoppers provided a matrix presenting the amenities the participants desired and listing the number of votes each item received. Then, designs and the matrix were presented to the architects at the office for Urban Regeneration (Ton Le 2017).

Within two months, the architect of the municipality revisited the designs and—based on the project's budget—used 3-D architectural software to produce the first architectural draft, which was presented to the public on December 10,

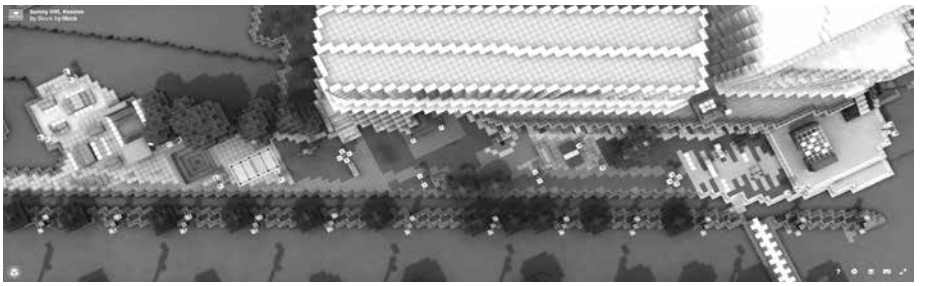

Figure 6. A screenshot of the final *Minecraft* model for the former marketplace cocreated by the Block by Block workshop participants. Screenshot taken using Sketchfab' lab experiment tools.

2015 (figure 7). The final design featured a range of facilities, including gardens, comfortable resting places, a playground, and a skate park. However, the young participants from the workshop did not take part in the phase during which the last decision was made (Ton Le 2017). The municipality put the project out for bid, which also means that the community did not participate in construction. The winning contractor began the project on April 15, 2017, planning to be finished in ninety working days. Instead, as the mayor announced, the construction was actually completed in May 2018, two years and eight months after the *Minecraft* workshop.

But a social audit from June to November 2018 by the Group for Legal and Political Studies (GLPS)—an independent, nonpartisan and nonprofit public policy organization based in Pristina—assessed the park situation and painted a different picture. The published report indicates that only 70 percent of the work was completed (Matias 2018). The audit indicated two reasons this project

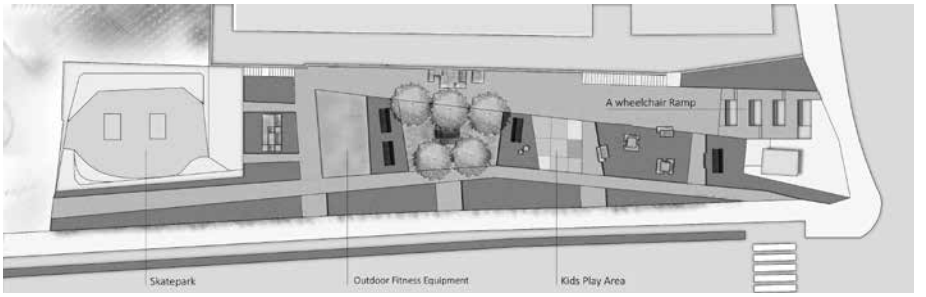

Figure 7. A plan, based on Google Earth imagery, showcasing the final product on the site of the former marketplace in Pristina, Kosovo. Illustrated by the author.

went slowly and remained uncompleted. First, the contractor did not respect the deadlines, so UN-Habitat withdrew fifty thousand dollars of funding from the project. Second, for a long period no project coordinators from the municipality oversaw the progress of the work after the original project coordinator retired. In addition to those problems, as the team learned, "the project proposal originally designed by the citizens of the community [was] not the same as the one the municipality contracted the company for" (Matias 2018, 1). And, too, the team, after conducting interviews with the neighbors, sought to increase the safety and security of the park's users by building speed bumps in the streets close to the park (a similar proposition to the one made by the participants in the workshop). The team also requested putting green fences around the area (Matias 2018).

Critical Analysis of Cases

Player Lens

From my perspective as a user and a member of a community, the involvement of players in the process seemed very limited. Participants were fully involved only in the second phase: that lasted between two and five days, a very short contact time in the scope of the entire project, which ranged from six months (Mind the Step) to three years (Model Street and Former Marketplace). Third-party organizations (e.g., FyreUK) produced the map in the first phase, which means that participants did not map their existing spaces by themselves. The second phase represents the high point of participant involvement. Along with site visits, participants in this phase used *Minecraft* for their main tool of space production. Players usually abandoned the playful maps they developed once the workshop ended. The professional designer, in the next phase, used a different CAD software to regenerate the drawings. These then became the basis for any further discussion or feedback till the implementation of the project, when the initial map created by play became useless. Consequently, after losing any visual means of design and communication, players found their involvement notably reduced in the remaining phases of the projects. Participant involvement became limited perhaps to attending a meeting or two after the architect finished the detailed drawings or, possibly, it involved some participation in the construction phase, which varied from case to case.

Another factor that limited the involvement of participants and their attachment to the project was the gap (figure 8) between the design phase and

the implementation phase. Both the Model Street's case and the Former Marketplace's case show a gap of approximately thirty to thirty-two months between the production of maps in the game space and its reproduction in the material space—a gap that risked disconnecting the produced maps in the physical space from its original creators, that is the players. It was a disconnect that could risk weakening the sense of belonging the participants once enjoyed while working on their *Minecraft* projects.

The budget becomes a crucial factor in the process. As described by von Heland, Nyberg, and Westerberg (2015), this caused some players to experience a tension "between embracing creativity and the unknown budget reality of the whole revitalization project" (11). Usually—if the workshop is composed of young participants—organizers did not explicitly share the budget's numbers, as in the second case. In the case of Former Marketplace, participants remained fully engaged and active, their belief that they could make a change in their public space motivating them to immerse themselves in the game space. When the budget was considered later, after the municipality received final recommendations, the result was a prioritization of cost over participant imagination.

In addition, the Block by Block initiative adopted a *Minecraft* technocratic language (Neuwirth 2016), which considered *Minecraft* as a potential ICT tool applicable to every project and every geographical context, one that fit all the

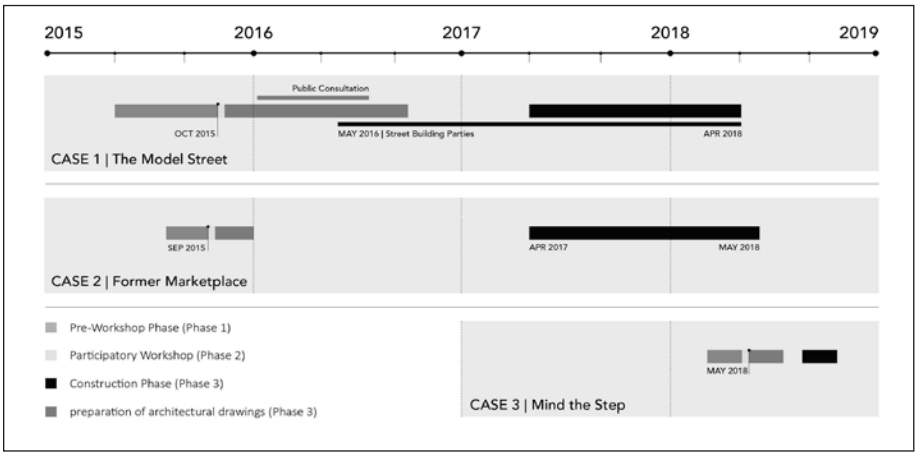

Figure 8: Illustration by the author showing the timeline of the three projects based on this research interpretation of the Block by Block guidelines. It demonstrates that the *Minecraft* workshop—the high point of players engagement—occupies a little space compared to the other phases.

conditions. This was a kind of technological determinism that proved more harmful than helpful to some communities. To play *Minecraft* in this context, a computer or a laptop was needed first, and then players needed to buy *Minecraft*'s license—a luxury many communities this initiative targets could hardly afford. Equipment in my first and second cases were brought on site exclusively for the duration of the workshop. This does not discount the role a video game can play in redesigning public spaces, not looking at it from a technological determinism aspect, but looking at it as another expansion of space—a space where its algorithm is in our hands and not in the hands of an institution. Instead of limiting an imagination, space can help open up an imagination.

Finally, participants were not active in the construction work in the Former Marketplace case. On the other hand, the Model Street and the Mind the Step's cases showed participant involvement in the construction phase. But for participatory design to be democratic, communities should build what they produce during the original workshop; otherwise, it risks turning the work on design with the architect, NGOs, and municipalities into labor instead of community engagement. All of which leads me to the following question: Did the final constructions resemble the maps produced earlier through *Minecraft*?

Spatial Lens

From a spatial perspective, comparing the maps produced during the different phases shows that between the first maps produced by participants and the final constructed project by the city council, a gap exists between the things people imagined and those the architects, stakeholders, and authorities built. (The Mind the Step project is a small urban intervention and therefore differences were not highly noticeable although some elements, like the slider, were almost impossible to create in *Minecraft*). Although the Block by Block position, as previously explained, confused the use of *Minecraft* as a participatory design and as a communication tool, I suggest that three reasons explain this gap.

First, the scaling of the *Minecraft* map is fixed. The firm FyreUK employs a scale of one block equals one meter (Minecraft 2013). This scaling is desirable in using *Minecraft* to construct a world map of a physical space because it slightly lessens the effort of building a base map. But the limits of this scaling system become obvious when working on the redesign of public space. At that point, the players are limited in terms of their design capabilities. For example, for players to design a seat, they will probably use a half block equals 0.5 meter. As a result, there will be an abstract representation of the seat (as in the Mind the

Step's project). Here, the results cannot be understood as an abstraction of players' ideas. Rather, it restricts players' imagination in design and space making.

Second, as the collected data in my three cases reveals, participants played *Minecraft* on average for twelve hours, a low number compared with the hours a trained architect needs to prepare a project's initial drawings. In the three cases, the architect needed between two weeks and two months (in some cases it took more time to consult public opinion) to prepare the design drawings. Although Block by Block claims that *Minecraft* is easy to learn, it still takes some time and effort to master its technicalities, enough time to exceed the hours spent in the workshops they organized.

Third, the architect drew plans in a separate process from the community. Knowing that in my chosen cases, most of the workshop organizers have rarely played *Minecraft* before or during the workshop. In other cases, the architect was not even invited to participate in the *Minecraft* workshop. The architect depended on screenshots taken from the game accompanied with some text with no active engagement with the players. This decreases community effect on the design process and its final product. By replacing *Minecraft* with other CAD tools that exceeds players' expertise, players could not actively participate in the decision-making process. The institution (represented in the architect, the NGO, and the municipality), and not the community, then becomes the actual owner of the project. Consequently, these hierarchical practices can diminish the space-making interface potential from acting as a space-making interface and render it a more temporary 3-D visualization tool.

A Space for Whom?

The cases I have analyzed show traces of agency over participants' choices. This agency sometimes extends to overshadow the ownership of the space itself. As I previously mentioned, the Block by Block guidelines recommend offering participants basic training about public space. In doing so, the experts' risk compromising the community's voice in upgrading their space. They also risk conveying the notion that outside experts bring a power narrative of superiority over the local community (Miessen 2010) and can discount the participants' knowledge of the space to favor the experts' understanding and their definition of what is a public and a private space. Remember, NGOs must propose something that fits the budgets of their grants. This already determined vision

of the space in a state of production automatically discounts the community design input.

Such initiatives are considered bottom-up (versus top-down) approaches. They claim they apply methodologies that offer a democratic process by making the decisions more inclusive. However, there is a space of contestation inconvenient for centralized power. The mutable state the game play platform can offer comprises a barrier to the bureaucracy—the systems of agencies that need a rigid and fixed map to proceed. Consequently, centralized powers depoliticize and neutralize the game space potential in creating a performative map. They fix the map and render the game space more as a visualization tool than a common space. Participatory models, in this case, reinstate the rule of the expert (Mitchell 2002).

I argue that *Minecraft*'s game space does not automatically offer a democratic space in which to perform participatory design. As I mentioned, participatory environments are vulnerable to forms of neutralization and depoliticization. Scholars and individuals from the community with shared interests must challenge such bureaucratic practices. Space should be produced through grassroots. Grassroots playful mapping should not aim for the creation of conventional 3-D models or detailed architectural plans. It is at this point that the map stops, becoming fixed, immutable, and rigid. But instead, it should aim to raise a community of playful mapmakers who can use the game space as a common space (Harvey 2012) to carve their interests and produce a map that carries the lines, modifications, and imaginations of its makers rather than of the institutional agent.

It is imperative that we explicitly identify the role of a video game in space-making endeavors like the Block by Block workshops. It should not be seen as the be all and end all of design. It should be but one stage in a sequence of processes of design that may include one game, multiple games, or many applications. Game space is not often built as a space of design, which means it may be better as a step in a sequence of developments that goes to the stage of design. To design, we need a tool that is better suited for spatial composition, a video game with spatial design in mind, one that has an open space able to incubate any spatial imaginary.

The role of spatial professionals in these workshops has become a problem as well, because they become the middleman between UN-Habitat and the community it presumes to serve. The architects possess the exclusionary ability to be the only party that can communicate with the funding body of the project.

Applying for a grant and corresponding with international entities is in itself a skill and a privilege not afforded to everybody, as in the case of Cidade Ativa, who tried to apply directly to UN-Habitat as a community but failed. Eventually, the organization becomes a contractor liable to its client (the funding organization) and not the community.

Lately, I have noticed a severance between the architect's final product and the workshop. Which means that architects need to be brought into the video game. The architect needs to be a player and a spatial broker at the same time without undermining the players' imaginations, a sentiment shared by the interviewed practitioners in both cases. The playing architect and the playing community will present a chance to get in touch with the homo ludens and render play as a space of production toward shared imaginations of the built environment without falling in the trap of technological determinism.

Moreover, existing auditing models for participatory initiative such as Block by Block can benefit a great deal from an audit of the game itself, as well as from the game play. Such audits should screen for accessibility to technology and engagement with the interface, without having classism or ageism hurdle the game. The game itself cannot be enforced. People in a given community interested in civic engagement should have the freedom to choose, to build, or to modify the game space as they deem appropriate for their common goal. Enforcing a particular game or a specific platform means enforcing all the structural and systemic problems that come with the game.

Conclusion

Researchers have already acknowledged that participatory design is a flawed process, and they have been resisting it for decades. Looking at these cases in good faith, if there is a design intention, it has to include people with an explicit awareness of the systemic mechanisms of exclusion; the system of governance that controls participation is problematic to begin with. The involvement of video games generally in the participatory processes is not a de facto assurance of increased equity in the historically flawed participation models.

However, video games remain a tool of outreach that can be useful to the democratization of decision making, especially for those decisions aimed at developing the built environment. They often do not push reform of the whole structure of the participatory process because video games bring to the process

many structural flaws of their own. In spatial production especially, the games bring additional power hierarchies because the space inside a video game as well as the space of play—the space where participatory workshops take place—are often preconstituted and allow limited control by the participating player. *Minecraft* is no exception. As a video game, it is embedded with institutional and colonial forces.

In the cases I have studied, we see the institutional forces at work preventing true access to space making by both Block by Block and *Minecraft*. Each brought a set of accessibility limitations to the player and to the community. The UN-Habitat–funded scheme presented a contingency of a middleman in NGOs and contractors along with a lack of screening for strong relations between these agents and the community they presume to serve. *Minecraft* brings in an additional space of exclusion with the needed computers and hardware often unavailable in disenfranchised communities and the colonial and restrictive origins of the game space itself.

I am neither pessimistic nor optimistic about the role of video games in promoting democratic participation and space making, despite my conclusion that neither top-down participatory schemes such as Block by Block nor neoliberal game spaces like the one in *Minecraft* are the right answer to the problems involved. Nevertheless, I see a chance for the use of video games that are grassroots made and targeted.

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