Play the City

Dungeons and Dragons for Cities

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Games are as old as society, yet when a spatial designer enters the world of games, a new world opens—bright with novelty and possibility, a relatively unexplored instrument for shaping spaces that are more meaningful to humans. How much can an architect or an urbanist learn from games? Can games teach them about trust and ownership, as platforms with transparent rules valid for everyone, and with common goals? Can games teach them about learning and engagement, having fun with strangers while constantly being challenged individually and collectively? Can games teach them about training and strategizing for the real world, as they fail but are allowed the chance to restart? Can games teach them about communication and avoiding jargon, with their effective visual environment and simple language?

From IBM's *CityOne* (2010) to Will Wright's *SimCity* (1989), and from Richard Duke's *Metropolis* (1969) to Buckminster Fuller's *World Game* (1961), a long list of games are predicated on cities in their staging, or these games take place directly in real urban areas. Some, as single-player games, run on predefined algorithms and quantitative feedback loops; others provide a multiplayer environment. Rules for the organization and composition of cities emerge from negotiations among multiple actors; an open system where new rules can be invented or unused rules abandoned, rather than a closed game with a predefined algorithm, are particularly promising for spatial designers.

Perhaps better than a city-themed game, an environment that can be modified by the players could be useful in the pursuit of spatial designers learning from video games—environments that can host a wide range of players and do not focus on winning or losing, but rather, on building ex-

perience and partnerships as their rewards. At first glance, *Dungeons and Dragons* (1974), a role-playing and story-building adventure game, seems to have little to do with urban development, yet it could serve as a game system for trying to understand and develop cities. This was the case for the game-evaluation method which was invented for the 2009 Play the City project, implemented by a serious gaming company focusing on the research and development of urban spaces.

Fig. 106: Play the City, Circular Amsterdam Game, 2016

Not one person controls urban development processes, but many "players" influence them. In *Dungeons and Dragons* (D&D), there are many characters, each with unique properties. They come together to build a collective adventure and carry out careful research before they meet to play; for instance, they determine the era and location of the adventure, their character's powers, and who they need to supplement to reach their goals.

The ability to build several unique, personal stories, which can be based on data and players' knowledge, is the most striking property of *Play the City's* games. Similar to the setup of D&D, we introduced a wide range of city-maker roles and specific influences on our city game. Both the usual and unusual suspects of urban development were included, with powers ranging from unlocking legal rules or finding investments, to mobilizing crowds, shaping streets and squares, vetoing speculations,

calculating carbon dioxide reductions, and so forth. As the game system matures, we have observed that more realistic and applicable outcomes are achieved when players act out their everyday, real-life roles in the game. As in D&D, play becomes much more advanced when players already know about their mission and conditions, yet are given the chance to develop, expand, and apply an evolving understanding of their roles in an interactive, creative setting with other players.

After achieving a meta-game structure, the *Play the City* method has been adapted for dozens of city challenges. This includes topics and locations such as urban renewal in Rotterdam, circulation in Amsterdam, township development in Cape Town, urban transformation in Istanbul, economic transition in Shenzhen, affordable housing in Dublin, urban safety in The Hague, mass-migration in Europe, mobility in Marmara Region. The list continues to grow.

Fig. 107: Play the City, Affordable Housing Game, 2018

Just a Game, Is It?

Our *Play the City* team, comprising many architects experimenting with gaming as a design method, is thrilled to have discovered a world with many new avenues to explore. However, we are aware that we have entered

risky territory. Conservative decision-makers preoccupied with securing predictable results in the field of urban planning are particularly threatened. The first meeting we managed to schedule—a meeting with the alderman of Amsterdam's Noord borough—was particularly memorable. Looking back, I realize that he was doing his best by spending time with young urbanists, who argued that they could help him reactivate a stalled master plan by playing a city game. Listening to our city-gaming pitch left him quite puzzled, but still he decided to finance and join the game.

However, convincing his project office of the process, or our colleagues who designed the master plan, was even more difficult. The office's technical advisors responsible for the project refused to join the game or to discuss alternatives outside the walls of their office. At the time, it was not uncommon for planners to think: "It is just a game, and we do not comprehend the real purpose of a game in such serious matters." Was it correct to spend their time on a game, when no one knew what the outcome would be? Confrontations with our colleagues at city halls proved to be a real challenge over the years. While delving into the world of games had been enriching and eye-opening, we faced an image problem. Was it really a good idea to call our method a game? "Playing games with someone" is considered manipulative, and "playing the game" refers to someone who acts a part. Not only in English, but most languages, have similar, suspicious phrasing regarding games. As we have introduced our method to cities around the world, we remain surprised to see how comparable the jokes cracked about gaming are, each and every time.

Games in Reality, Reality in Games

At the heart of the matter lies a tension between reality and gaming. How close and how distant are the "game world" and the "real world" from one another? Can they influence each other's progress? I believe the key to explaining how games can perform as real-world problem solvers lies in the particular ways that games and reality connect. There are several ways the two relate:

The most common relation is when games conduct their fictional narrative in an environment the player recognizes from real life; for example, when the popular video games *Grand Theft Auto III* and *IV* (2001/2008) depict New York City. Thanks to its realistic rendering, a New Yorker no-

tices particular details about their city, while a teenager from Amsterdam would be able orient himself upon first arrival in New York. Today, gaining familiarity with complex subjects without even being conscious of them is effectively used as an entertaining learning mechanism.

A more direct link to reality is using gaming to fix a real problem, while simultaneously exploiting its escapism. Games can remain fictional, but the very act of playing the game will alter aspects of reality. A telling example of this relationship comes from the ancient Greek era, when, in order to survive a severe famine that lasted eighteen years, King Croesus of Lydia ordered everyone to indulge in games on one day and eat or work on the next.

Game dynamics can be introduced into real life, as with Nike's running application: a digital interface encourages users to exercise regularly to improve their health, and then congratulates them for it. Thus, the game is introduced through feedback loops into an individual's life. It can also connect these players with each other, to make the daily workout more fun and engaging, and less tiring and boring.

Games can be constructed in alternate realities to help initiate real life challenges. This can be done by taking real-life quests, such as global warming, migration, or inequality, and changing some of their conditions to generate what-if scenarios. Reminiscent of Buckminster Fuller's *World Peace Game*, in which all nation-state borders disappear, players can trade world resources and move freely. By altering the condition of country borders, the game is able to show that the deadlock is not scarcity, but rather, an unfair distribution of resources. Hence, a more equitable and peaceful world becomes not only visible, but also possible, by testing out alternatives.

Last but not least, a real-life challenge can be introduced into a game (i.e. the reverse of the third kind of relation). Thus, in safe gaming environments, testing and mastering collaborative solutions becomes possible. Real actors can play through out-of-the-box solutions, while mistakes can be made and learned from, in order to potentially reduce risks.

As such, games can be inserted into reality and reality into games. Whether games are constructed as an aspiration resembling the real world, or built to escape from it or fix it, they are a reality for those who play them, and games can influence their lives in the ways elaborated above. New theories of play, such as those from the literature on pervasive and ambient gaming, bring games right into the heart of the real world, blur-

ring the boundaries of Johan Huizinga's (1872-1945) "magic circle." In her groundbreaking book *Reality is Broken*, Jane McGonigal invited everyone to design games to repair reality.[1] Almost every day, a new game emerges for education, in the health sector, the defense industry, entertainment business, personal development, and for making more open, collaborative cities.

Among the five mechanisms relating games to reality, *Play the City's* gaming method is most closely aligned with the final category. All city games are modeled on real urban challenges and are played by their actual stakeholders. In this model, by playing, responsible actors train for reality by considering and testing various options, or by making mistakes in the game environment. This allows them to avoid them, and articulate wiser decisions for widely negotiated urban processes, in the real world. The game helps generate collaborative solutions to collectively defined questions. During this process, the understanding of games as escapism is slowly shifting towards a playful confrontation with reality.

Fig. 108: Play the City Gaming Method

1 | Jane McGonigal, *Reality is Broken: Why Games Makes us Better and How They Can Change the World* (New York, NY: The Penguin Press, 2011).

New Horizons for City Gaming

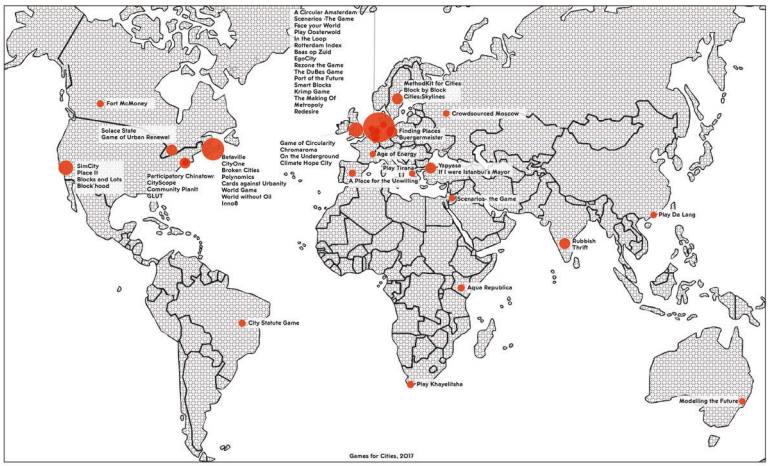
What began as a simple design experiment with students slowly evolved into a mature and authentic city-making methodology, practiced daily at the *Play the City* office. Today, city games are becoming more and more prevalent in the everyday work of policy-makers, regulators, urban designers, smart-city experts, and architects. A decade ago, many local government agencies in the Netherlands would have been puzzled if they were advised to work with games. Using applied city games as a tool to resolve complex urban development processes was simply too unfamiliar.

Although it is not yet a mainstream practice, cities are now inviting game designers to come up with their own urban challenges to tackle with city gaming. Since 2010, several cities in the Netherlands—Amsterdam, Utrecht, The Hague, Almere, Eindhoven, among others—have increasingly been applying the city-gaming method to their own contextual challenges. Apart from *Play the City's* work, talented young designers are working on developing new city-gaming techniques and championing the method with clients unfamiliar to gaming, such as encouraging large, conservative construction companies to guide early design processes with city games. Another striking example of this is that city-game designers now occupy full-time positions in strategic planning departments at the local, provincial, and national levels. Besides progress with the Dutch government, well-respected academic institutions in the Netherlands have also been integrating gaming into their curricula and their architectural design methods, such the *Why Factory* at the Technical University of Delft.

Academic institutions worldwide have also been exploring the potential of game-based research and design in their educational curricula, including the ETH Zurich and MIT Media Lab, developing their own city-game methods and interfaces. Beyond the more well-known objectives of learning and education, cities are also beginning to play games to address complex and pressing urban challenges, channeling innovative solutions. In November 2016, the Mayor of Hamburg hired a game called *Finding-Places* to respond to a large and rapid influx of refugees in the city, engaging residents to co-develop a strategic settlement plan proposal through a hybrid game interface, which was then put to the City's planning department for approval. City-gaming methods are emerging and evolving with increasing frequency, often alongside technological advances, em-

ploying the collective intelligence of experts and non-experts toward more informed and sustainable city-making solutions. A comprehensive, worldwide overview of city-games is mapped on the *Games for Cities* platform. From Boston to Bangalore, Moscow to Istanbul, Shenzhen to Sydney, and Cape Town to Nairobi, city games are tackling complex urban issues through the active engagement of their people.

Fig. 109: A Collection of Worldwide City-Games



These games address common challenges of urban planning departments, such as delivering affordable housing, providing quality public spaces, preventing water scarcities and floods, developing ports sustainably, maintaining urban safeties, adapting to a circular economy, mitigating climate change, and accommodating increased migration flows. Across the spectrum of city-game topics, games and urban planning share two common properties: they require a combination of multiple experts and kinds of tacit knowledge, and are concerned with a highly diverse set of stakeholders, who require effective communication and cooperation in order for successful outcomes to emerge. While capable of distilling and interpreting knowledge from all players, the expertise involved is necessary to carry proposals forward, transforming collective ideas into uniquely tailored solutions.

An interesting future step would be linking games with distinct topics to one another, as an inter-operable platform of games, each tackling their

own city-making elements in a system and plugging into one another. Imagine if a game about the circular economy could feed back into the affordable housing game, and could receive input from the urban transformation game, and so on. A number of players active in the flood game are relevant to the circular economy game, and stakeholders that focus on urban development in the circular economy game could provide input to corresponding game sessions in the affordable housing arena. A connected and layered set of city games could thus facilitate exponential increases to creativity and collective solution-making. I believe there is significant untapped potential in future attempts that would try build a circular system of games, in which the players and their decisions in one game can act as input to another game, increasing the complexity of each individual game (and its topic of inquiry) as the input is enriched and become more nuanced.

Just as the challenges that can be addressed by city-gaming diversify, the technologies that support gaming interfaces also vary greatly and evolve rapidly. City games running on digital game engines provide 2D and 3D geographic visualizations, and produce real-time, data-driven software simulations. This property is superior to conventional analog games, in terms of the quantity of data that can be processed before and during game sessions. However, fully digital game environments have come under scrutiny for the individualist nature of play, as well as their limited capacity for building trust, due to a lack of interaction between players and the emergent qualities of such interactions. Individual players are isolated in analyzing and interpreting the large sum of data with which they are interacting, unable to remold their own perspectives based on others, or to contribute towards shared narratives. This divide need not be so black and white. Hybrid games can employ both analog and digital components, formulating an optimal mix of their respective attributes, as appropriate for each specific challenge and context. While analog 3D-environments, which are modeled with game blocks based on real urban geographies, help players interact face-to-face and negotiate on solutions, 3D scanners and software tailored to urban simulations read the color and height information from physical model, depicting land use, square-meter price, density, parking, and so forth. This technology fosters increased and accelerated opportunities for making sense of complex datasets, and generating responsive, real-time feedback on player moves.

Technology is also transforming the pervasiveness of city games, accessing players in public spaces, or even in their own homes. For example, in a playful public space experiment in Istanbul, RFID scanners transformed local public transport cards into digital voting devices for a public poll. When used correctly, in this sort of way, technology can increase the social, economic, and political inclusivity of active engagement strategies. On top of this, digitally integrated gameplay decisions can be embedded within social media platforms to engage a wider community, as well as to support the systematic recording of game outcomes. Engaging online communities not physically present during the "game" can generate valuable external commentary and discussion regarding a game's outcomes, and potentially even trigger face-to-face meetings between interested parties. Hybrid systems that link digital and analog game elements have the potential to achieve a better integration between game interfaces and real-world planning and city-making.

Fig. 110: If I were the Mayor of Istanbul

The *Games for Cities* database provides the necessary evidence that city games are considered an effective method of engagement for collaborative city-making. As it continues to become more widely accepted, we expect its instruments to spread, variegate, and mature. While it would not be

wise to claim that it can guarantee solutions, city-gaming has the potential to go beyond traditional planning methods when intense and effective communication is called for, when complexity is high due to the involved parties, or when a conflict needs to be taken into account in planning and designing. For technically complicated cases—such as urban development according to circular economy logic—or for integrating different disciplines, games prove to be effective as a common language that all disciplines can relate to, and appropriate to serve their own means. Inaccessible, "expert" jargon is removed from the debate, and relayed to players as a form of tangible and tractable logic to be played with. Knowing the strengths of games, as well as appropriate combinations of digital and analog components, and using them accordingly, is key to successfully applying the method. Empirical research on implementing games as tools for addressing city-making challenges is rather sparse, as it is a relatively new field of inquiry. Simply put, more research is required, entailing the careful and continuous observation of games and analyses of their outcomes. This will allow the method to become more accurate and assertive, in regard to the benefits that games possess for urban development processes.

The horizons for city-gaming as a method will continue to expand, as long as there remains a need to involving people in conversations about their city. However, the evolution of this approach is also dependent on more young and innovative designers joining this movement; they must convince open-minded cities to implement this method for urban challenges globally, and apply the right combination of analog and digital elements for their individual contexts and objectives. This is also an imperative step in contesting preconceived notions of gaming as "not serious enough" a method for serious urban issues. There is some progress in this regard, with city officials becoming increasingly likely to embrace gaming as a relevant, interactive, fun-but-serious, and effective planning tool. While it may be too early to declare city-gaming as an established method for engaging with urban development, there is no doubt that the method is gaining ground. We need to adapt our methods of inquiry to suit a new generation of regulators and policymakers—ones born into a world that not only contains, but is reshaped by, the likes of *Minecraft* (2009), *Pokemon Go* (2016) and *Foursquare* (2009) on a daily basis. Interactive digital maps, 3D-virtual environments, and multiplayer settings are simply the new media and technologies through which an entire generation perceives the urban world. Imagine a future where cities are modeled, tested,

designed, and reshaped through interactive, collaborative games. At *Play the City*, we are working towards creating this future. This generation's city officials will not need convincing: they will speak the language of games and they will play to plan their cities.