SimCity and the Creative Class

Happiness, Place, and the Pursuit of Urban Planning

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Abstract

Used habitually in educational settings, *SimCity* has been drawing many young people to design by highlighting popular aspects of urban planning. The 2007 version of the game mimics popular planning theories that resemble the controversial work of Richard Florida and his use of the creative class. Florida's writings are in this article interlinked with texts produced by Will Wright, creator of *SimCity*, as well as the game`s websites, manuals, in order to track these similarities. It is my understanding that both Florida's and Wright's work share and emphasize certain cultural values, including cities' personalities. The analysis reveals how significantly the existence of happiness is linked to place in contemporary cultural setting, although Florida and Wright seem to disagree on how exactly they may relate. Furthermore, critiques of Florida also evoke criticism of the game's suppositions. Through interpreting *SimCity*'s application in pedagogy, its educational value is tied to discussions of in-game assumptions which promote academic critical inquiry. The conclusion frames the game as a simulation or model in game and play theory and problematizes Wright's intention to build elaborate models based on assumptions, which players as potential urban planners absorb and emulate.

Keywords

Models, Pedagogy, Richard Florida, Simulation, Social Engineering, Urban Planning, Will Wright

Introduction

Maps, of course, are a type of model. Computer models contain the same levels of assumptions as the road map. —Will Wright

SimCity creator Will Wright wrote in one of his notebooks that much like a road map, computer models reflect simplified versions of reality.[1] Cartographers, like game designers, foreground certain aspects of geography, or culture, while other aspects move to the background. Wright found inspiration for the game from maps: while he worked as a game designer for *Raid on Bungling Bay* (Brøderbund 1985), an aerial shooting game where the player flew a helicopter over a map and targeted buildings, rather than the shooting, he preferred designing maps.

This game poses unique challenges for artifact study because its designer is cognizant that the game distorts the culture it represents. In this paper, E. McClung Fleming's Artifact Study method (1982) is applied to a new media. The *SimCity* game and its paratexts, such as online resources, game manuals, and the game itself are studied as an artifact. In the first section, *SimCity*'s various versions and how they follow trends in urban planning are identified. Secondly, I compare *SimCity Societies* to ideas credited to famed urban theorist Richard Florida. Adapting Fleming's method, my evaluation frames or contextualizes by comparing social engineering in game to that in urban planning. This leads to a cultural analysis in the third section that unveils the importance of place for happiness. In the fourth section, I interpret these findings in the context of a spectrum of user groups to explore the educational value of using *SimCityEDU* as a teaching aid. My conclusion situates the game as simulation or model in game and play theory, and questions the creator's intention with reference to Wright's keynote address.

1. In 2010 The Strong National Museum of Play (Rochester, New York) acquired nine of Wright's design notebooks, which convey his ideas and thought processes while developing other games based on SimCity. The notebooks were created while developing The Sims, SimCopter (Electronic Arts 1996), and Spore (Electronic Arts 2008). They are in the "Will Wright Collection" and the epigraph is from Object ID: 110.1633.

Methodology

Scholars have defined diverse methods to study artifacts. One consistent endeavor is to outline "material culture as a process whereby we attempt to see through objects (not just the objects themselves) to the cultural meaning to which they relate or which they might mediate" (Schlereth 1991, 240). My investigation utilizes Fleming's four steps: identification, evaluation, cultural analysis, and interpretation (1982). Folklorist Henry Glassie promotes three different types of contextual framing for artifacts: personal, conceptual (paratexts), and physical (1991, 256). In this study, conceptual framing is used. Moreover, artifacts manifest multiple identities, such as maker and user. Glassie conjectures that artifacts are more accurate portrayals of the maker; meanwhile, architectural historian Dell Upton sees "the object as a mediator between creator and perceiver" (1991, 263; 1991, 158). Therefore, in addition to Fleming's four-step analysis, I describe the different user types in the interpretation section and the maker's intentions in the discussion.

Despite a recent push to develop a unified method to study video and massively multiplayer online games, methodological tool boxes for this type of research are fragmented. For instance, games like *The Sims* (Maxis 2000) can be studied as cultural "texts" that can be analyzed through the lenses of "Object Inventory, Interface Study, Interaction Map, and Gameplay Log" (Consalvo and Dutton 2006). One gap in existing research, according to Ioanna Iacovides and coauthors, is "investigating both how and what people learn through their involvement with games" (Iacovides et al. 2013, 2). While their research focuses on the mental and physiological breakthroughs and breakdowns of *how* through lab observations and diaries participants internalize informal educational goals, in comparison, I strive to understand *what* a videogame says in a formal educational context. Another trend in game studies is to treat videogames as either realistic or fantastic. Alternately, Alexander Galloway promotes a hybrid viewing of games as representations of reality, akin to an artwork (Galloway 2004). Synthesizing these approaches, my argument treats

these virtual artifacts like artworks which mediate cultural meanings between makers and users.

Research on physical games and toys is often subjected to material culture methodology. Observe that using this method to study physical toys like dolls is well-established by scholars, such as Attfield (1996). Surely, Wright knew of other types of toys as he grew up in the 1960s in Atlanta Georgia. He often relates his games to "fundamental paradigms of play [like] role-play, constructing miniature towns, [and] 'playing house'" by comparing them with physical toys, and sometimes calling them toys in sources like his keynote or in his notebooks (Pearce 2002, 116 qtd. in Lauwaert 2009, 75; Wright 2010, 110; Wright). While designing *The Sims* he wrote the word dollhouse several times in his notebook. This was the major inspiration for the game, but a problematic one: Jeff Braun, Maxis' other co-founder, explains that using the dollhouse paradigm made it initially difficult to attract investors (Lew 1989). The dollhouse is also a popular metaphor used to dissect *The Sims* (as in the work of Martey and Stromer-Galley 2007; Consalvo 2007; Reid-Walsh 2011). Given that *SimCity* combines physical games like spatial toys such as construction blocks, simulation toys such as dollhouses, and strategy games such as Risk or Monopoly, I believe it is reasonable to apply material culture methods. Digital games may not be physical, but they do contribute to popular and visual culture, to which this method readily applies.

Identification: SimCity as Artifact

In Fleming's first step, called identification, the basic properties of an artifact are history, function, design, material, and construction (1982). Several themes from the profession of urban planning, like sustainability, gentrification, social engineering, and the desire to make the profession more accessible to women, are highlighted in various versions. Functionally, players of the original *SimCity* (Maxis 1989) used their budgets to build basic services, such as residences, police stations, fire stations, parks, and entertainment and work places, while working within zoning (based on water and electricity

infrastructure), budgetary, and population requirements. Tax revenue was generated by attracting citizens, which consequently generates more finances for the player to expand his or her city. Residents were deterred by crime, traffic, and pollution. In the sequel, *SimCity 2000* (Maxis 1994), the interface shifted from pure plan to isometric and the object inventory increased by adding new programmatic building types, like schools and prisons. New features included a newspaper (later a news ticker), a query tool, and neighbor cities, while improved graphics showed buildings that were under construction, in use, and unoccupied. The next version *SimCity 3000* (Electronic Arts 1999) introduced even more complex cities with waste management, agriculture, agreements with neighbors, and more emphasis on pollution and its effects.[2] Again graphics improved; this time maps took on different climate characteristics with different vegetation types.

SimCity was related to urban planning from the beginning, and early packaging reinforced this relationship. In the user's manual for *SimCity 2000* the 1996 collector's edition, the bibliography cited a score of spatial scholars; among them were Le Corbusier, Jane Jacobs, and Christopher Alexander (Bremer 1996, 139). Le Corbusier was an influential modern architect practicing after The First World War known early in his career for grand urban designs and continued to practice until his death in 1965. Jane Jacobs was a highly respected activist-journalist who criticized Le Corbusier's urban plans in the early 1960s, and whose ideas like "eyes on the street" have influenced many planners. A decade and a half later, Christopher Alexander reacted against sterile modernist environments preferring ground-up design; although he was trained in architecture and math, he is best known today among computer scientists. The bibliography was comprised of urban theories from the mid 1960s to the late 1980s. Wright most likely learned of them when he spent two years studying architecture (Yi 2003; digital kids con 2013). Their inclusion

2. Maxis became a subsidiary company of Electronic Arts games gradually relinquishing their role from 1997-2004.

contextualizes the product within architectural and urban planning disciplines.

In the 2000s, *SimCity* mirrored developments in the urban planning profession by taking a decisive turn away from technical and toward social concerns, like gentrification. Rather than the user managing technical aspects like placing the streets and utilities, in *SimCity 4* (Electronic Arts 2003) zoning could determine the grid patterns of the roads and accelerate the layout process. In earlier versions residences merely evolved due to density, this version introduced residential building phases categorized by the economic class of the occupants, called sims. Sim's educational quotient was inherited by their parents, and corresponded to their wealth (Kramer 2002, 252). Housing desirability was based on nearby public amenities like recreational areas and schools (Kramer 2002, 274). Upper class sims generated more tax income that many users strived to achieve. Gentrification, an issue popularized by sociologist Ruth Glass continues to be discussed with vigor in urban planning (Glass 1964).

Among the most prominent urban planning theorists in the mid-2000s was Florida, who popularized "the creative class", a demographic group often associated with gentrification. Perhaps in response to trends in urban planning or because *SimCity* was developed by a different company, *SimCity Societies* (Electronic Arts 2007) departed from previous versions;[3] this enraged fans such that it did not achieve the success of previous versions. The game focused less on utilities and infrastructure than previous versions and more on social engineering through mixing building types without zoning regulations. This mixture led to cities with personalities, such as the fun city.

In the following decade, *SimCity* (Electronic Arts 2013) was a Massively Multiplayer Online game and, due to internet connection issues, is available offline. It included more aesthetic choices (like curved roads), and simplified infrastructure, insofar as the road

3. Maxis outsourced the development to Tilted Mill Entertainment the designers of Caesar IV (Sierra Entertainment 2006).

simultaneously supplied water and electricity to buildings. Since individual cities and players interacted with each other through the internet, designers of cities were encouraged to focus on certain niche markets, like an industrial port city or a high-tech region. The game no longer included the unpopular city archetypes from *SimCity Societies*, but instead focuses on interactions between players acting as megaregions; megaregions have been a focus of contemporary urban theorists like Edward Soja (2013).

In 2013 Electronic Arts partnered with GlassLab to make an educational adaptation focusing on climate change; it is considered a science, technology, engineering, and mathematics (STEM) "game-based learning and assessment tool" called *SimCityEDU* ("SimCityEDU" 2014). This platform is a basic version with many variables removed so that the user focuses on the objective, yet it still allows micro and macro views of the city. The integration of STEM and Common Core Standards in the United States educational system induced a heated public debate on the best way to encourage women and minorities to develop these skills. Urban planning is among the STEM professions, yet as a newer profession, the Town Planning institute of Canada formed in 1922, it has attracted women since the mid-1940s (Adams and Tancred 2000, 70–71).

Over the past twenty-five years, *SimCity* has enjoyed phenomenal success. Materially, over the years the game has come in boxes or jewel CD or DVD cases, containing manuals and the CD or DVD itself. Recently, the game came as a digital download. The game has had a variety of platforms including Amiga, PC or MAC, and the game's price is mid-level. However, the original version, *Micropolis* (Electronic Arts 2008), can be freely acquired as it was designed for the company's participation in One Laptop Per Child where children from developing countries were given it preinstalled on their own laptop). There are also free fan-created homages, like *LinCity* (1999) or *OpenCity* (2008). These are testaments to its status as a cultural phenomenon.

Evaluation: Cities have Personality

According to Fleming, the second step is evaluation which is a comparison between the artifact and a similar object which "provides the essential building blocks for conceptual generalization" (1982, 169). *SimCity* was the first of many games in the city building genre. On a larger scale is *Civilizations* (MicroProse 1991) and *Age of Empires* (Microsoft Studios 1997); on a smaller scale is Wright's other hit game *The Sims*. These games stress the relationship between the built environment and humanity. The similar object in this discussion is the theory of Richard Florida. They share notoriety, the belief that cities have personalities, their focus on creativity, their attempt to measure creativity, and their assumption that high-tech industry is based on creativity.

Florida is what many consider a superstar academic who has breached the boundary into mainstream discourse. His books have graced bestseller lists because his writing style is relaxed and readily accessible to the general public. Primarily his books *The Rise of the Creative Class: And How It's Transforming Work, Leisure and Everyday Life* (2002)[4] and *Who's Your City?* (2008) are compared with *SimCity Societies* (2007). Florida's influence is broad and his popular lectures have influenced a "generation of leftish policy-makers and urban planners" (Malanga 2004, 36 qtd. in Peck 2005, 740). *SimCity 4* may also influence policy; for instance, an article claims that a politician had gotten his tax rate the game. The Electronic Arts representative responded: "We encourage politicians to continue to look to innovative games like SimCity for inspiration for social and economic change" (Terkel 2011). While a sardonic response, it captures *SimCity* as progressive change.

"Cities have Personality too," asserts Florida because people with similar personality types cluster in certain regions; therefore, these regions have their own personalities. In short, like-minded people tend to congregate in the same city or cities. Florida's categories are based on five personality types from psychologist Lewis Goldberg:

4. Note that John Howkin's termed the creative economy.

extroverted, agreeable, neurotic, conscientious, and open to experience (2008, 194).[5] These types overlap, just as many people have combinations of personality types so can cities and Florida closely links these city traits to professions, as does *SimCity Societies*.

SimCity Societies presents six "societal values" which determine what archetype your city will reflect. The six societal values are authority, creativity, knowledge, productivity, prosperity, and spirituality, and these social values lead to the city characters authoritarian, capitalistic, industrial, fun city, and contemplative. The player does not choose the character of the city at the outset; rather it is based on the city's composition of different structures. Points in each societal value are generated and consumed by buildings and the balance visually transforms the city and shapes the city's character. Like Florida's types, there are also more complex city profiles that consist of more than one societal value; they are cyberpunk, haunted town (hidden), normal, romantic, and small town.

Florida's experimental region and *SimCity Societies'* fun city both privilege creativity. Florida writes whole books on the creative class (the denizens of experimental cities), and the game bases its tutorial on this type of highly creative city. Florida's experimental city is filled with "Open types [who] have a tendency to enjoy new experiences, especially intellectual experiences, the arts, fantasies, and anything that exposes them to new ideas. Open people tend to be curious, artistic, and creative" and are "people who do not need to be around other people, who question authority, and who quest after intense experiences" (2008, 190, 200). Openness, to Florida, is the major trait linked to economic development (2008, 210). Like the experimental city, the fun city in *SimCity Societies* relies on the societal value of creativity and is hindered by authority (Kramer 2007, 17).

Both Florida and *SimCity Societies* attempt to measure creativity, yet do so very differently. *SimCity Societies'* tutorial declares,

5. Florida also cites two studies: Goldberg 1990 and Gosling and Rentfrow's "The Geography of Personality".

"Decorations are a great way to generate Creativity." In this system, a decorative fountain earns five creativity points, the societal value that determines a fun city. There are options to put sims in creative housing, to build schools that encourage creativity like drama schools, to entertain them creatively by providing city botanical garden or theaters, and to have sims active in creative fields like playing in a garage band. Fun cities generate at least one-hundred creativity points. As the city produces more creativity, up to one-thousand points, the city takes on more characteristics of the fun city. Alternately, Florida's creative index is formed by four factors; they are the proportion of the population in creative careers, the number of patents per capita measuring innovation, the high-tech index, and the gay index (2002, 244).[6] Although through different means, Florida and *SimCity Societies* both quantify creativity.

High-tech industries are the economic center of both cities. In Florida's earlier book these open individuals, which populate the experimental region, are part of the creative class and share the values of individuality, meritocracy, diversity, and openness (2002, 77–79). Florida links the creative class to high-tech industries, while in *SimCity Societies* high-tech industries, like game developer, use creativity and knowledge. Entertainment venues, such as art museums, drama schools, and ice cream shops, produce creativity, whereas haunted houses and corporate offices consume creativity. Some assumptions in the game are realistic, such as carbon levels influencing the frequency of natural disasters, while other assumptions are unrelated, like haunted houses depending on creativity. In earlier versions, even assumptions are made for fictitious species; for instance in *SimCity 3000* aliens attack landmarks first and then the most expensive buildings (Kramer 2000, 45). It is evident that the game is a rich tapestry woven with both real and imagined societal beliefs.

6. The gay index is one of the more heated arguments against Florida (Florida 2004). Note, that Wright's games are considered quite liberal. The Sims, as author Stephen Kline points out, is one of the most liberal games regarding homosexuality (Kline, Dyer-Witheford, and Peuter 2003, 269–293).

Cultural Analysis: Place and Happiness

Fleming argues that in cultural analysis "the artifact functions as a vehicle of communication conveying status, ideas, values, feelings, and meaning" (1982, 169). *SimCity* and Florida communicate that cities have personalities and this affects the happiness of the population. Although both deal extensively with happiness, they differ on how place affects happiness. This section explores these connections in three ways. First, while Florida frames the problem as an individual choice, *SimCity* takes the viewpoint of a politician or city planner that endeavors to attract sims. Second, happiness equates to a temporal and financial resource in the game. Third, since there is no established goal many users infer that the goal is to make sims happy. Lastly, given that several scholars question Florida's accuracy and because Florida and *SimCity Societies* have so many points of correspondence, the accuracy of social engineering that *SimCity Societies* depicts should be questioned.

Florida explains how to pick a place, while *SimCity* encourages players to mold the place to retain and gain city dwellers. *Who's your City?* was written to "help you pick the place that is right for you" and is based on an extensive twenty eight-thousand person survey Florida conducted called the "Place and Happiness Survey" (2008, 12–13). He stresses the importance of location for one's life as it affects educational, professional, and love pursuits (2008, 6). Florida focuses on a single city type and makes few allowances for other types of cities to provide happiness, for example he writes "that place affects happiness, that the happiest communities tend to be open-minded, vibrant places where people feel free to express themselves and cultivate their identities, and that these communities tend to foster creativity" (2008, 187).

Conversely, in *SimCity* the player cannot chose where to play or affect the sims' happiness directly, but place-making is his or her responsibility. In *SimCity 3000* the easiest way to maximize happiness is to create "a nice, ordered city, with low crime, low pollution, plenty of water, great health care, thriving business, and

lots of good recreation. In short, they want it all. SO, you know what to do. … places that say, 'This city isn't just efficient, it's fun too'"(DeMaria 1999, 294)! Later, *SimCity Societies* skips directly to specific buildings affecting the mood of sims (Kramer 2007, 16). The player must attract dwellers by providing a happy place, which is attributed to "Home, Visiting Venues, Accessories and Enhancements, Special Sims, Building Actions [... and] An especially nice home minimizes a Sim's daily loss of happiness" (Kramer 2007, 22). Thus, while game players actively shape their city in ways to promote sims' happiness, happiness for Florida is dependent on selecting the right place.

Happiness is one resource in the game. Sims require time to accumulate happiness, and consequently their happiness provides tax revenue which gives the player more money and allows them to build more. One change in *SimCity Societies* is that the player could not set the tax rate; the manual explains: "the revenue your city collects is a function of the buildings you choose and how happy their workers are" (Kramer 2007, 5). Previously, if sims did not or could not travel to their workplaces, they would soon lose their jobs. In this version, sims will always go to work, however time spent traveling decreases their free time, so they have less time for entertainment to increase their happiness. Yet it is important to place their homes away from workplaces, which the game manual tends to conflate with industrial zones, because these buildings cause pollution that decreases sims' happiness (Kramer 2007, 6). In a city with many productivity structures leading to an industrial society, unhappy citizens become rogue, the status of sims when they are unhappy enough to shut down a workplace (Kramer 2007, 26). The run-down townhouses called "slum apartments" that produce productivity have a negative effect on sims' happiness. This sets up an assumption that industrial workers are not happy, which follows the game's logic where happiness is largely based on free time and income. Indeed, if you click on apartment buildings, like "Wood Trim Apts", the inhabitants will evaluate their city with economically based assessments, such as "What makes me Happy? There are great places to shop!" (GlassLabs 2014). Do sims represent the consumer citizen?

The fact that Wright's game did not have a goal in itself was one of the revolutionary aspects of the game. Despite the lack of a clear goal, most people believe "the object is to make the citizens of the simulated city happy by creating an optimal environment"(Lew 1989). However, according to the game manual, *SimCity Societies* "isn't about *maximizing* happiness. It's about *controlling* it" (Kramer 2007, 21). Yet, there is a constant bar graph indicating how happy the sims are and a happiness filter to see face bubbles above the sims' heads. The *SimCity 3000* guidebook says, "It's an educational product disguised as a really cool game. It's an *urban development simulation* that rises to reproduce with reasonable faithfulness the actual conditions and problems faced by real-world cities" (Kramer 2000, 4). This reasonable faithfulness belies the fact that *SimCity* is based on popular assumptions concerning societal values.

SimCity is heralded as educational, yet it may not portray accurate theories. Florida's theories are criticized by scholars, particularly for its neoliberal tendencies. Geographer Jamie Peck describes *The Rise of the Creative Class* as "cosmopolitan elitism and pop universalism, hedonism and responsibility, cultural radicalism and economic conservatism, casual and causal inference, and social libertarianism and business realism" (Peck 2005, 741). Another geographer, Stefan Krätke, points out Florida's overly affirmative approval of the creative class and suggests an alternative approach, which the author applies to a German test case to show that Florida mistakenly relates economic growth to his creative class rather than other occupations which are co-located (Krätke 2010). Because Florida discusses happiness extensively and has been criticized as being a hedonist, it seems reasonable to understand happiness as his implicit quest. Comparing social engineering aspects found in Florida's theories and in *SimCity Societies* facilitates critically questioning the goals of games.

Interpretation: Teaching Space

Fleming's next step "focuses on the relation between some fact learned about the artifact and some key aspect of our current value

system" (1982, 172). This section studies how different user groups' play, sometimes subversively, with the sims' happiness. To understand how this occurs, it is critical to understand how and to what degree users play with norms, either by absorbing or reacting to cultural assumptions. First anecdotal information about its use in primary schools shows the game facilitated learning computer skills. Then, the interpretation considers how a recent adaptation of the game called *SimCityEDU* and its web-based community promote critical thought through discussions on embedded cultural assumptions. These are similar teaching goals when using the game at college level. Lastly, advanced users, like Vincent Ocasla, play with these assumptions as well, especially happiness.

The first type of user is school children. Many people remember playing the game in elementary school. One journalist remembered "technology lessons that consisted of us sitting two to a computer, playing the original *SimCity*; presumably to stop us fighting each other for one hour a day" (Sterry 2010). The game may be more about the skills of concentrating, reading, and learning to use a mouse than applicable skills for architecture or planning. Play theorist Brian Sutton-Smith writes that videogames develop concentration and solo play (1986 24, 61, 69). In addition to learning these skills, there was an educational descriptive in the initial *SimCity*; namely, missions with historical backgrounds were incorporated.

SimCity also offers an interactive tool to develop skills like critical thought. Since February 1993, the National Engineering Week sponsored by the Institute of Electrical and Electronic Engineers (IEEE) has held "The Future City Competition" for 7th and 8th grade students where a *SimCity* layout, a descriptive essay, and a physical model are judged. Many of the lesson plans featured on the polished GlassLabs' website for *SimCityEDU* also include the virtual city and descriptive essay. Several of the lesson plans on the website ask the students to compare their virtual cities to real life ones. Critical thinking and understanding "basic causal relationships" on which the game is built are 21st century learning objectives of the GlassLab lesson plans. The website explains that this adaptation

"provides formative assessment information about students' ability to problem solve, explain the relationships in complex systems, and read informational texts and diagrams" ("SimCityEDU" 2014).[7] The game only tracks a couple variables, such as time to complete the mission, air quality, and city funds. The teacher's interface displays statistics for each student called a report, and if the student affected several variables they receive a higher level. However, the report accesses a limited number of variables in the complex system and obviously does not show the amount of thought or creativity.

In higher education, *SimCity* is hesitantly incorporated. A journalist for the New York Times, Julie Lew, interviewed various design professionals and university professors who extolled the realism and academic value of the game (Lew 1989). More recently, An architecture student recounted how interest in the game was considered too hackneyed a justification for attending architecture school on a Museum of Modern Art (MoMA) website (Arida 2014). Yet, planning professor John Gaber used the game at college level (2007). He examined the instructional possibilities of the game, noted that the designers' assumptions are imbedded into the game, and explained how these assumptions can be uncovered in a classroom debate (2007). Interestingly, for Gaber and *SimCityEDU* the most educational aspect is the discussion.

One user who engages the cultural assumptions of the game in a subversive way is Vincent Ocasla who manipulates happiness to produce desired effects like maximum population. His *SimCity 3000* city Magnasanti surpassed six-million and the city itself is 50,000 years old (Sterry 2010). The city consists of repetitious mid-rise residential buildings, and there are no public amenities like schools, fire stations, or hospitals; however there are abundant police stations. So while it follows some advice in the *SimCity 3000* guide like striving for low crime and high organization, it ignores citizen's health and education (DeMaria 1999, 294). Unsurprisingly, he was an

7. These goals are expressed according to the language of educational standards; namely, English Language Arts (ELA) Common Core and Next Generation Science educational standards.

architecture student at the time and says he views *SimCity* as a "tool or medium for artistic self-expression" (Sterry 2010). Furthermore, for him it is a political statement inspired by the Bhavacakra in Buddhism as well as *Koyaanisqatsi* (1982), a film by Godfrey Reggio with composer Phillip Glass. The title is translated from Hopi to mean "Life out of Balance" and the Bhavacakra without the symbolism of the moon denotes a cyclic existence with ignorance, hatred, and greed as poisons which propel the cycle. Ocasla's city is considered art, most likely due to these references and has been acquired by the MoMA (Arida 2014). In Magnasanti, Ocasla carefully regulates happiness to maximize population. In addition to Oscala, other players manipulate happiness; in fact, it is anticipated by *SimCity Societies* which incentivizes subversive behavior by awarding trophies, such as the "fat cat" trophy which requires angry or furious citizens.

Conclusion: Models Simulating Space

The name of the game comes from simulation, which cultural theorists Roger Caillois, Brian Sutton-Smith, and Jean Baudrillard define differently. Roger Caillois classifies play into four categories, one of which is simulation. He describes two conflicting types of simulation play. Many times, simulation is just as we assume "nothing more than theater" (1958, 77). The second definition allows for transformation of the performer to character, "the corruption of mimicry [... is] when the one who is disguised believes that his role, travesty, or mask is real" (1958, 49). In the early years of videogames, Brian Sutton-Smith remarked on videogames as perfect models and automations (1986, 61–62). Galloway notes that the more real a videogame is, the more it acts like a simulation or model (2004). However, instead of the predominantly positivist way of viewing simulation games Patrick Crogan problematizes simulation by analyzing philosopher Jean Baudrillard (2007). Baudrillard illustrated his theory with Jorge-Luis Borges's story "On Exactitude", where the map makers are so absorbed in their work, they make full scale maps (Crogan 2007). Baudrillard defines simulation relative to simulacra. In his description, simulacra destroy or replace reality, whereas

simulations run parallel to the real (1981, 47). In a later definition he describes a "total simulacrum an automated nature" (1968, 125). While Wright may or may not have been familiar with authors like Baudrillard, they capture cultural connotations of simulation.

This artifact study linking *SimCity* with urban planning has provided insight into the design of the game and how it teaches space. By closely examining *SimCity Societies* and the urban theories of Richard Florida together, their emphasis on place, personality, and happiness emerged. The cultural value of happiness became the emphasis of many players too. The game's imperfect reality is an educational asset since it is discussions surrounding the verisimilitude, which engages critical thought. Wright, however, points to a few sources of inspiration that problematize how we interpret this artifact, such as a short story and his own background in models.

Wright often cites science-fiction writer Stanisław Lem's "The Seventh Sally" as inspiration for *SimCity*. In it, the main character Trurl returns from giving a model city to a barbaric despot named Excelsius, who now lives on a planet by himself. Trurl and his friend Klapaucius argue whether the inhabitants feel pain. They return to Excelsius' planet and the civilization had spread out of its box to the entire planet, and Excelsius is shot into space (1967). Simulation goes too far, because as we know from the story's alternate title, "How Trurl's Own Perfection Led to No Good", perfectly simulated miniature cities are bad for both the inhabitants and the king.

This story highlights Wright's wariness of models. Wright spoke about the relationship between models and imagination in his keynote address at "Engage Expo". He loved building models as a boy and tested the validity of the models with his imagination through narrative or simulation play. He explained: "play and story [...] are both fundamentally educational technologies [that] we use to supplant our limited experiences to build more elaborate models of the world" (2010, 4). He related these models to videogames.

Models are educational aids to understanding complex systems or objects. Models can also be a tool to imagine a prototype. If potential urban planners, who inspired by Wright's games or models, overemphasize happiness, then we know what assumptions the roadmap might contain.

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