Understanding Videogame Cities

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ABSTRACT
This paper examines the city of Steelport in *Saints Row: The Third* (Volition, 2011) as a real-and-imagined space that can be described using an urban framework of constitutional, representational, and experiential components. It relates mediated and physical cities through spatial arrangement, processes of representation, and the factors that contribute to a sense of place in both material and immaterial worlds.

KEYWORDS
videogames, cities, urbanism, urban design, algorithmic infrastructure

VIDEOGAME CITIES
The city as the subject of videogame design bears functional and representational similarities to real world cities but possesses its own set of requirements. Though designed for play, the videogame city is not unlike the real city millions pass through each day. We attempt to get from point A to point B with as little resistance as possible, pass by buildings whose interiors we know nothing of, are subject to rules and regulations that determine our actions, and experience a network around us that animates the world with people, pipes, and potholes. We tend to think of cities as concrete, identifiable entities, but as media scholar James Donald suggests: "why reduce the reality of cities to their thinginess, or their thinginess to a question of bricks and mortar?" (Donald 1999, 8). This question emerges from Henri Lefebvre's tripartite theory—spatial practice (perceived), representations of space (conceived), and representational space (lived)—describing the active process of producing space (Lefebvre 1991, 38). Postmodern geographer and Lefebvre scholar Edward Soja explains how this spatial triad produces real, imagined, and *real-and-imagined* space that entangles our actual experience of cities with our conceptions derived from mediated urban representations (Soja 1996, 10–11). Thus, Donald suggests that the city is "an abstraction, which claims to identify what, if anything is common to all cities" (Donald 1999, 9). Being able discuss cities broadly, then, means finding a framework that supports both material and immaterial cities.

This framework for analyzing cities of all kinds emerges from landscape architectural scholar Douglas Allen, who established the *constitutional* and *representational* definitions of cities. The problem of defining the city, as Lewis Mumford notes in the opening of *The City in History*, is that "no single definition will apply to all its manifestations and no single description will cover all its transformations..." (Mumford 1961, 3). Because definitions vary as greatly as cities themselves, Allen developed these simple criteria that allows for discussions of cities of all sizes from all periods in history.

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The *constitutional order* establishes the physical requirements of an urban space (streets, boundaries, public spaces, and monuments), while the *representational order* refers to the systems that bring that space to life (Allen 2010). Missing from this technical framework, however, is the interpretation of space by its active participants, as championed in the works of Lefebvre, Soja, Steen Eiler Rasmussen (Rasmussen 1964), Kevin Lynch (Lynch 1960), and Michel de Certeau (de Certeau 1988). Thus, in addition to the *constitutional* and *representational* components, I introduce an *experiential order* that addresses how real and imagined spaces coexist.

Videogames, because they are experienced through motion and activity, have the capacity to depict a range of urban structures, representations, and systems. Networks of interconnected spaces, pedestrians, dwellings, telephone lines, stop signs, city councils, and alleyways are spatialized and experienced through the movement of traversing the space that connects them. Experience, writes Tuan, is "a cover-all term for the various modes through which a person knows and constructs a reality" (Tuan 2005, 8). Studying the elements of design that contribute to the experience of the city identifies their specificity. Henri Lefebvre has described these characteristics as producing an *oeuvre*, while Yi-Fu Tuan similarly uses the term *placeness*. Videogames demonstrate the primacy of the experience of space in the city and provide an entry point for understanding how cities of divergent forms can be discussed coherently. I site the primary interpretation of experience of the city as a body moving through space and examine how the worlds of videogames are composed of various networks that are intertwined through the player's engagement with the game.

This paper is based on research that has looked at a large corpus of "open world" games set in the city, but has focused on a close playing of a single example. An open world city is one in which the player is given a certain amount of freedom to circulate through an open city space, which must come to life through a series of processes that govern an active world. *Saints Row: The Third* (Volition, 2011) proves illustrative of the videogame city because of its many forms of embodied motilities, its self-awareness of "open world" setting tropes, and its use of a non-indexical location. The constitutional-representational-experiential framework that joins real and imagined space, creates an interpretive lens capable of describing how a fictional media space like Steelport in *Saints Row: The Third* is like any physical city in the world.

Methodology

Describing the experience of the city in videogames involves three interrelated actions: close playing, unit analysis, and synthesis through emplotment. Emplotment, a concept adopted by human geographer J. Nicholas Entrikin from historian Hayden White (1973), is a way of interpreting the experience of space as not a continuous flow but rather a series of moments or vignettes strung together in our minds (Entrikin 1991, 125). As Kevin Lynch wrote, the possibility of single cohesive image of a city is "a highly speculative one," (Lynch 1960, 115). Instead, it is more likely that our experience of a space is a series of images, memories, and observations. This maps to Ian Bogost's unit analysis, which views expression in texts as configurations of discrete entities that produce meaning and is intended to be deployed as a tool of comparative media (Bogost 2006, ix). This combination of emplotment and unit analysis, when employed in games that have been closely played, allows us to describe experience by connecting moments of play and a deconstruction of the game's operations rather than tracing a linear path through the story. Embracing subjectivity, it can describe a range of possible experiences a player might have had and the kind of city they remember.

THREE URBAN ORDERS IN STEELPORT

Douglas Allen's *constitutional* and *representational* orders (Allen 2010) is the foundation of the framework which includes my contribution of the *experiential* order. These cover the makeup of urban space, the systems that bring that space to life, and the resulting experience of the world. But because the material of all these cities and their purposes are so different from each other, there needs to be a way of relating them through some shared property. The *experiential* order provides the necessary linkage between cities physical and virtual, material and immaterial, real and imagined.

Constitutional

The constitutional order's four requirements bring a collective structure into being, organizes society spatially, and both separates people from one another while also joining them in a collective (Allen 2010). *Streets* are the primary structural unit of the city and allow people to communicate and move (Allen 2010). In addition to buildings, they are the most visible structure in videogame cities. Games that do not use streets for circulation, instead constructing them as labyrinthine paths, are merely representing city spaces as opposed to building an urban world. *Boundaries* are the "fundamental tectonic unit of the city" that separate and join discrete identities into a collective whole (Allen 2010). These are manifest in videogames in both the firm boundaries of the world's physical geometry that makes walls impenetrable and the rules that govern porous boundaries such as trespassing that triggers police response. We become aware of our role as citizens and our relation to others in *public places*, which is why it is significant for games to provide the illusion that other people use the world. Lastly, monuments (and other public buildings and memorials) play an important role in forging a bond with history, marking the past for the present, and establishing the collective identity of the populous (Allen 2010). Videogames can both represent real and fictional monuments while also constructing their own during the course of a game. This constitutional framework is not about architectural form as much as it is about organizing concepts. It is relates individual and collective identities to fellowship and separation, spatializing processes of recognition.

Set in Steelport, *Saints Row: The Third*'s city consists of four large islands and three smaller islands. Functionally, it is divided into four districts: Downtown in the center, Stanfield to the northwest, Carver Island to the southwest, and New Colvin to the east. Each of these regions is further divided into named neighborhood regions, which become the subject of the game's territory-control system. The premise of the game—a self-aware exaggeration of open-world city genre tropes—puts the 3rd Street Saints gang from the first two (more serious) installments in the series in the role of international superstars whose illegal activities have earned them fame, energy drink sponsorships, and a large corporate headquarters. This narrative premise is significant to the construction of the city because it sets the tone for the kinds of activities the player will be tasked with and expectations for how the space will be traversed.

Steelport is a tangled network of surface roads and highways, but driving from one location to another is a relatively quick trip. A straight, elevated freeway runs east to west and connects the southern tip of New Colvin with the center of Downtown, and then to the connecting point between Stanfield and Carver Island. The major highways and instantly available vehicles reveal the mobility of Steelport. Players are given a number of motilities—methods of moving in the game: bipedal movement, a variety of automobiles and motorbikes, tanks, helicopters, a vertical landing and take-off (VTOL) jet, and a hovercraft jet-bike. Vehicles can be stolen while on the streets or, having been

stored in the garage of the player's "crib" (a home location that serves as a narrative and functional base for the player), vehicles can be instantly recalled through a menu. During the course of the game the player adds characters' phone numbers to their cell phone and can have a variety of vehicles nearly-instantly delivered to their location anywhere in Steelport. While pedestrian and automotive movement are common to games of this genre, access to the more absurd forms of travel early in the game make moving around the city a quick affair. Consequently, because it is expected that the player is never more than a couple of minutes from any location, missions may be initiated anywhere via cell phone call instructing the player to travel to the opposite side of the city.

Much of the space of the city is public, especially because public usually implies outdoors. Public includes the streets, sidewalks, parks, the water surrounding the islands, airspace over the city, and the interiors of freely accessible buildings. Public, in videogame cities, generally means not only accessible to the player, but also spaces where we would expect to find pedestrians (unnamed characters that populate the world) for whom the space is also accessible. Similarly to our everyday experience, Steelport also has many publically accessible privately owned spaces such as the 3 Count Casino, Planet Saints clothing stores, or strip clubs.

Videogame cities have two kinds of private spaces: functionally private and representationally private. "Cribs" serve as the *Saints Row: The Third's* functionally private spaces, establishing boundaries between what is the player's personal space and the spaces occupied by the citizens of Steelport, rival gangs, and the military. Cribs are home bases for the player that serve a few game functions. Being inside the crib grants access to game menus such as vehicle retrieval, character and gang customization. It also functions as a location where members of the 3rd Street Gang come together to move the plot forward. Usually cribs are safe spaces, but these boundaries can be violated for dramatic effect. For example, during the STAG Party mission, the special military force occupying the city attacks the Saint's headquarters and forces the gang out of the space. In general, though, these are protected spaces that provide the player with a home. Representationally private spaces recreate those we think of as private in our everyday life. Because the criminal activity of *Saints Row: The Third*'s is commercial in nature, the insides of homes are absent from the game's missions. Most of the buildings in the city cannot be entered freely and it is implied that these spaces—like the houses of average Steelport residents—lie outside of the game's purview.

Porous public and private boundaries are represented in the territory-control system in which the player takes control of the city by eliminating other gangs from different regions. Territory-control not only takes place between rival gangs but also the government's military occupation of Steelport. Groups of gang members congregate on the streets or in other open public areas and the player must intervene in their activities and eliminate them. These gangs do not interfere with civilians but will shoot at or pursue the player in vehicles when passing through a controlled-territory. The boundary, in these cases, is not physical but rather a system. Likewise, the island region of Sierra Point—first occupied by the National Guard and later the special military force S.T.A.G—is functionally accessible by the player as public space but representationally private because the military will attack the trespassing player.

The city's territory is divided in other ways. In addition to eliminating rival gangs, the player needs to purchase property in a region to gain control of it. Property ranges from retail stores selling 3rd Street Saints merchandise or weapons to public infrastructure like

the hospital and airport. These last two in particular demonstrate that no part of Steelport is off limits to private ownership and commercialization. Not only does territory control increase the player's "respect" and income levels, but it also has a visible effect on the landscape. The 3rd Street Saints use purple for their gang, which becomes reflected in the facades of buildings lit with the color when the player establishes control of an area.

Urban historian Lewis Mumford wrote that the "mark of the city" is a visible structure like a temple or monument that is the expression of power (Mumford 1961, 65). Monuments can be constructed in games in a number of ways. They might copy the kinds of monuments we expect to see in our own cities: statues to the men and women of history, fountains, and markers of previous events. Steelport's southeastern most island is one of the few spaces no faction in the game can claim as territory. Modeled after Liberty Island and the Statue of Liberty, Magarac Island boasts an enormous statue of a worker pouring molten steel into an I-beam. This monument to the city's fictional founding as an industrial town lends symbolic credibility to Steelport's populace. It is worth noting that the island's name is a reference to Joe Magarac, the mythical folk hero of Pittsburgh steel workers (Misko 2008). Whether or not many players would understand this reference, the allusion relates a fictional city to a real city. Another "mark" of Steelport is the number of churches that dot its landscape. It can be inferred through their architecture (the Richardsonian Romanesque of Boston's Trinity Church) that these buildings stood long before the criminal and corporate takeover of the city, providing Steelport with a history.

Another form of monument in the urban constitution is the persistent alternation of an object or building in the game world. At the conclusion of the early mission "The Belgian Problem," the player is given the choice to disarm or detonate a bomb planted in the Morningstar gang's Syndicate Tower headquarters. Detonating the bomb destroys the top floors of the building and leaves its smoldering remains for the rest of the game. This presumably relays the player's actions as something visible to the inhabitants and is narratively commented on by a news report that comments on the aftermath of the event. Likewise, toward the end of the game the statue of the steelworker on Magarac Island is destroyed, erasing a part of the city's steel history and rewriting it with the effects of the gang warfare.

Steelport demonstrates the ways in which the constitutional criteria can be appropriated for mediated spaces. While the definitions of street, boundary, public space, and monument undergo adjustment to fit the videogame city, the fluidity of their application attests to the idea of the constitution order as physical structures derived from the relationship of inhabitants.

Representational

Unlike the constitutional elements, which possess a set of requirements, the *representational* are what emerge from (or are the catalyst of) the physical. Representational structures are particularly useful for looking at mediated cities like those of games. The representational order of cities is less rigid than the constitutional. In effect, representation is anything that brings the city to life, "animating" its constitutional order through the lives of its citizens (Allen 2010). In the traditional sense, it is the social, political, and economic exchange produced by the city's inhabitants. It lends specificity to the constitutional elements: What kinds of private and public spaces are in a city? What are the boundaries between? How are the streets used? What are the monuments of? Here, I have aligned the representational order with Lefebvre's "representations of space," which refers to the manner by which social and cultural understandings of space

guide the conception and function of that space (Lefebvre 1991, 38). This section is primarily concerned with the representational qualities which "bring the city to life" through symbols and urban processes.

Indexical Qualities

One method by which mediations are imbued with meaning is by referencing other existing urban forms. In semiotician Charles Sanders Peirce's theories of signs, the index refers to one object that is explicitly making reference to another object so as to inherit the properties of that original object (Peirce 1955, 102). Klainbaum and Bogost, referring to the indexical properties of Miami and Los Angeles in the *Grand Theft Auto* games, use the term *translation* to refer to "not only the physical treatment of each city's local architecture and atmosphere, but also to a rendition of the spirit of these cities as they exist in popular culture" (Bogost and Klainbaum 2006, 162). Because Steelport is not based on a specific pre-existing city, it does not have indexical representations that make direct references the player would recognize. Instead, it more broadly references the conception of cities in general while drawing on other games in the open-world city genre. Its Downtown district, for example, features a skyline with numerous buildings that resemble familiar skyscrapers. One looks similar to the Empire State Building while another resembles the Petronas Towers in Kuala Lampur. Volition, whose studio is based in Champaign, Illinois spoke explicitly about being inspired by Chicago's canal system, which manifest itself in the drawbridges that connect many of the city's regions. The statue of the steel worker on Magarac Island, which lies offshore from Downtown, draws explicit connection to the Statue of Liberty through both its giant memorial and its star-shaped pedestal.

The interpretation of a work of architecture "can function only where there is already a bond to reinforce" because architectural meaning operates subconsciously through a lifetime of absorption (Edelman 1978, 3). Umberto Eco writes that "it is codified meaning that, in a given cultural context, is attributed to the sign vehicle" which characterizes the architectural object (Eco 1997, 184). Thus, the recognition of the *architectural code* that determines form and the *iconic code* that propagates use distinguishes one physical object from another (Eco 1997, 175). Because codes make multiple readings possible, different people can interpret a single space as different places. Relatedly, as James Donald synthesizes, "imagination is always a creative, but also constrained, interchange between the subjective and the social" (Donald 1999, 18). Because codes are recognized dynamically, the representational spaces of videogame cities are the product of multiple factors. They are established during the course of play, brought into one game from experiences with another, and shared between physical and mediated spaces.

Steelport is meant to be a contemporary city. Narratively, the game is set in 2014, though the specific date is less important than the type of buildings and objects in the game that would date it. The city's "Welcome to Steelport" sign marks its founding in 1827, though much of this early history has been overwritten by new buildings and the changing face of industrialism. The technology that appears to be used in its numerous skyscrapers covers a range of decades, from the concrete of the 1930s to today's super- and mega-tall buildings with x-bracing. It is a bit of an every-city, taking on the characteristics of places like New York and Chicago, with the neon glow of Asian cities like Hong Kong and Tokyo. Steelport, as its name implies, was a working-class town of steel workers and is loosely based on Pittsburgh, PA and Bridgeport, CT. With the exception of Downtown, most of the city is portrayed as lower-income and industrial. In an interview, the game's

developer Volition explained how in Steelport's fictional history there were no zoning laws, causing "skyscrapers and a steel mill" to be built side-by-side and "chemical plants just dropped in the middle of everything" (Claflin and Marquart). The lack of zoning ordinances also leads to a mixture of single-family homes and multi-family high-rises that border on commercial and industrial districts.

The narrative premise of a game influences representational design decisions of the city. *Saints Row: The Third* is set in a world in which three major gangs have formed a crime syndicate that has reached corporation-like status. This justifies the tallest of Steelport's skyscrapers that, in the game's fictional history, had obviously been built recently in a competition between the wealthiest gangs. These buildings glow with the colors of the gangs as a marker of their power and influence over the city. The premise of the rival gangs also produces the territory-control dynamics of the game that mark out boundaries in Steelport. Little of the history of the city is made explicit in the game, but the narrative environment tells a story of the class divide between the gangs' commercial operations and the working class that populated the city before the crime syndicate dominated the city. Cultures increasingly construct images in the city to stake their claim and, consequently, images can fabricate culture (Zukin 1995, 3). The Saints' popularity is manifest in the oversized neon billboards that canvas the exterior of a number of Downtown buildings, drawing connections between their celebrity and cult-hero status among Steelport residents.

Algorithmic Infrastructure

In one perspective on urban design, infrastructure that animates the city is its defining characteristic. British historian Reyner Banham, criticizing the centralized, unified urban plan that was the vision of modernism, posited an alternative "Non-Plan" that addressed the competing interests of government agencies, interest groups, and individuals (Varnelis 2008, 12). Banham's lasting contribution to the conversation about networked infrastructure was his concept of the four *ecologies* of Los Angeles (Varnelis 2008, 13). The authors of *The Infrastructural City: Networked Ecologies in Los Angeles* used these ideas in conjunction with geographer Anton Wagner's *städtische Landschaft* (urban landscape) to illustrate and critique the contemporary city in terms of *network ecologies*—"a series of codependent systems of environmental mitigation, land-use organization, communication and service delivery" (Varnelis 2008, 15–16). Its lessons about feedback mechanisms have application to videogames, whose cities are dependent upon algorithms that bring them to life.

Videogames simulate and represent certain infrastructures while ignoring others. On the other hand, videogame cities need *algorithmic infrastructure* to operate the artificial intelligence in crowds and cars, determine how missions begin and end, and to build a world to move through. In some cases, however, *representational infrastructure* serves the aesthetic experience of the city. Like real cities, videogames require both physical and informational infrastructures. Instantaneous algorithms control the processes of the game while time-and-space dependent algorithms occur as the game is played. All of these processes are networked together by code and experienced while playing. Therefore, it is worthwhile to consider the networks of cities and how they might relate to videogames.

In many ways, Steelport is like the videogame worlds it apes: it functions like the typical -world city that has persisted since *Grand Theft Auto III* (Rockstar North, 2001) made its mark on an emerging genre. As such, much of the city's function is based around cars and transportation systems are the most visible infrastructure in the game. In addition to

acting as pedestrians, the city's civilians (AI characters that do not belong to the protagonist's or antagonist's side) also animate the most visible piece of infrastructure: the roads. While the word street has become associated with the automobile, it is really the road that is home to speeding motorists. Steelport is the kind of city Lewis Mumford warned against in 1961, writing that while "[g]ood urban planning must provide a place for the motor car... this does not in the least mean that the motor car must be permitted to penetrate every part of the city and stay there, even though it disrupts all other activities" (Mumford 1961, 509). The roads, whether in the industrial outskirts or downtown core, are portrayed as run-down, with visible cracks, potholes, sloppy patch-work, and oil stains. Drivers in Steelport are programmed with simple behaviors that can be observed by following the cars. They seem to follow random paths through subsections of the city, responding to traffic lights and stop signs, but are prone to make sudden U-turns, be they at a dead-end or in the middle of a busy street. They drive slowly, perhaps as a design choice that grants more room for the player to maneuver around them. Vehicles remain in the world so long as the player remains close to them; down a long stretch of road it is possible to see a vehicle vanish from the system. Of course, driver behavior is reasonably abstracted, since few players will ever pay close attention to the intelligence patterns they seem to follow.

Videogame cities mediate the dynamics of physical cities by populating the streets with pedestrians and vehicles. This brings them to life with the illusion of other's lives to imply a public sphere, established primarily through the citizens that populate the sidewalks and roads. Pedestrians are subject to the actions both each other and the player. They will respond to compliments and taunts imitated by the player by either returning a greeting or becoming aggressive. Additionally, they are subject to the player's violence: not only can they be run over and shot, but they might also find themselves the target of over-the-top wrestling-inspired takedowns. Generally, these interactions have little consequence besides raising the notoriety level that can cause the police force to intervene. Pedestrians come in a variety of character models, ranging from the average to the outlandish. It is not uncommon to see a golf cart packed with four people in colorful bunny costumes driving down the road. In this way, the city permits the characterizations of itself as a self-aware exaggeration of the previous games in the series.

Vehicles also contribute to the dynamics of the city by permitting different kinds of movement for the player. Automobiles, which come in different models, range from slow and well-protected to speedy but fragile. It appears that there the player is more likely to find a fast sports-car in the Downtown district than they are in the outlying neighborhoods, but generally there is an equal distribution of vehicles spawned in each area. (This can be contrasted with *Grand Theft Auto IV* (Rockstar North, 2008), which very clearly assigns nicer cars to the wealthier areas.) A reasonably skilled player can drive from the southwest corner of Carver Island across Downtown to the northeastern corner of New Colvin in around three minutes. Most importantly, this eschews the typical structure of open world cities that cluster missions conveniently for the player. Steelport provides the opportunity for rapid mobility for anyone who owns (or is willing to steal) a fast car. But cars are not the only speedy form of transportation: a little more than a quarter through the game, the player receives a helicopter that they can access from their cribs. The helicopter's speed is later eclipsed by the fighter plane that can not only cross the city in nearly sixty seconds, but it is design to transform to hover in place, making it something that can actually maneuver through buildings. The city is organized such that traversing it should never be a barrier to the structuring of activities.

The cell phone system within the 3rd Street Saints is another significant part of the city's dynamic because it supports both the structuring of missions and the social system of the game. Information travels instantaneously through cell phone networks, de-spatializing it in many cases. In most cases, the player is presented with a list of contacts in their phone who have missions to send the player on when they call. In others, however, the person on the phone immediately requests the player's presence, such as in "Three Way" when Angel calls to warn that the head of the Luchadores gang plans to leave the city. In both cases, it determines vectors of movement. The cell phone also functions as a menu that retrieves the city map, allows the player to document the world with a camera, gives access to "homies" who will bring the player vehicles or provide support during combat, and is where the player can customize the soundtrack they will hear in the city's vehicles.

Experiential

The third way of describing the city is through the *experiential order*. This emerges from understanding how navigational techniques, the imaged environment, and the game's activities relate to the constitution and representation of the city. Experience is describable through a narrative-like synthesis of emplotment. The simple requirements of the constitutional and representational can be empowering because they allow cities to exist in a broad spectrum, while it is through *experience* that we are able to link real and imagined cities through their production of place. Generally speaking, *space* is the plane of existence, while *place* is the plane of experience. Yi-Fu Tuan figures place from a self-described humanistic perspective. Tuan defines space as "the relative location of objects or places, as the distances and expanses that separate or link places, and—more abstractly—as the area defined as a network of places" (Tuan 2005, 12).

Architectural historian Edmund Bacon opens his seminal text *Design of Cities* with an emphasis on the primacy of spatial experience (Bacon 1967, 15). Space connects human bodies to larger and larger systems as our perceptions of the world deepen (Bacon 1967, 15). The *experiential* is not only our phenomenological understanding or the narratives we construct about the city, but rather our situation-in and perception-of the urban. In particular, our interpretation of space in games like *Saints Row: The Third* derives from the primacy of a body's motility for seeing and creating an impression of the world. Attachment to these "operation spaces of games," writes Michael Nitsche, "encourage players to engage them, find their own identity in relation to them, develop of a history with them, [and] customize them" (Nitsche 2008, 195). Our experience of new places is not developed at a glance, but rather through durations of time in the space (Pearce 1997, 27). These comments confirm Tuan's assertion that part of the experience of the physical body is the passing of time (Tuan 1979, 390). Experiencing the city over time, moving through it and participating in its systems and activities, produces a sense place.

Motion and Motility

The experience of motion across space in the many cities of videogames is the result of the method of traversal and the ways in which the game structures and permits kinds of movement. As Kevin Lynch recognized, the "moving elements in a city, and in particular the people and their activities, are as important as the stationary physical parts" (Lynch 1960, 2). Three-dimensional videogame cities are neither static environments nor stationary views; rather, they are experienced through movement, action, and play. The motility of the player's body in a game defines the structures of the city they navigate, becoming the primary characteristic for interpreting these mediated spaces.

In previous work, I insisted on the importance of understanding the videogame body in motion (Schweizer 2013). Here, Paul Dourish's definition of embodiment—"possessing and acting through a physical manifestation in the world,"—is used broadly (Dourish 2001, 100). In particular, motion is a product of controlling an embodied entity in a game.Using the practice of skateboarding a case study, Iain Borden observed, "these are also bodies which actively do something, which have dynamic operation in the city [...] Actions are important not for their production of things, but for their production of meanings, subjects, relations, uses, and desire" (Borden 2001, 12). Embodiment has a significant impact in the (re)construction of the city space because it influences movement and gives the player access to mechanics. Player motility, as a product of the bodies (human and inhuman) that are inhabited in games, has the most significant effect on perceptions and interpretations of the videogame city.

Imaging the City through Traversal

While Allen's constitutional order sets requirements for the city, urban scholar Kevin Lynch's well-known classification of the five elements used to image the environment of space—paths, edges, districts, nodes, and landmarks—provides a useful way of describing the spatial makeup of the city (Lynch 1960, 46). Paths are channels of movement, edges are linear elements that are not paths but rather boundaries, districts are medium to large sections of space, nodes are strategic points which can be entered, and landmarks are visually distinct reference points often used for navigation and wayfinding. "The world may be organized around a set of focal points, or be broken into named regions, or be linked by remembered routes," writes Lynch on the imageability of space (Lynch 1960, 7). Writing about play in the city, Quentin Stevens follows a compositional model similar to that of Kevin Lynch that includes paths, intersections, boundaries, and thresholds (Stevens 2007).

An image of the city emerges over time. "Environmental images," Lynch writes, "are the result of a two-way process between the observer and his environment. The environment suggest distinctions and relations, and the observer—with great adaptability and in the light of his own purposes—selects, organizes, and endows with meaning what he sees" (Lynch 1960, 6). Lynch defines imageability as "that quality in a physical object which gives it a high probability of evoking a strong image in any given observer." The player takes multiple viewpoints of Steelport based on their in-game embodiment. On the one hand, as a biped that can walk, run, and climb over short walls, the city is a gigantic space. Players are not meant to traverse large distances on foot, and the height of the Downtown skyscrapers and outlying high-rises dwarf their view. Downtown in particular produces a cluttered image of the environment as enormous neon signs contrast with the vacuous anonymity of most building facades (which proves true of our physical urban experience as well).

While the island districts are visibly separated from one another, the edges between the neighborhood regions are not. These distinctions, which appear so visibly on the in-game map, fade in the actual experience of the city. Though the neighborhood names appear on screen for a few seconds when the player crosses a boundary, little in the environment differentiates one from the next. Most of the neighborhoods look like one another: a conglomeration of houses and businesses populated by the same kinds of activities as all the others. As Michael Nitsche criticized, in order for the spaces of games to be remembered, they need legible presentation and meaningful functionality (Nitsche 2008, 8). The gangs that inhabit the area wearing red, blue, or green provide clues to these boundaries. However, gang members tend to cluster around designated areas set too far

apart from each other to produce a visual juxtaposition. As a result, the "takeover" missions in the territory-control system rely heavily on the information in the map and the experience of territory is not as apparent as perhaps the game would like to convey.

The most obvious paths in the player follows, whether as a biped or vehicle, is the streets. As previously mentioned, *Saints Row: The Third* uses on-screen navigational aids that place yellow arrows in the environment and a distance meter at the destination to lead the player to their next location. Michel de Certeau describes asyndeton—conjunctions deliberately left out of a sentence or phrase—as one of the the fundamental processes of spatial collapse in the urban environment (de Certeau 1988, 101). He uses this to explain the phenomenon of ignoring the spaces connected by travel, mentally collapsing the distance between two locations. These concepts become especially important for mission-based games like *Saints Row: The Third* in which the player must travel between nodes to trigger events. High-speed means of movement (like the automobile and public transportation) reduce the visibility of the architecture being passed, while teleportation skips it completely (Jakobsson 2007, 164). Driving back and forth across Steelport, it is easy for the player to lose sight of a fixed image. Certain major landmarks may stand out, but because the player can rely on on-screen navigational aids, there is little reason to learn the environment. Recognizing that players in open world cities often create their own paths, Volition implemented a "shortcut" system that adds convenient cut-throughs to the game's GPS system as the player blazes their own trail through alleyways and yards, rendering concealed paths visible.

By the time the player has earned a helicopter and the VTOL jet, however, a new image of the environment is formed. This takes into account the elevation of the city's tall buildings that was not necessarily apparent from the ground level. It also provides a birds-eye view of the city that helps to visualize the relation of locations to one another. While de Certeau warned against the omniscient perspective from above (de Certeau 1988, 92), hovering atop Steelport actually provides spatial context for the network of traversal below. Many of the game's landmark buildings—especially those where missions take place—are large enough to be visible at a distance, and flying around the city relates them geographically.

Activities

In addition to navigation and techniques of imaging, the specificity of the city emerges from the kinds of activities in which the player engages. The Steelport experienced by the player is a place of violence, sex, camaraderie, and extreme behavior. *Saints Row: The Third* is combat-centric, and the player gradually obtains access to an extensive range of weapons. They can upgrade the protagonist to dual-wield handguns with explosive ammo, take control of tanks and fighter planes capable of reigning down rockets, and improve their defense abilities to withstand a 30-story high fall from a building. Missions are most often structured around killing—wipe out a gang, raid a building, assassinate a target—and these are performed both on foot and in vehicles. Many of these take place outside, though "story missions" (those that progress the plot forward) are often set inside of buildings. Story missions, as previously mentioned, most often take place in landmark buildings. Buildings like Syndicate Tower, Saints' HQ, 3 Counts Casino, the Powder designer gun shop, Steelport Arena, the Thermopylae aircraft carrier, and Angel's Gym stand out from their surrounding environment and are very clearly central to the progression of the game.

The variety and frequency of the exaggerated combat scenarios necessitates a city with large open spaces. Wide streets and big intersections support both moving quickly through the city and also maneuvering vehicles as large as tanks in combat. Because numerous aerial vehicles are offered, there is a certain amount of consistency in the heights of buildings in different areas such that the player doesn't accidentally smash into a building outside of their peripheral vision while trailing their "homies" as they run drugs in the "Heli Assault" mission type. Steelport's industrial setting provides for other open spaces like shipping yards, industrial parks, and warehouses.

Given that crime syndicates have taken over the city, it is unsurprising that the businesses of sex—prostitution, adult-oriented stores, and strip clubs—have also penetrated the landscape Steelport The player's various homebase "cribs" have strippers performing for both male and female gang members in the living areas. Zimos, one of the player's allies, is a pimp and the "Escort" missions he tasks the player with involve recruiting new prostitutes to work for him or protecting those that already do. Even the game's player avatar customization system is caught up in sex which allows for the customization of body types portraying exaggerated breasts or a bulging crotch.

The 3rd Street Saints' notoriety is a significant part of the city's aesthetic. The territory control system is structured around activities that would boost the player's "respect" rating in the area. These include wiping out the existing gangs, purchasing property, and participating in activities such as escorting a drug dealer around or causing destruction to increase your notoriety. Completing a set number of these challenges in each of the neighborhoods causes the 3rd Street Saints to gain control over the area, which earns money for the player to spend on character upgrades or new property. Many of these side-missions derive from earlier games in the *Saints Row* franchise, but they can also be read as a commentary on the kinds of open world activities in other games. *Saints Row: The Third* conceives of itself as a genre parody, establishing a setting where the illegal activities used in its contemporary *Grand Theft Auto IV* are a normal part of life for Steelport's residents. Criminal organizations are portrayed as no different from corporations, which in turn naturalizes an urban environment dominated by related images and behaviors.

CONCLUSION

As the Saints take control of territory and property, the landscape of the city begins to glow with the purple hue of the gang's color, reflecting the boundaries permeated by the player. Steelport, while similar on the surface to other open world cities, establishes its specificity primarily in relation to its parody of games in the genre, its focus on high-speed traversal, and the broad distribution of activities across the space. By examining its constitutional and representational order, and by describing how movement and activities produces an experience of the first two components of Allen's city framework, we can understand what makes one videogame city different from another. Because players will undoubtedly have different experiences of the same game, the methodology of emplotment empowers us to describe how individual portions of a game city produce an impression of the whole. The constitutional, representational, experiential framework proposed here takes into account the hybrid nature of space that is often cited in urban studies literature and is extensible to other forms of the city, both real and imagined.

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