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Smart City Songdo? A Digital Turn on Urban Fabric

Authors : Suzanne Peyrard and Valérie Gelézeau

Using the perspective of cultural and critical geography, this paper discusses the fabric of Songdo, South Korea, a mega-urban project declared as the paragon of a “smart city” and intended to house about 250,000 inhabitants by 2020.¹ After demonstrating how Songdo fits David Harvey’s (1975, 2001b) concept of a “mega-project,” we deconstruct the development of Songdo to show how the city is a “spatial fix” (Harvey 1981, 2001a). Then, according to Henri Lefebvre’s (1974) theory of space (conceived, perceived, and experienced), we analyze Songdo’s smart city marketing. This method allows us to interrogate the logics of actors in the fabric of Songdo and the articulation between the fabric, the meaning, and the living, focusing on residential scale. What does it mean to live in such a “smart city” in the making? Are the housing, planning, and public facilities appropriate for the pioneering residents’ actual practices in the new city? Has digital intelligence had any effects on building and managing a city? If so, what are they? By analyzing data collected through ethnographic methods, we present a better vision of the complex temporalities of such a mega-project under construction. A city in the making leads to functional and morphological discrepancies: from the presence of idle lands nearby brand new towers to vegetable gardens in front of glamorous urban facilities. Our approach to Songdo is remote from the usual boasting discourse on the “smart city.” Songdo is hardly smarter than any contemporary city; rather, it is a smart city only because digital life enhanced by the use of smartphones has become a “total social fact” (Mauss 1973) in South Korea and in urbanism.

Keywords: Cultural and critical geography, South Korea, Songdo, smart city, mega-project, residential space

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¹ Incheon Free Economic Zone official website: <https://www.ifez.go.kr/ivt075>, Accessed September 10, 2019.

Introduction

Near Seoul (South Korea) and within the premises of Incheon Metropolitan City (*Incheon gwangyeok-si*),² the new city of Songdo emerges on a vast reclaimed land from the sea. This city is an urban mega-project aiming to house about 250,000 inhabitants by 2020.³ In the competition of large metropolises and global cities (Sassen 1991), this new city is part of a South Korean public policy that is trying to promote the Capital Region as a major hub in Northeast Asia. Therefore, the territory is subject to fierce international marketing and appears in 2020 as an urban model of the twenty-first century, combining digital technologies (“u-city,” “smart city”) and sustainable development (“green city”).

In media discourse, Songdo is related to many urban utopias that societies create in the fabric of an ideal place to live.⁴ For example, conceptual elements of apartment complexes (Gelézeau 2003, 2007, 2017) in Songdo, and more broadly in South Korea, received their inspiration from the nineteenth-century Ebenezer Howard’s garden city (Howard 1985) and Le Corbusier’s (1924) housing unit (*unité d’habitation grandeur conforme*) in the 1930s. Songdo is often described as an ideal place to live. The following is Bridget Martin’s (2015, 253) description: “‘The future’ is a commonly repeated refrain in New Songdo. It is on signs and advertisements, in place names and business names, on the fences of construction sites, and in everyday speech.”

However, as of 2019, Songdo apartment complexes (*apateu danji*) were no utopia but concrete places. About 152,310 inhabitants (including 3,457 foreigners) live in those complexes settled between construction sites and brand new skyscrapers.⁵ In December 2015, over ninety percent of the housing stock in Songdo fell under the category of *apateu* (apartment) as statistically defined in South Korea (R+4 buildings).⁶ Beyond utopia, Songdo is mainly one example of an urban mega-project flourishing thanks to massive private and public investment. At this stage, Songdo seems to fit the description of what David Harvey (1981, 2001a) calls a “spatial fix.” In other words, Songdo reflects a geographical dimension of capitalism. If capital needs to be spread to overcome over-accumulation crises, it also needs to locate itself in mega-projects like Songdo to build up investments and benefits over time. But David Harvey (1975,

² Since this paper is exclusively situated in the contemporary South Korean social world, we chose the current romanization system of the Republic of Korea to transcribe the Korean writing except for well-known words like *chaebol*. Korean names appear in the vernacular order with the family name first.

³ Incheon Free Economic Zone official website: <https://www.ifez.go.kr/ivt075>, accessed September 10, 2019.

⁴ The word “utopia” comes from Greek and literally means “no-place” (negative preposition *u* + *topos* place). English lawyer and philosopher Thomas More first coined the term in his book *Utopia*, published in 1516, to refer to a political place that does not exist—an ideal society.

⁵ *IFEZ Journal* (September 2016); Incheon Free Economic Zone official website: <https://www.ifez.go.kr/noti002/2000702>, accessed September 14, 2019.

⁶ *IFEZ Journal* (March-April 2016), 3.

2001b) underlines well the temporary nature of such a solution, like the temporary sense of wellbeing offered by a “drug fix.”

We use this critical geographic perspective to elaborate our questions based on the following argument: Songdo is bonded to a utopian discourse because it is a mega-project *and* a “spatial fix.” Also, we situate Songdo into the trans-historical frame of the endless search for urban utopias and the expansion of Asian mega-projects, from the Great Wall of China to the enterprise of the *Tripitaka Koreana*. However, to deconstruct the portrayed utopian vision of the city, we confront Songdo through more contemporary global realities: cities becoming digital, green, smart, and everyday depending more and more on smartphones.

Using Songdo as an anchor for fieldwork, our goal is to question urban digital tools to better understand the effects and building processes of a new smart city. We hypothesize that 1) the digital acts as a smokescreen transforming socio-spatial problems (existing elsewhere); and 2) the smart systems should be able to build a more spatially fair urbanity allowing inhabitants to feel an organic belonging to the city.

What does it mean to live in a growing mega-project? To what extent could the smart city’s branding be a utopian dressing to avoid crisis? Is the “smart city” only a brand or does it impact the daily life of the residents? In a more practical way, are the planning of housing and public facilities appropriate to the actual practices of the pioneering new city residents?

To address these questions, we use various recent secondary sources steadily published mainly in English and Korean since 2012 (Shwayri 2013; Lichá 2015). We have mentioned some of the literature on economic geography and political economy, which researchers (Varrel and Kennedy 2011; Martin 2015; Shin 2016) have applied to analyze the Songdo mega-project as integrated into the international competition of large metropolitan areas and as a paragon of urban developmentalism and entrepreneurship. Another direction of research sharply criticizes the dimension of Songdo as a standardized green city (Kuecker 2013). Also, digital development in Songdo has been analyzed in its political (Halegoua 2012) and more technical dimensions (Yi 2012).

However, urban development research often lacks an ethnographic analysis of what it means to live in an incomplete mega-project trying to be smart. That is why our focus will elaborate on the ethnographic dimension of Songdo, integrating planning narratives with dwellers’ residential trajectories. Our fieldwork materials were collected in several steps. First, in 2014 and 2016, Valérie Gelézeau implemented two sessions of fieldwork in Songdo. Her respondents were chosen through long term and stable exchanges based on trust and transparency that allowed her to establish a clear narrative about Songdo. Then, Suzanne

Peyrard's fieldworks took place in summer 2018 and autumn 2019 to spring 2020 with a panel of people selected for their expertise about smart city implementation in Songdo. Most of the respondents were local residents or workers. However, some specific interviews were made with government officials or development company workers who are directly involved in Songdo construction. Subsequently, by having two researchers exploring the narrative about the same fieldwork but with different entries and temporalities, a solid long term qualitative survey was created based on residential trajectories and life stories about Songdo.

In addition, this research draws on an analysis of media commentary on Songdo to examine how a smart city is constructed in media discourse and made accessible to the greater public. Peyrard carried out the corpus analysis by gathering articles mainly from the English press but also from the French, Korean, and Spanish media. The articles were extracted from newspapers like *The Korea Herald*, *Korea Joongang Daily*, *Huntington Post*, *The Guardian*, and *La revista*.⁷ Websites like CityLab and MilTech were also used to expand the corpus and track which keywords are reused from one article to another.⁸ The corpus was analyzed next language by language with a word counter program to bring out a list of words mostly associated with Songdo. Thanks to this analysis, we created a chronology of the evolution of the media discourse around Songdo from 1987 to 2017. Then, by integrating the findings of the fieldwork and the analysis of media discourses, we were able to look at the temporalities of Songdo. This timeline reveals that planning does not always meet the production of a livable space and creates distortions and surprises.

Within this framework, we start by discussing Songdo's practical conception as a mega-project. Also, we look at the discourses about Songdo to demonstrate how the city is taking the shape of a "spatial fix" (Harvey, 1981, 2001a) depending on a continuous infusion of utopian branding. Then, using the classical framework of various modalities of space (conceived, perceived, and experienced or lived, Lefebvre 1974), we highlight how the marketed representation of Songdo smart city clashes with the current state of construction. The inhabitants' use of pervasive digital technologies in residential neighborhoods has manifested differently than planned. Thus, we focus on one scale, the residential scale, and one aspect, the digitalized urban environment of Songdo as a smart city. Lastly, we attempt to put aside the utopian-marketed imaginary around Songdo to investigate whether the Songdo conception allows inhabitants to feel at home and not just in a living space.

⁷ This list is not exhaustive.

⁸ MilTech official website: <https://military-technologies.net>, accessed January 22, 2020; City Lab official website: <https://www.citylab.com>, accessed January 22, 2020.

Songdo: From a Simple New Town (*sin dosi*) to a Smart City

1. Temporalities of a Mega-project Design

First of all, before 2000, only the South Korea media was talking about Songdo. In 1994, the most associated word in the Korean press was “new maritime town” (*haesang sin dosi*) because Songdo was entirely built on water (by land reclamation). It was planned as a “new town” and the design could have referred to the work of Le Corbusier (1924). Thus, the expression “smart city” to qualify Songdo did not appear until 2000. However, it is not a coincidence that by 2019 Songdo was being described as the “paragon of the smart city”; this image was meticulously planned and needed.

Songdo is a project that has changed over time. It is important to recall that President Roh Tae-woo’s plan in 1988 was to create two million housing units in five years. Songdo was planned within this context as a late 1980s standard “new town” (*sin dosi*). At that time, the construction of Songdo was one way to appease political and economic tensions between Korean conglomerates (i.e., the *chaebol*), the government, and labor.⁹ On the one hand, labor would receive new decent housing and, on the other, Korean conglomerates, supported by the government, would be able to invest massively in an attempt to mitigate rising economic tensions. Unfortunately, the project was still volatile and the Asian crisis in 1997 stopped all the planning and construction of Songdo. Indeed, a mega-project like Songdo is subject to political and economic hazards. Even though its construction was stopped abruptly, this first development phase shows that, from the beginning, Songdo has been a mega-project where investors are trying to fix their capital while avoiding an over-accumulation crisis.¹⁰

After the Asian crisis, South Korea entered into the so-called International Monetary Fund era (*IMF sidae*), which changed the economic backdrop. In brief, IMF help was granted to contain the crisis on the express condition that South Korea opens up to foreign direct investment. At that time, however, a popular anti-liberal protest (supported by some *chaebol*) pushed the Korean government to limit the establishment of foreign companies (Lee 2016). Therefore, Special Economic Zones (SEZ) were created as one of the many compromises the Korean government had to make to appease popular sentiment. The management of those SEZ were then left to regional authorities. Today, this has led to competition between regions to

⁹ A *chaebol* is a global conglomerate run and controlled by a South Korean owner or family, like Samsung or Hyundai.

¹⁰ See also Doucette and Park (2018) and Shin (2017).

attract foreign capital (Martin 2015). In this political framework, Songdo was included in the so-called IFEZ (Incheon Free Economic Zone) created in 2003, which became what Park Bae-Gyoon (2005, 855) calls a “hybrid space composed of neo-liberalization and the existing regulatory strategies” of the Korean state.

Starting from 2000, the development of Songdo combined the typical private and public actors of what Shin Hyun-bang (2017, 82) qualifies as “entrepreneurial urbanism”: the South Korean central government and Incheon Metropolitan City for the public, and Gale International/Pederson and Fox and a few *chaebol* (among which POSCO plays a key role) for the private. As a result, Songdo was reshaped as a hybrid between an urban free economic zone and a joint development district, organized by the principle of *gonggu* (building area).¹¹ Songdo is now one of three parts of the IFEZ, which represents about six hundred hectares of land surface (figure 1). The planned district aims to combine an International Business District (IBD), international education system, and Research and Development (R&D) centers (figure 2). Furthermore, according to the IFEZ official journal, Songdo will be able to house about 250,000 residents by 2020, which seems a very hard target to meet despite a rapid pace of urbanization: In 2016, Songdo’s population was about seventy thousand; in 2019 it reached about 152,310.¹²

¹¹ *Gonggu* (*gongsa* + *guyeok*) literally means “construction zone” but as it refers to both under-construction zones and fully constructed zones, we chose to translate it as “building area.” In 2002, only Songdo in South Korea is divided into *gonggu* from one to eleven. The word *gonggu* was made to designate a neighborhood in terms of its character, such as proximity to a campus or golf park.

¹² IFEZ official website: <https://www.ifez.go.kr/noti002/2000702>, accessed September 14, 2019.

Figure 1: Map of IFEZ in the Capital Region

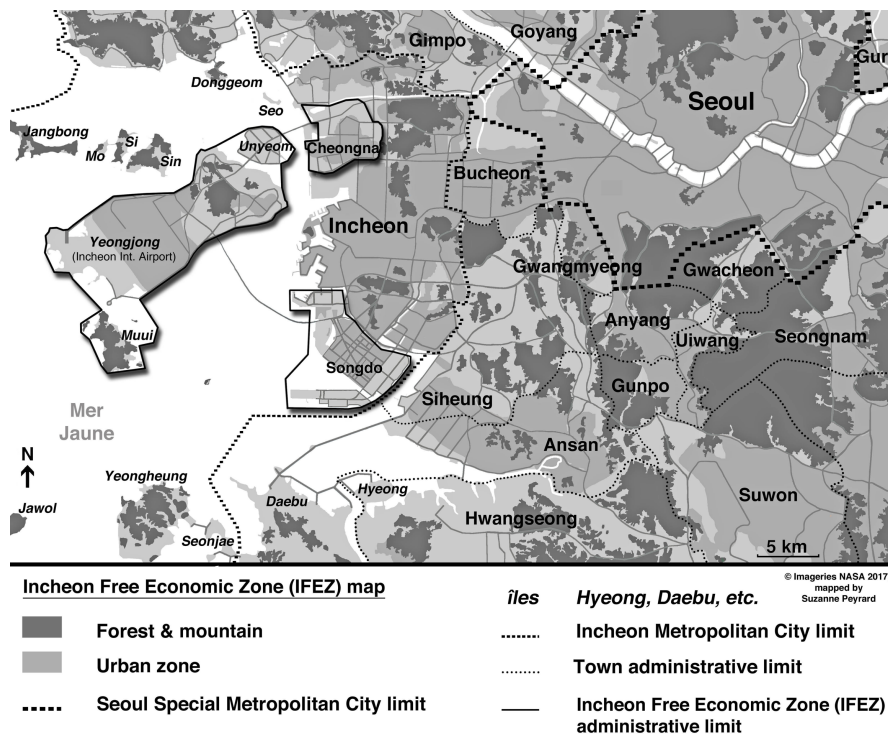


Figure 2: Master Plan of Songdo



In the 2000s, the SEZ creation and reshaping by international investors were the main factors attracting new capital to Songdo. The CEO of Gale International had a vision for Songdo and, thanks to the special tax system and laws to protect it induced by the SEZ, Songdo became

a place where firms, like BMW or Celtrion, have wanted to relocate their headquarters.¹³ Accordingly, the first phase of development in the 1980s allowed Songdo to become a space suitable for huge investments in the 2000s, and the reshaped mega-project has become a place for fixing capital.

2. *Songdo Marketing: A Utopian Fix for the Mega-project*

Doing more than just planning, the developing actors (IFEZ, Gale Int., and construction companies such as POSCO) intensively promoted Songdo. In 2003, highways, a port, and an airport that are close or a part of Songdo were advertised to portray the city as an international place.¹⁴ However, this promotion was insufficient. The Songdo master plan was accordingly revised, although only partially. Indeed, when the construction plan was updated, some apartment complexes were being built and could not be included to fit the new Songdo perspective.

With promotional articles, the developers created an imaginary of smartness emphasized through 3D images (not real photos) of Songdo with brand new skyscrapers lit by the glow of a sunset. These images present glamorous selected views of the Central Park area, the most luxurious place in the city. However, the luxury high-rise residences around Central Park, called “Harbor View” (*Habeobyu*) and “The Sharp” (*Deosyap*), constitute just a tiny fraction of the housing stock in Songdo. For example, The Sharp apartment complexes represent less than 1,300 housing units inside the 96,628 units composing Songdo.¹⁵ This new marketed lifestyle of Songdo has generated a gated community with an expensive way of life described in detail in promotional materials with three main attributes: Songdo as 1) an international city, which is a very important branding to appeal to businesses; 2) a green city with a low carbon impact thanks, for example, to buildings equipped with solar panels; and 3) a so-called “smart” or “u-city,” meaning a city where computing is ubiquitous in daily life. This attempt to brand Songdo with an “international,” “green,” and “smart” label demonstrates the need of a dream—a utopian vision—around this mega-project. As Kim Chigon (2010, 15) states, the media coverage of Songdo has attempted “to give credibility to certain interpretations and meanings framed by the real estate sector and government actors.” Indeed, it seems that for the dream to last and the investors to stay, the utopian vision of Songdo needs to be renewed.

¹³ See Kasarda and Lindsay (2012).

¹⁴ See Kasarda and Lindsay (2012).

¹⁵ *IFEZ Journal* (March-April 2016, 3).

With the development of information technology, trends have changed at a pace hard to match in the concrete reality of building. Construction is taking time and much of Songdo has not been built yet. In the digital realm, however, a city can be built first by keywords. This is why Songdo developers are marketing intensely to reinvent the Songdo vision at a pace quick enough to attract more and new capital. For its first twenty years of planning, the “new city” dream was bound to Songdo because “new” was connected to a modern urban environment modeled on, as mentioned above, the work of Le Corbusier (1924). Then, with the new planning of the 2000s, the media discourse started to change, associating Songdo with “green” or “sustainable” terms that were trendy at that time. These keywords still remain in the discourse but, since 2010, they are less and less common. Moreover, these are just examples of many keywords that have periodically been used to describe Songdo. Some, like “digital” or “u-city,” were heavily advertised but did not stick for more than two to three years. Lastly, since 2014, the new trend is to become a “smart city brand” (Shin 2017, 90). This vision has become part of the building of Songdo through keywords. These appear mainly in the international press and less in the Korean press, demonstrating the key role of the American partnership. The city is described in promotional videos, images, and showrooms as an ideal place to live. However, the vision of Songdo is always in the future, like a utopia.

In this respect, Songdo fits the pattern of a “spatial fix” (Harvey 1975, 1981, 2001a). More precisely, as the mega-project is developing, capital is accumulating. Songdo investors are seeking benefits from this urban mega-project. They are betting that the smart city model will fix for a time capital itself while avoiding crisis. In 2020, Songdo has taken shape and seems so close to being completed. However, the more the mega-project absorbs capital surpluses, the more it is in tension: If the capital fails to materialize as a concrete place, then the capital already invested will be devalued and lost. In addition, as we argue, the capital accumulation around Songdo depends more and more on digital media and a continuous infusion of utopian branding to stay fixed. In that case, is the appellation “smart city” just a new temporary keyword to attract capital or is it really transforming the territory in the long run? To answer this question, we need to understand to what extent the smart city can be a real model of urban creation involving new theoretical principles of urbanization and generating new urban practices.

Very Smart Indeed: Songdo as a Marketed Utopia

1. *Smart City: Just a Keyword?*

Urban developers are currently advocating the idea that the most innovative and best-designed cities are “smart cities” (Giffinger 2007). However, there is no consensus on what defines a smart city and, depending on who is talking, the term is used interchangeably with “digital city,” “ubiquitous city,” and “u-city” (Halegoua 2011, 2012, 2015). Yet through the important literature published on smart cities, we can identify the smart city as a city that integrates information and communication technologies at all scales of its existence in order to increase its economic efficiency, governance, and quality of life. In other words, a smart city is a sensor-controlled city measured in real time by computer programs producing big data about inhabitants and their urban environment. The more planners and decision makers obtain data about the city and its residents’ practices, the better they are able to manage, optimize, and make the city sustainable.

However, this fluctuant definition of what makes a smart city and how to distinguish it from a digital or ubiquitous city raises the question of how a smart city is modeled and built in reality. For Germaine Halegoua (2015, 22), smart cities, digital cities, and ubiquitous cities are the same “tangible, spatial examples of a dedication to high tech innovation.” But how does the smart city work? How might Songdo be a smart city model?

In promotional articles (from IFEZ and developers), the smart lifestyle of Songdo exists thanks to various facilities such as charging stations for electric cars, a clean subway, and the IBD with LEED-certified buildings supported by smart grids.¹⁶ A smart grid is an electrical grid that includes various energy system measurements. For example, in Songdo, a smart grid allows the command center to control the production and distribution of electricity in different parts of the city in real time. Indeed, all these systems are constantly monitored by the command center: a center full of screens analyzing Songdo in real time through about 1,300 surveillance cameras. For planners and public authorities, Songdo is a smart city because it incorporates smart systems on a vast scale. However, we need to underline that we are aware of all these systems only because of the heavy marketing about them. Again, the smart city model seems to be inseparable from its promotion. But how do these large-scale systems really operate?

¹⁶ LEED means “Leadership in Energy and Environmental Design.” LEED certification official website: <https://www.usgbc.org>, accessed on January 22, 2020.

2. *Deconstructing the Smart Brand: What is the Current State of Songdo?*

Currently, discrepancies appear between the planning, building, and meaning of Songdo. For example, Songdo's LEED certification needs to be critically analyzed. The program certifies sustainable and efficient buildings. The certification can be attributed for a sustainable conception phase, efficient construction phase, and concrete buildings with low energy consumption. This means that LEED certification can be granted to a building that does not exist yet. Thus, the certification creates an institutional frame to make more credible a marketed future where a building-to-be has already been certified as sustainable thanks to its architecture. Songdo has 118 buildings intended to be LEED certified.¹⁷ As of 2020, fifty percent of these buildings are not yet built and their certification is classified as "in progress" by the LEED official website,¹⁸ meaning that in theory they will be low energy-consumption buildings. Among the other fifty percent already built, only one, Chadwick International University, received full LEED certification. The others are "awaiting performance data."¹⁹ In other words, Songdo will probably have 118 certified LEED buildings but, like a lot of things in Songdo, this is something for the future.

The other key system of the marketed Songdo smart city is the waste system consisting of digitally monitored underground tubes. Peyrard's fieldwork showed that part of this system is not working properly. In 2019, some buildings next to Songdo Central Park relied on a deficient waste management system that ended up leaving more than eight hundred residences without a proper waste collection system. In addition, residents interviewed by Peyrard in 2019 expressed mixed opinions concerning this system.²⁰ The respondents who were satisfied with the system were all living in the most luxurious smart apartments in Songdo. However, other respondents complained about the deficient system because, for example, it does not or only partially work. Other respondents did not even have access to the waste system through their residences, which were too old to implement it. Indeed, depending on the period of construction, apartment complexes in Songdo are quite different in structure and design. The logic of development has dictated that *apateu* (apartments) in the first built *gonggu* (building area) are more ancient and not smart at all compared to those built in the latest *gonggu*. For example, figure 3 presents a view of "I Park Apartments" built in 2006. The shape of this

¹⁷ According to the Gale International official press kit about Songdo from October 9, 2015: <http://www.galeintl.com/2015/10/09/songdo-ibd-press-kit>, accessed on January 22, 2020.

¹⁸ LEED Certification official website: <https://www.usgbc.org>, accessed on January 22, 2020.

¹⁹ Example of Songdo Block D19, described as "awaiting performance data" since May 31, 2012 by the official LEED website: <https://www.usgbc.org/projects/songdo-block-d19>, accessed on August 20, 2020.

²⁰ A dozen interviews were conducted in an informal context between November and December 2019 with different people (from middle to upper social classes) living in different buildings types in different parts of Songdo.

complex is classic for the Korean urban landscape. This apartment could be anywhere in Seoul or other large Korean cities.

Figure 3: © Valérie Gelézeau, photo of the Temporary Market near the Entrance of I Park Apartments²¹



We must emphasize that the city is incomplete, presenting the characteristics of a city in the making. In 2014, for example, less than fifty percent of the overall development project of Songdo was completed, and less than thirty percent if actual economic activities and services, not just land and construction, are taken into account. Still, in 2020, around eighty-five percent of the land reclamation has been completed while less than fifty percent of planned construction has actually been completed.²² Beyond the first two building areas (*je-1 gonggu* and *je-2 gonggu*) that were reclaimed in the early 1990s, the whole city is in the making, and some areas are even still under reclamation in 2020 such as the remote campus zones. This morphological discrepancy between planning and reality has arisen because urban development includes different dynamics, different actors, different problems, and delays for each plot. As a result, important stocks of underdeveloped lands can lay as idle areas for periods of time that are difficult to determine.

There are clearly inconsistencies between the smart city marketing and the current state of Songdo. A good example of this are urban ruins like the “Tomorrow City” building (figure 4). Located at the core of the city near Central Park, this building could easily be confused with

²¹ © Valérie Gelézeau, 2014.

²² These figures were calculated by comparing the masterplan available on the IFEZ official website about Songdo and the actual map of Songdo created by Peyrard. All the data of the actual map were confirmed by direct observation during Peyrard’s fieldwork between 2019 and 2020.

a brand new public facility. “Tomorrow City” was first designed to be a futuristic transportation terminal built by Incheon City. In 2008, however, due to the drop in land value, the construction company went into bankruptcy and filed a claim for compensation from the metropolitan city. The empty building was then temporarily used for exhibition purposes, but this quickly became precarious due to a lack of maintenance, and the building was closed indefinitely around 2010-2011.²³ By 2019, it was still empty. Although the lawsuit has concluded, no official announcement has been made about reopening the place. Thus, for now, “Tomorrow City” remains an urban site that became a ruin even before completion.

Figure 4: © Valérie Gelézeau, photo of “Tomorrow City” in 2016²⁴



Building a mega-project from scratch involves planning, which means that it develops in a manner different from that of an organic city built over time. A mega-project thus requires heavy marketing to hide its current state. For Songdo, being “smart” is not just a new means of adding to the city’s attractiveness, as could be said to be the case for London with the Canary Wharf (Murry 2015). Rather, being smart has to do with Songdo’s very model of conception. Planners believe that smart-city tools and the collection of big data will suffice to generate a successful organic city from scratch. However, there are discrepancies between the idea of the smart city and what has actually been built. For a new city, time passes differently. The narrative about Songdo has been accelerated to produce the image of being organic: keywords such as

²³ Gelézeau’s fieldwork, June 2016: interviews with one company member in Gale International and one officer of the Global Climate Fund, both of whom were Songdo residents.

²⁴ © Valérie Gelézeau, 2016.

“new,” “green,” and “smart” rapidly alternate, giving an impression of history. This compression of time pushes the city to the point that ruins (without history) appear at its very core, as if this were Rome. Meanwhile, in this contracted temporality, the buildings seem to assume many different lives.

What does this mean for the city? We analyze these attributes by critically engaging with the scientific literature on urban policy, urban governance, city planning, urban sociology, etc. Notably, these studies often describe Songdo quite speculatively, as if there were no inhabitants. We have already touched on the real state of Songdo and its residents by discussing its waste system. We now begin to more deeply explore the question, what does it really mean to live in a smart city in progress?

3. Songdo Apateu: From Unused Smart Homes to Smartphone Apps

During her fieldwork in 2018, Peyrard systematically referenced the different moments where smart tools were present in the daily life of Songdo residents from the public to the private space. Outside, these tools appear first with the cameras watching and recording every residents' movement. As for example, developers in Songdo are experimenting cameras that record all the incoming cars' license plates for safety and traffic efficiency. While camera surveillance in South Korea is actually common, Songdo, with its sensors and the surveillance center, is more equipped than other Korean cities and exacerbate this surveillance system. The continuous surveillance clearly impacts the behavior of the inhabitants in the public space, even if this is not specific to Songdo.

Besides, in the luxury housing around Songdo Central Park, residents have access to the latest technology. For instance, most of the apartments are equipped with digital services allowing for easy management of the home. The smart home monitor allows the resident to instantly check their home energy consumption, make phone calls to different types of services, and check the cameras to know, for example, parking availability in the area. Moreover, many apartments include the possibility of regular online health check-ups. Lastly, there is the waste system we discussed above, which seems only partly efficient. Such facilities promote a way of life depending on digital structures that, essentially, monitor and record information about inhabitants. Through these facilities, the developers of Songdo aim to create a ubiquitous city or U-city where a “unique composite of digital culture (U-Life) is expected to arise” (Halegoua 2015, 32) and lead to a better quality of life for the residents. But how do those facilities affect the residents?

During her 2014 and 2016 fieldwork, Gelézeau observed the use of digital equipment in apartments and collected a dozen interviews about the residential trajectories and daily life of Songdo residents. The perception that arises from Gelézeau's survey echoes the interviews made by Peyrard in 2019 and 2020. All fieldwork expeditions corroborated the idea that the "smart city" advertised through promotional discourse has not yet come to life. Indeed, the smart city in practice is different from what was planned. For residents, Songdo is no smarter than any other place to live in South Korea. Below are a sample of statements from Gelézeau's interviews in 2014 and 2016 and Peyrard's interviews in 2019 and 2020. These are selections but they are very representative, meaning that all residents made similar replies when asked questions about the daily experience of the "smart" or "u-city."

"What u-city? Frankly, it doesn't ring a bell." (Mr. A, 2014, I Park Apt.)

"Of course we don't use the medical services. It's too expensive, and we lost the machine." (Ms. B, 2016, Central Park 1 Apt.)

"Actually, now that I think of it, the magnetic card can be useful for parking." (Ms. C, 2016, Central Park 1 Apt.)

"I do not use it. At first, I found it amusing to call the elevator [from inside the house], now I think it's useless" (Ms. D, 2019, Castle Park Apt.)

"I don't know how it works, I never used it before" - regarding the smart home system (Mrs. E, 2020, The Sharp Central Park 2 Apt.)

What do those statements mean? Not that people are ignorant and unaware of their environment. More probably, the interview questions were irrelevant to their daily life. In that case, might there be smart tools that do not just record information about the residents but are actually useful for their daily life?

Over the course of Peyrard's fieldwork, a common observation linked to this smart city way of life made clear how the residents confront the smart urban reality in Songdo: To move around or do anything in Songdo, the inhabitants use smartphone applications. Using a smartphone is part of daily life anywhere in Korea. This is the mundane daily "cultural poaching" ("*braconnage culturel*"), as Michel de Certeau (1994) conceptualizes it. Beyond what the planners and government create and organize, people use their daily space by discovering what is useful to them. They create their own smart life by "poaching" fragments of the things around them in ways that may not exactly reflect the smart life originally planned for them or what is theorized by the scientific literature on Songdo. This is simply daily life in

urban South Korea. In Songdo, there are popular applications like “Kakaomap” (*Kakaomaep*)²⁵ to go around the city and also more specialized applications like “*Lotte Castle*” for managing one’s apartment or “*Ifez Smart City*” for finding out everything about Songdo. This last application claims to be able to answer inhabitants’ every need in the city by giving them real time data such as pollution rates or traffic information. Therefore, with such applications, the smartphone has become a tool for urban perception. The theory is that, in both terminology and urban practice, there is a correlation between the smart city and the smartphone. The smartphone allows individuals to apprehend the smart city through applications like Kakaomap. Thereby, thanks to Songdo sensors and to Korean app like Kakaomap (*Kakaomaep*) or Naver Map (*Neibo Maep*), the inhabitants have access to the exact position of the bus they want to take, information that is no longer available in the surrounding towns²⁶. More than a gated community with expensive apartments, the smart city provides to its inhabitants the opportunity to access information that residents of other cities cannot obtain.

We can argue that Songdo is a smart city because it experiments with large-scale digital systems that directly impact the city. However, the reality shows that the smart facilities are not fully used or accessible. More than that, the smart city reduces city creation to city monitoring from its conception through the LEED program and surveillance of its inhabitants within their private spaces thanks to home monitors and the smartphone. Meanwhile, once the smart city brand is stripped away, many discrepancies between the planning, building, and living appear. This does not mean that Songdo is not a living place for its inhabitants. In fact, to complete this analysis of Songdo, we chose to draw upon Henri Lefebvre’s idea that the living space materializes conflict. Indeed, the living space results from the relationship between perception and design. It materializes through socio-spatial practices, which make the difference between a place and a space. Thus, without smart city branding, how do Songdo residents experience the city? How do they enjoy their leisure time? What are they missing? In brief, is this city model giving them a home or just a living space?

²⁵ This is an equivalent of Google Maps.

²⁶ We want to underline that this bus sensor system is also experiment and available in other cities in South Korea (like Seoul) that have developed smart city policy. So the territorial divide we are talking about is above all local and not to be seen as a national privilege. Also, Songdo is a test bed for new technology and if a system is working well, we can assume that it will be extended nationwide but, as for early 2020, it was still not the case for this bus localisation system.

Songdo City in the Making: A Living Place?

1. *The Local Reality in Songdo: A Utopian Narrative Realized as Noisy Countryside (sigol)*

Our media corpus study revealed that the narrative about Songdo differs between when one is actually in the city speaking Korean and when one looks at it from a distance in an English context. Songdo is also described as a smart city in the Korean press, although in a less systematic way. Of course, smart tools are important for a modern Korean family, but being smart on a daily basis in Songdo mostly means looking at a smartphone. And most of the topics about Songdo in the Korean press in 2017 were related to various events (festivals, concerts) or to the Songdo university campus. Here again, such an “international campus” advertisement is another way to make Songdo appear as an ideal place—but this particular advertisement is directly targeting Korean families. The International Campus zone is growing fast: George Mason international branches were established in 2014 and Yonsei University settled in in 2016. As we suggested above, digital media need to reinvent themselves rapidly. Also, Songdo promoters have been developing a new image for Songdo. In 2019, “international campus” has progressively become the new keyword for Songdo, even at the international scale. By coming to Songdo, Koreans are seeking a place of high-level education for their children.

Nonetheless, the mega-project is a small place to live and the Central Park area (the flagship place of Songdo) is still surrounded by cranes and construction noises (figure 5). In 2014, most of the inhabitants’ activities and services centered around the first two building areas (*gonggu*) along Convensia Avenue (*Keonbensia daero*), which is home to two large commercial buildings with evocative names: “Millennium” (Millenieom) and “Dream City” (Deurim Siti) (again, marketing). Another active commercial area was the outdoor commercial street of Canal Walk, featuring shops and restaurants on two levels. Every one of Gelézeau’s first meetings with interviewees in 2014 and 2016 was set on Canal Walk, and, even with the commercial facilities already there, people unanimously complained about the lack of commercial space and services. In particular, there was no movie theater in the city at that time. When they compared it with Seoul, all of them qualified Songdo as “countryside” (*sigol*).

Figure 5: © Valérie Gelézeau, photo of the IBD Under Construction in 2014²⁷



2. *Between Cranes and Countryside (sigol): Where is the Public Space?*

Currently, living in Songdo means experiencing a space that is full of discrepancies that are a concrete outcome of an uncertain development and the temporalities of such a mega-project in the making. On one hand, the city is perceived as “countryside” by many of its inhabitants, the subtext being that Songdo is somewhat backward. On the other hand, Songdo is marketed as smart. These two perceptions of Songdo are creating a new city paradox, even allowing for the fact that the countryside aspect will probably slowly disappear as Songdo becomes more developed. Songdo is essentially a place where the first generations of inhabitants, who have been living there for more than ten years, try to fit in and create their own public spaces. In 2014, a popular place for picnics and barbecuing was located east of the first building area (*je-1 gonggu*), nearby the vast open space known as “Moonlight Festival Park” (*Dalbit chukje gongwon*). This place was originally planned for the construction of public facilities, including a hospital. In this case, the morphology and use of a recreational space has transformed the planned function of public services. This distorted use could be seen as reflecting the desire of inhabitants to find public spaces to meet and feel that they belong to an urban community (figure 6).

²⁷ © Valérie Gelézeau, 2014.

Figure 6: © Valérie Gelézeau, Photo of the barbecue area (*babekyu jang*) in 2014²⁸



In 2014, Gelézeau observed a few elderly people taking care of a garden created on a future construction plot. Again in 2016, she observed that behind the white tall fences of un-constructed zones, there were huge gardens, blossoming and full of fruits and vegetables (figure 7). Even in 2019, important plots were still un-constructed in the central areas of the first and second building area (*je-1 gonggu* and *je-2 gonggu*) that were still used for vegetable gardens. During her fieldwork, Gelézeau learnt that the practice of gardening for food was largely developed and even institutionalized in Songdo before the construction started. Some companies were actually offering to rent the plot for a very cheap price to future dwellers or people from outside the city. Based on the few people Gelézeau was able to talk to on the spot (she could not organize systematic interviews in the vegetable gardens), these were retired people who came from Siheung or central Incheon. As a result, the central part of Songdo around the vegetable gardens evinced an atmosphere very similar to what is observed in many world cities where urban agriculture is developing.²⁹ Beyond being smart, Songdo is an interesting case to observe in terms of urban agriculture in a new city. Could this use of idle lands for leisure activities show Songdo's capacity to exist as an urban/rural community? In any case, with such functional and morphological discrepancies, people are trying to find leisure spaces and create their own public spaces with gardens and picnic areas. This has demonstrated

²⁸ © Valérie Gelézeau, 2014.

²⁹ On urban agriculture, see Joinau, Križnik, and Yi (2017) and Darly and McClintock (2017).

a capacity for self-management of the city. Moreover, this urban development could mean the creation of a game-changing public space contrasting with the top-down ideologically planned space. Nonetheless, even if the camping/picnic areas and gardening have continued to subsist (as of 2019), people using them seem to come from outside of Songdo.

Figure 7: © Valérie Gelézeau, photo of the Vegetable Gardens in *je-l gonggu* in 2016³⁰



3. Songdo Planning: A Top-down Space Pushing Away Unplanned Public Spaces

Let us look again at the ground floor of the buildings in figure 3. There is a temporary market for fresh fruits and vegetables near the entrance of the complex, a very common addition in commercial buildings (*sangga*). However, the residents of that complex interviewed by Gelézeau in 2014 complained that there was a real lack of such temporary markets for daily shopping and an absence of street food and snack stalls (*pojang macha*) in the city (none of them were allowed by the planners). The smart city needs to be clean and devoid of temporary markets or snack stalls. In the ideal vision created by developers, such facilities belong to an urban past, and the standardized mall is the only commercial public space developed. Therefore, this marketed perception clashes with residents' wishes.

Meanwhile, in 2017, several extensions had changed the face of the city. First, the Technopark area was well filled with laboratories and joint-venture companies. Many hotels and large new public spaces also soon opened, such as the great “Hyundai Premium Outlet” and “Triple Street.” During Gelézeau last fieldwork expedition in 2016, all interviewees

³⁰ © Valérie Gelézeau, 2016.

mentioned these new public spaces as an awaited improvement in their daily life. The “Triple Street” mega-mall, still under construction in 2016, advertised on its construction palisade: “A desirable pedestrian street: Songdo Triple Street” (*Geotko sipeun geori Songdo teuripeul seuteuriteu*). In fact, the opening of a commercial and recreational mall had been planned in the Songdo master plan from the early 2000s. However, the construction project, originally undertaken by the conglomerate Daewoo in 2008, went bankrupt and remained idle for six years after the foundations were dug. The project became a temporary ruin before it was taken over and built by the famous architect agency Mass Studies (architect Minsuk Cho). Today the mall is situated on a 550-meter-long strip of four massive blocks linked by bridges and a skyway. The commercial complex includes a cineplex and many other leisure facilities. According to architect Minsuk Cho,³¹ the name “Triple Street” refers to the three levels of circulation (roof, ground, and underground) that structure the mall. These three levels include the use of low-speed electric “personal utility vehicles” to transport shopping goods and are supposed to illustrate the concept of a “slow-speed city.” Again, this explanation about the meaning of the building is a marketed discourse to describe a regular mall and promote a consumer society. In 2020, respecting the assumption of the planners, inhabitants have been going to the mall during their leisure time. Peyrard observed that Triple Street was the place where Songdo families gathered during the weekend. Although the ideal Songdo lifestyle is expensive and although citizens are often mistaken as consumers, as of 2020, the planners of Songdo seem to have met the needs and expectations of the citizens/users in their design of public facilities.

However, we wish to highlight that, in 2020, the gardens are still flourishing in the unconstructed zones and people gather for picnics when there is a sunny day. This inspires hope for the creation of an urban community in Songdo not only oriented towards consumption. Meanwhile, these parallel leisure practices, far from a smart lifestyle, allow us to reconsider the typical boasting discourse on Songdo as the paragon of a smart city.

Conclusion

Songdo appears as an interesting case to demystify the complex spatiotemporal realities of a mega-project under construction. Songdo is an amazing laboratory to reflect on David Harvey’s (1981, 2001a) “spatial fix” and the link between global marketed visions and capital accumulation. The smart city involves a planning approach where residents are seen as

³¹ Interview with Minsuk Cho by Valérie Gelézeau in Seoul on August 17, 2016.

consumers and a marketing approach where the city becomes a product as well as a place for production. The Songdo model has even been sold to China, which aims to duplicate it. However, Songdo as a growing new city is a place where temporalities are bumpy and where perceptions clash. Songdo is characterized by idle lands nearby brand new towers and vegetable gardens in front of glamorous urban facilities that sometimes turn into ruins before even being completed.

Our approach to Songdo, inspired by cultural geography or anthropology of space and based on ethnographic research and fieldwork, is remote from the usual boasting discourse on the “smart city.” Songdo is hardly smarter than any contemporary city, or it is smart only because using a smartphone has become a “total social fact” (*un fait social total*, Mauss 1973) in South Korea. The smart city thus only demonstrates and exacerbates the “transformation of individual practices (of the city), supplied by the increasing use of smartphones” (Rio 2018, 193).

To conclude, Songdo has developed an expensive way of life that is not easily accessible or desired by everyone. The analysis of Songdo utopian branding implies an ideal inhabitant who agrees to be monitored in the conventional public space of the mall and even within inside his *apateu* (apartment) through the latest version of the smartphone. Yet hope emerges within the space and time lapse between two cameras, in discrepancies and hidden gardens. Otherwise, this urban model with CCTVs, sensors, and daily smartphone data collection would be following the dystopian urban path described in the “right to the city” (*le droit à la ville*, Lefebvre 1974). Indeed, Songdo has shown that “global surveillance” is a real paradigm for societies (or is this also just a keyword?).

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