The Valuable Citizens of Smart Cities: The Case of Songdo City

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ABSTRACT: The article on hand uses the city of Songdo, South Korea, to examine how self-proclaimed smart cities select their citizens, and to what effect. It shows how the smart city uses technological systems to refigure citizens into subject declared *valuable*, fit for competing in the global knowledge economy, and thus highlights the exclusionist aspects of the notion of a smart city. The form of governmentality to be found in this city, the article argues, is highly socially selective and holds the potential to profoundly upend societal constellations, pushing those who are already marginalised by the knowledge economy even further to the rims of society. The smart city, at least as it is envisioned in the case of Songdo, is in this sense an expression of highly efficient clientele politics. Carried by a public-private cooperation, it seeks to establish a new estimation of the relative moral values of various professions in urban environments.

KEYWORDS: smart cities, valuable citizens, governmentality, social selection and exclusion, technological systems, knowledge economy

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In recent years, there has been much talk about the emergence and development of the new urban trend known as the *smart city*. In most contexts, this new conceptual trend carries positive connotations by standing for an intelligent, environmentally friendly or efficient urban space, which seeks to improve the quality of life of its citizens. However, there is also an exclusionist side to the notion of a smart city. This article examines how and with which societal repercussions self-proclaimed

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smart cities select their citizens and use technological systems to refigure them into subjects declared *valuable* – all to compete in the global (knowledge) economy.

Originally, the term *smarter city* was coined by IT consulting company IBM and defined as an urban entity offering a better understanding and control of urban life while optimizing the usage of limited resources (cf. Cosgrove et al., 2011, p. 1). At first, this term referred to current urban development projects which have been built from scratch, such as Masdar City in Saudi Arabia, PlanITValley (also known as Living PlanIT) in Portugal or Songdo City in South Korea (Ryser, 2014; Greenfield, 2013). These urban environments have been constructed by cooperatives comprising different stakeholders, particularly local governments and renowned IT companies (such as IBM, Cisco, Siemens, Intel, Samsung etc.) as suppliers of technology (hardware). According to the urbanist Adam Greenfield, we currently observe an unusual movement in the history of urbanism, since never before large-scale commercial actors (IT companies) have been so deeply involved with the building-up of a city's ideology (Greenfield, 2013; see also Townsend, 2013). These companies promise to transform both the newly built and existent cities into smart environments, '*where information technology is wielded to address problems old and new*' (Townsend, 2013, p. xii). Where the cities of the twentieth century have learnt to coordinate '*the flow of people and goods in a rigid, predetermined way*' (ibid.), the so-called smart cities of our century are going to predict, optimise and smoothly coordinate every single movement within the city in real-time – with the integration of information-processing technologies (sensor networks, cameras, RFIDs etc.) into the very urban fabric (objects, surfaces, spaces, bodies etc.) and interconnecting them through one pivotal operation center in each city. In such cities – thanks to technological systems – citizens would never get stuck in traffic jams, produce less CO2, constantly know where their personal effects are, have immediate access to medical staff or education programmes, etc. The technology-driven, automatically coordinated environment will free them from any obstacles to everyday life and thusly improve the quality of life – according to the promises and visions of this kind of technological utopia. The canonical smart cities such as Masdar, Songdo and PlanITValley all tell a similar narrative about the current way of life in technologically-managed urban environments and suggest themselves as prototypes of future cities.

In the meantime, the definition and notion of smart cities attracted great attention from city administrators, finding itself applied to hundreds of other cities

worldwide. This led to a diversity of smart city initiatives and different social, technical or economical emphases within smart city policies. When I started my research on smart cities in 2011, there were few analytically and critically written academic works on the subject. Over the last four years, the situation has changed considerably: many books and articles have been published, covering different aspects of this urban phenomenon critically and reflectively. However, still little is to be found when it comes to qualitative research on the connection between *smart cities* and the production of their desirable citizens against the backdrop of the promotion of global knowledge economy. The geographers Olds and Thrift have already said that almost all Western states follow a rhetoric and a measure of modernisation that is based on fashioning citizens who can become '*actively seeking factor[s] of production*' (2005, p. 275). This attitude, which was adopted from the world of business, is meant to produce subjects within the context of the state that find their place in '*contemporary, and especially future, systems of accumulation*' of capital (ibid., p. 274). The new urban trend *smart city* seems to be shaping up to produce ideal sites for the implementation of such subjectivisation processes. Accordingly, the present paper asks: How and with which societal consequences are smart cities – the latest (but not first) technological utopias – connected to the refiguring of citizens into valuable subjects for the purposes of the knowledge economy?

To answer this question, I focused on the smart city of Songdo, South Korea – harnessing qualitative methods of the social sciences and cultural studies, such as small-scale participant observations, expert interviewing, mappings of the city, and document and media analysis. Since I set out to examine the connection between *smart cities* and its desired citizens, I took particular interest in the ideas, imaginations, objectives and notions of those who conceive and realise the city. To break down the emerging subjectivisation processes of the *valuable citizens*, I applied the historical point of view and the theories of governmentality studies, which, thanks to their wide perspective and thoroughly developed methodological and theoretical toolkits, lend themselves well to analyses of current 'societal upheavals' (Lemke et al., 2012, p. 9). Further, I am confident that special attention should be given to developments of smart cities such as Songdo, because they do not represent one-off, singular projects (Lindsay, 2010). Instead, with the rationale of the increasing urbanisation worldwide, other cities just like Songdo are to be built in 'copy and paste' fashion, e.g. the 'Meixi Lake' development in China (Woyke, 2009). However, before I start to elaborate on this novel urban develop-

ment and its societal consequences in more detail, I would like to further introduce the urban project of Songdo and the theory of governmentality.

Technological Utopia: Songdo

Fig. 1: The city of Songdo

Songdo City is planned and built as a leading international business district in Northeast Asia, located in the Incheon Free Economic Zone (IFEZ), South Korea. It is supposed to become a business and research hub, which targets to build an environmentally sustainable community by using advanced information and communication technologies on a large scale (IFEZ, 2010). Construction began in 2003 and is slated to be completed by 2020. This new city consists of forty percent parks and green spaces, rendering its urban space highly walkable (see fig. 1). Its current residents can use water taxis, public transportation or bicycles to move without cars. To make the city more sustainable, innovative waste management was developed: every flat in the city has a pneumatic trash pipe. Once residents of Songdo throw their domestic trash in this pipe, it will be supplied to a central waste processing centre by the underground system and recycled there. But more than just waste, grey and rain water are also collected for irrigation and recycling. For these and other reasons, Songdo City was chosen in 2012 as the host city for the Green Climate Fund (cf. GCF homepage). In combination with various green management systems, Songdo already provides its residents with so-called 'smart services' such as effective traffic management, smart health care or smart home management – which means that citizens can easily connect to the city government, schools, universities, hospitals and more from the comfort of their home via tele-presence, at the press of a button.

This self-appointed smart city has been constructed by a joint venture made up of the US real estate development Gale International and the Korean construction giant POSCO E&C, with the support of the local government (Songdo IBD,

2015). The joint venture purchased 5.77 square kilometres of territory reclaimed from the ocean and, in turn, was awarded by the Korean government the contract to develop the city of Songdo (Shin, forthcoming 2015, p. 7). Accordingly, this city has been called '*the largest private real estate development*' (Lobo, 2013; Viser 2014). Once construction was complete, 252,000 people were to be housed in the city (IFEZ, 2010), benefitting from the city's advantageous location (its proximity to the Korean capital Seoul and the international airport) and enjoying the '*unparalleled quality of life*' promised by the city (Songdo IBD, 2015). The latter is traced to the implementation of various smart services described above, which are backed by networked technological systems, including pervasive RFID, sensor networks, CCTV, telepresence systems, wireless Internet etc., and provided to the city by private companies such as Cisco Inc., 3M Worldwide or United Technologies (ibid.).

A theoretical excursus on the concept of governmentality

The analysis of the connection between smart cities using the example of Songdo and refiguring process of its citizens into valuable subjects proposed in this article is based on theoretical considerations adopted from the concept of governmentality. Originally proposed by the French social theorist Michel Foucault, governmentality studies concerns itself with the meaning of governing. Beyond mere force or oppression, Foucault drew attention to the meaning of 'technologies of the self' as an important form and instrument of governing and power. By technologies of the self, he understood different means and processes (education, exercising, self-management etc.) which can be used by individuals to transform or modify themselves (i.e. their bodies and minds) for reaching different goals such as the state of integrity, happiness, liberty and purity (Foucault, 1984, p. 35f). The task of the government therein is the invention and promotion of this kind of technologies of the self. However the latter are mostly coupled to particular governmental targets (Lemke et al., 2012, p. 29), such as the production of healthy, wealthy and/or knowledgeable citizens fit for competing in the world economy. The term governmentality thus semantically combines the act of governing and the mentality behind conducting governance. Foucault himself explains a key meaning of governmentality as follows:

> First, by 'governmentality' I understand the ensemble formed by institutions, procedures, analyses and reflections, calculations, and tactics that allow the exercise of this very specific, albeit very complex, power that has the population as its target, political economy as its major form of knowledge, and apparatuses of security as its essential technical instrument. (Foucault, 2007, 144)

After applying this abstract term to urban spaces, as sociologists Thomas Osborne and Nikolas Rose (1999) did already more than ten years ago, we find that there are many ways to territorialise governmentality in urban form by producing certain 'truths' about cities – such as healthy, risky, or enterprising cities. For example, since the nineteenth century, diseases in European cities were not only 'governed away' through improved water quality, sewages etc. but also through the promotion of health. In Osborne and Rose's words: '*If the habits of those who live in the city are in large part bad habits, then it is necessary not so much to act directly upon those habits themselves but to modify the city so as to induce the right kind of habits'* (ibid., p. 743). Multiple strategies and tactics can be applied in order to achieve a desired urban population consisting of subjects with the 'right' habits: development and establishment of certain kinds of city architecture (private/public spaces etc.) and infrastructure (flow regulation, accessibility etc.), rules (written and unwritten), norms, promotion of 'desirable' life styles and more.

To sum up, the term of governmentality – as it used in the context of this article – enables us to reconcile different strategies, tactics and actions of diverse stakeholders (city administration, private sector and citizens), which synergistically produce a profile of desirable citizens in smart cities built from scratch. In the case of Songdo, the governmental assemblage of tactics consists of selecting and – through technologies of the self – re-figuring valuable citizens, as well as of replacing non-valuable citizens with technological systems. All to become a smart city known as a humane and moral environment appropriate for modernity, and to compete in the global knowledge economy.

Selecting *valuable* citizens

The historical origin of Songdo illustrates how the city found its citizens: namely by selecting them according to particular national, social, and economical objectives.

In most relevant academic literature and journalistic articles about Songdo, readers learn that this city was built from scratch; more rarely, that its territory had been partly reclaimed from the ocean; and, even more infrequently, that it had accommodated small fishing villages before. However, this kind of information avoids raising any hackles by painting Songdo as a history-less city (see for example Roy, 2014; Arbes/Bethea, 2014). I disagree with this common assumption by considering the meaning and consequences of this urban development from a historical perspective. According to Do (n.y.), both the coastal wetlands with their rich flora and fauna and the homes and working areas of numerous fishermen had to be eliminated in order to make way for the new city. In view of the displaced fishermen and the amount of sea life destroyed, there can hardly be talk of a construction on a *blank slate*. Rather, the construction process can be read as a conscious decision on the part of the South Korean government to adapt its territory, and the ways in which it is used, to the globally expanding economic objectives and sources of the 21st century. While between 1950 and 1970, this area of land was a fishing industry zone that had been specifically selected and promoted by the government (ibid.), it was now declared a site for the emergence of global business and research hubs, designed to keep South Korea competitive in the international knowledge economy. The tour guide I met in the 'Compact Smart City Hall' museum located in Songdo recounts how the idea for building the new city was born:

> The story behind [Songdo] is…it started in 2003. At this time was the president Moo-Hyun Roh and he was thinking…since we have China next to our country, and they had already free economic zones like Shanghai. They got a lot of attention. And the president thought, we don't have this kind of cities in Korea. So, he was thinking, if we can build the city like Songdo, he thought it will be a good chance for Korea to step forward.

The information given in Korean media is, as a whole, not transparent enough to know what exactly happened to fishermen and their families after falling victim to the presidential ambitions for South Korea to leapfrog. One of the local artists provides us with insight into the city building process by using satirical cartoons to illustrate the fishermen's plight (see fig. 2 and 3).

Hardly ten years later, the president's idea about a new city had turned into a

physical urban space. Having taken a walk through the city in 2011 and considering the current layout of Songdo, it becomes quite clear that the city of Songdo is subject to a strict segregation into a small number of sectors – office spaces, commercial districts, residential areas and green and other public spaces (see fig. 4). In those areas marked off as office space, city inhabitants can work in select industry sectors, which include: biomedicine, the high-tech industries, logistics, finance or international trade. A fragmentation of the urban space this strict facilitates the rise of a dynamic of movement between the segments on the part of the residents, who split their daytime between the physically separate spaces on one level and the various groups thusly segregated (workers from specific industries, service providers within the commercial district, housewives/housemen and so on) on another. Such a segmentation of urban space brings up associations with Fordism, whose overriding objective was to increase productivity.

Fig. 2: A satirical cartoon depicting representatives of companies and organisations involved in construction. They are pushing a fisherman off a ship labelled 'Tidal Power Plant Development', saying: 'All that needs to happen is you taking the plunge!'

Fig. 3: A satirical cartoon depicting a teacher and her students in a museum. The teacher explains to her students which creatures used to live on the territory that now houses Songdo. A fisherman figures among the extinct marine creatures.

Looking for a more detailed description of the professional opportunities offered by Songdo, I constantly found myself pointed towards the connection between an 'unparalleled' quality of life, technology, resources, innovation and a 'world-class' international community. This 'international community' is intended to be made up of 'forward-thinking' individuals. From Songdo's official website:

> The people of Korea and their international partners are creating the new gateway to Northeast Asia, a city designed around the people who live and work there. The forward-thinking individuals and companies who make Songdo IBD [International Business District] their home will experience an unparalleled quality of life as technology, resources, and innovation come together to create a world class international community. (Songdo IBD, 2015)

Taking these claims at face value, it follows that the city of Songdo was built around a target demographic of potential inhabitants that is very clearly demarcated: forward-thinking professionals and their families. As the sociologist Robert Hollands (2008) hypothesised already, the self-appointed 'smart cities' will increasingly polarise knowledge workers and the uneducated, poor local population, on the economic, social, cultural, and spatial axes. He is of the opinion that the term 'smart cities' in itself already comprises a notion of social polarisation (p. 311f.). The geographer Alberto Vanolo (2014) agrees with Hollands and assumes that 'smart cities' will find little space for those who are 'uneducated' in technology, poor, or otherwise marginalised by the smart city discourse (p. 893). Looking at Songdo's overall rents as well as its strict spatial and occupational segregation, this city does not seem to accommodate 'non-forward-thinking' or, in other words, non-*valuable* individuals at all.

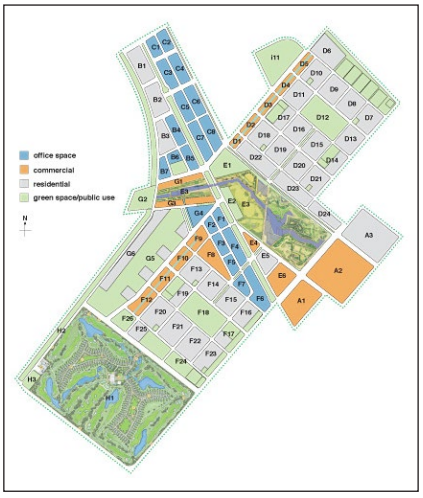

Fig. 4: Map of topological segmentation of Songdo

Now that fishermen and their families had been expelled and replaced by wealthy citizens, one might be inclined to think of Songdo and its citizens as a newly built and organised *gated community*, where at least working-class service sector employees still commute to the city for work and go home upon completion of their day's tasks. However, Songdo goes a step further and tries to entirely replace its human service sector workforce with technological systems: it seeks to create a society where everyone has equal job opportunities by strictly defining what kinds of occupation are desirable and valuable and which ones are not. Based on this definition, *non-valuable jobs* and subsequently the *non-valuable workers* are going to be gradually replaced by machines, at the very least accord-

ing to the visions of life in the city that were expressed to me. In the next section I will specify these visions.

Replacing *non-valuable* citizens with technological systems

According to a member of the Ubiquitous Consortium (UC) in Seoul, the primary mission of *smart cities* is to free city inhabitants from 'monotonous' work, so that they may turn their attention to more 'valuable' pursuits. The so-called '3D jobs' in South Korea are slated to be increasingly taken over by technological systems. The term '3D' is an acronym for '**d**ifficult', '**d**angerous' and '**d**irty' professions, especially in the manufacturing and service industries such as construction, gastronomy, cleaning or healthcare (Lee, 2007, p. 7). In the UC member's words:

> What we want is, let the human being do the most valuable things. (…) We want to release human being from this kind of 3D-works. Some people repeat some not valuable work. That means they can repeating checking in some place something and spending their time and they work for that, and they get some salary. But they just check, is this device ok or not. Or this part of the bridge ok or not. But that kind of thinking can be replaced by sensors, by smart city system. So, we want to say, replace the jobs by the system. So, people can do more valuable things, not this kind of things.

So he argues with the high level of morality to be found in a smart city, which is intended to be built primarily for the humans in it and not for the sake of the technological systems per se. The presence of so-called 3D workers testifies to an inequitable treatment of humans and an uneven playing field when it comes to employment opportunities, both of which are thought to be inappropriate for a 'modern society'. Asked what types of employment the inhabitants of smart cities *can* pursue, the UC member replies:

> Oh, this is up to them. You decide. Pay more time for develop your mind or spirit, soul or enjoy life more. (…) So, if you are employed by the city office and your role let's say is to clean the street. It was very common, but nowadays the clean-

> ing car can do it. Or if there are some cleaning system, without the use of human being. This is a kind of slavery work, motion work. Even if you have to earn money for your life, so we say it is not suitable for them, for modern society. They can do valuable things, use your brain and on other things. (…) if you think about middle period, say you need some slaves for this dirty work. Or you want some worker import…worker from foreign countries and to this kind of work. So, this is not equal opportunity. So, we can realise high level of morality if we have smart city. This what I am saying: Smart cities for human being.

According to this quote, the 'monotonous', 'slavish' work is effectively equated with any work involving physical labour and made out to be 'ignoble' and 'dirty', while employment that is 'valuable' is vaguely defined to refer to various activities 'using the brain' and 'other things', and is welcomed. The precise nature of said activities remained unclear.

Research by human geographers Olds and Thrift on the new Singaporean definition of citizens can, to some extent, clarify this way of thinking in South Korea. They have observed that the increasing cooperation between governments and private business companies gives rise to new practices of governmentality, finding that the conduct of the Singaporean state government becomes increasingly intertwined with the discursive and practical dogmas of various institutions '*produc[ing] and disseminat[ing] business knowledge*' (Olds/Thrift, 2005, p. 272). These dogmas constantly redefine who is to be considered a 'worthy' citizen and incessantly set out to produce adequate kinds of subjects ('souls') that conform to '*contemporary, and especially future, systems of accumulation*' of capital (ibid., p. 274). Both scholars point out that the refiguring of citizens into subjects is nothing new in itself, bringing to mind associations with Taylorism, for example. What is new, however, is that increasing amounts of attention are directed towards producing 'knowledgeable' citizens (ibid., p. 275). Going by the UC member's claims, smart cities are thus envisioned as socially equitable, 'fair' environments, housing knowledgeable citizens only: The image of a city divided along the lines of class (the wealthy and educated versus low-income service workers) is to be avoided. Accordingly, activities such as garbage collection and street cleaning are devalued relative to knowledge-based work. The key aspects of a knowledge economy, which according to Powell and Snellman (2004) include an emphasis on intellectual capabilities

as opposed to bodily work and natural resources (cf. p. 201) are realisable with technological systems and legitimised through the new morals of equal urbanity for everyone. The UC member thereby highlighted the unequal chances in the labor market between local and foreigner workers. However, Songdo is promoted as an international community, which means foreign workers in select occupations only such as biomedicine, the high-tech industries, logistics, finance and international trade, etc. are welcomed, whereas foreign non-knowledge workers need to give way to the construction of a human and moral environment.

One relevant example of attempts to materialise the ideas about replacing so-called 3D workers with technological systems is the novel waste disposal system in Songdo. The former leader of IFEZA [Incheon Free Economic Zone Authority] describes it as follows:

> First, Songdo was an empty ground, ten years ago. First, we made such a big tunnel – underground – actually even the track can also go through. So, the size of tunnel is very big. Inside, there are cabinets like this. One cabinet for water supply pipes and gas also. And also communication cable. And rubbish also. You know in the house, if they [citizens] throw out the rubbish, then the factory just sicking this rubbish and it goes through this pipeline and it will be changed to the energy, electricity, something like that.

Fig. 5: The door in the staircase opening onto a pipe, which transports the domestic garbage on to the waste disposal plant.

Thus there are waste container in stairways or on the street that transport the garbage directly, underground, to the waste disposal plant (see fig. 5 and 6).

Such systems of waste disposal are beneficial to city management for a number of reasons: they supposedly lead to a reduction in city traffic, which means reduced consumption of CO2 and absent 3D workers – at least the original idea and justification for in-

Fig. 6: Automated waste disposal bins in front of a block of houses.

stalling such an expensive system. To what extent this idea has yet been realised is out of the scope of this article, but merits closer scrutiny.

So far, I have outlined how Songdo's proprietors exert their power on Songdos' citizens by selecting and replacing them, pursuing particular goals: 'improving' the image of current or future cities and increasing overall profits in the city (and thus the nation as whole) through particular professions and an emphasis on business. The next section of the article goes into the re-figuring process of citizens already declared 'knowledgable' or 'valuable' respectively, which proceeds with the support of technological systems in everyday life. The desired citizens of Songdo can free themselves from any obstacles in daily life thanks to the delegation of several tasks to technological systems – so that they can gain more free time and brain capacity to be put to use for 'valuable' tasks and reflections, as in the following examples. Here, the city environment provides the infrastructural conditions for encouraging certain desirable behaviours – but at least, the decision to harness them or ignore them is left up to Songdos' residents.

Re-figuring *valuable* citizens

It frequently emerged from the expert interviews that Songdo's inhabitants benefit from a net- worked urban infrastructure primarily by becoming more 'carefree' and saving on time that can be spent at their leisure. Any and all actions undertaken within the city can, according to these statements, be supported by technological systems. An employee of IT company Cisco, Inc. describes the benefits of a smart city as follows:

> I think smart city means everything is connected. Everything actually. People today at the bus stop, if I have to transfer the bus I have to cross the street, but you know after getting off the bus I can check, ohh the app said, the bus will come three minutes later, I can run. And if I lost [I missed the bus] then I can check next bus and if it says it comes ten minutes later I can go to the convenient store and I can have [eat] something. So I mean, right now buses are connected. It has GPS, it has network. It is connected to the center, connected with my smart phone. Because it is connected, I can check and I can have more time. I don't like dependence, I like to have more time.

The quote shows how the time saved by the usage of apps can increasingly be used in productive fashion. In general, the state of 'waiting' appears as an obstacle in the city, which, if not minimised, should at least be put to sensible use. For instance, city residents no longer have to wait for the elevator standing in the corridor, but can summon it while still in their apartments. They receive a timely notification once it is ready and awaiting passengers. Reducing or at least purposefully using waiting time is, as in the quote above, more often than not traced back to independence and additional gained time.

Songdo's citizens also would not need to worry about where they have put their personal belongings. The use of smartphone apps or the 'smart kiosks' scattered around the city (see fig. 7) enables residents to always track the position of their belongings and find out how to get to them, no matter where they are within the city. A representative of IT company Cisco explains the usage of the 'smart kiosks':

> This is smart kiosk. It can be located everywhere, in subways, in buildings, trans areas (…). You know any places. So, just press 'car parking' if you are not sure where you parked your car. Then you just put your number in here and press search, then it indicates where your car is parked and then will let you know how to get there.

The software not only points out *where* the objects are, but also *how* to get to them the fastest. Time that would normally be spent searching for things is saved. Both side benefits of this service – the saved time and attention, the latter referring to the fact that you do not have to worry about losing your belongings and can enjoy an 'unburdened mind' – free up resources that workers can repurpose productively for other tasks.

There are other ways in which technology evolves to support people's everyday lives. The smart city will also allow parents to leave their children at home 'without issue'. Parents can remain in contact with their children on a permanent basis.

Fig. 7: smart kiosk in Seoul

This scenario is painted in the following excerpt from the interview with the UC member:

> And then you got married and you have two children. Five, six years old. And then to leave them alone is ok. But however you are interested: is there any problem? Or you want to talk to your children, say, very easy to talk to your children, if they are in your home and they are in a smart city. You also can specify, if they get rid of your house, say within fifty meters. More as fifty meters they get rid of the house, then it will automatically inform you. They are far from your house. And the camera will start to send the images to mother and father. So, they can talk 'Where are you going?' 'Go back to home'. Say, if you can afford baby sitters, then it is ok. But otherwise you will be very much stressed. You have to work during the day time, but you always will think about your children. (…) But if you live in a smart city, even if he goes out from his house, they can trace him, so safe. Comfortable to breed your children, if you live in a smart city.

The quote illustrates the technology by showing how the residents of Songdo can still continue their work in their offices due to technological surveillance systems, giving them peace of mind about their children's whereabouts. Alternative courses of action, such as sending your child to kindergarten, hiring a babysitter or, especially, working directly from home (especially considering the existent telepresence technologies in Songdo), do not figure prominently in the UC member's remarks. It is not far-fetched to conclude that this is a city where 'order' around and within the community is ideally ensured through the use of technological systems. As Saskia Sassen (quoted in: Meister, 2012) has already pointed out, Songdo's inhabitants practically no longer need to take heed of the world surrounding them. Because the city supplies them with all kinds of services, they have nary an excuse to not be productive and ready for work – which means that they can fully focus on their professional activities.

Consequently, the citizens of Songdo, already selected, educated, and knowledgeable, are encouraged to behave so as to maximise 'productive' time, through the application of technological features. From the above examples, we can gather that the additional time gained essentially serves either for satisfaction of elementary physiological needs (such as having a quick snack between changing buses)

or continued work. And the citizens are responsible for *actively* recuperating time through the use of technological appliances, so as to optimise themselves and their way of living under the ideals of independence and autonomy. According to Lemke et al., 'autonomous' subjectivity is currently being promoted as a societal ideal, '*whereby the self-responsibility* [here: independence, autonomy] *demanded is satisfied by directing one's own life towards economic criteria of efficiency and entrepreneurial calculations'* (Lemke et al, 2011, p. 30). This is quite visible in Songdo, not least because there is little information to be found on what Songdo's inhabitants might do in the city, besides work and satisfying their primal needs – apart from shopping, sports (such as playing golf and biking), and learning languages via tele-presence technologies. For more, there are few provisions in the city, both infrastructurally and (it appears) conceptually.

Conclusion

The article has examined – using the example of South Korean Songdo – how self-proclaimed smart cities (built from scratch) select their citizens and use technological systems to refigure them into subjects deemed *valuable* to compete in the global knowledge economy. It thereby called attention to an exclusionist side to the notion of a smart city: the form of governmentality to be found in this city is highly selective from a social standpoint and holds the potential to profoundly upend societal constellations, while pushing those who are already marginalised by the knowledge economy even further to the rims of society. The smart city, at least as it is envisioned in the case of Songdo, is in this sense not one that is socially inclusive, but rather an expression of highly efficient clientele politics, driven by a public-private cooperation.

There are a number of emergent problems. First of all, the value judgment on who is to be included and who is to be excluded is cast in fairly simplistic, trite terms – but pitting blue collar against white collar workers hardly seems prudent. The fact that the concept of automation is taken to a whole new level only stokes this conflict. No longer is it just specific parts of the production chain that are automated, but any and all 'low-level' services are targeted for replacement with technological systems. As a result of this process, a new pattern of urban morality is articulated: cities consisting of *valuable* (as in *knowledgeable*) citizens are hu-

mane and appropriate for modernity, while all others – those who uphold social and professional diversity – are declassified as 'inferior'. This new hierarchy of cities will also pit 'new' cities against the old.

Another argument to be considered is the classical issue of the government encroaching on personal liberties. Beyond the mere technologist aspect of surveillance and privacy, which has been expounded at length elsewhere, the governance approach leverages redefining mechanisms that lead citizens to change their behaviour, ostensibly of their own accord, over the middle-to-long term – towards both using more total time for work and increasing productivity during work hours. To what extent this is justified, especially when invoking either abstract goals such as a more 'moral' society or economic benefits, is a question that should be subject to an informed, open public debate. Can a city (or its owners) really tell its citizens how to use their time, time it allegedly gifts them in the first place? Or is this behaviour justified, since it is a certain segment of citizens that chooses to move there to begin with, willing to knowingly accept the consequences?

The problem, after all, lies in the definition of the word 'smart'. That word can be stretched so thinly that it loses any real significance. Using a word this broad renders its interpretation inherently political. Surely we all want a 'smarter city', but smart in a sense that fits our own ideas. Is it really smart to widen social disparity and broaden the rift between 'knowledge workers' and those less fortunate? Is it not much more intuitive to attach the label 'smart' to a city that manages to create a propitious living environment for all socioeconomic groups in society, bridging their various needs and affording a chance at a happy life for everyone?

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Illustrations

Figure 1: The city of Songdo, Olesya Benedikt

Figure 2: Cartoon, source: Ko/Schubert/Hester, Yekang/Derek/Randolph (2011): *A Conflict of Greens: Green Development Versus Habitat Preservation – The Case of*

Incheon, South Korea. http://www.environmentmagazine.org/archives/back%20issues/2011/may-june%202011/conflict-of-greens-full.html (accessed March 3, 2015).

Figure 3: Cartoon, ibid.

Figure 4: Map of the city of Songdo, source: Songdo IBD. http://www.songdo.com/songdo-international-business-district/the-city/master-plan.aspx (accessed March 10, 2015).

Figure 5: Waste disposal system in Songdo, Jung Hur.

Figure 6: Waste disposal system in Songdo, Jung Hur.

Figure 7: 'Smart kiosk' in Seoul, Olesya Benedikt .