

# **South Korea's New Songdo City: From Neo-liberal Globalisation to the Twenty-first Century Green Economy**

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This essay explores the Republic of Korea's transition from the embrace of neo-liberal globalisation to a commitment toward building a twenty-first century green economy. It explores South Korea's place within twenty-first century global challenges, the importance of twenty-first century urbanisation for understanding those challenges, the conceptualization and building of New Songdo City, and a critical analysis of the New Songdo City project. It argues that New Songdo City represents a precursor to the green economy commitment, and is a hybrid of South Korea's embrace of globalisation and an attempt at building a sustainable and resilient city. The essay shows that New Songdo City's hybridity resulted in its becoming an exclusive boutique city that rejects the right to the city, and raises questions about equity and equality as we contend with the challenges of the twenty-first century.

**Key words:** New Sangdo City, Eco-city, Green Economy, Globalization, Climate Change.

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### **Entering the Twenty-first Century**

In August 2008, President Lee Myung-bak used the opportunity of the sixtieth anniversary of the founding of the Republic of Korea to announce that the country would start the transition to a low-carbon, green growth future that would be at the centre of economic policy to 2050. This measure was followed by the January 2009 Presidential announcement of the 'Green New Deal', a US\$38.5 billion investment in major infrastructure projects, such as the Four Major Rivers Restoration Project. In July 2009, the Government unveiled its National Strategy for Green Growth up to 2050, which focussed on mitigating climate change. The Government also implemented a five-year plan to guide implementation of the green economy.<sup>1</sup> Praising South Korea, a United Nations Environment Programme report states the green economy vision 'represents a major attempt to fundamentally transform the country's growth paradigm from 'quantitative growth' to low-carbon, 'qualitative growth'.<sup>2</sup> The bold policy initiative positions South Korea as a global leader in confronting the major challenges of the twenty-first century. It also marks an important moment of transition from the global community's recent embrace of neo-liberal globalisation to creating the green economy of the future.

South Korea's green economy commitment can be viewed as part of an arc of deep change within the nation's recent history. Within a 50-year period, South Korea first made the successful leap to a modern, industrialised economy, to an International Monetary Fund-directed programme of structural adjustment and integration into neo-liberal globalization, to a radically different paradigm, the twenty-first century's green economy. South Korea's pace of change at the start of the twenty-first century has quickened, especially as mounting global crises have created both risks and opportunities for policy action. Within two decades, South Korea had shifted national focus from building Free Economic Zones (FEZs) to experiments with green policies, before making the green economy commitment. This essay explores South Korea's transition by considering South Korea's place within twenty-first century global challenges, the importance of urbanisation for understanding those challenges, the conceptualisation and building of New Songdo City, and a critical analysis of the New Songdo City project. It argues that New Songdo City represents a precursor to the green economy commitment, and is a hybrid of South Korea's embrace of globalisation and an attempt at building a sustainable and resilient city. The essay shows that New Songdo City's hybridity resulted in its becoming an exclusive boutique city that rejects the right to the city, and raises questions about equity and equality as we contend with the challenges of the twenty-first century.

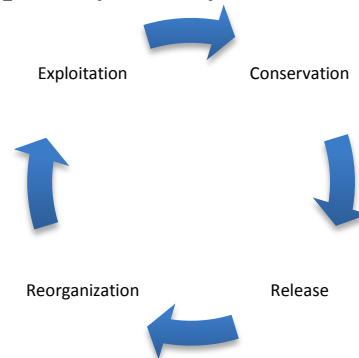
## South Korea and the Perfect Storm

Social science considerations of South Korea's place in the world tend to remain rooted within a globalisation studies paradigm. It constructs South Korea as a successful nation, one that has made the transition to being an important nation within the international system. Globalisation, from this perspective, has benefitted South Korea, a conclusion that suggests South Korea has a bright future, especially as a leader within the cutting-edge sectors of globalisation, such as electronics and biotechnology.<sup>3</sup> The globalisation paradigm also leads scholars to emphasize cultural issues, especially the vexing questions about the essentialness of Korean identity.<sup>4</sup>

Globalisation, however, is largely a symptom, although a very important one, within a much larger and far more important process, one that this essay defines from a complexity perspective. This process is system collapse. Looking to the decades ahead, South Korea will join the rest of humanity in facing a 'perfect storm' of unprecedented challenges that are large scale, exceedingly complex, interconnected and are all happening at the same time.<sup>5</sup> These challenges include: mitigating the impacts of climate change; transitioning to post-hydrocarbon energy, production and food systems; easing food insecurity by doubling global food production by 2050; facing global pandemics; fixing deep structural crises in global capitalism; coping with an additional two billion people by 2050; adjusting to a world defined by two-thirds of humanity living in cities; contending with resource scarcities; and handling severe stresses to critical ecological systems. The South Korean Government's embrace of the green economy explicitly recognizes the reality of the perfect storm.

From a complexity perspective, South Korea is positioned within the late conservation phase of a complex system's adaptive cycle (see Diagram 1). The late conservation phase

**Diagram 1: Complex Adaptive System Cycle**



**Source:** Adapted from Gunderson and Holling, 2002: 34.

is defined by an extreme state of overshoot, where the system is in a relentless pursuit of efficiency within its rule-set, here understood to be the political economy of neo-liberal globalisation. South Korea is also part of a major geographic transition in the core of the global capitalist system from its twenty-first century centre in the United States toward a twenty-first century Asian centre. As part of the emerging core,

South Korea is positioned within a highly unstable, oscillating global system, one that is either in or is soon approaching a critical threshold or tipping point, into the release phase of the modern system. Understanding the positioning within this tipping point and the transition to the release phase is the key for understanding South Korea's future.

Overshoot means South Korea is currently past a threshold of sustainability, defined as a scenario in which present forms of societal organisation result in an extreme disequilibrium between sources and sinks, whereby the disequilibrium compromises present and future capacities for reproduction. Positive feedback loops within South Korea's complex system send South Koreans signals that they should relentlessly pursue efficiency within the neo-liberal globalisation rule-set, while constructing significant economic, political, social, and cultural signals that prevent it from embracing policies and actions that would cause system stabilizing negative feedback loops. Lacking a system operating by negative feedback loops, South Korea, along with the rest of the global community, can drive itself to collapse. The Government's green economy commitment, however, marks an important paradigm shift, suggestive of what Meadows, Meadows, and Randers, in their *Limits to Growth*, call the 'sustainability revolution'.<sup>6</sup> It constitutes a national-level attempt at creating negative feedback loops that will be necessary for weathering the perfect storm of catastrophic system collapse.

### **The Urban Century**

According to many observers, humanity has entered an urban century. We are on course to extend the global urban population to two-thirds of humanity by 2030, a level of city dwelling unprecedented in human experience. Of course, that two-thirds will be part of a growing global population, which is on-track for nine billion people by 2050, which may grow to ten billion by the end of the twenty-first century. These demographic realities are a driving force within the perfect storm's multiple challenges.<sup>7</sup> We know that the majority of this urban transition will take place in Africa, followed by Asia. South Korea has largely completed its process of transformation, with 83 per cent of its population now settled in urban spaces. While it is relieved of the demographic shift, South Korea remains within the larger global problematic of how we go about making our urban spaces both sustainable and resilient. The UN Habitat's *Cities and Climate Change* states the challenge in stark terms:

'As the world enters the second decade in the new millennium, humanity faces a very dangerous threat. Fuelled by two powerful human-induced forces that have been unleashed by development and manipulation of the environment in the industrial age, the effects of urbanization and climate change are converging in dangerous ways which threaten to have unprecedented negative impacts upon quality of life, and economic and social stability'.<sup>8</sup>

Any approach to bringing humanity back from collapse by creating negative feedback loops will require addressing the combined forces of urbanisation and climate change. Newman, Beatley, and Boyer's *Resilient Cities*, echoes this conclusion, but adds energy to the list of challenges to tackle.<sup>9</sup>

Given the dismal state of our ability to address the existential threat of climate change, as well as the current trend toward a relentless exploitation of proven reserves of hydrocarbon based energy,<sup>10</sup> and the dramatic boom in non-conventional hydrocarbons, shale oil and natural gas hydraulic fracturing,<sup>11</sup> it appears our ability to realise substantial negative feedback loops is severely compromised. Led by the United Nations, as well as local and regional governments, humanity is increasingly turning to mitigation and adaptation as the best path forward. These efforts focus on significantly enhancing disaster risk reduction (DRR), especially through the United Nation's Hyogo Framework<sup>12</sup> and the construction of either sustainable or resilient cities.<sup>13</sup>

In *Resilient Cities*, Newman, Beatly, and Boyer present four potential future scenarios for the world's cities.<sup>14</sup> The first is collapse, where cities experience a radical loss of complexity accompanied by significant population decline. The second is the 'ruralized city', in which modern cities, deeply disconnected from their bioregions, 'return to the garden', by adapting a 'semi-rural lifestyle'. Cities will become more self-sufficient, especially in the area of food production. They will shift toward an eco-village model, similar to England's 'transition towns', that are defined by smaller scale, lesser density, lower consumption, and slower lifestyles. Their next scenario is the divided city, where class defines the outcome. The rich build enclaves within existing cities, or in new spaces that are isolated, defended, and cordoned off from the perfect storm. These enclaves will be opulent boutique cities where the very best of technology is deployed in an increasingly futile effort at holding back the discomfiting effects of collapse. The majority of the population is left outside the gates in a *Mad Max*, Hobbesian dystopia. The divided city will require increasing levels of militarisation in order to keep the masses and effects of catastrophe out. These walled cities, following Mike Davis' analysis in *Ecology of Fear*, are very much in play.<sup>15</sup>

Finally, they present resilient cities as an outcome. These cities follow the eco-city model of the divided city, but provide it for all the citizens. To realise this desirable outcome Newman, Beatly, and Boyer show the importance of technological innovation. The transition to a resilient city is highly dependent on the so-called 'Sixth Wave of Industrialism', which they describe as the 'complete reorientation of industrial society to a different set of technologies and rethinking of how we organize cities'.<sup>16</sup> The Sixth Wave consists of sustainability, radical resource productivity, whole system design, biomimicry, green chemistry, industrial ecology, renewable energy, and green nanotechnology. The Sixth Wave corresponds to the sustainability revolution called for by Meadows, Meadows, and Randers in *Limits to Growth*.<sup>17</sup> It is the convergence of Castells's 'information age' with sustainable, eco-urban design.<sup>18</sup> Resilient cities consist of renewable energy - carbon neutral, distributed (decentralized in key infrastructures like energy, water, and waste), photosynthetic, eco-efficient (closed-loop system/recycling beyond the bin) and place based-bioregional, and sustainable transport.

One of the leading ways humanity has approached the problem of twenty-first century urbanism is through the eco-city concept. Richard Register, a philosopher and founder of Eco-city Builders,<sup>19</sup> was the pioneer of the concept, first articulating the idea in his 1987 book, *Eco-city Berkeley*.<sup>20</sup> Eco-city Builders' understanding of an eco-city 'is

conditional upon a healthy relationship of the city's parts and functions, similar to the relationship of organs in a living complex organism'. This definition emphasizes the integration between city design, planning, building, and operations 'in relation to the surrounding environment and natural resources of the region, utilising organic, ecological and whole-systems lessons to actually reverse the negative impacts of climate change, species extinction and the destruction of the biosphere.'<sup>21</sup> As Ekblaw, Johnson, and Malyak comment, 'the relatively broad definition of eco-cities has unsurprisingly lent itself to a wide range of applications, much as the terms 'green' and 'sustainable' are often used loosely'.<sup>22</sup> Exploring eco-city typologies, they maintain that there are two broad types. First, there are eco-cities that are new cities, built from a zero point of urban infrastructure. These new cities are heavily planned propositions, but also carry with them a high degree of innovation, creativity, and experimentation. Examples of this typology include Masdar in the United Arab Emirates, multiple efforts in China with Dongtan and the Sino-Singapore Tianjin Eco-City Project in the forefront<sup>23</sup>, and New Songdo City. The second group consists of existing cities that are incorporating eco-city design principles into a broader and longer-term process of urban renewal, often in response to the failure of national government attempts at formulating a climate change plan, as well as the failure of the international community to effectively renew the Kyoto Protocol. These early adaptors, according to Ekblaw, Johnson, and Malyak, see both the urgent need to begin changing, but also the opportunity to become the new wave of global cities.<sup>24</sup>

### **New Songdo City: Building the Future**

New Songdo City's origins are clearly rooted in the business hub strategy, especially South Korea's recognition of its economic vulnerabilities and advantages within globalisation's maturing regime of neo-liberalism. The Ministry of Finance and Economy understood that South Korea's model for economic growth was encountering a process of 'deindustrialization', and needed reform to be competitive with Japan and contend with China's emergence as a global economic power.<sup>25</sup> The state decided to create Free Economic Zones (FEZ) 'as a new growth engine to upgrade the Korean economy.'<sup>26</sup> The FEZs had the goal to become business, logistical, and IT hubs 'as leading areas for globalization'.<sup>27</sup> As a business hub, South Korea was within a four-hour flight of 51 cities with a population of over one million people. As a logistical hub, the Ministry promoted Pusan and Kwangyang, as well as the newly constructed world-class international airport in Inch'ŏn. As an IT hub, South Korea has a robust electronics industry, led by Samsung, but also a strong research and development sector with a highly educated labour force. The 2003 FEZ Law promoted deregulation, tax incentives, and labour flexibility as incentives to attract foreign direct investment. A key part of the strategy was to entice corporations to set up offices in South Korea by creating an 'optimal living environment', including world-class educational and medical facilities demanded by foreign nationals. The state went so far as to make 'English compulsory in official documents', and promoting the construction of golf courses in foreign national residential areas. Between 2003 and 2004, three FEZs were established, including Inch'ŏn, which included the plan for New Songdo City.<sup>28</sup>

South Korean planners also saw Inch'ŏn as an excellent location for contending with the considerable limitations facing Seoul's continued urban expansion. By the mid-1990s Seoul was running out of land for expansion as each growth spurt pushed the

city further up the sides of surrounding mountains. Continued growth would require expensive and ecologically damaging mountain cuts. Seeking an alternative, the Government turned to Inch'ŏn's open waterfront spaces for urban development.<sup>29</sup> A key part of the vision was the Government's decision to build Seoul's new international airport thirty miles from the capital, in a landfill zone near the port of Inch'ŏn. Completed in 2001, the airport joined several new airport projects throughout Asia that were part of the significantly increased level of air travel that came with globalisation. With these airports, a new urban form began to emerge, what John Kasarda calls 'the aerotropolis', in which airports are the urban centre 'with cities growing around them, connecting workers, suppliers, executives, and goods to the global marketplace'.<sup>30</sup> Kasarda and Lindsay understand New Songdo City to be a leading example of the twenty-first century aerotropolis, with Inch'ŏn International Airport serving as an integral part of the long-term plan.

The South Korean Government originally contracted with the Daewoo Group to undertake the development of New Songdo City. Daewoo had planned to locate their media centre on reclaimed marshland south of the airport, but those plans fell apart when the Daewoo Group dissolved during the Asian economic crisis.<sup>31</sup> With South Korea's neo-liberal turn, the Government looked to foreign developers to lead the floundering project. In 1999, the City of Inch'ŏn hired Jay Kim to find a developer. A Korean-American nuclear engineer, Kim had the state's confidence through his years of working for Westinghouse on South Korean projects. After reading about the One Lincoln Office Project in Boston, Kim contacted John Haynes the CEO of the developer Gale International. Upon meeting Kim in Boston, Haynes informed Gale International's Chairman, Stan Gale, about the project and Gale gave him the go-ahead to pursue it further. When Haynes visited South Korea, he immediately enticed Gale to see the site first-hand.<sup>32</sup> In an interview, Gale explained to Kasarda and Lindsay, 'They tracked us down, wanted us to build a city in the ocean, and no one else was interested? *What was going on here?....* Their version scared everyone else away. It wasn't until I saw the airport that I understood where they wanted to go with this'.<sup>33</sup> Indeed, Gale International signed up as the developer in 2001, the same year the airport opened.

The 2001 contract that Gale International signed with the City of Inch'ŏn was valued at US\$12.7 billion, and it partnered the developer with POSCO Engineering and Construction, South Korea's largest steelmaker and icon of the nation's industrial past. Planners set the project's budget at US\$35 billion, and J. P. Morgan made the first investment at US\$350 million. Officials scheduled project completion by 2020, but its initial phase was to be finished by 2008. Gale International selected Kohn Pedersen Fox to be the project's principal architect. The developer also secured the consultancy and design services of Arup, best known for its work on the Sydney Opera House, the HSBC Building in Hong Kong, and the Bird's Nest in Beijing, but Arup is also an early pioneer in eco-city development with China experience. Cisco Systems, according to a Harvard Business School study, became the project's 'major technology player', which was part of the company's Smart+Connected Communities Initiative. Joining Gale International in building New Songdo City was United Technologies and the Hanjin Group. An advisory group from Harvard University guided the formation of New Songdo City's international school, which was

undertaken with collaboration from Milton Academy, where Gale International's CEO and President, had been a student. Philadelphia International Medicine and New York-Presbyterian Hospital participated in designing a world-class hospital complex.<sup>34</sup>

They planned an urban complex that was ambitious, futuristic, and utopian. At a cost of US\$60 billion, the new city contained an international school, a golf course designed by Jack Nicklaus, a 100-acre green space modeled after New York City's Central Park, Venetian-styled canals, a world-class LEED [Leadership in Energy and Environmental Design] convention centre, a block of LEED office towers, luxury residences for 65,000 people, five luxury hotels, a hospital complex, a bridge to Incheon International Airport, and clusters of buildings for a range of research and development enterprises.

### **Becoming an Eco-City**

New Songdo City's emergence as a green city resulted from the convergence of South Korea's seeking a competitive edge in globalisation, Kohn Pedersen Fox's eco-boutique-city vision, and their increasing awareness about issues of sustainability that merged with the state's green economy programme. The South Korean state understood the advantages offered by green cities in the global economy. For example, Lee Hwan-kyun, head of the Incheon FEZ, told the *Financial Times*, 'This project is a pivotal part of the survival strategy for our economy in this globalised era'.<sup>35</sup> Huh Chan-guk, an economist at Korean Economic Research Institute, also told the *Financial Times* that New Songdo City needed to do something to 'differentiate itself from other free-trade areas to make foreign investors choose it'.<sup>36</sup> The developer began to construct a futuristic vision of New Songdo City that 'reflects a new global culture—one not dominated by a single nation or region, but a diverse group of people with similar tastes and needs. This new generation of residents demands state of the art technology, eco-friendly Green buildings, a universal business language (English), world-class recreation, and high caliber medical and educational facilities'.<sup>37</sup> Echoing this vision, Gale International's CEO John Haynes told Milton Academy, 'It is awe-inspiring to know that we are doing something that has never really been done before—designing, developing and building an entire city from the ground up. Our goals might seem lofty, but I really think they are attainable—to build one of the greenest, most sustainable, most ubiquitous cities in the world, with an unmatched quality of life'.<sup>38</sup> Kohn Pedersen Fox maintains that 'New Songdo City builds on this effort [the state's green economy framework] by implementing measurable initiatives that will help mitigate growing global and regional environmental conflicts'.<sup>39</sup>

The turning point for New Songdo City's development as an eco-city was in November 2006. 'Despite the fact that the construction of the city was well underway', Kohn, Pedersen and Fox explain, 'Gale International began to ask how New Songdo City could be improved. The environment soon became the focus of a critical reevaluation'.<sup>40</sup> Gale International sponsored what is known in green circles as a 'Charrette', which is a workshop that gathers all stakeholders for a process of brainstorming about ways to become more sustainable. Kohn, Pedersen and Fox state, 'A dedicated team made up of the New Songdo City project developer, key architects, engineers, and environmental experts participated in an Environmental Opportunities Charrette to assess and identify ways to improve environmental



performance and quality of life in the city. The development of long-term sustainability initiatives and systems, which would be considered in every design decision and adaptable to changing needs, was the goal'.<sup>41</sup>

### **The Boutique Eco-City and Global Apartheid**

New Songdo City represents the significant problem of twenty-first century transformation, the state of being between stages of a complex adaptive system that is not fully within the conservation phase of modernity nor fully entered into the release phase. It represents the thinking and actions of humanity at a tipping-point, almost a liminal state of becoming something new that retains old ways of being, seeing, thinking, and acting. At the critical threshold, New Songdo City marks South Korea's continued embrace of capitalism in the late conservation phase, an attempt to win the game of globalisation by integrating itself into the sinews and circuits of global capitalism. By its own recognition, this position is not sustainable, yet it remains a predicament of necessity within the rule-set of planners. At the threshold, New Songdo City also represents an aspiration and vision for the future, one defined by a utopian quest to free humanity from the confines of a complicated and increasingly dysfunctional culture-nature relationship. In this vision, the past remains through the deployment of modern technological solutions. New Songdo City appears caught within the necessary contradictions of the tipping-point, where planners and designers force the old and the new into physical, symbolic, and ideological spaces of the eco-city. A question remains whether New Songdo City can serve two masters, globalisation and sustainability, or if the attempt is yet another indicator of the instability, uncertainty, and awkwardness of humanity's crisis-driven departure from humanity.

New Songdo City exists within the Enlightenment's meta-narrative of rationality. Through the scientific deployment of reason, humanity can find its liberation from suffering and progressively realise the perfection of the human condition. Yet, as suggested by the Frankfurt School's critique of Enlightenment rationality, modern projects like New Songdo City carry a dark side that bring with them modernity's troubled history of marginalisation, repression, and exploitation. Deployment of our best technology, finest planning, and depths of social and financial capital to build an eco-city whose reason for existence is to be inviting enough for the global élite to opt to reside within raises hard questions about what will happen to the global majority, those billions of existing and new urban dwellers, many of them consigned by modernity to slums, who do not have the option to live in the eco-city.

Urban scholars like Edward Glaeser argue that the urban form triumphs because of its openness, its willingness to accept the marginalised into its confines and offer them the opportunity to make a go of it.<sup>42</sup> This idea is Henri Lefebvre's 'right to the city'.<sup>43</sup> In their *State of the World Population: Unleashing the Potential of Urban Growth*, the United Nations Population Fund strongly advocates for the 'right to the city' approach to the great challenges of twenty-first century urbanisation. The report explicitly states that excluding the poor from the city is 'futile, counter-productive, and a violation of people's rights'.<sup>44</sup> The basics of social justice, as urban geographers like David Harvey have argued, demand that we confront the inequalities and inequities generated by urban planning and design.<sup>45</sup> Harvey writes, 'The question of what kind of city we want cannot be divorced from what kind of

social ties, relationship to nature, lifestyles, technologies and aesthetic values we desire. The 'right to the city' is far more than the individual liberty to access urban resources; it is a right to change ourselves by changing the city. It is, moreover, a common rather than an individual right since this transformation inevitably depends upon the exercise of a collective power to reshape the processes of urbanisation. The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights.<sup>46</sup> Ekblaw, Johnson, Malyak explain, 'one common weakness of Masdar, Songdo IBD, and master-planned cities in general is the tendency to underrepresent the equity issues due to overemphasis on economic growth. The completely new city must attract business in order to succeed and often attempts to sustain rapid growth to earn returns on massive capital investments. In order to attract industry, policies naturally favor the wealthy and increase income disparities'.<sup>47</sup>

Stanford Kwinter illustrates the crucial link between eco-city design and the right to the city. 'We may learn over the next years that cities, even megacities, actually represent dramatically efficient ecological solutions', writes Kwinter.<sup>48</sup> But, he asserts that 'this fact alone does not make them sustainable, especially if the forces of social inventions remain trapped in tyrannies that only ecological thinking on an ecumenical scale can free us from. For ecological thinking too has its counterfeit and debased forms, and many 'sustainability' discourses remain more oppressive than liberatory, more stifling than inventive, and it would be at great peril if we were to continue to assume that these two areas of approach, and especially their methods and presuppositions, are necessarily complementary'.<sup>49</sup> A critical review of New Songdo City's conceptualisation and implementation illustrates a silence concerning the right to the city, a fascinating erasure given the planner's keen awareness of the great challenges facing humanity in the twenty-first century.

A 25 December, 2012 entertainment news item reported that Hyoyeon from the pop group Girl's Generation, purchased a luxury apartment in New Songdo City. It was in the Prugio apartment complex, which the reporter claimed had 999 units. Hyoyeon's was a penthouse on the 60<sup>th</sup> floor. The reporter quotes a real estate agent as saying,

'In the case of New Songdo City, it is not only in close proximity to Seoul's Gangnam, Yeouido, and Ilsan, but it is close to the Incheon International Airport (voted World's Best Airport Seven Years in a Row) which will fit the preferences of people who have lots of overseas schedules. This development features pleasant and safe housing conditions, excellent educational standards, access to some of the best amenities, and provides one of the best mixtures of work and play, which is why celebrities tend to move here'.<sup>50</sup>

When eco-cities become twenty-first century boutique cities, humanity moves closer toward global apartheid. The privileged few in the global north, globalisation's elite class, will enjoy the benefits of the tipping-point's innovation and creativity, while the global majority will be left in geographies of increased catastrophe, forced to use their social capital to improvise, innovate, and create new ways of being, seeing, thinking, and acting within an urban dystopia that's potentially beyond our capacity to fully comprehend. In this scenario, the boutique eco-city becomes an isolated geography

of an early twenty-first century vision that increasingly becomes preoccupied with keeping systemic collapse outside the spatial barriers which define its pampering of the desires of the élite. The eco-city's élites will be reduced to travelling to other islands within the perfect storm, to Masdar City or Dongtan, passing over humanity, increasingly detached from reality and uninformed by the new epistemic, the emergent property of humanity produced by those weathering the perfect storm. Overtime, New Songdo City's entire logic will give way to the logic of being a walled-city, the antithesis of the design's intent to become a global city.

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### Endnotes

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<sup>11</sup> See International Energy Agency, *World Energy Outlook 2012*; Hart Energy Publication, *Unconventional Reserves: Reliable Asset Performance*; and Leonardo Maugeri, *Oil The Next Revolution: The Unprecedented Upsurge of Oil Production Capacity and What It Means for the World*.

<sup>12</sup> See United Nations, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*; and United Nations, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and*

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<sup>14</sup> Beatley, Boyer, and Newman, *op. cit.*, pp. 37-41.

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<sup>17</sup> Meadows, Meadows, and Randers, *op. cit.*

<sup>18</sup> See three works by Manuel Castells, ‘The Education of City Planners in the Information Age’, pp. 25-31; *The Power of Identity. The Information Age: Economy, Society and Culture. Volume II*; and *The Informational City: Information Technology, Economic Restructuring and the Urban-Regional Process.*

<sup>19</sup> <http://www.ecocitybuilders.org>.

<sup>20</sup> Richard Register, *Ecocity Berkeley: Building Cities for a Healthy Future.*

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<sup>22</sup> Jessica Ekblaw, Erin Johnson, and Kristin Malyak, *Idealistic or Realistic?: A Comparison of Eco-City Typologies.*

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<sup>24</sup> Ekblaw, Johnson, and Malyak, *op. cit.*, p. 14.

<sup>25</sup> Yong Chun Baek, ‘Attraction of High Value Added Businesses – Experience of Free Economic Zones in Korea’.

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

<sup>29</sup> Kohn Pedersen Fox Associates, *New Songdo City; Green City*, p. 31.

<sup>30</sup> See <http://www.aerotropolis.com>; and John Kasarda and Greg Lindsay, *Aerotropolis: The Way We’ll Live Next*, pp. 3-6, 353-358.

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- <sup>33</sup> Kasarda and Lindsay, op. cit., p. 4.
- <sup>34</sup> Annissa Alusi, Robert Eccles, Amy Edmondson, and Tiona Zuzul, *Sustainable Cities: Oxymoron or the Shape of the Future?*, p. 5.
- <sup>35</sup> *Financial Times*, 18 August, 2004.
- <sup>36</sup> Ibid.
- <sup>37</sup> Southerton, op cit, p.91.
- <sup>38</sup> Milton Academy, 'A Brand-New City'.
- <sup>39</sup> Kohn Pedersen Fox Associates, op. cit., p. 15.
- <sup>40</sup> Ibid, p. 22.
- <sup>41</sup> Ibid.
- <sup>42</sup> Edward Glaeser, *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*.
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- <sup>44</sup> United Nations Population Fund, *State of the World Population. Unleashing the Potential of Urban Growth*, p. 3.
- <sup>45</sup> David Harvey, *Social Justice and the City*.
- <sup>46</sup> David Harvey, 'The Right to the City', pp. 23–40.
- <sup>47</sup> Ekblaw, Johnson, and Malyak, op. cit., p. 23.
- <sup>48</sup> Stanford Kwinter, 'Notes on the Third Ecology', p. 103.
- <sup>49</sup> Ibid.
- <sup>50</sup> Pkdance, 'Girls' Generation Hyoyeon Purchases a Luxurious Penthouse in New Songdo City, Incheon'.

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