# THE SUPERLATIVE CITY

## DUBAI AND THE URBAN CONDITION IN THE EARLY TWENTY-FIRST CENTURY

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# THE DUBAI EFFECT ARCHIPELAGO

As architecture and urbanism were busy mapping emergent phenomena, Dubai caught us at a bizarre moment. During the last decade, the contemporary city began to be seen as the physical and symbolic manifestation of globalization, rapid urbanization, infrastructures, and networks; research and mapping became more urgent for architecture and urbanism. The terminologies employed by disciplinary frameworks were deemed insufficient when it came to naming and interpreting new urban mutations; accordingly, research on the contemporary city has mapped and documented the immediate and ungraspable evidence of urban conditions as they emerged, at times thickened with a wealth of "retroactive manifestos" that cannot cope with the abundance of evidence.[1]

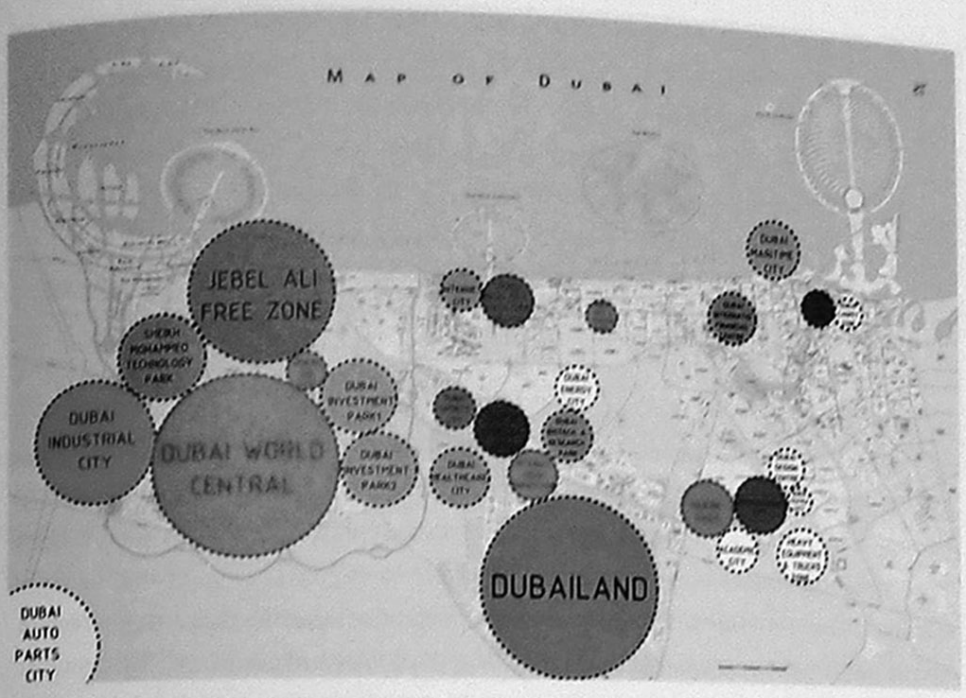
In this context, as one of the fastest-growing cities in the world and the source of relevant material for such retroactive mapping projects, Dubai is obviously unusual. Busy with prompting unusual templates of scale, Dubai's seductive realities portray the limitations of existing disciplinary positionings regarding the idea of dimension in architecture and urbanism.

In the following text, part of a larger study on the new scales of context within contemporary cities, I examine how Dubai acts as a switchpoint for current discussions on scale. To do this, I try to highlight Dubai's swift mutation not from its locality but from its effects. I propose the idea of the "Dubai Effect," by which I mean the application of the Dubai model of development to other countries, by way of large-scale global projects initiated by Dubai companies. The Dubai Effect is positioned in the essay as an emerging template of large-scale development delineating an awkward symbiosis between the organizational (network) and the iconographic realms of contemporary urbanism. With its peculiar urban and transnational reconfiguration, this symbiosis not only extends our seemingly settled templates regarding the notions of global versus local (as well as generic versus specific) but also asks for new disciplinary frameworks within urban discussions, ones that are reactive and proactive rather than merely retroactive.

## THE DUBAI EFFECT

By reorienting the oil-reliant economy to services and tourism (taking Hong Kong and Singapore as its model), Dubai has become the high-speed version of a regional financial hub. To compete at this level, contemporary cities invest heavily in the rapid development of their transportation infrastructures, regulatory and legal systems, and technologies, and aim to provide appealing living conditions for expatriate bankers and the emerging middle classes. In this context, Dubai is the high-speed version of a global city and is becoming a model not only for other cities in the region (such as the financial centers of Bahrain and Qatar, and the Ras Al Khaimah Financial City) but also an important template for more dispersed locations such as São Paulo, Johannesburg, and Istanbul, which are now seeking to become regional financial centers like Dubai.
For Dubai, to become such a hub has meant rapid urbanization plus the development of a unique urban form, based on a new port city model.[2] This new model is different both because of its unusual metropolitan organization, land-use systems (i.e., "cities-within-cities," free-trade-zone clusters) and its regulations (such as the independent legal, regulatory, and judicial regime of the Dubai International Financial Center, which may even supersede various federal and/or local laws), and also because of the new templates and configurations it presents at a global scale.

If we map this new model of Dubai not so much from its unusual urban form but through the form of its global effects—that is, urban development projects undertaken by Dubai companies abroad—we see Dubai replicating itself at a new scale and within a new geography. Development and investment projects are packaged and tested first as a brand within their own locality (Dubai) and then exported and franchised adaptively as templates of compact urban organization to various spots in the world. By the




Archipelago urbanism of Dubai

"Dubai Effect," I refer to the global diffusion of Dubai-originated development projects and their potential interaction with these localities. Coupling logistics and infrastructure with tourism and real estate, the Dubai Effect connotes both a literal Dubai authorship and a model for urban development.[3]

The Dubai Effect takes its name from the so-called Bilbao Effect—the self-referential landmark franchising itself for urban regeneration and regional development.[4] With the Bilbao Effect, the building becomes a flagship of seduction for tourism, entertainment, and large-scale urban development projects, which are the "mechanisms...through which globalization becomes urbanized."[5] In parallel, the Bilbao Effect signifies architecture's desire for an alternative reality. Joan Ockman describes the process:

> The concept of indigenization affords a more nuanced understanding of the way architectural ideas get disseminated and the experience of their varied materializations. It reminds us that the "context" of any built work encompasses not just the "authentic," pre-existing characteristics of a place. Architecture also has the capacity to embody the often conflicted feeling a place harbors about its own past and future, its insecurities about being provincial, its fantasies and desires for a reality that is alternative to the present. The assimilation of foreign tendencies within a local situation is in this sense not just or not necessarily, a hegemonic process, but sometimes, as at Bilbao, one of voluntary adaptation and a consciously acknowledged need for change.[6]

If the Bilbao Effect marks an aspiration for an alternative reality for a city or region, the Dubai Effect is its expanded and supersized version. That is, if the Bilbao Effect franchises architectural spectacles to promote a desire for change where the flagship building is an icon, the Dubai Effect franchises compact urban packages to encourage alternative futures and the urban model acts as the icon.

Projects of the largest trade infrastructure, real-estate, and investment companies of Dubai—JAFZA, TECOM, Dubai World, Emaar Properties, Damac Properties, Sama Dubai, Istithmar, Nakheel, Limitless—are now spread all over the world, appearing in places as diverse as Saudi Arabia, Bahrain, Oman, Syria, Jordan, Lebanon, Qatar, and Turkey; reaching out to Russia, Kazakhstan, China, India, Pakistan, Indonesia, Philippines, and Vietnam in Asia; South Africa, Djibouti, Egypt, Morocco, Tunisia, Libya, Algeria, Senegal, and Rwanda, Zanzibar, and Mozambique in Africa; Malta in Europe, and the United States.

Large in both scale and investment, and developed mostly with the active participation of local government agencies in each country, these new projects trigger existing real-estate forces and also instigate urban developments in their localities. Just like its predecessor, the Bilbao Effect, the Dubai Effect aims to act as a giant guarantor for further investment. For instance, for one of the Dubai investments in Turkey (Dubai Towers-Istanbul), which was recently cancelled due to ongoing lawsuits and the global economic downturn Dubai's investments promised to activate the property sector as well as fuel further investments in the area. Mayor of Istanbul declared: "The commitment of these [Dubai] giants to the investment property market in Turkey just proves that there is massive potential in the country and that the time is definitely right for property investors to do their due diligence on Turkey and commit to careful real estate investment projects." [7]

## THE DUBAI EFFECT ARCHIPELAGO

In March 2006, Dubai's government enacted a law legalizing foreign ownership of property in designated areas in Dubai.[8] The list of freehold properties included twenty-three areas and forty-five plots in the city, including Dubai World Central (previously Jebel Ali Airport City), Burj Dubai, Dubai Marina, the World Island, the Palm Island projects, and Emirates Hills. In addition to the freehold property areas, free zones of Dubai (Dubai International Financial Center, Dubai Internet City, Dubai Healthcare City, Dubai Knowledge Village, Dubai Media City, Dubai Silicon Oasis, etc.) might also guarantee ownership of freehold land within their boundaries in addition to the 100 percent equity granted in every free zone (elsewhere businesses are required to be 51 percent owned by a UAE national). One example is the Dubai International Financial Center (DIFC) Law (issued in August 2006), which allows foreign companies and individuals to hold freehold ownership of real estate within the DFIC. Since entities operating in the DIFC are subject to an independent legal, regulatory, and judicial regime (which may even supersede various federal and local laws), the DIFC is an oasis; it is one of the autonomous island cities of Dubai's archipelago urbanism. In this context, if free zones and freehold areas of the city present a congested form of an archipelago urbanism, the transnational configuration of the Dubai Effect marks an expanded version of this condition, namely the Dubai Effect Archipelago.

An archipelago would be a general term for various forms of enclosure in cities, indicating a fragmented urban condition where autonomous enclaves or islands (that


Dubai Effect Archipelago in the global context

is, theme parks, golf clubs, gated communities, special economic zones, office parks, airport cities, IT campuses, retail chains, offshore outsourcing centers, military bases, camps, etc.) are scattered on a common ground. They are "capsular civilizations," as Lieven de Cautier terms them, in elucidating different forms of suburban enclosures in the contemporary city, and spatio-political enclaves or the "critical materialization of digital capitalism," according to Keller Easterling.[9] While the fragmentation of the city is often seen as a twentieth-century phenomenon dating back to the changing nature of the metropolis in the beginning of the century, the fragmented nature of the contemporary archipelago portrays itself as unique—especially with regard to the level of autonomy its islands embody, compared to the vast extent of infrastructural and global networks in which they are embedded. Having different attributes and characteristics and illustrating various forms of what Sven Lutticken calls "parklifes," these islands are paradoxical utopias and zones of detachment, security, extraterritoriality, and exception, where general laws are suspended.[10]

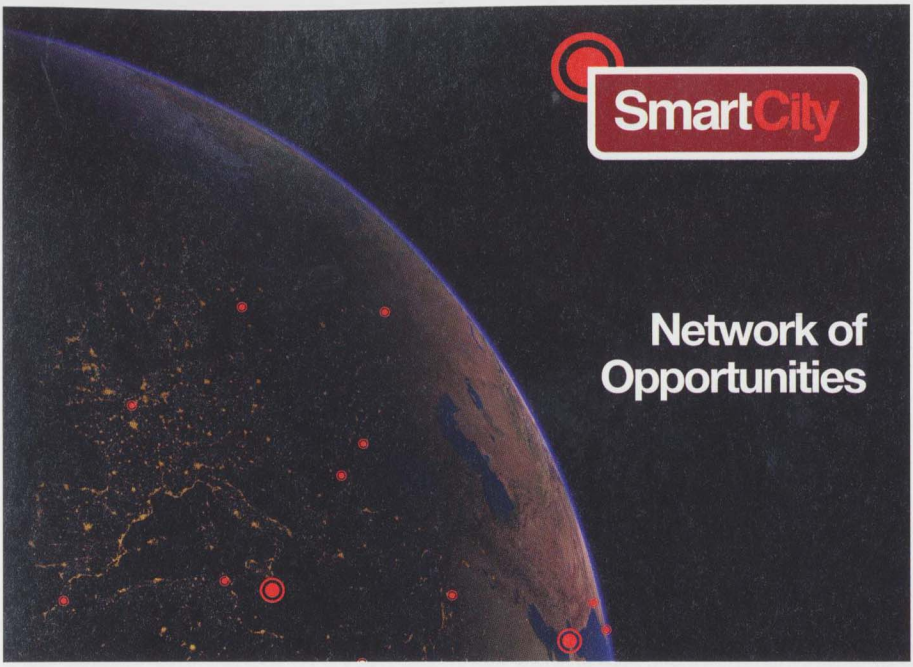
The most important aspect of the Dubai Effect Archipelago is its symbiosis of branding, infrastructure, and real-estate development, providing various combinations of autonomous clusters for different locations. An example of this would be the "SmartCity" joint venture by real-estate firm Sama Dubai and the Technology and Media Free Zone Authority (TECOM)—both divisions of Dubai Holding, owned by Sheikh Mohammed bin Rashid Al Maktoum. Using the autonomous clusters of Dubai Internet City, Dubai Media City, and Dubai Knowledge Village as their model, the aim of the SmartCity venture is to harness the power of existing technology clusters in Dubai and build a large network of knowledge-based industry townships across the world. While exploring the global expansion of various business parks (information and communication technology, media, education, biotechnology, and energy), and coupling those investments with real- estate projects, the joint venture promises technological and economic impact and "sustainable development" to regions. As announced by the CEO of TECOM: "The benefits of the SmartCity concept, as we have seen in Dubai, transcend to all areas of the socio-economic sphere."[11]

In global SmartCity locations, companies will take land on long lease to build their own facilities according to their requirements, just as existing regulations in Dubai allowed construction of Dubai Internet City and Dubai Knowledge Village. In addition to the similarities to existing facilities in Dubai, the SmartCity brand has other features that would be specific to the Dubai Effect Archipelago. For instance, for each company that chooses to be located in a SmartCity in a particular country or region, opportunities is offered to that company to expand into new markets or to set up facilities in other SmartCity clusters located in other countries, creating global interconnections. SmartCity locations are chosen according to their potential to become regional knowledge-economy hubs that attracts "knowledge workers," and local governments' commitment to knowledge-based development is considered an important factor for selection.

One of the first projects of the SmartCity brand is the SmartCity@ Ricasoli (Malta) project, approved by the Malta parliament in 2006.[12] The first European outpost for Dubai Internet City and Dubai Media City, SmartCity@ Ricasoli is promoted by the Malta government as an opportunity for radical transformation of the island's economic activity after its inclusion in the EU. The project is expected to generate 5,600 jobs in the region, and the Malta government sees Dubai's investment in SmartCity as an instigator for other Middle Eastern investments in the area.[13]

The second SmartCity project is SmartCity@ Kochi (Kerala, India). Upon signing the bilateral agreement in 2005 to develop SmartCity@ Kochi, Ahmad bin Bayat, Director General of TECOM, declared: "Dubai Internet City has developed considerable expertise in developing business campuses that provide infrastructure and support services for IT companies...This project is also part of Dubai Internet City's global expansion plans where it is seeking to evolve from a regional venture to an internationally diversified organization. Our mission is to become the ICT business campus provider of choice across the world."[14] Yet full authorization was not granted until some time later because of government resistance in Kerala to Dubai's insistence on freehold rights to the land. The implementation of the project has been cleared by the Indian Ministry of Commerce by declaring the entire project site as a Special Economic Zone for the mega IT facility in 2011.[15] Being a Special Economic Zone means acting like a Dubai free- zone cluster—that is, no foreign ownership restrictions will be applied in developing zone infrastructure, residential areas, and recreation centers in the facility.[16] Accordingly, in Dubai Effect Archipelago urbanism, Dubai island cloning is possible not only by implementing the Dubai urban model for various offshore localities but also by creating necessary regulatory conditions that can provide swift adaptability to these regimes.

The Dubai Effect Archipelago is not limited to the cloning of its technology clusters like Dubai Internet City. Taking Dubai's Jebel Ali Port and Free Zone (JAFZA) as a model, the symbiosis of infrastructure, port development, and real estate would be another form of configuration for the exporting of autonomous clusters. For instance, as part of Senegal's development plans for a new administrative city in the north of Dakar, positioning Senegal as a major business hub in West Africa, the government of Senegal and JAFZA (of Dubai World) signed an agreement in 2007 to develop an integrated Special Economic Zone in Dakar. While the Zone will host 1,000 companies




SmartCity advertisement

within a 6.5-million-square-meter area, the project will expanded to be an integrated port of 10,000 hectares that will include tourism and residential and commercial projects, and will be developed by JAFZA 's sister real-estate companies.[17] Important to note here would be the relationship between the generic and the specific in cloning Dubai Effect Archipelago islands. That is, in an attempt to present the "compact port city" configuration in a specific locality, port infrastructures and facilities are always coupled with business, residential, and leisure areas similar to the development of the Jebel Ali Port, its adjacent Jebel Ali Free Trade Zone, and integrated urban development projects. Another feature of a generic model replication would be the aim for multimodal (sea, air, rail, road) connectivity. Similar to the new airport next to the Jebel Ali Port and Free Zone, Dakar Special Economic Zone's proximity to the Blaise Diagne International Airport is seen as a benefit to the project, enhancing the multimodal idea. Other important international free-trade-zone projects of JAFZA International are Djibouti Port and Free Zone, Orangeburg County Port Project in South Carolina (United States), and Subic Bay Freeport in Philippines.

One development project in Africa seems ripe for the possible provision of free zones as part of the Dubai Effect Archipelago. Dubai's involvement in developing Djibouti's oil terminal, port infrastructure, and industrial and commercial free zone stimulated Djibouti's economic growth, helping it develop as a regional hub for the Red Sea and Indian Ocean, and become a business and tourist destination.[18] The port, now managed by DP World, has become one of the fastest-growing container terminals in Africa.

According to Said Omar Moussa, president of Djibouti's International Chamber of Commerce and Industry: "[T]he relationship with Dubai has made our dream of becoming a commercial centre more real...We are no longer looking at Hong Kong and Singapore but at Dubai." Aboubaker Omar Hadi, commercial director of Djibouti port, summarizes the importance of Dubai's role: "Dubai has done in five years what the French did not do (to help Djibouti) during 115 years of colonization. And Dubai is doing it without showing any arrogance. That is the difference."[19]

Underscoring the strategic importance of Djibouti for Dubai, Dubai-based Middle East Development LLC released its plans in 2007 to build a 28-kilometer bridge (six-lane motorway and four-track railway) to link Yemen with Africa via Djibouti.[20] In addition to the bridge project, the company also announced plans for two new cities (Noor City, translated as "City of Light") to be built at either end of the bridge (Djibouti and Yemen), where both cities will be "tax-free metropolises," and free-trade zones, "having their own law, court system and administration."[21] The details for the bridge as well as the new cities were revealed at a press conference in Djibouti in 2008, at which Djibouti's prime minister participated. Along with the presentations on the Djibouti Noor City, a new airport that will serve both cities was mentioned, providing an air-land-sea link for neighboring landlocked African states.

In that vein, future port projects developed by Dubai in Djibouti and Senegal mark an important feature for Dubai's positioning as a port city and its global connection. In recent discussions on ports, cities, and global supply chains, hinterlands (conventionally interpreted as the background land for the port, or the area over which the port draws its majority of business) are interpreted with their logistical and commodity chain characteristics, in addition to their physical or geographical attributes: i.e., macroeconomic hinterland, logistical hinterland, physical hinterland, etc.[22] It is evident in studies of Dubai's Jebel Ali Port that competitiveness and strategic emphasis on global accessibility and transshipment is the main goal for the port development of Dubai (rather than integrated regional development).[23] Accordingly, it could be argued that projects like Djibouti and Senegal help Dubai's port city to expand into a global hinterland, not only physically but also macroeconomically and logistically. Similar to the recently coined neologism of "development by China"—that is, China's continuing infrastructure development projects in Africa (e.g., in Angola) for an exchange of the continent's resources—"development by Dubai" could mark the initial form of an emerging global reconfiguration and scaling in infrastructural development and urbanism.

## "FULL-SPECTRUM CITY PROVIDER"

Of all the projects of the Dubai Effect Archipelago, King Abdullah Economic City in Saudi Arabia—a megacity that spreads across 168 million square meters and is located on the 22-mile shoreline of the Red Sea—represents the most prominent example of the Dubai Effect. Promising potential investors access to both regional and global markets by land, air, and sea, the city is divided into six zones: Sea Port (which spreads across 2 million square meters), Financial Island, Education Zone, Residential Area,

Along with all these large-scale projects abroad, the social dimension (i.e., "projected citizens" for those new cities) remains a question. If Dubai, with its expatriate majority, exhibits a cultural cosmopolitanism, for the projects developed abroad, multiculturalism of the planned cities also seems to be taken into account. As part of the Vision 2010 program, Emaar's acquisition of Singapore-based education provider Raffles Campus is a prime example. To provide educational institutions in its development projects in Dubai and abroad, Emaar attempts with this acquisition to solve the complexities of the multi-cultural nature of their projects: "The world is becoming a smaller place, with global citizenship on the rise. The opportunity to live in a different country and culture will allow our students and teachers to develop a global outlook and be better equipped to meet the challenges of the modern world."[29]

Among all the projects, the crucial question seems to be whether the Dubai Effect Archipelago marks a territorial reconfiguration of globalization as it relates to urbanism and development. If "exceptionality" is argued as the main prerequisite for neoliberal urbanization and large-scale development projects by most theorists,[30] by replicating and reconfiguring its clusters and free zones into various "full-spectrum city" models, Dubai is generating "exceptionalities" within a transnational context. With their separate laws and regulations, these "exceptional zones" act as the culmination of a clever symbiosis between the iconographic branding and the infrastructural realm of urban development. As the autonomous character of the Dubai clusters is often discussed as offering flexible land-use regulation, urban form, and legislation in Dubai itself, it should be added that this new model also allows for easy adaptations into new global locales, strategic cooperation with local government agencies around the world, and varied (infrastructural and iconographic) combinations of "full-package" urban development when needed.

## THE DUBAI EFFECT: BIG RECONSIDERED

> The amount of building becomes obscene without a blueprint...Each time you ask yourself, do you have the right to do this much work on this scale if you don't have an opinion about what the world should be like? We really feel that. But is there time for a manifesto? I don't know.
>
> —Rem Koolhaas, "New New City," *New York Times* (June 2008)

What exactly does the Dubai Effect Archipelago suggest for contemporary architecture and urbanism? First is architecture's changing relation to the notion of scale. For more than a decade, with an attempt to analyze and understand our complex urban condition and to develop a repertoire of concepts, research and mapping of the contemporary city have presented an abundance of retroactive manifestos, providing evidence of political and technological imagination.[31] However, rather than exaggerated depictions of emergent phenomena, or an ongoing fascination with the large scale, Dubai Effect Archipelago might portray the necessity to develop new frameworks for

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Architecture and the BIG: Le Corbusier's *Aquitania* collage, Rem Koolhaas's Manhattan skyscraper, and Burj Khalifa in scalar comparison

the notion of scale that are less about extravagance and seduction, and more about the possibility of an alternative project for architectural urbanism.

Second, the Dubai Effect Archipelago may raise provocations regarding the notion of the model. For contemporary architecture and urbanism, the large scale, or the BIG, has been a notion that has paradoxically oscillated between being a *symptom* (of emergent urban realities, as described above with research and mapping attempts) and a *model* (for new architectural and urban organizations). It is beyond the scope of this essay to historicize this oscillation within twentieth-century architecture and urbanism; however, some arguments about the symptom and the model condition of the BIG might be helpful here.

"Bigness or the Problem of Large" (1994), Rem Koolhaas's renowned manifesto for the large scale, was an important provocation for a possible attitude toward the BIG within contemporary architecture and urbanism. As the idea of Bigness set the latent theory for scale, the skyscraper became both the symptom and the model for inventive and clever maneuvers within emergent urban phenomena.[32] Koolhaas's admiration for the skyscraper, and manifestly of the BIG, resonated with Le Corbusier's fascination for the ocean liner, best expressed in his *Aquitania* collages. Corbusier showed a clear

modernist admiration for the large scale and technological achievement of the ship, perhaps best expressed by his words below the *Aquitania* collage in *Towards a New Architecture*: "[O]ur masterly constructors of steamships produce palaces in comparison with which cathedrals are tiny things."[33]

Here it is important to note the common premise of the BIG scale—and the celebration of the ship and the skyscraper—for Corbusier and Koolhaas. The significance of both lies not only in their expansive scale but more important, in their provocation for a suggestive template for possible urban architectures: the ship and the skyscraper as floating islands independent of any context. Corbusian intervention was like a ship, a *floating city*, conceived as a hygienic separation from the existing urban fabric, in opposition to the unsanitary traditional city. In this vertical garden city, buildings would float on nature, and via urban parks, the ground plane would be liberated for public use. In his book *The Radiant City*, a caption below the cross-section of the *Aquitania* makes evident the direct relationship of the ocean-liner to the proposed urban model, whose functions is to be separated (i.e., housing, recreation, transportation, work). Corbusier writes: "Inside this floating city where all ought to be confusion and chaos, everything functions, on the contrary, with amazing discipline. [M]ain services...are all separately located. Why should a city apartment house not attempt to provide us with the same comfort as a ship?"[34]

Koolhaasian intervention, on the other hand, was like a skyscraper, again a floating island/city, conceived as the hedonistic and zipped replication of the metropolitan culture (i.e., the absurdities of the private domain and its unconventional programmatic and social encounters) detached from the urban tissue yet belonged to the larger metropolitan grid infrastructure. If, for Koolhaas, Manhattan was "a dry archipelago of blocks...[where]...each block is now alone like an island, fundamentally on its own,"[35] (as elaborated in his retroactive manifesto for Manhattan, *Delirious New York*) then, beyond a certain scale, architecture would take the inventiveness of the autonomous skyscraper: independence of context, layering in section for self-sufficient programming, and generic form separating itself from function—all of which would inform a new infrastructural urbanism: "Bigness, through its very independence of context, is the one architecture that can survive...[I]t gravitates opportunistically to locations of maximum infrastructural promise."[36] In parallel, with its clear and necessary replacement of the postwar "contextualisms" and its intricate emphasis on scale, various interpretations of infrastructure urbanisms saw design and infrastructure in a symbiotic relationship. Ultimately, infrastructure became the context itself where operative forces and networks that make the city were emphasized and enacted.[37]

However, as elaborated with the *globally floating islands* of the Dubai Effect Archipelago—in which various combinations of existing clustering models are exported within a transnational scale to provide the "full-spectrum city"—infrastructure is not always a contextual ground. That is, the large-scale urban architectures come at the same time or sometimes even before the infrastructure, where infrastructure might result from the extension of the design intervention. Thus, in these conditions, rather than reacting to a predefined context, designers might be bound

to redefine and shape their contexts. This condition not only marks the shifting role of infrastructure in design but also puts pressure on the agency of the architect within a much wider contextual scale. In parallel, while aesthetic and political questions come up front, design decisions cannot be simplified to mere architectural fascination with the extravagance of the BIG or reduced to an innocent extension of external realities. If the Bilbao Effect marked the questioning of the iconographic/self-referential landmark and the role of the architect in our contemporary culture, perhaps the Dubai Effect points a deeper shift for the architect. After a decade of mapping emerging phenomena of the city (the horizontal BIG) on one hand and monumental/expressionist iconography (the vertical BIG) on the other, new disciplinary positions toward the large scale are crucial for architecture and urbanism.

**Notes**

1 Rem Koolhaas begins his retroactive manifesto for Manhattan by writing that the "fatal weakness of the manifestoes is their lack of evidence." See Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan* (New York: Oxford University Press, 1978). Also see Rem Koolhaas et al., *Mutations* (Bordeaux: Arc en rêve centre d'architecture, Barcelona: ACTAR, 2000) and Sanford Kwinter, "Politics and Pastoralism," *Assemblage 27* (1995): 25–32.

2 If we map the evolution of the port-city relationships in history, the story is a one that starts with the port and city being composite parts of a whole (one thinks of the ideal port-city depictions in the sixteenth century) to a complete disjunction especially after the 1960s, and back again to a complete integration effort after 1990s. In the context of the contemporary reintegration discussions of the port and the city, the Dubai model offers a unique urban form via the physical proximity of its port, clusters, and free zones. For a history of city-port relationships, see Josef W. Konvitz, *Cities and the Sea: Port City Planning in Early Modern Europe* (Baltimore and London: Johns Hopkins University Press, 1978); Han Meyer, *City and Port: Urban Planning as a Cultural Venture in London, Barcelona, New York, and Rotterdam* (Utrecht: International Books, 1999); for a review of port-city waterfront relationships, see Brian Hoyle, "Global and Local Change on the Port-City Waterfront," *Geographical Review* 90:3 (July 2000): 395–417; for a specific study on the Dubai Jebel Ali Port, see Wouter Jacobs and Peter V. Hall, "What Conditions Supply Chain Strategies of Ports? The Case of Dubai," *GeoJournal* 68 (2007): 327–342.

3 See "The Dubai Model: An Outline of Key Components of the Development Process in Dubai," *Working Paper No. 12* (October 2007), Centre for Contemporary Middle East Studies, University of Southern Denmark, http://www.sdu.dk/~/media/246A1730F5C34E2893FC512BF694E28F.ashx; "Public-Private Ties and Their Contribution to Development: The Case of Dubai," *Middle Eastern Studies* 4:43 (July 2007): 557–577.

4 For discussions on the "Bilbao Effect," see A. M. Guasch and J. Zulaika, eds., *Learning from the Bilbao Guggenheim* (Reno: Center for Basque Studies, 2005); and G. C. Santamaria, *Bilbao: Basque Pathways to Globalization* (Oxford: Elsevier, 2007). To promote Bilbao as a new cultural and business center, the Guggenheim Museum was one of two major landmarks in a waterfront development project that also included the construction of 80,000 square meters of office space, a 27,000-square-meter shopping center, a luxury hotel, university facilities, and 800 housing units, and 122,000 square meters of green space. See Frank Moulaert, Arantxa Rodriguez, and Erik Swyngedouw, "Neoliberal Urbanization in Europe: Large-Scale Urban Development Projects and the New Urban Policy," *Antipode* 3 (July 2002), 542–582. For more on the Bilbao Effect and the relationship between urban development and museums, see C. Hamnett and N. Shoval, "Museums as Flagships of Urban Development," in *Cities and Visitors: Regulating People, Markets, and City Space*, edited by L. M. Hoffman, D. Judd, and S. S. Fainstein (Oxford: Blackwell, 2003), 219–236. Among references to the relationship between the Bilbao Effect, architecture, spectacle, and branding are: D. Medina Lasansky and Brian McLaren, eds., *Architecture and Tourism: Perception, Performance, and Place* (Oxford and New York: Berg, 2004); Joan Ockman and Salomon Frausto, *Architourism: Authentic, Escapist, Exotic, Spectacular* (Prestel, 2005); A. Klingman, *Brandscapes: Architects in the Experience Economy* (Cambridge, MA: MIT Press, 2007); Anthony Vidler, *Architecture Between Spectacle and Use* (Williamstown, MA: Sterling and Francine Clark Institute, 2008).

5 "In sum, large-scale urban development projects are the mechanisms *par excellence* through which globalization becomes urbanized." Frank Moulaert, Arantxa Rodriguez, and Erik Swyngedouw, eds., *The Globalized City: Economic Restructuring and Social Polarization in European Cities* (New York: Oxford University Press, 2003), 3.

6 Joan Ockman, "New Politics of the Spectacle: 'Bilbao' and the Global Imagination," in *Architecture and*

*Tourism: Perception, Performance and Place*, edited by D. Medina Lasansky and Brian McLaren (Oxford, New York: Berg, 2004), 235.

7 "Mayor Topbas: 'This Tender is the Expression of Turkey's Stability and Istanbul's Opening-up to the World," *Istanbul Municipality News*, March 23, 2007, < http://www.ibb.gov.tr/IBB/Popup/en-US/PrinterFriendlyHaberler.aspx?CultureId=en-US&HaberId=1065> (March 25, 2007). In 2007, a large tract of public land was sold to Sama Dubai by the Turkish Government via a controversial public auction that attracted much local criticism and lawsuits. Sama Dubai could not pay the necessary amounts by 2010 and the land has recently been transferred back to the Turkish Government.

8 In 2002, the Ruler of Dubai announced that freehold ownership of certain designated areas within Dubai would be available to all nationalities. However, no laws or regulations reflecting permitted foreign ownership of the relevant designated areas were enacted in Dubai until 2006.

9 Lieven De Cautier, "The Capsule and the Network: Preliminary Notes for a General Theory" *Oase* 54 (2001): 122–134; Keller Easterling, *Enduring Innocence: Global Architecture and Its Political Masquerades* (Cambridge, MA: MIT Press, 2005), 1.

10 Sven Lutticken, "Parklife," *New Left Review 10* (July/August 2001): 111–118. For an analysis of contemporary island conditions as utopias, see Stephen Coates and Alex Stetter, eds., *Impossible Worlds* (Basel, Boston: Birkhäuser, 2000); and Anselm Franke, Rafi Segal, Eyal Weizman, eds., *Territories: Islands, Camps, and Other States of Utopia* (Cologne: Verlag der Buchhandlung Konig, 2003).

11 "TECOM and Sama Dubai to Jointly Create 'Smart City' Clusters Worldwide," *Sama Dubai News*, March 20 2007,<http://www.sama-dubai.com/news/070320A.asp> (retrieved on March 27, 2007). For details on the project, see: www.smartcity.ae.

12 Smart City@Malta project opened its initial buildings in 2010 and will be fully completed in 2021.

13 For an interview with the prime minister of Malta (Lawrence Gonzi) regarding the Smart City@Malta project, see: Mohammed Ezz Al Deen, "Malta's Dubai-Backed Smart City Will Put Island on IT Map," *Gulf News*, March 30, 2007, http://archive.gulfnews.com/articles/07/03/30/10114645.html (retrieved on April 1, 2007).

14 Vimala Vasan , "Kochi Smart City: DIC Plans Study for Prospective Firms," *Business Line*, September 12, 2005, http://www.thehindubusinessline.com/2005/09/12/stories/2005091200681300.html (retrieved on November 15, 2006). "SmartCity Kochi Go-Ahead," *AME Info*, May 13 2007, http://www.ameinfo.com/119959.html (retrieved on May 17, 2007).

15 The Government of India has granted a single Special Economic Zone (SEZ) status for the 246 acres of project land in December 2011. See the official announcement at the website of Special Economic Zones of India, Ministry of Commerce, <http://www.sezindia.gov.in> (retrieved on December 10, 2012). The Smart City@Kochi is planned to have an 8.8 million square feet of built-up space.

16 "Tecom's Kerala Smart City Project Gets SEZ Status," *Khaleej Times Online*, 21 March 2008, http://www.khaleejtimes.com/DisplayArticle.asp?xfile=/data/business/2008/March/business_March643.xml&section=business (retrieved April 1, 2008).

17 A $709-million contract was already signed by JAFZA's sister company, marine terminal operator DP World, and the Senegal Government to upgrade the Port of Dakar and build a container terminal. The contract for the Dakar Special Economic Zone, on the other hand, was signed in 2008 by JAFZA to develop a free zone of 6.5 million square meters.

18 While JAFZA manages Djibouti Free Zone and Dubai Customs, DP World has invested $30 million in the Horizon Djibouti Terminal facility and committed $300 million for a new container port. In addition to infrastructural projects, Nakheel is developing its first overseas development, a five-star hotel at the center of Djibouti City, the capital of Djibouti. For the expansion and redevelopment of the Djibouti port, several Arab financial institutions are also involved: the Arab Fund for Social and Economic Development (AFSED) and funds from Saudi Arabia, Kuwait, and Abu Dhabi. Djibouti also houses the only American military base (Camp Lamonier, previously the military barracks of the French Foreign Legion) in Africa since 2001.

19 "Dubai Projects Stimulate Djibouti Economic Growth," *Gulf News*, April 1, 2006, http://archive.gulfnews.com/articles/06/04/01/10029826.html (retrieved September 12, 2006).

20 Danish consulting engineering group COWI has been commissioned for the giant project. See "Yemen: Africa Bridge," *AME Info*, February 2, 2007 <http://www.ameinfo.com/111352.html> (March 5, 2007). See also the project announcement in Denmark's Ministry of Foreign Affairs news note: "Danish Engineers to Design Giant Bridge over Red Sea," March 13 2008 http://www.investindk.com/visNyhed.asp?artikelID=19277 (retrieved April 2, 2008).

21 The bridge project is on hold since 2010 mainly due to the recent Dubai credit crunch as well as the civil uprisings in Yemen. See the earlier article in *Economist* about the proposed plans regarding Djibouti and Yemen: "The Red Sea: Can It Be Really Bridged?" *Economist* (August 2, 2008): 55–57. Also see: Horand Knaup, "A Vision to Connect Africa and Asia," *Der Spiegel* (August 22, 2008).

22 Theo Notteboom and Jean-Paul Rodrigue, "Re-assesing Port-hinterland Relationships in the Context of Global Commodity Chains," in *Ports, Cities, and Global Supply Chains*, James Wang et al., eds. (London: Ashgate, 2007), 51–66.

23 Jacobs and Hall, "What Conditions Supply Chain Strategies of Ports? The Case of Dubai."

24 [italics added]. "Emaar Showcases International Projects of over AED 220 Billion at Cityscape,"*INR*

*News*, December 2, 2006, http://www.inrnews.com/realestateproperty/middle_east/dubai/emaar_showcases_international.html (retrieved January 16, 2007).

25 The airport has an annual cargo capacity of 12 million tons, more than three times that of Memphis International Airport, and a passenger capacity of more than 120 million.

26 *Aerotropolis* is a term coined by John Kasarda, professor of management at the University of North Carolina's Business School. Greg Lindsay, "The Rise of the Aerotropolis," *Fast Company* 107 (July/August 2006): 76–85; for a detailed discussion on the topic, see John Kasarda, *Airport Cities: Evolution* (London: Insight Media, 2008).

27 Masdar (which means "the source" in Arabic) Eco-City is a 6-square-kilometer zero-pollution, zero-waste city for 100,000 people, designed by Norman Foster. Construction began on Masdar City in 2008 and the first buildings of the city were completed and occupied in October 2010. Full completion is scheduled for 2025. Masdar City will employ various renewable power sources. Solar power plants, wind farms, geothermal energy, solar power plants, solar-powered desalination, gray-water recycling, waste incineration, and sustainable manufacturing are all planned for the project.

28 Fred. A. Bernstein, "Reaching for the Clouds in Dubai," *New York Times* (August 8, 2008).

29 Raffles Campus, which is registered with the Ministry of Education in Singapore, has six educational institutions in Singapore, Vietnam, Indonesia, and China. See "Emaar Acquires Singapore-Based 'Raffles Campus' to Provide World-class Education," http://www.emaar.com/MediaCenter/PressReleases/2006September26.asp; also see http://www.rafflescampus.com/pressrelease1.asp

30 Especially in terms of urban policy making, exceptionality is argued as the main driving force for large-scale urban development projects: "The framework of 'exceptionality' associated with these initiatives favors a more autonomous, if not autocratic, dynamic marked by special plans and projects that relegate statutory norms and procedures to a secondary and subordinated place... 'Exceptionality' is a fundamental feature of the new urban policy, based on the primacy of project-based initiatives over regulatory plans and procedures." Frank Moulaert et al., "Neoliberal Urbanization in Europe: Large-Scale Urban Development Projects and the New Urban Policy," 577. For an interesting reflection on the idea of exception and its relation to neoliberalism and globalization, see Aihwa Hong, *Neoliberalism as Exception: Mutations in Citizenship and Sovereignty* (Durham and London: Duke University Press, 2006).

31 A typical example of the research/mapping attempts would be the documentation of Rem Koolhaas's *Harvard Project on the City*. See Rem Koolhaas et al., eds., *Great Leap Forward* (2002), *Mutations* (2001), and *Harvard Design School Guide to Shopping* (2002), all published by the Harvard Graduate School of Design. Also see Kazys Varnelis, "Is There Research in Studio?" in *Journal of Architectural Education* 61:1 (2007): 11–14.

32 Rem Koolhaas, "Bigness or the Problem of the Large," *Small, Medium, Large, Extra-Large: Office for Metropolitan Architecture*, edited by Jennifer Sigler (Rotterdam: 010 Publishers; New York: Monacelli Press, 1995), 495–516.

33 The quote as it appears below the *Aquitania* collage: "Architects live and move within the narrow limits of academic requirements and in ignorance of new ways of building, and they are quite willing that their conceptions should remain as doves kissing one another. But our daring and masterly constructors of steamships produce palaces in comparison with which cathedrals are tiny things, and they throw them on to the sea. Architecture is stifled by custom." Le Corbusier, *Towards a New Architecture* (New York: Praeger Publishers, 1970).

34 Le Corbusier, *The Radiant City: Elements of a Doctrine of Urbanism To Be Used as the Basis of Our Machine-Age Civilization* (New York, Orion Press, 1967), 118.

35 Koolhaas, *Delirious New York*, 97.

36 Koolhaas, "Bigness or the Problem of the Large," 515.

37 For some of the early theoretical and practical variations of infrastructural urbanisms, see Alex Wall, "Programming the Urban Surface," *Recovering Landscape*, ed. by James Corner (New York: Princeton Architectural Press, 1999), 232–249; and Stan Allen, "Infrastructural Urbanism," in *Points + Lines* (New York: Princeton Architectural Press, 1999), 46–57. Also see Charles Waldheim, *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2006) and Rem Koolhaas, "Urban Operations," *D: Columbia Documents of Architecture and Theory*, vol. 3 (1993): 25–57.