

Anticipating the City That Never Was

The stated position of this session suggests that designers should pursue “innovative solutions ... for [the] inevitable waste to come” from economic production.¹ While I fundamentally agree with this position, I would like to take the opportunity to advance this notion a step further in order to suggest that designers should look not just to anticipate waste but also to begin anticipating the inevitable failure of

anthropogenic settlement altogether. To be clear, this is not a radical, dystopian proposition interested in a kind of postapocalyptic Blade Runner idea of urbanism. Rather, this essay is interested in the capacity of design to more actively concern itself with the inevitable interruptions, inflections, and, ultimately, “failures” that emerge from changing social, market, and political demands, as well as the need for course correction, which materializes over the extended timescale required for the delivery of territorial-scale urbanization.

This position is predicated on the notion that urbanization—the constructing of anthropogenic settlement—has become a globally recognized means of economic production.² The point of departure for this essay is the empirical evidence suggested by the recent proliferation of “ghost” settlements and infrastructures that have appeared as a result of economic growth policies that encourage speculative urban development in both established and emerging economies. While there is little question that political and economic policies are primarily responsible for the speculative development seen globally that is a root cause of what I refer to here as *The City That Never Was* phenomenon, I would also argue that the physical planning and design solutions that companion these policies are equally complicit in increasing the likelihood of failure and, thus, the social, economic, and ecological gravity of the situation.

The presumption of continuous market expansion together with the perceived successes of peer metropolitan initiatives have created an environment globally where replicable, prepackaged formats of urbanization (SEZs, casinos, expos, airports, super-talls, waterfronts, etc.) are sold as instruments of expedient access to limitless economic opportunity.³ As such,

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The City That Never Was has emerged from a set of increasingly generic urbanistic strategies that presume that the continuous construction of new edifices and infrastructures will serve to attract additional investment and thereby prosperity. When this model is successful, it is the envy of governors, mayors, developers, planners, and designers alike. When it fails, it is no less spectacular.

For the purposes of this argument, this paper will consider the vast and numerous landscapes of incomplete and unoccupied contemporary urban development, leisure amenities, and white-elephant infrastructure that lie abandoned or dormant outside the metropolitan extents of established Spanish cities such as Madrid, Barcelona, Valencia, and Seville.

THE SITUATION AT HAND

Following the success of the Barcelona Olympics and the Seville Expo in 1992, Spain experienced an unprecedented expansion of its urbanized territories. Between 2004 and 2008 alone, more than 2.4 million new residences were constructed across the country, with current estimates of more than half of those continuing to remain unoccupied.⁴ Spain built more than 5,000 km of new highway in the past two decades, leaving the country with the fourth-longest highway system in the world behind only the continental networks of the United States, China, and Canada.⁵ Of Spain's 50(!) international airports, 15 of them qualify economically as ghost airports based on annual passenger numbers, with the privately financed Aeropuerto de Ciudad Real perhaps the most conspicuous with zero commercial flights currently scheduled despite an investment of 1.1 billion euros.⁶ Spain has constructed more than 2,600 km of high-speed rail track, ranking behind only China in terms of total length, with plans to have

Figure 1: Ciudad Valdeluz, Guadalajara: a new town 60 km from Madrid planned for 30,000 residents. At present, fewer than 2,500 people live there. (Photo source: Vecinos de Valdeluz.)

doubled this length by 2015.⁷ Comunidad de Madrid alone built 65 km of new metro between 1990 and 1999 and another 118 km between 2000 and 2011, creating the eighth-longest metro system in the world despite being only the fiftieth-most populous metropolitan area.⁸ This infrastructural investment was accompanied by the construction of innumerable cultural and civic facilities throughout the country, including infamous white elephants such as Peter Eisenman's Galicia City of Culture and Santiago Calatrava's City of Arts and Sciences in Valencia.

The quality, scope, and extent of the construction undertaken in Spain were nothing short of delirious, seeming to have more in common with emerging Asian economies than Spain's own continental neighbors. The Spanish urban growth model was frequently held up as an exemplar of contemporary urbanization, in terms of both the quality of its physical form and its own particular economic strategy. The 2006 exhibition at the Museum of Modern Art in New York entitled *On Site: New Architecture in Spain* cemented the country as a global hotbed of innovative, high-quality urbanistic planning and design, despite the show's now-glaring absence of prescience regarding the impending economic and urbanistic crisis.⁹

A number of political considerations should be understood as setting the stage for the intensity and extent of this urbanization. These factors include the rapid expansion of Spain's economy following the country joining the European Economic Community (EEC) in 1986; the significant external capital pumped into Spain—first from the EEC and then from the European Union (EU)—in order to modernize the country's agricultural and infrastructural systems, allowing for full integration into the European community; the perceived success of the Barcelona Olympics and the Seville Expo as replicable models of urban regeneration and growth; the post-Franco constitutional structure of Spain's 17 *comunidades* (states), which have wide legislative and executive autonomy that often leads to internal competition and redundancy of urban initiatives within the country; and two legislative acts (the first in 1998, the second in 2002) that, respectively, loosened land use and development restrictions and liberalized labor policies throughout the country.¹⁰ The Land Law of 1998, in particular, served to catalyze development in Spain to such an extent that only areas of noteworthy ecological preserve were excluded from consideration for new settlement. At the same time, the arrival of the euro in 2002 dramatically reduced mortgage interest rates from 11% in 1995 to 3.5% in 2003, rapidly accelerating the rate of speculative urbanization.¹¹

Over the first decade of the twenty-first century, these aspects led to an unsustainable overprivileging of the construction sector within the Spanish economy as compared with other Western countries.¹² Spain had initiated a federal urban growth model that promoted the relentless, speculative urbanization of previously agricultural landscapes as a primary driver of the country's overall economy. This reliance on construction increased Spain's exposure to the aftershocks of the 2008 Lehman Brothers collapse and the ensuing tightening of the global credit market. In addition, the 2005 decision to reduce the amount of structural funding Spain received from the





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Figure 2: M-203 Toll Motorway, Madrid: a network of toll motorways was designed around Madrid parallel to the public freeways to alleviate traffic congestion. Motorway M-203 never opened. (Photo source: Ricardo Espinosa.)

EU beginning in 2007 further set the stage for the bust of the construction sector of the country's economy.¹³

The 2008 global economic downturn exposed Spain's particular urban growth model as an egregious and dramatic example of contemporary settlement being driven almost exclusively by widespread real estate speculation, both public and private. In this context, urban development was rendered an instrument of economic and political power, deployed to artificially generate wealth and labor demands (reduced unemployment) with little impact on the overall productivity of the country's broader economy.¹⁴ The result is a delirious landscape of incomplete, empty, or abandoned edifices; redundant, overscaled mobility infrastructures; and numerous sparsely populated leisure amenities that are etched into the previously agricultural territories surrounding the country's established urban centers. In addition to this physical accumulation, there exists a corresponding population of underwater mortgage holders and unemployed laborers, who were both once envisioned to build and occupy this city that never was.¹⁵ What makes this state of affairs all the more remarkable is that the vast majority of these incomplete and abandoned projects often lie well beyond what has commonly been considered the metropolitan limits of established Spanish cities (often 60 km or more), leaving them without any population or economic activity by which to logically occupy and support them.

What exacerbated the situation in Spain is that the real estate bubble with which we are all now familiar was accompanied by a construction bubble that, at its peak in 2005, saw nearly 45 percent of all new residential construction and 16% of all construction in the Euro Zone accounted for by Spain alone.¹⁶ The most dramatic examples of this development were concentrated around the periphery of Madrid, the seat of financial and political power in the country, as well as along the Mediterranean coast, the primary destination for northern European tourist populations and their associated investment capital.

The myriad challenges that have resulted from Spain's failed urban growth model are well documented. As such, this essay is not interested in relitigating the economic merits or political impacts of the policies that drove this speculative urbanization. Rather, the intent of the essay is to employ the current circumstances in Spain as a lens through which to reconsider and critique a set of broad conventions common to the financing, planning, and design of contemporary urbanization and settlement.

Within this trajectory of investigation, what is perhaps the most compelling characteristic of the urbanistic situation in Spain is that it is not really an example of a "post" condition (i.e., postindustrial) but rather an extant circumstance that mirrors the current narrative about how global cities should look to grow. Spain, in general, and Madrid, specifically, have checked all of the boxes the dominant contemporary discourse of urban design and planning says need to be considered in order to be globally competitive: expansion of mobility systems, densification of populations, intensification of program, introduction of civic amenities, and broad "greening" of the urban



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fabric. Yet, the resulting spatial products have still been met with widespread failure.


This provokes a fundamental question: Are the urbanistic failures in Spain solely the result of political miscalculations in combination with economic breakdowns elsewhere globally? Or, as was suggested above, has design been complicit in this systemic failure because of its unwillingness to challenge the demands of potential clients or its overreliance on the widely accepted expedient models of urbanization upon which these projects rely?

A RECURRENT PHENOMENON

Today, more than 25% of urbanized lands in and around Madrid are composed of partially vacant or incomplete recent urban developments, often catalyzed by equally recent overscaled and underused mobility infrastructures.¹⁷ However, this speculative model of urban settlement is not a phenomenon distinct to Spain. Rather, Spain is simply the most dramatic and pervasive example of failure of the phenomenon yet to emerge as of the summer of 2012.

Historical examples of this sort of speculation include the Los Angeles real estate boom of 1887 and the south Florida boom of the 1920s, which were both characterized by a land rush based upon a real estate market created through the opening up of a new or exotic *landscape*.¹⁸ However, unlike the situation in Spain, these instances remained local in their concentration. Though the circumstances of both were covered at the time by newspapers throughout the country, the individual cases were a function of their particular geographic location and not the result of a larger policy decision at the state or federal level.

Figure 3: More than 25% of urbanized lands in and around Madrid are composed of partially vacant or incomplete urban development, here shown in pink. (Map courtesy of author.)



Today in the United States, these speculative settlements are often associated with the phenomenon of sprawl, with the Sun Belt region of the country demonstrating the highest rate of speculative construction and subsequently vacancy in the first decade of the twenty-first century. For example, according to U.S. Census Bureau data, more than 167,000 homes in Nevada were considered vacant (approx. 14% of all homes in the state) as of 2010.¹⁹ Gross vacancy rates in California, Florida, and Arizona also nearly doubled between 2000 (the beginning of the most recent bubble) and 2009 (the year following the collapse of the housing market).²⁰ Yet this speculative development was not limited to the suburban periphery or the Sun Belt. The real estate markets in northern urban centers such as New York and Chicago were also radically inflated with the construction of new condos and civic amenities, resulting in a surplus of vacant or incomplete development.

A variety of factors contributed to this most recent case of real estate speculation in the United States, including relaxed lending standards, historically low interest rates, tax subsidies, and, perhaps most importantly, the belief on the part of politicians, banks, developers, and homeowners that real estate values would always go up. Yale economist Robert Shiller points out that the United States' real estate boom of the 2000s—which paralleled the boom in Spain—appears larger than any that has come before it.²¹ Shiller suggests that unlike previous speculative bubbles, which were limited to a particular region of the country or state, the 2000–2008 bubble was widespread throughout the United States, demonstrating what Shiller describes elsewhere as an “irrational exuberance” created by a kind of contagion or herd behavior rooted in the perception of an economic condition rather than a measurable reality.²² In addition to Spain and the United States, Ireland experienced a similar speculation-induced real estate bubble over the first decade of the twenty-first century, resulting in detrimental effects on its economy.²³ Clearly, this “irrational exuberance” is a function of economic and urban policy interfacing with the market that emerges from these policies. And, notably, design's role in this market can be characterized as supporting the widespread proliferation of these new settlements and thus reinforcing the “exuberance.”

In regard to these most recent real estate bubbles, social theorist David Harvey has suggested that “today's economic crisis is an urban crisis,” rightly noting that “if the dynamics of urbanization go bad, then the economy goes bad.” He points out that following an economic crisis, a capitalist economy historically demonstrates a need to bring surplus capital and surplus labor together, and one of the easiest ways of doing that is through urbanization. Harvey suggests that since 1945, the United States has grown its economy “by building houses and filling them with things,” allowing for surplus capital to be absorbed through the construction of primarily suburban spatial products. Curiously, though he demonizes the suburban results of this investment, he simultaneously advocates this sort of investment of capital into the “city.” Tellingly, however, he also warns that an act of “urbanization helps you get out of a crisis by defining what the next crisis will look like.” That is, inducing significant investment in the built environment as a

way to grow an economy will likely generate a new real estate bubble as a result²⁴—which brings us to what many are projecting to be the next wave of bubbles and ghosted settlements: the ongoing speculative urbanization in China, the Middle East, and parts of Africa.

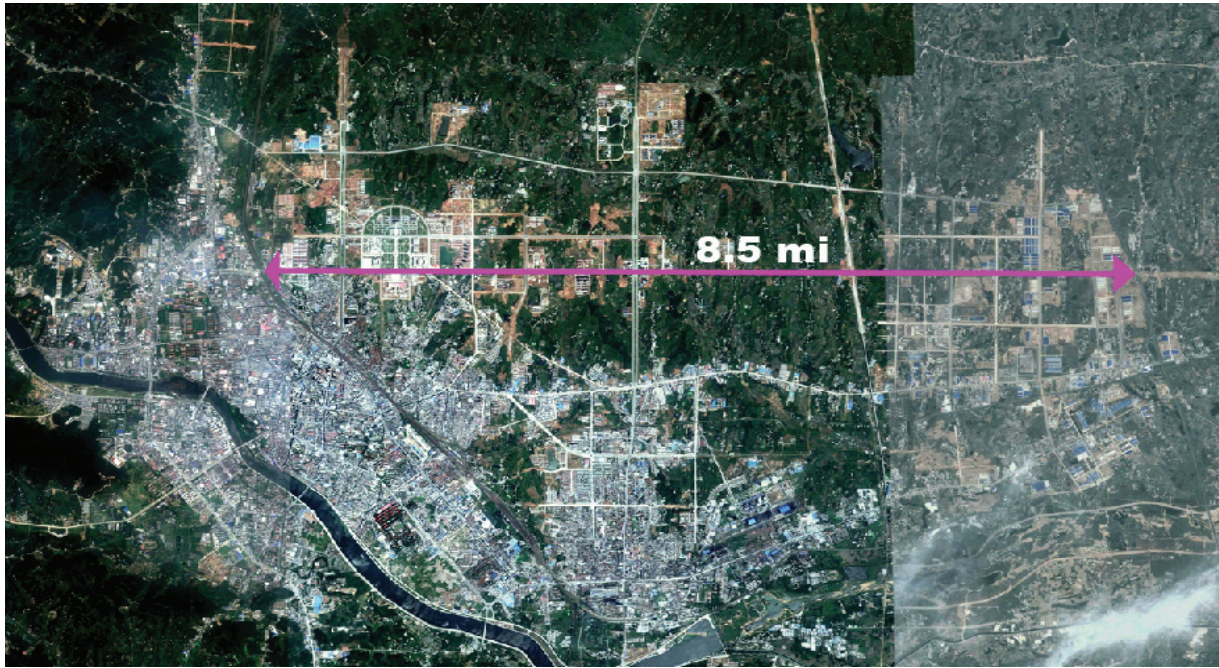
In comparison to Spain, whose percentage of GDP devoted to construction peaked at 16% in 2007, conservative estimates of the same measure in China are somewhere between 20% and 25%.²⁵ This equates to an urbanization rate of 2.3%. In comparison, the average rate of urbanization in the United States is 1.2%, with a corresponding segment of GDP at roughly 4%.²⁶

Kangbashi/Ordos, Inner Mongolia, is perhaps the most well-known ghost settlement in China, particularly within design circles, thanks to Ai Wei Wei and Herzon/DeMeuron's *Ordos 100* project. Yet Kangbashi appears to be only the tip of the iceberg. With the Chinese government planning to build 20 new cities per year for the next 20 years, examples of incomplete and unoccupied urbanization can be found throughout the country.²⁷ In fact, some estimates suggest that there are already as many as 64 million housing units sitting empty in China as of 2012.²⁸

Of course, the salacious Western media stories of ghost towns in China must be taken with a grain of salt. In cases such as the Zhengzhou Central Business District in Henan province, what was once reported to be a ghosted metropolitan district as little as 18 months ago has more recently been showing signs of occupation and activity. In fact, many defenders of the Chinese urban growth model argue that these new urban settlements should not be considered as complete but understood as being in process. That is, they are being built in anticipation of a rural population migrating toward cities in the middle and west of the country from China's hinterland, as well as from established conurbations, at a projected rate of 15–20 million people per year.²⁹

This point is critical to note in that urbanization in China over the past 30 years has occurred primarily in the East, particularly along the coast, in established cities such as Beijing, Shanghai, Shenzhen, Guangzhou, and Hangzhou, where you can easily find examples of unoccupied or ghosted development despite these cities' demonstrated economic significance. However, more recently, China has begun to develop new cities from smaller existing towns and villages in the interior of the country, particularly within the western and southern provinces. These include places such as Chenggong, a satellite city near Kunming; the expansions of Bayun Nur and Ernhot in Inner Mongolia; development at the periphery Changsha in Hunan province; and a massive unnamed satellite city northeast of Xinyang in Henan province.³⁰

Government or university programs often anchor these new settlements, ostensibly to initiate their occupancy through a devoted population. Yet despite the projected influx of rural populations and the institutional anchoring, there are still questions regarding the viability of these new settlements. In particular, some economists argue that individual local



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governments are primarily responsible for this new construction because these mayors are under pressure to continue to achieve a high GDP in addition to having strong incentive politically to invest in urban development projects of this sort.³¹

The Chinese government's belief in the potentials of urbanization as an instrument of economic production is not limited to its own national territory. State-owned corporations are also responsible for the recently constructed Nova Cidade de Kilamba in Angola, Africa. Built for 500,000 people, the city has fewer than a few hundred inhabitants, mostly Chinese workers employed in building the city.³² And like many of the ghost settlements found in China, the cost of a basic unit of housing in this new development is well out of reach of the everyday citizen, bringing into question the ultimate intention of this pervasive urbanization.

Obviously, the political and economic particulars of each of these examples vary, but each shares the common trait of economic and urban policy inducing a speculative expansion of anthropogenic settlement predicated on the assumed generation of wealth through an increase in land and real estate values. While the specific mechanisms of these economic and political transactions fall outside of the disciplinary domain of design, the repetitive, standardized formats by which this future settlement is conceived and organized does not. As was noted above, this essay is not interested in entering into a critique of the effects of capitalism on urban form. Rather, it looks to use the realities and limitations of this dominant economic model to reflect upon the possibilities of alternative formats of anthropogenic settlement that have the capacity to respond to changing external pressures or priorities that emerge over the extended time threshold of implementation associated with urban development of this scale.

Figure 4: Massive unnamed satellite development northeast of Xinyang in Henan province. (Source: Google Earth/author.)

The City That Never Was is a recurring phenomenon regardless of geographic location, maturation of economy, or sophistication of urban form. The question at hand is not whether this kind of speculative development will continue to occur or will again fail but rather where the next bubble will burst. As such, the particular circumstances found in Spain and elsewhere suggest an opportunity (or perhaps demand a need) to fundamentally reconsider how we as planners and designers— not to mention politicians, policy makers, and financiers—conceive of and deploy future expansions of large-scale urban settlement.

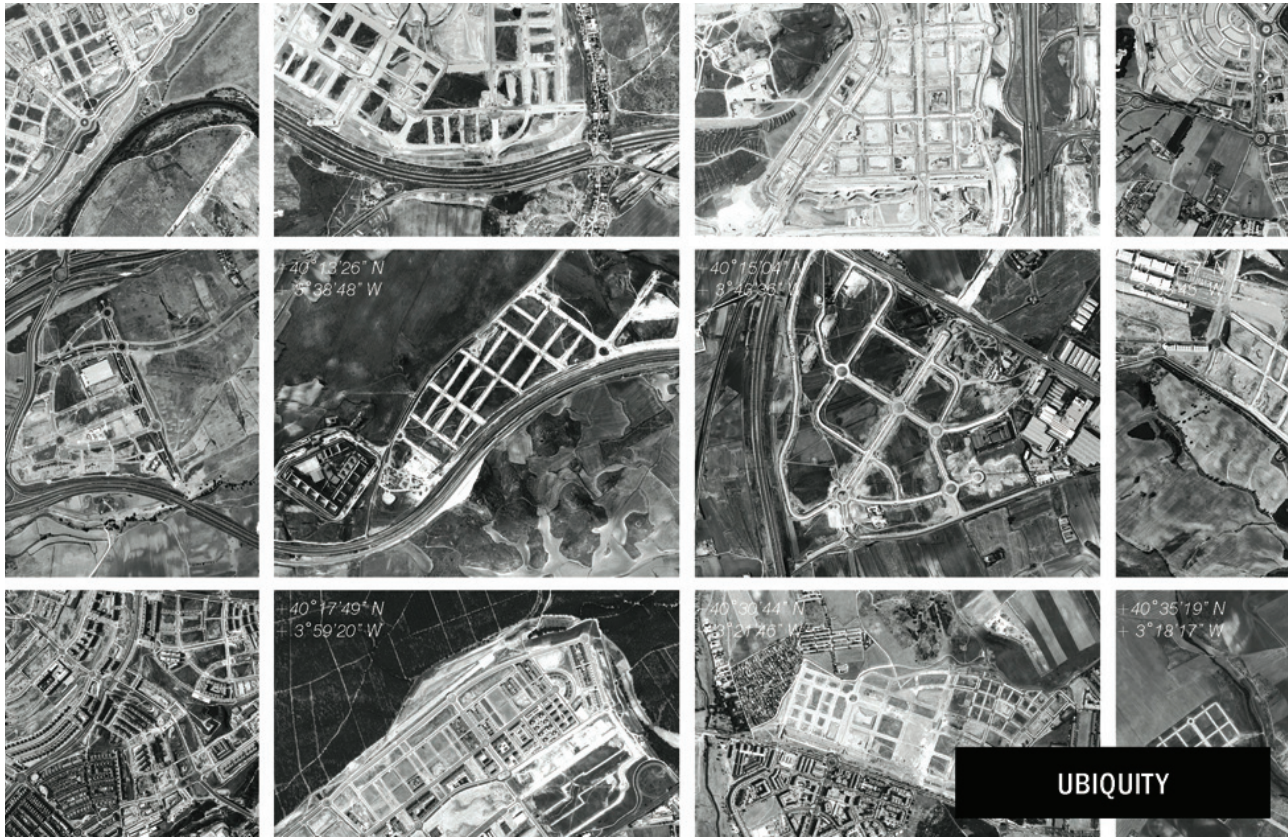
NEW POSSIBILITIES

The City That Never Was phenomenon introduces a fundamental question related to the weight and permanence of future urbanization, that is, the challenge of imagining entirely new formats of settlement that demonstrate such unexpected characteristics, such as lightness, multiplicity, productivity, suppleness, dormancy, nomadism, or periodicity. While a single solution to such a question is both impossible and undesirable, I would like to introduce four lenses that can shape potential responses to the question of early twenty-first-century settlement: *agility*, *entropy*, *utility*, and *fertility*.

Agility: The accelerated rate of global capital over the past two and a half decades is a major contributor to the emergence of *The City That Never Was* phenomenon. The frenetic pace of this transactional economy is exacerbated by the weight of the physical manifestation of its accumulation: urbanization. The sense of immediacy that has companioned this exchange of capital has induced the widespread importation and deployment of repetitive urban development plans, often marketed as infallible recipes for economic and metropolitan success. Unfortunately, these plans are rarely calibrated to the realities of a particular social, economic, or ecological context, rendering them incapable of responding to the changing social priorities, market realities, or political demands that inevitably emerge over the course of their implementation.

It is this presumption of inevitable growth—a kind of speculation-driven momentum—that seems to preclude the ability of a proposal for new settlement to change course once an urbanistic trajectory has been initiated. As an alternative, one might imagine contrasting these fixed formats of instant settlement with the possibility of a more agile urbanism that gives the unexpected a chance. This mode of operation would be characterized by adaptive, nimble systems of urbanization that leverage the delay between the hidden potentials of a specific territory and the emerging demands of a particular circumstance. In this regard, latent relationships—once located and amplified—become unique points of leverage capable of catalyzing unexpected, opportune patterns of settlement and long-term urban affect.

Entropy: Urbanization is, by its very nature, inefficient. Regardless of aspirations otherwise, or attempts at engineering an “optimized” efficiency, urbanization inevitably produces waste, entropy, and disorder. Entropic degradation is an irreversible condition, as is the production of obsolete landscapes. The material accumulation of waste simply cannot be returned to a preurban state.



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UBIQUITY

ENDNOTES

1. ACSA panel description.
2. John M. Quigley, "Urbanization, Agglomeration and Economic Development," in *Urbanization and Growth*, eds. Michaels Spence, Patricia Clark Annez, and Robert M. Buckley (Washington, D.C.: International Bank for Reconstruction and Development/ World Bank, 2009), 115-128.
3. See, for example, Keller Easterling, "Zone: The Spatial Softwares of Extrastatecraft," *Design Observer*, posted June 11, 2012, accessed July 15, 2012, and Paul Romer, "The World's First Charter City," TED website, posted June 2011, accessed August 3, 2012.
4. Stephanie McGovern, "From boom town to ghost town," BBC News online, posted August 27, 2008, accessed January 28, 2012. Duncan Campbell, "Economic crisis: the pain in Spain," *Guardian online*, posted December 3, 2011, accessed January 28, 2012.
5. Eurostat online, accessed January 31, 2012. CIA World Factbook online, accessed January 31, 2012.

Figure 5: Incomplete and abandoned developments in the Madrid metropolitan area. (Google Earth compilation courtesy of author.)

Waste is, however, a subjective evaluation. The collateral by-products of urbanization have the capacity to become new resources or commodities by means of reorienting one's approach to the planning and design of new settlement. This notion of waste as a commodity or resource is not about recycling per se or a sense of environmental stewardship that suggests a kind of naive earnestness. Rather, it is about an acknowledgement and acceptance that urbanization is a destructive act. The capacity of what follows these acts of destruction appears to be a question pregnant with possibilities. In particular, one can imagine an urban landscape conceived of as emergent from waste rather than in conflict with it. As the theme of this panel implies, serious work should be undertaken in consideration of the inventive future potentials of anthropogenic waste landscapes.

Utility: The phenomenon of *The City That Never Was* becomes apparent at any point where the ground has been manipulated to accommodate the basic services upon which urbanization relies (sanitation, water, mobility, energy, etc.). In fact, economic growth—and thereby urban growth—is typically predicated on the deployment of these systems as the catalyst of future expansion. Yet despite this fundamental role, the basic physical form and subsequent settlement organized by these utilities have remained ostensibly unchanged for the better part of a century.

Politically charged and socio-impactful, these services with their corresponding facilities and networks are often considered simply a given of urbanization. Moreover, the enormous physical weight and economic cost of urban infrastructure have cast the potential modification or manipulation of these systems as too great a risk. Yet the redundant, overscaled, underused infrastructures that crisscross Spain (and China, for that matter) suggest that investment in these familiar metropolitan utilities alone does not provide any guarantee of economic or urbanistic success.

Given the inevitability of speculative urbanization, I would offer that it is worth recasting these essential utilities in one of two ways: (1) in an incremental, or "light," form, where failure or obsolescence is anticipated, or (2) as something capable of being synthesized with other systems in order to produce a greater repertoire and wider range of affect. In both cases, the familiar formats of settlement that have emerged from the morphology and organization of these utilities are discarded in favor of new opportunities for urbanistic organization.

Fertility: The discussion of environmental and ecological concerns seemingly permeates the discourse surrounding contemporary planning and design. Yet these concerns are most often oriented toward limiting the environmental impact of new settlement or remediating an already impacted situation. Unfortunately, this responsive approach misses the projective capacity for the logics of ecology and environment to become primary drivers and organizers of new settlement.

Understanding landscape as a passive response to urbanization is a reductionist approach to land occupation. On the contrary, ecological principles have the capacity to become the fertile substratum of new urban form. As

6. Grupo AENA website, accessed January 31, 2012.
7. "Los Reyes inaugurarán el AVE a Valencia, y los Príncipes la conexión a Albacete," EuropaPress online, posted October 12, 2010, accessed February 2, 2012. Tim Sheehan, "Spain's high-speed rail system offers lessons for California," *Fresno Bee*, posted January 15, 2012, accessed February 2, 2012.
8. MetroMadrid website, accessed February 5, 2012.
9. See *Contemporary Architecture in Spain: Shaking Off the Dust* (Riley, T., 2006).
10. Spain's real estate "bubble" was precipitated by legislation including the Land Act of 1998 and the labor market reform of 2002, which liberalized both financing and construction hiring (Girardini, L., and Morandini, S., 2011).
11. Bank of Spain via "Spanish house prices in freefall, amidst struggling economy," *Global Property Guide*, posted September 11, 2012, accessed September 12, 2012.
12. In 2007, the percentage of Spain's GDP devoted to the construction sector (construction + buildings + civil engineering) reached approx. 16%. Source: Eurostat via Instituto Nacional de Estadística, accessed August 24, 2012.
13. This reduction was due to Spain's above-EU-average economic growth and the fact that the GDP per capita gap with the rest of the EU had been closed (Santander Investment Bolsa, European Equity Research—Spain/Macro Strategy, December 19, 2005), accessed January 25, 2012.
14. Juan S. Mora-Sanguinetti and Andrés Fuentes, "An Analysis of Productivity Performance in Spain Before and During the Crisis: Exploring the Role of Institutions," Organisation for Economic Co-operation and Development, July 30, 2012.
15. 5.6 million immigrants are estimated to have entered Spain between 1998 and 2009 (De la Dehesa, G., 2009).
16. Erich Gluch, "The European Construction Market 1990-2009," *Euroconstruct*, May-June 2007, 23-25.
17. Vacancy percentage surrounding Madrid sourced from mapping exercise developed by students in Penn's LARP 702 studio in spring 2012.
18. See Joseph Netz, "The Great Los Angeles Real Estate Boom of 1887," *Annual Publication of the Historical Society of Southern California*, Vol. 10, No. 1/2 (1915-1916), 54-68, and Eugene N. White, "Lessons from the Great American Real Estate Boom and Bust of the 1920s," *National Bureau of Economic Research, NBER Working Paper No. 15573* (issued December 2009).
19. "U.S. Census Homeowner Vacancy Rates," U.S. Census Bureau website, accessed August 24, 2012.
20. Note: Gross vacancy rate is the percentage of the total housing inventory that is vacant. The rate is computed with the formula (all vacant units/all housing units (occupied + vacant)) * (100). "Gross Vacancy Rates, by State: 2005 to 2011," U.S. Census Bureau website, accessed August 24, 2012.
21. Robert J. Shiller, "Historic Turning Points in Real Estate," in *Eastern Economics Journal*, No. 34 (2008).
22. Robert J. Shiller, *Irrational Exuberance*, (Princeton, N.J.: Princeton University Press, 2000).

23. See Michael Lewis, "When Irish Eyes Are Crying," *Vanity Fair*, posted March 2011, accessed July 26, 2012.
24. David Harvey interview, *The Guardian*, posted May 28, 2012, accessed June 15, 2012.
25. Determining the exact segment of China's GDP devoted to construction has proven difficult and varies by source since this number is included under the "industry" sector, which is much broader than just construction. As such, 20%-22% represents a conservative estimate.
26. U.S. Department of Commerce Bureau of Economic Analysis website, accessed April 20, 2012.
27. "China 2020: The Landscape of Change," in *World Winning Cities Global Foresight Series* (Jones Lang LaSalle, November 2008).
28. Xu Ming, "Beijing district releases official housing vacancy rates," *Market Watch: The Wall Street Journal*, posted August 26, 2010, accessed August 24, 2012.
29. Stephen S. Roach, "China Is Okay," *Project Syndicate*, posted August 29, 2012, accessed September 3, 2012.
30. See Chris Buckley and Simon Rabinovitch, "Special Report: China bets future on inland cities," *Thomson Reuters*, posted August 3, 2010, accessed August 24, 2012, and Gillem Tulloch, "On Site—China: Ghost Cities," *Forensic Asia Limited*, posted December 14, 2010, accessed August 24, 2012.
31. Geoff Dyer, "China: No one home," *The Financial Times*, posted February 21, 2010, accessed August 24, 2012.
32. Samuel Medina, "A Ghost City in Angola, Built by the Chinese," *The Atlantic—Cities*, posted July 17, 2012, accessed August 10, 2012.

such, the precise deployment of constructed ecologies of vegetal, aquatic, and climatic production can generate catalytic urban effects where issues of reforestation, desertification, water scarcity, air quality, heat island, and habitat erosion serve as vehicles for reconceiving anthropogenic occupancy. These same considerations also offer the means by which to reorganize and reorient existing territories toward a similar logic of ecological and environmental production. Rather than continuing to consider landscape regimes as responses to urbanization, one might even begin imagining entirely new formats of urbanization initiated and driven by productive regimes of ecology and landscape, and not recycled nineteenth-century formats of urbanization simply dressed in festive wreaths of green.

CONCLUSIONS—MOVING FORWARD

Obviously, the four lines of thought outlined above are quite broad and, in many ways, reside in an early state of gestation. Yet perhaps they will never be fully formed since I would argue that their true value is in their applicability as lenses through which new proposals for settlement can emerge, not as universally transportable prototypes. If there is one takeaway from the recent proliferation of incomplete and unoccupied speculative settlements, it is the risk in a continued reliance on the standardized toolbox of contemporary urbanization—mobility, density, programmatic mix, amenity, and "greening." Like International English, regularly experienced on any transoceanic flight, we now have International Urbanism. And the promiscuity with which it is deployed is a reduction of design and planning into technocratic vocations.

To close, I return to a point made twice in this paper—the critique offered here is not a critique of speculation-driven urbanization or the neoliberal capitalist economy that drives it. Rather, I am suggesting that given the emergence of urbanization as the leading global instrument of economic production, we will continue to see an increase in speculative urbanization throughout the developed and developing world. As such, imagining new formats of urbanization and settlement that anticipate failure, pause, reorientation, and adaptation is both necessary and an opportunity. Urbanization has become the ultimate industry, the format of economic production upon which all others rely. Allowing it to reside in a cumbersome, fixed, singular format represents a disciplinary failure and, perhaps more importantly, a cultural failure. As such, our current global economy demands that we as designers and planners begin actively anticipating the city that never was. ♦