



urban property prices that was characteristic of the financialization of the global economy that the ideology of neoliberalism justified. Rising urban property prices created the security needed for extending the credit to households that fueled the consumption boom and the rise of China as the world's manufacturer.

Hence the urban issue is fundamentally intertwined with the fate of our economy. In that sense the next economy will have to be defined within the same urban spatial configurations. It also allows us to examine what is now emerging within our cities in order to find a new, green economic order. What are the evolutionary potentials of the present? Which alternative future trajectories of economic change can we discern? Can there be a move away from the real-estate driven boom-and-bust logic that enriched a few to a more inclusive, sustainable, and secure alternative?

#### THE CENTRALITY OF THE URBAN IN ECONOMIC CHANGE

Previous long waves of economic change manifested in urban transitions. And every time an upgrade in the urban infrastructure played a key role. The introduction of sanitation systems in the late nineteenth century prepared the way for vast urban agglomerations that made the mass production of consumer goods by an increasingly educated and healthy industrial working class possible. The construction of highway systems during the middle decades of the twentieth century was a car-oriented infrastructure that was a key catalyst of the resource-intensive 'great acceleration' that occurred after the Second World War. It was this great acceleration that drove the transition from a dependence on biomass to a dependence on non-renewables from the 1950s onwards.

The next phase started in the 1980s, as globalization and neoliberalization resulted in 'splintered' urbanisms. Urban regions were fragmented into enclaves for the increasingly wealthy Internet-linked elites. Depending on the location, poorer residents ended up in enclaves of 1960s high-rises, degenerating sprawling ghettos, ramshackle suburbs and, especially in the global South, mushrooming slums on cheap outer-city land or inner-city zones of occupation.

Technology played a role in all three waves of urban development. If sanitation was the iconic innovation of the late Victorian era and highways the exemplar of the great acceleration, then the sacrificing of public space in favor of privatized enclaves and services were the iconic innovations of the neoliberal era of splintered urbanism that began in the mid- to late-1970s.

We can now envisage that the Next Economy will show in the iconic innovation of the contraptions of clean energy – the monstrous

elegance of giant windmills, the glinting space-age images of concentrated solar power plants and the slick shiny trains and busses created by fast growing investments in mass public transit.

But technology alone won't deliver on our Next Economy. Technology is always embedded in sociotechnical ensembles that determine the distribution and delivery of the systems for its citizens. Up until the 1980s, the dominant economic paradigm was inclusionary welfarist Keynesianism. From the 1930s onwards it created the urban context for productivist Fordism largely within a Westphalian framework of sovereign nation-states, reinforced after the Second World War by the UN Charter. Inclusionary urbanism gave way to the exclusionary neoliberalism expressed in splintered urbanism that was the context for a post-Fordist consumerism that became the new driver of finance-driven globalization. This would not have been possible without computerization, or what Castells called the 'rise of the network society.' As China became the world's manufacturer (using cheap disciplined labor), its financial surpluses were transformed into the credit that drove the consumer boom and massive escalations in urban property values across most economies. But the financialized, short term oriented form of global capitalism is now haunted by the negative side effects it produced.

#### RESOURCE REQUIREMENTS OF FUTURE URBANIZATION

The next phase of urban transitions will have to engage with the climate and resource requirements of the urban Anthropocene. The expected doubling of the urban population by 2050 will result in the urbanization of another 4 billion people taking us to a planet of 7 billion urban dwellers. One single fact helps to reveal the enormous significance of this staggering process of social transformation: in the three-year period from 2011 to 2013, China used more cement than the USA used during the course of the entire twentieth century. Urbanism as we know it will have to change given that China is halfway through its urbanization process, India is only a quarter way through, and Africa's urban population is projected to increase from 400 million today to 1.2 billion in 2050. The resource requirements and related climate implications of urbanization are makers or breakers of any concerted policy effort to realize the UN's Sustainable Development Goals.

A set of three key interventions can deliver urban futures appropriate for the Anthropocene. These are spatial restructuring of the urban morphology to reverse the century-long trend towards de-densification; Transit-Oriented Development (TOD) to subvert the private car and drive urban regeneration; and the introduction of efficient and renewable energy systems (ERES). The primary significance of urban morphology, TOD and ERES interventions, is that they are on the whole controllable by local governments.

## TRANSFORMING URBAN GOVERNANCE

The tremendous transition requires a new mode of urban governance and a new way of imagining and designing urban infrastructures. Creating new, high-quality dense cityscapes, TOD investments and inclusive renewable energy grids will depend on new leadership coalitions to realize the potential of accelerated urban transitions. It probably requires incumbents to rethink their business case, including allowing space for new entrepreneurs to enter into the market of urbanism. This will take vastly different forms across different contexts: in cities of the global North with well-developed urban infrastructures, city-level leadership will be faced with the challenge of 'lock-in' and 'sunk costs' if it is seriously committed to retrofitting. However, for cities in the global South that have not yet sunk in concrete nineteenth- and twentieth-century technologies, the challenge will be to secure and build up the necessary institutional capacity for implementation. They will also need to overcome the modernist aspiration to 'be like the West' (that has been the cause of such disasters in China's vast new urban agglomerations).

But this new configuration of governance for the *urban* Anthropocene can only emerge if we are aware of the modes of governance that we have had so far. There are six modes of urban governance that have emerged during the industrial era. None of them exist in their pure form. *Clientelistic* modes form around powerful political personalities who dispense patronage for material gain by special interests. *Corporatist* modes form around formal ruling coalitions of powerful local political elites who work closely with business and/or community interests to steer urban development in accordance with clearly defined negotiated programs. *Managerial* modes are based on formal bureaucratic systems and rules controlled by powerful officials who make authoritative decisions that set the rules for all other players so that public goals can be achieved. *Pluralist* modes emerge in cities where there are rivalries between powerful competing interests with government brokering conflicts to manage competing blocs seeking to direct the policy agenda in their own material interests. *Populist* modes tend to form around politicians who form alliances with popular grassroots movements – democratic participation, inclusion and accountability are the key symbolic practices that legitimize a populist governing coalition. The sixth mode is the '*entrepreneurial* mode of urban governance,' where politicians and officials work closely with innovation-oriented entrepreneurs and knowledge networks to mount niche-level 'urban experiments' at various levels of ambition, often with 'intermediaries' playing a key role.

The history of the governance of urban infrastructure is marked by crises and is worth recalling. The 1929 stock market crash brought an end to the great *laissez faire* boom period of the Victorian era, and marked the start of a Keynesian era of welfare economics that

started with the New Deal in the USA. It was expanded on a grand scale during the reconstruction of post-Second World War Europe (Marshall Plan), further extended into the building of the Japanese industrial miracle, and then (incompletely) implanted (legitimated by modernization ideology) into the postcolonial environments in Asia and Africa during the 1950s and 1960s. The mode of urban governance was primarily managerialist with corporatist orientations in most locales, and in many developing countries the managerialist mode also had either clientelistic (especially in Africa) or populist orientations (as in Latin America). The 1973 Oil Crisis triggered a recession that exposed the fiscal weakness of Keynesian economics. By the end of the 1970s the neoliberal alternative had gained ascendance in the Reagan-Thatcher alliance against welfarism. By massively reducing state subsidies, privatizing whatever could be privatized, lowering inflation and interest rates, massively subsidizing the innovations that drove the information revolution and deregulating the financial sector and global trading regimes, the neoliberal governments across the developed and developing world prepared the way for accelerated business-led globalization that was driven primarily by the financialization of the global economy. De-industrialization of many Western economies followed, coupled to the rise of new industrial nations in Asia and eventually China, and the emergence of flexible specialization and just-in-time production and distribution systems. As cities competed for a share of the emerging post-Fordist economy and now highly mobile deregulated capital flows, new urban coalitions emerged around urban redevelopments aimed at creating premier urban infrastructures of connected enclaves, from free trade zones, stylish cultural centers and premium resorts to serving the new globalized elites, and a network of production facilities spread out in space. As Keller Easterling narrates (see her essay elsewhere in this catalog), it was made possible by a tremendous effort in standard setting to allow a system of global trade. Yet the inclusive urbanism of the 1930s-1970s era literally splintered into increasingly divided urban environments presided over by new modes of decentralized unaccountable urban 'special purpose' authorities on the one hand, and corporatist business-led public-private partnerships on the other. Their job was to open up the urban system for massive flows of credit that drove up property prices and securitized the consumption boom.

State devolution of powers and functions to city-level was a general trend across all regions during the post-1970s period of globalization and neoliberalism. This, however, was not complemented by a corresponding increase in funding, which explains the rise of corporatist public-private partnerships to secure the investment resources needed for managing urban development. This included the unique form that public-private partnerships took in China where managerialist local government regimes were empowered to mount their own land development initiatives to attract foreign investors – a process

that effectively drove the remarkable rise of China as the world's manufacturer. The opposite emerged in the USA: business-led coalitions took control of urban regimes to drive the credit-fueled property boom. In many African countries where clientelistic modes of governance have always been dominant, particularly pernicious fusions of clientelistic and corporatist modes reinforced slum urbanism.

However, in Latin America a tradition of populist urban governance emerged in many cities when social movements formed alliances with political elites who resisted the strategies of business to set an exclusionary urban agenda. In that sense it is no coincidence that many of the most inspiring examples for a Next Economy urbanism, such as Bogota, Medellin or Curitiba, are Latin American. We may see it as evolutionary potential for a new 'green urbanism' regime. Now spreading, this regime is based on a realization that both the welfarist/Keynesian era and the post-1970s era of neoliberalism/globalization – the two eras that make up the post-Second World War long-term development cycle – suffered from a failure to recognize that conventional infrastructures facilitated unsustainable urban metabolisms.

In response to the 2007 crisis, the search is on for an interventionist state that promotes innovative responses to both the economic and ecological crisis. This is expressed most clearly in the emergence of a vast number of global coalitions emphasizing the role of city governments as leading innovative sustainability-oriented change (such as C40 League, ICLEI). At the same time the post-2007 'smart city' agenda promoted by the giant IT companies represents a neo-corporatist bid to capture this dynamic, represented most dramatically in the real existing cities of Songdo or Masdar to demonstrate the potential of an 'algorithmic urbanism' to city leaders around the world of what would be possible if corporates were called in to run their cities.

Looking at the evolutionary potential of existing regimes of urban governance, we should pay attention to a new 'entrepreneurial modes of urban governance' that get formed by – and emerge to drive – a wide range of 'urban experiments.' Responding to the extreme uncertainties of rapidly changing urban contexts, urban experiments are inspired by innovations that respond in practice to specific challenges in inclusive and sustainable ways.

Under the aegis of entrepreneurial modes of urban governance, the city as laboratory of the future has become the hallmark of the global green transformation. It can, however, go either way: toward the tightly coupled algorithmic urbanism of the corporate-led 'smart city' agenda that might simply result in the greening of splintered urbanism; or toward a more inclusive, heterogeneous, creative, open source, loosely coupled city-wide agenda of urban experimentation.

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### FROM 'WHAT IS' TO 'WHAT OUGHT TO BE'

The new experimental cities constitute an opportunity for a new green urbanism. But currently they are scattered and individual in their effort to force a green and inclusive transformation. To make this work, collaborative learning between cities will be key. Ways must be found to ensure that cities learn from each other in much more effective ways. The resulting 'globally networked urbanism' will allow local groups to use the inventiveness of others, without this harming the value of the initial invention/intervention. On the contrary, this may allow for new positive feedbacks that improve the initial experiment, thus creating a framework for replication and scaling up across the cities of our world.

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