The Exploding Cities of the Developing World

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VULNERABLE GIANTS

The rhythm of history has been the rise, collapse, and occasional rebirth of cities. Until recently urban populations waxed and waned as disease, changes in trade and technology, and shifting political fortunes rewarded some cities and penalized others. In this century the rhythm has been interrupted in the developing world, where urban populations almost always rise. Lured by the bright lights, or driven from the countryside by political and economic turmoil, population pressures, and ecological breakdown, billions of people have been migrating to the cities.

This influx strains the resources, leadership, and infrastructure of already overburdened countries. Migrants from the desperately poor interior of sub-Saharan Africa continue to come to Kinshasa, Zaire, despite the collapse of its economy and services, which has led to rampant disease and malnutrition and brought the city to the edge of anarchy. Pakistanis pour into Karachi despite factional violence characterized by car bombings and gun battles in the streets. Question marks hang in the polluted air over megacities like Rio de Janeiro, São Paulo, Jakarta, Mexico City, Cairo, Delhi, and Beijing and tens of thousands of smaller cities in Asia, Africa, and Latin America. Many First World cities are also coping with waves of poor newcomers at a time when their tax base is eroding as companies and well-to-do citizens move out, driven away by high costs, crime, and a deteriorating quality of life.

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More and more, the fate of cities determines the fate of nations and regions. Karachi, for instance, accounts for half of government revenues in Pakistan and 20 percent of GDP. It is the country’s financial center and only port and has the highest concentration of literate people. Given the ties between Karachi’s ethnic groups and powerful tribes elsewhere in the country, if the current factional violence in the city intensifies, unrest could engulf the rest of Pakistan’s well-armed populace, perhaps leading to international conflicts and large cross-border movements of people.

With ever-increasing global integration, problems that arise in one city can quickly spread throughout its region and even worldwide. The health of cities in the developed world depends in some measure on developing nations’ efforts to control new diseases and drug-resistant strains of old ones incubating in their slums. Moreover, as Earth becomes more and more crowded, how successfully developing world cities absorb continuing migration will have much to do with whether tides of humanity overwhelm nations and regions in years to come. The developed world ignores at its peril the problems of Third World cities.

MISMEASURE OF A METROPOLIS

At the turn of the century roughly five percent of the world’s people lived in cities with populations over 100,000. Today an estimated 45 percent—slightly more than 2.5 billion people—live in urban centers. In recent years the most explosive growth has been in the developing world. Between 1950 and 1995 the number of cities in the developed world with populations greater than 1 million more than doubled, from 49 to 112; in the same period, million-plus cities in the developing world increased sixfold, from 34 to 213. The United Nations estimates that rural numbers will remain virtually steady while urban populations continue to soar: by 2025, it predicts, more than 5 billion people, or 61 percent of humanity, will be living in cities.

Determining what steps governments might take to lessen the shocks of this coming era of giant cities calls for information not available today. It is difficult, for example, to get a fix on something as elementary as the size of the larger cities. In 1992 some estimates put the population of Mexico City at 20 million. Now the United
Nations sets the number at 15.6 million—a difference bigger than Baghdad. Karachi may have 9.5 million residents, or it may have 12 million; São Paulo, at 16 million, has several million fewer than in earlier estimates. Part of the problem is the uncertainty of census data—where there has been a census at all—in nations that do not have the resources to conduct an efficient count and where squatters and legal residents may have sound reasons for evading the tally.

Migration to the cities is also difficult to analyze or predict. Often it is a product of both the pull of perceived opportunities and services in the metropolis and the push of rural unemployment caused by the mechanization of agriculture, oversubdivision of farmland, and environmental degradation. In China’s rural Sichuan province, for example, where the land cannot come close to supporting the people on it, workers are squeezed out to join the country’s “floating population” of some 100 million souls.

The conventional wisdom has been that megacities will continue to grow to horrific size. Experience, however, has sometimes proved otherwise, as in Mexico. As economic and political power was consolidated in Mexico City from the 1940s onward, peasants flocked to the capital, drawn by the prospect of jobs and lavishly subsidized transportation, health care, and education. Since the mid-1980s, however, when Mexico began opening its markets, many companies producing for domestic consumption have closed down; the job losses and cutbacks in government spending hit the capital disproportionately, and immigration has moderated in response. What might be called the rising cost of admission, as scarcity of land, water, and other resources drives up prices in the capital, is also having an effect. In recent years Mexicans have followed jobs to secondary cities like Monterrey. Thus U.N. projections for Mexico City’s population at century’s end have been halved since 1973, from 32 million to 16.4 million, and have been wildly off the mark for other cities, from Rio de Janeiro to Seoul.

The emphasis on megacities, argues David Satterthwaite of the International Institute for Environment and Development in London, is based on misapprehensions about what made them big and diverts attention from the real problems. There are probably 30,000 urban centers in the developing world, he says. “We concentrate on perhaps 100 of them.” The fastest-growing cities on the planet, after all, are not the
giant metropolises but anonymous secondary cities—agglomerations like El Alto, a sprawling collection of 500,000 people in Bolivia that has been expanding nine percent a year with virtually no planning and a haphazard infrastructure. The infant mortality rate in the million-plus Indian city of Kanpur is nearly four times that in Delhi. The second-rank cities must deal with all the problems facing a Karachi or Jakarta without the national attention and international assistance that go to the more visible megacities.

THE DISEASED CITY

The general picture of the developing world in the latter half of the twentieth century painted by international institutions is one of tremendous progress in improving health and raising incomes: child mortality has been cut in half and incomes have more than doubled, according to the World Bank. These statistics, however, have been skewed by the tremendous health gains and economic growth of China and the newly industrializing Asian Tigers. Roughly one billion people—more than at any other time in history—live in households too poor to obtain enough food to provide nourishment for
normal work, points out James Gustave Speth, the current head of the U.N. Development Programme. Another two billion live in conditions Speth describes as deplorable. About 1.5 billion poor people now live in cities, and many of them see their prospects dimming and family and community ties dissolving at the same time that assaults on their personal well-being have risen sharply.

Even the greatest and most enduring cities seem vulnerable when one considers the natural, political, and economic upheavals they must contend with. Poverty, unemployment, disease, crime, and pollution have plagued urban centers for 10,000 years, since the earliest cities developed around granaries and armories in Mesopotamia and Anatolia. There is reason to believe, however, that while the individual problems facing cities are not new, an unholy synergy created in the developing world when explosive population growth, industrialization, and capital scarcity meet means dangers on an unprecedented scale.

After the decline of ancient Rome, nearly 1,800 years passed before a city again reached a population of one million, as London did in the nineteenth century. Until then, crowded slums without running water or sewers and inadequate public health procedures allowed microbes to flourish, and epidemics regularly decimated populations. Advances in sanitation and the discovery of antibiotics have given humanity a century’s respite from the ravages of infectious disease. But many epidemiologists fear this period is drawing to a close as urban growth outruns the installation of sanitation in the developing world and resilient microbes discover opportunities in the stressed immune systems of the urban poor.

Diseases transmitted by insects are staging a comeback from the ditches and trash heaps of squatter settlements. Mosquito hosts for the larvae of the parasite that causes filariasis can breed in polluted water. Anopheles stephensi mosquitoes need cleaner water but find it in open water tanks and the irrigated urban gardens of India and Africa. The malaria they carry is now the leading cause of hospital visits and deaths from infectious disease in Latin America and Africa, according to Carolyn Stephens, an epidemiologist at the London School of Hygiene and Tropical Medicine. The mosquito that transmits dengue has also benefited from urbanization, multiplying in old tires, flowerpots, and water drums.

While diseases vary from city to city, one motif the megacities of
the developing world share is pollution. To live in Mexico City or Delhi is to live in a place where the basic elements of life—air, water, and soil—have become inimical to health. Many of the cities in China have five to ten times the levels of particulates and sulfur dioxide found in the air of First World cities; a recent sampling in Guangzhou revealed concentrations of these pollutants among the highest ever measured anywhere. In Beijing and other Chinese metropolises ordinary people have been driven to riot by pollution ranging from incessant noise to choking clouds of coal dust. In some parts of Poland the land and water have been so poisoned by toxic waste that ten percent of babies are born with birth defects. Inadequate zoning regulations and enforcement, antiquated technologies, corruption, rising consumption, and burgeoning populations all play a part.

Pollution also has a role in the renewed spread of infectious disease. Untreated sewage flowing into the Bay of Bengal off Bangladesh made its way into the bilge tanks of a freighter headed for South America; a relatively new strain of cholera came along for the ride. According to Paul Epstein, an epidemiologist at the Harvard School of Public Health, when the tanker emptied its bilge off Peru, the microbe found a home in algal blooms in the coastal waters that had been nurtured by sewage from Lima. From there the cholera made its way into cities as people ate contaminated shellfish. Since arriving in Latin America in 1991, the disease has struck 320,000 people and killed 2,600.

Stephens’ work has shown that poor people in cities die disproportionately from both infectious diseases and chronic illnesses, such as cancer and heart disease, associated with more developed societies. She and others argue that disease, along with pollution, is a symptom of a larger threat to urban dwellers: poverty. Many people endure these risks in the hope that work in the city will pay enough for them to move their families out of harm’s way. But as cities continue to swell because of migration and births, workers face crowds of competitors like themselves. Beijing is now home to an estimated one million floating workers in search of jobs. Unemployment rates in scores of African cities top 20 percent and are unlikely to drop soon.

Disease, squalor, hopelessness, stress, and the decline of traditional cultural constraints in the atomized contemporary city conspire to aggravate yet another health hazard: violence. Homicides and
other violence accounted for 86 percent of all deaths among teenage boys in São Paulo in a study Stephens conducted. Karachi, with roughly four million unemployed, many of them teens, has an endless supply of recruits for its ethnic militias and drive-by assassination teams. “You have a lot of people sitting around idly, and a lot of guns,” says a World Bank official. “All you need is a little ideology and you can get your own army.” The mixture helps fuel the Islamic uprising in Algerian cities and a crime wave in Rio that has driven the middle class into garrisons and encouraged vigilante justice.

Finally, there is war, which, as the stories that have emerged from Monrovia, Mogadishu, and Kigali show, inflicts unique horrors on those trapped in cities that at the best of times have trouble taking care of the injured, the hungry, and the displaced. Even without the stresses of war, the quality of life for the poor has declined to the point where observers who long believed city dwellers had the advantage now recognize that large numbers of impoverished urbanites are worse off than the rural poor.

Violence, disorder, pollution, and disease can ultimately become so severe that authorities abdicate, foreign investors retreat, and a city begins to slide into chaos. Karachi has flirted with this threshold in the past and after a few years of growth may be approaching it again. Kinshasa has long since crossed the line, and its slow contraction shows how a city dies from government corruption and incompetence.

**Kinshasa Descending**

Kinshasa should be one of the more prosperous cities in sub-Saharan Africa. It is the capital of a country blessed with vast forests, rich agricultural lands, one of the world’s great rivers, and huge reserves of copper, cobalt, manganese, and diamonds (now essentially privatized as a source of cash for the elite). During the Cold War, Zaire received billions in development aid, much of which disappeared, along with the nation’s wealth, into the pockets of President Mobutu Sese Seko and his kleptocratic officials. Even so, the capital city of roughly four million people began the decade with an excellent water system, cheap and reliable electricity, and functioning public transportation.
In September 1991, however, ordinary citizens joined unpaid government troops in rioting and looting, reducing the city to a shambles; roughly $1 billion in goods changed hands. Foreign workers, many of whom provided critical services for the utilities, fled the city. Over the last three years Kinshasa has seen its formal economy shrink 40 percent. Thousands of government jobs have disappeared, the infrastructure has slowly crumbled, and businesspeople have replaced store windows with concrete facades and steel gates in anticipation of new rounds of civil disorder. Carjackers and gangs of bandits rove the streets. Those lucky enough to have work are paid in a shaky currency. Following rises of 8,500 percent in 1993 and 6,000 percent in 1994, inflation has been cut to three digits, but the economy is still extremely vulnerable. Many people eat only every other day, long-vanquished diseases such as plague are returning, and AIDS, tuberculosis, malaria, sleeping sickness, cholera, and river blindness spread.

What amazes visitors is that the city continues to function at all. Most Kinshasans live by what is facetiously called Article 25 of the constitution—debrouil-toi, or getting by on your own. A lively informal economy has sprung up and proved much more efficient than the bloated, corrupt state-owned organizations. People grow crops and raise livestock on every available patch of ground. Families share good fortune and bad. Enterprising traders work the markets. Still, only food from outside donors has prevented outright starvation.

The situation is particularly frustrating because, as one U.S. State Department official put it, “Given the wealth of the nation, it would not take a lot to restore a semblance of order to the economy.” The interim government of Prime Minister Kengo wa Dondo has wrested control of the central bank from Indiang Kabul, a Mobutu loyalist, and installed Patrice Djamboleka, a seasoned civil servant, who has imposed some discipline. But hopes for a savior are dim, as Mobutu has entangled most of the nation’s best and brightest in his web of corruption. “There are no virgins in Zaire,” it is said.

SWOLLEN CITIES, WEAKENED STATES
The world’s major cities already cast a long shadow, and as they absorb the great majority of those born in the coming decades, their
economic and electoral significance will only grow—along with the danger of conflict as cities protect their interests.

How long, for instance, will China’s central government be able to maintain control of booming coastal provinces dominated by industrial cities as the economy opens up and these local units gain clout? With the capitalist genie escaping from the bottle, the central government has less and less to offer in return for its claims on productivity. An attempt to reassert central control could cause provinces like Guangdong to break away and declare themselves free economic zones.

Internal migration may also drive coastal cities to break with China. The 100 or 120 million surplus workers in the country gravitate toward cities in search of employment; Vaclav Smil of the University of Manitoba estimates that at any given time China’s major urban centers each house between 500,000 and two million recent arrivals. Cities such as Guangzhou, which in 1990 averaged 5.7 people per room (the average in the United States is 0.5), are already too crowded to absorb migrants. Yet the great urban migration has only just begun in China, which is still more than 70 percent rural.

China may be fast approaching other limits. After a tenfold increase in agricultural productivity between 1978 and 1988, there may not be much room for improved yields. Recently the country went from being a net exporter to a net importer of grain. Factors including political turmoil following the death of paramount leader Deng Xiaoping, consolidation of land holdings, or protracted drought could trigger an enormous increase in the already heavy migration to the cities among China’s rural population of 800 million. The government has allowed grain prices to jump more than 60 percent over the past year, possibly to boost rural incomes and encourage people to remain on the land. This, however, is a delicate game because higher food prices might inflame the urban poor. Should migration increase, the prosperous cities and provinces might try to close their gates, leaving rural China to cope with millions of desperate unemployed peasants. According to Jack Goldstone, a specialist on revolt and rebellion in China who teaches at the University
of California at Davis, the tensions created by the contrast between coastal prosperity and rural poverty might even tear the country apart. This pattern of population pressures leading to collapse into warlord-led states, Goldstone argues, has bedeviled the region since antiquity.

CITIES OF HOPE?

Despite these dangers, many economists view China’s migrants in a positive light. Urbanization has long been seen as a necessary step in economic development (although studies of Brazil and Mexico have shown that urbanization does not necessarily lead to development). Urban living carries built-in incentives to have smaller families, take mass transportation, recycle garbage, use energy, water, and space carefully, and do other things deemed desirable in a crowded world with limited resources. In fact, the shift to the cities may be a major reason behind the present rapid drop in birthrates throughout the developing world. Concentration in urban areas may well be the only efficient way to house people and still preserve agricultural acreage and wilderness, given inexorable population growth.

But more than anything else, cities are a prism for the genius of civilizations. As Lewis Mumford put it, they are a “symbol of the possible,” and this is true in the developing world no less than the developed. Cities are where entrepreneurs hatch their schemes and find the markets and financing to bring them to fruition, where the elites of technology, industry, and the arts meet to brainstorm, and where deep shifts in culture and politics might begin with an unexpected encounter.

Faced with budgetary restraints and capital scarcity, some developing world cities have adopted creative approaches to fundamental problems. Calcutta, Ho Chi Minh City, and Jakarta, for instance, have been experimenting with sewage treatment that uses wetland plants like water hyacinth and duckweed to purify waste naturally. Alternative energy sources such as wind and solar power are getting a much better reception in the developing world than they did in the developed, fossil fuel–based systems having been adjudged expensive, dirty, and a drain on foreign exchange.

Some urban cheerleaders foresee South-to-North technology
transfers as cities in the developed world encounter dilemmas familiar to poorer countries, while confronting a similar scarcity of capital. One possibility is suggested by the Speedy Line, designed to meet mass transit needs in Curitiba, Brazil. Essentially a bus line with loading platforms and dedicated lanes, the Speedy Line achieves speeds and passenger capacity approaching that of a subway system at one-thirtieth the cost. Moreover, it can be installed in six months, which means, notes Curitiba’s former mayor, Jaime Lerner, “you don’t have to waste a generation building a subway.” Vancouver and Lyons are among the cities examining the idea’s potential.

During the past few years Curitiba, a state capital in a predominantly agricultural region of southern Brazil, has become the poster child for the hopes of the developing world city. Its economy is now based on a healthy mix of manufacturing, services, and commerce. Although its 2.2 million citizens have an average annual income of only about $2,000, Curitiba offers amenities and services many First World cities fail to deliver. The city has managed to increase open space per capita by a factor of 100 since 1970 even as its population grew by 164 percent; today citizens enjoy nearly four times the open space available to New Yorkers. Curitiba has feeding centers for street children, immaculate public housing, and innovative programs like one in which the poor in neighborhoods beyond the reach of sanitation trucks trade garbage for fresh vegetables. Lerner argues that parks and good public transportation bolster ordinary people’s dignity, and says, “If people feel respected, they will assume responsibility to help solve other problems.”

What does Curitiba have that other cities don’t? Most notably, quality leadership. Lerner and an idealistic team of technocrats with experience in urban planning have guided the city since 1970. When Lerner left office recently, he was the most popular mayor in Brazilian history. Now that he has been elected governor of Parana and a member of his mayoral administration, Rafael Greca, has succeeded him in Curitiba, the city and state may be able to mount a coordinated response to rural-urban migration, the one seemingly intractable problem for this successful city in a poor country.
THE PRECARIOUS FUTURE

Curitiba, the Indian city of Bangalore, and a few other examples may indicate that the real problem facing poorer cities is not so much population growth or their resource base but a lack of competent leadership and sound regulations and policies that last beyond one administration. But the extreme rarity of success stories in the array of struggling municipalities suggests that this does not explain why so many cities are having trouble creating an environment in which citizens and businesses can prosper. Self-reliance among the indigent is also insufficient to pull a city up. There are those who say, get government out of the way of business, allow the poor to own their plots and homes, and watch human resourcefulness do the rest. This logic resonates with the libertarian mood of the times, but action tends to stop where the neighborhood stops, and a city is much more than a series of adjoining neighborhoods.

In fact, the fortunes of cities are increasingly hostage to factors beyond their control. Population pressures and the integration of the world economy have unleashed forces that can overwhelm a city, however well managed. To a degree, all poor cities today are at the mercy of a restless $4 trillion in institutional capital that roams the world like a giant ocean bird looking for profitable places to alight. When investment fund managers lose confidence in a nation’s fiscal policies, as happened in Mexico in the fall of 1994, a country’s or region’s share of that capital can vanish, leaving cities to deal with the consequences of a ruined currency.

Even seemingly permanent foreign investments have become flighty. Competition among cities for what Adrian Atkinson of the Development Planning Unit of University College, London, calls “footloose foreign industry attracted to cheap labor” places constraints on the current panacea for improving the lot of the poor: jobs. Jabotatek, the name given to greater Jakarta, the Indonesian capital, has enjoyed formidable growth in manufacturing jobs since the 1970s as foreign investment took advantage of labor as cheap as $1.50 a day. Since the industries that have created those jobs import the bulk of their raw materials, they could move elsewhere if costs rise or a more attractive labor market beckons. This leaves workers little hope of better wages or working conditions, since their government is loath
to impose costs that might scare away foreign money. Meanwhile, unrelenting migration from overpopulated agricultural areas creates a situation in which ever more people could be chasing ever fewer jobs in an economic downturn. Atkinson writes, “The city could, in this situation, become a mass graveyard.”

As the global population climbs by nearly 100 million a year, starker limits appear on the horizon. Successful export-based economies can generate the money to buy food elsewhere, but somebody has to produce it. Even today China is simply too populous to count on exports to release its economy from inherent agricultural and resource limitations. Though the largest grain producer in the world, China has quickly become the second-largest importer of grain as well. Worldwide grain reserves, an estimated 48-day supply, are at their lowest level since the agricultural community began tabulating global statistics in 1963. Any disruption of the world market by either weather or grain exporters imposing export controls to protect their consumers could cause a staggering free-for-all over grain. Lester Brown of the Worldwatch Institute in Washington asks: what happens to countries that cannot compete with China and other hungry giants?

The usually optimistic International Food Policy Research Institute recently warned that the world cannot expect new breakthroughs to replicate the gains won during the now-sputtering Green Revolution. According to the World Bank, food production failed to keep pace with population growth in 75 countries during the 1980s, and 15 developing countries saw per capita food production decrease more than 20 percent during the decade. In per capita terms, fish production, fresh water, and arable land have all declined since 1980. As surpluses vanish, higher prices may temporarily spur production, but scores of developing countries may find themselves priced out of the market.

As limits begin to appear—or, equally important, are perceived to appear—the potential for strife and disorder rises, particularly if there are huge disparities in wealth within a city or society. The interplay between scarce land in the countryside, urban migration, and conflict in the cities is complicated, but the scramble for resources in a developing
world city can create an environment ripe for exploitation by thugs and gangs. Thomas Homer-Dixon, director of the Peace and Conflict Studies Program at the University of Toronto, argues that crime and social instability resulting from environmental degradation and scarcity of land can prevent a society from establishing independent courts, open and honest markets, and other institutions necessary if it is to decouple its economy from resource limitations.

Other threats loom further off. Sometime in the next century, cities may have to deal with the serious consequences of climate change. Thirty of the world’s 50 largest cities lie near coasts; a one-meter rise in the oceans caused by global warming would place an estimated 300 million people directly at risk. Many foreign investors already steer clear of Bangladesh because of its vulnerability to typhoons; a sea-level rise of one meter would put 16 percent of that densely populated country under water.

City dwellers have proved their resilience many times over. Kinshasa refuses to die, and Monrovia and Mogadishu still function despite hellish upheavals. But throughout history cities have expired, and there is no reason to believe the cycle has been permanently interrupted. One can envision a future in which the world’s urban population swells from the 300 million of 1950 to perhaps 6 billion in 2050 without widespread collapse, but such a scenario is unlikely, if for no other reason than that it would run counter to the rhythm of history. In its own interest, the more developed world should help the developing cities with investments that promote family planning, foster education for girls as well as boys, improve sanitation and health care, and better the lot of those in rural areas. Broadcasting the rare success stories like Curitiba would also be useful. The world will have an opportunity to spotlight the problems of developing world cities at the U.N. conference on cities in Istanbul in June.

If the world’s cities cannot absorb the unprecedented influx, masses of the desperate may overwhelm entire nations and regions. As populations grow and cities become more crowded, the margin for error narrows and the cost of mistakes rises. If peaceful, functioning cities are to exist in 2050, a law-abiding, harmonious, hard-working, ecology-conscious citizenry must be supported by enlightened leaders. Little in the cities of today suggests that this will come to pass.≥