The Future of Cities: Seven Trends We Know and Seven Suggestions for What Might Be

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Cities have always been concentrations of innovation and knowledge with the promise of freedom. With cities getting ever larger, will cities become unmanageable or will they remain centers of innovation and freedom?

Past predictions about the future of cities have almost all been wrong because they were often US- or Euro-centric and erroneously extrapolated the future from the present or the past. Predictions also were often solely fixated on technology and failed to address the possibility of social change. What are the driving forces for cities in the 21st century? Will North American and European cities be left behind by the mega-cities of the developing world? Is the decline and shrinkage of the former industrial US “legacy cities” and their sharp divide between rich and poor an indicator for all cities in the coming decades? Should smaller but wealthy and stable historic cities such as San Francisco, Zurich, Oslo, and Prague be our models—gentrified, maybe even calcified, but still successful? Can we learn from Mexico City, Shanghai, and Lagos?

I will make occasional reference to my home city, Baltimore, Maryland, a shrinking former industrial city which is struggling to redefine itself as a knowledge community. Baltimore may serve as my canvas to see what lessons can be learned and what may be in store for cities in the post-industrial age.

1. **People:** The idea of the city as a hub for free, creative, and innovative spirits got a boost when Richard Florida coined the term “creative class” for the highly mobile young and educated creative professionals which seem to be the hallmark of the post-industrial city. Where they decide to go is where the action will be, Florida says, and right now the action appears to be in U.S. cities like Austin, San Diego, and Denver. Increasingly, comeback cities like Pittsburgh, Baltimore, and even Detroit draw members of Florida’s “creative class.” The fuel appears to be the Millennium generation, which is generally fed up with suburbs and environmental degradation and is attracted instead to dense urban communities, especially to downtown areas of large cities. Although Florida’s analysis is undoubtedly U.S.-centric, it nonetheless renewed and sanctioned as a fashionable trend the age-old promise of cities providing income, work, freedom, and satisfaction to people. This promise also holds true in places like Jakarta, Mexico City, and even Lagos, cities that will not necessarily repeat the traditional U.S. cycle of industrialization and decline but in many cases

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1Richard Florida is head of the Martin Prosperity Institute at the Rotman School of Management at the University of Toronto. According to Florida, the “creative class” is a key driver for economic development of post-industrial cities in the United States.
may leapfrog straight into a post-industrial, knowledge-based existence.

**Suggestions:** For the cutting-edge innovative members of the “creative class,” traditional hubs of creativity such as San Francisco, Vancouver, Zurich, and Copenhagen may have become too stodgy or too expensive. The defection of those cities’ smokestack industries opens an opportunity for struggling industrial centers through plenty of affordable and often attractive space. Located originally for easy trade and transportation, Baltimore offers easy access and proximity to the ocean, mountains, and the nation’s capital. This mix of affordable quality spaces and convenient geographic location brought young talent to the city and enabled film, music, and the visual and performing arts to thrive. Strong institutions like Johns Hopkins University and the University of Maryland give these fledgling trends solid underpinnings while providing still largely untapped opportunities for venture capital investment. However, Baltimore needs much more capital to break the cycle of disinvestment. It should be a major goal for Baltimore and many other former smokestack cities that have great urban DNA to attract capital for research, construction, support of start-ups, and experimentation.

2. **Production:** Cities have historically grown exponentially with industrialization; in the “developed” world, they shrank when the industrial sector declined. Lately, trends emerge that indicate that the age of manufacturing is not over, not even in the United States. New York City recently started a “Made in New York” campaign to emphasize its manufacturing that other cities have since adopted. A lecture series organized in Baltimore was titled “Making Things in Baltimore.” Meanwhile industrial centers in the “developing” world may leapfrog straight into an era where industrial production can be made sustainable and well-integrated into cities. That this is still mostly a dream was demonstrated famously in Beijing, which battled smog so severe in January that the government declared emergency measures.

**Suggestions:** Even in this modern age of service and knowledge economies, manufacturing is still essential. Clean and flexible technologies such as 3-D printing, automation, and nanoscale technology, combined with increasing cost for transportation, will bring manufacturing back to cities. Production facilities can be stacked and mixed with other uses, fitting well into an urban environment. This trend has just begun and can become much stronger. It can help revitalize old industrial cities such as Baltimore, especially in combination with great educational institutions and efficient transportation routes. It will be a big challenge for the United States to restructure a consumer society back into one of production and overcome the vestiges of “Euclidian zoning,” where industrial lands were carefully and intentionally placed in remote and unattractive areas. Yet a renaissance in manufacturing and advanced technologies, paired with a widespread “live where you work” mentality, represents important opportunities for cities and especially old industrial centers.

3. **Food:** Although the famous Malthusian doomsday prognosis of starvation and world hunger has not yet come to pass, the world population of over 7 billion strains our capacity to feed everyone, especially if we consider that current methods of food production are unsustainable. Soils are depleted, environmental damage is great, and global warming threatens to reduce crop yields. Energy and transportation costs, shortages of petroleum and water, and the depletion of soils make it imperative to grow food sustainably right where it is
needed: adjacent to and in cities. Only very recently are food production and cities mentioned in the same breath. Still, most current urban sustainability plans consider urban agriculture as a boutique operation rather than on a scale large enough to make a difference for feeding the world.

**Suggestions:** To combat a modern-day fulfillment of Malthus’ dark prediction, vertical farms, so far merely ideas on paper, will be necessary in the next 10 to 20 years to feed the expected number of world residents who will live increasingly in cities. Vertical farming, in which food and energy are integral to large buildings, could provide an entirely new economy for cities and fundamentally change architecture and building construction. Baltimore is experimenting with intensive, high-yield urban farms on vacant lots. With the help and knowledge of the nearby federal Beltsville Agricultural Research Center, Baltimore could become a leader in testing how farming could be integrated into residential, commercial, and retail centers, on roofs, in facades, and on intermittent floors and in atriums. This will require additional venture capital, new regulations, and again entirely different zoning. As is the case with manufacturing, food would also be produced and processed where people live, and cities could benefit.

4. **Transportation:** Cities historically flourish in places where waterways, roads, rails, and airports meet. The more recent attempt of reshaping cities around the automobile has had devastating effects for the environment and for urban form, especially in the United States. However, with the new emphasis on cities and mixed use urban centers serviced by transit and organized around walking and biking, older U.S. cities are embarking on a renaissance and setting new trends. Meanwhile, the new “mega cities” in the developing world that are just now entering large scale motorization have an opportunity to leap straight into a post-automobile form of organization.

**Suggestions:** Public and private transportation technologies and operations may converge and become more similar. This would mean that buses and rail transit would become more demand-responsive while private car travel would become more organized and regulated. The on-demand model of car sharing could spread to privately owned cars, which will offer significant cost advantages and added efficiencies from less need for parking. It might soon become possible for individual cars to be automated to run in platoons that move on interstates like trains—efficiently, safely, and quickly—while they break rank upon nearing their destinations. This could be a way for the United States to make up for its current lack of either a high speed rail system or adequate road capacity. Either way, cities like Baltimore, which historically developed before the car and have good connectivity, will be able to reclaim a lot of space previously devoted to parking. Another largely untapped opportunity exists in regional activation of abandoned or active freight lines for small unit passenger rail serving smaller metro regions. Above all, manufacturing and food production in and near
population centers would drastically reduce the demand for trips and transportation resources, thus freeing up existing capacity for what remains necessary as mobility in a free and innovative society.

5. **Energy and Climate Change:** Cities are an efficient and energy conserving form of habitation. It was only when we thought that energy was endlessly and cheaply available that cities became unglued. As a result of sprawl, houses became larger and were often built far apart from each other, often entirely disconnected from nearby cities and towns. This, in turn, makes Americans use more energy than necessary, far more than almost everybody else on the planet. This is utterly unsustainable, both fiscally and environmentally.

**Suggestions:** The unwise waste of fossil fuels brought us global warming, which will affect cities in many ways. Cities in the United States are no exception. With a growing world population, energy will remain a central focus of livability and survival, and cities may play a valuable part in a more energy-efficient future. In addition to the already noted inherent energy efficiency of cities, integrated manufacturing, food production, and buildings themselves could provide excellent opportunities for harnessing wind, solar, and biological energies as well as co-generation without the waste of the current “grid” where energy is produced far away from population centers in nuclear power plants, offshore wind farms, or solar farms in a desert. Once cities and buildings become power generators, places like Baltimore should buy back their privatized and globalized utility companies and create a municipal laboratory of local energy production under the direct control of its citizens. Mixed use, short transportation routes, and redundancy, combined with short distances in power transmission, will be important steps towards resiliency against extreme weather and attacks.

Large parts of Baltimore are threatened by rising sea levels. A more resilient city will require creative solutions for vulnerable areas, such as low-lying tidal floodplains, which may well be better suited for food production than living.

6. **Urban Form:** For centuries, cities followed similar patterns built around the range and needs of pedestrians, until this form suffocated in the filth and pollution of 19th century industrialization. In response, 20th century modernist thinkers and architects emphasized the concept of air and sun in design. With the automobile, mobility appeared endless. The Congres Internationaux d’Architecture Moderne (CIAM)\(^2\) created the visions that were strikingly depicted in Le Corbusier’s ideal image of the city, Ville Radieuse, and would degenerate over the decades into the conglomerations of freeways, air traffic, and commercial sprawl we know so well. Few new visions for urban form have emerged to solve the problems created by sprawl since CIAM except for New Urbanism, a movement largely limited to the United States, which promotes patterns of the traditional pre-automobile city.

\(^2\) From 1928 to 1959, CIAM, the International Congresses of Modern Architecture, promoted the architectural principles of the Modern Movement, profoundly influencing building design and urban planning.
Suggestions: With mixed use, local food production, clean factories, and integrated decentralized energy production, the city can be dense, attractive, and clean without sprawl. If urban “place-making” orients itself again on the human scale, even very large cities could be livable and pleasant. With technology replacing many of the spatial needs for cities, human interaction, diversity, stimulation, innovation, and access to nature will be the main drive for cities. Good design, architecture, and planning will not be luxuries but an essential condition. A city as rich in history as Baltimore, with a unique and unmistakably local architectural character, has a competitive advantage that needs to be maintained through comprehensive historic preservation and creative adaptive reuse. Natural assets such as the Chesapeake Bay need careful protection. It may be necessary to revert many coastal zones into flood buffers, helping the bay’s water quality as much as the resilience of the shorelines.

7. Government: Historically cities may have served to defend and protect from the enemy. Increasingly, though, cities represent a microcosm for experiments in governance. Strong mayors, some in developing countries, teach us lessons in quick and efficient change. Architect and Mayor Jaime Lerner in Curitiba, Brazil, for example, has shown that good governance and innovative design ideas can make a big difference, even in mega cities with extensive poverty and a large alternative economy. In the United States, with federal government seemingly stuck in a stalemate, states and cities are left to implement innovation and ideas on a smaller scale.

Suggestions: Cities like Baltimore could learn from the self-organizing principles of some “third-world” mega cities. Self-organizing and emergence through feedback loops have already crept into much of our life and are long known in science. Researchers study fireflies and ants for ways to efficiently evacuate large buildings in the case of fire, but the possibilities for organizing and running a city based on similar principles have not yet been studied in great detail. The many non-profits in Baltimore that assist developing countries with health and public policy could apply their research to their hometown to find ways to help the large number of residents that have been left out of the economy. Microloans, small business creation, and entrepreneurship could be nurtured rather than hampered by regulation. Funding through value capture, public-private partnerships, and crowd sourcing need to be expanded and subsidies for large developer-friendly vanity projects should be reduced.

Thus, we end where we started— with people. Cities are foremost of and for people and the future of cities will depend on how well they will provide what people need most: information, knowledge, association, protection, and choice.

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