

Urbanization as a Sustainable Solution

If urbanization is defined as the shift of populations from rural to urban areas whereby people, resources and places of commerce are concentrated in geographical proximity, then, from a resource-use perspective, urbanization is good for sustainability. Cities can be tremendously efficient as it is easier to provide water and sanitation to people living closer together, while access to health, education, and other social and cultural services is also much more readily available. Urban areas have a higher density of corporate offices, hospitals, schools and transportation hubs. For the simple reason that the closer man is to places he needs to be, the less it will take to access those spaces or resources. At scale, it is easier to optimize resource allocation, which leads to less use of resources. On an absolute basis, less is good, because that means that future generations have more to meet their needs.

Urbanization becomes antithetical to sustainability or sustainable development when it takes the form of rapid, unplanned, and chaotic urbanization. We all understand the ugly kind of urbanization – from urban sprawl in American cities to illegal encroachments and massive slums in places like Mumbai and Nairobi – we have seen the products of unsustainable urbanization which are not only terrible from a resource-use sustainability standpoint (resource-theft is common, so is inefficiency and wastefulness of resources), but this kind of urbanization also does not provide a decent standard of life.

Peter Droege in his piece *Beyond Sustainability: Architecture in the Renewable City* argues something different. Droege decries the rise of “Fossil City”¹ – which despite careful planning and immaculate design – is, according to Droege, the manifestation of problems in modern-day transportation infrastructure, energy use and architecture design. Using examples of Brasilia in Brazil and Chandigarh in India, two cities in the developing world thirsty for first-world recognition, Droege makes the case for how Fossil Cities (based on the energy mix that powers these cities, which is discussed later in this essay) are only exacerbating the problem of climate change and threatening mankind’s survival. He uses statistics like “cities in the thirty member OECD countries account for sixty to eighty percent of their respective national energy consumption”² which might be true, but that number says nothing about energy intensity either in terms of energy per capita or energy per dollar of economic activity. In fact, in OECD countries, urban areas account for about 80% of the population³ so Droege’s statistic doesn’t really advance his claim of cities being the energy guzzlers that he makes them out to be: 80% of the population consuming their fair share – or less – of energy is the textbook definition of sustainable use of resources. By Droege’s own logic, we ought to have more cities!

¹ Peter Droege : *Beyond Sustainability: Architecture in the Renewable City* (SAGE handbook of Architectural Theory)

² Peter Droege : *Beyond Sustainability: Architecture in the Renewable City* (SAGE handbook of Architectural Theory)

³ World Bank, 2013 <http://data.worldbank.org/topic/urban-development>

Next is the challenge of energy infrastructure as it pertains to cities and urban areas. Droege argues that most of the energy consumed in cities comes from fossil fuels, and while he grants that we have reached Peak Oil – meaning that oil consumption and production will only decline going forward – Droege points out that the use of coal for electricity generation is continuing unabated. But Droege makes no mention of countless efforts, ranging from the UN at the international stage to university campuses with student activists successfully canvassing for divestment from coal companies at Stanford, to say nothing of the results that NGO-led activism has produced, such as Obama administration’s announcement last summer⁴ that under the Clean Air Act section 111(d), the U.S. EPA will use its authority to issue standards and regulations to address carbon pollution from new and existing power plants, which will phase out old polluting coal-fired power plants.

For Droege, however, facts are secondary. He goes on a diatribe against Nuclear power, using a few isolated accidents like Chernobyl and Three Mile Island to argue for a shift away from the use of Nuclear power, as if the derailment of an Amtrak in Philadelphia last week is a reasonable argument to ban rail travel. Nuclear power is emissions free, and easily scalable, but for Droege it is the “great hangover from the twentieth century”⁵ which is “lingering in the hearts and minds of many powerful players today”.

⁴ <http://www.nytimes.com/2014/05/30/opinion/teaching-an-old-law-new-tricks.html>

⁵ Peter Droege : *Beyond Sustainability: Architecture in the Renewable City* (SAGE handbook of Architectural Theory)

Droege does provide some idea of what he would like his ideal city to look like, and where it would derive its energy from, but his musings are short on details. “Confronting the reactive and energy blind nature of contemporary planning practice”, Droege would like to build “integrated photovoltaic systems, wind and other renewable energy systems replacing non-renewable power”. The wind doesn’t blow all the time, and the sun doesn’t shine at night so unless Elon Musk at Tesla can mass produce those storage batteries⁶, it will be a while before Droege’s suggestions “move from the considerable space they occupy in PowerPoint and find expression in concrete”.⁷

Regardless of the energy mix, we must continue to urbanize. Of course we must endeavor for more renewable sources in the energy mix and better integrated systems that include local climate conditions in architecture design as Ken Yeang’s and Walter Sobek’s work show us, but cities, as they presently are, allow for efficient allocation of resources and provision of services to large populations while keeping a lower carbon footprint than lets say rural areas. In an attempt to make cities better than they are, let’s not let perfect be the enemy of good.

⁶ <http://www.bloomberg.com/news/articles/2015-04-28/elon-musk-bulks-up-tesla-batteries-in-leap-beyond-cars-to-grid>

⁷ Peter Droege : *Beyond Sustainability: Architecture in the Renewable City* (SAGE handbook of Architectural Theory)