



The Infinite Suburb Is An Academic Joke

Sustainable Development, aka Technocracy, is an unworkable economic model that will self-destruct as its proponents foolishly worship at the alter of Utopia. I cannot find a single legitimate economist who has done a deep analysis on Technocracy and concluded that Utopia has finally arrived. It has not, will not, cannot. □ TN Editor

The elite graduate schools of urban planning have yet another new vision of the future. Lately, they see a new-and-improved suburbia—based on self-driving electric cars, deliveries by “drones deliveries at your doorstep,” and “teardrop-shaped one-way roads” (otherwise known as cul-de-sacs)—as the coming sure thing. It sounds suspiciously like yesterday’s tomorrow, the George Jetson utopia that has been the stock-in-trade of half-baked futurism for decades. It may be obvious that for some time now we have lived in a reality-optional culture, and it’s vividly on display in the cavalcade of techno-narcissism that passes for thinking these days in academia.

Exhibit A is an essay that appeared last month in *The New York Times Magazine* titled “[The Suburb of the Future is Almost Here](#),” by Alan M. Berger of the MIT urban design faculty and author of the book *Infinite*

Suburbia—on the face of it a perfectly inane notion. The subtitle of his *Times Magazine* piece argued that “Millennials want a different kind of suburban development that is smart, efficient, and sustainable.”

Note the trio of clichés at the end, borrowed from the lexicon of the advertising industry. “Smart” is a meaningless anodyne that replaces the worn out tropes “deluxe,” “super,” “limited edition,” and so on. It’s simply meant to tweak the reader’s status consciousness. Who wants to be dumb?

“Efficient” and “sustainable” are actually at odds. The combo ought to ring an alarm bell for anyone tasked with designing human habitats. Do you know what “efficient” gets you in terms of ecology? Monocultures, such as GMO corn grown on sterile soil mediums jacked with petroleum-based fertilizers, herbicides, and fast-depleting fossil aquifer water. It’s a method that is very efficient for producing corn flakes and Cheez Doodles, but has poor prospects for continuing further into this century—as does conventional suburban sprawl, as we’ve known it. Efficiency in ecological terms beats a path straight to entropy and death.

Real successful ecologies, on the other hand, are the opposite of efficient. They are deeply redundant. They are rich in diverse species and functions, many of which overlap and duplicate, so that a problem with one failed part or one function doesn’t defeat the whole system. This redundancy is what makes them resilient and sustainable. Swamps, prairies, and hardwood forests are rich and sustainable ecologies. Monocultures, such as agri-biz style corn crops and “big box” retail monopolies are not sustainable and they’re certainly not even ecologies, just temporary artifacts of finance and engineering. What would America do if Walmart went out of business? (And don’t underestimate the possibility as geopolitical tension and conflict undermine global supply lines.)

Suburbia of the American type is composed of monocultures: residential, commercial, industrial, connected by the circulatory system of cars. Suburbia is not a sustainable human ecology. Among other weaknesses, it is fatally prone to Liebig’s “law of the minimum,” which states that the overall health of a system depends on the amount of the scarcest of the

essential resources that is available to it. This ought to be self-evident to an urbanist, who must *ipso facto* be a kind of ecologist.

Yet techno-narcissists such as MIT's Berger take it as axiomatic that innovation of-and-by itself can overcome all natural limits on a planet with finite resources. They assume the new-and-improved suburbs will continue to run on cars, only now they will be driverless and electric, and everything in their paradigm follows from that.

I don't think so. Like it or not, the human race has not yet found a replacement for fossil fuels, especially oil, which has been the foundation of techno-industrial economies for a hundred years, and it is getting a little late in the game to imagine an orderly segue to some as-yet-undiscovered energy regime.

By the way, electricity is not an energy source. It is just a carrier of energy generated in power plants. We have produced large quantities of it at the grand scale using fossil fuels, hydropower, and nuclear fission (which is dependent on fossil fuels to operate). And, by the way, all of our nuclear power plants are nearing the end of their design life, with no plans or prospects for them to be replaced by new ones. We have maxed out on potential hydroelectric sites and the existing big ones are silting up, which will take them out of service inside of this century.

Electricity can also be produced by solar cells and wind turbines, but at nowhere near the scale necessary, on their own, for running contemporary American life. The conceit that we can power suburbia, the interstate highway system, truck-based distribution networks, commercial aviation, the U.S. military, and Walt Disney World on anything besides fossil fuels is going to leave a lot of people very disappointed.

The truth is that we have been running all this stuff on an extravagant ramp-up of debt for at least a decade to compensate for the troubles that exist in the oil industry, oil being the primary and indispensable resource for our way of life. These troubles are often lumped under the rubric *peak oil*, but the core of the trouble must be seen a little differently: namely, a steep decline in the Energy Return on Investment

(EROI) across the oil industry. The phrase might seem abstruse on the face of it. It means simply that it is becoming uneconomical to extract oil from the ground, even with the so-called miracle of “fracking” shale oil deposits. It doesn’t pay for itself, and the EROI is still headed further down.

In the 1930s, the oil industry could get 100 barrels of oil for every barrel of oil in energy they put into production. Drilling on the Texas prairie was like slipping a straw in a milkshake and the oil gushed out of the ground under its own pressure. Today, those old wells are far into depletion and we’re left with unconventional oil. Horizontal drilling and fracking into shale is enormously more expensive to carry out, and offshore deepwater drilling that requires a \$100 million floating oil platform is nothing like slipping a straw into a milkshake. They have to go down a mile or more beneath the surface and then another mile into the undersea rock. It’s very expensive and dangerous. (Remember the BP Deepwater Horizon blowout of 2010?)

The aggregate ratio of *oil-out-for-energy-in* these days is 17 to 1, and for shale oil it’s more like 5 to 1. You cannot run industrial civilizations at those EROI ratios. Thirty to one is probably the minimum. And you can’t run renewable alternative energy systems without an underlying support platform of fossil fuels. The implacable reality of this dynamic has yet to sink in at the graduate-school fantasy factories.

The world’s major oil companies are cannibalizing themselves to stay in business, with balance sheets cratering, and next-to-zero new oil fields being discovered. The shale oil producers haven’t made a net dime since the project got ramped up around 2005. Their activities have been financed on junk lending made possible by arbitrages on the near-zero Fed fund rate, itself an historical abnormality. The shale-oil drillers are producing all out to service their loans, and have thus driven down oil prices, negating their profit. Low oil prices are not the sign of a healthy industry but of a failing industrial economy, the latter currently expressing itself in a sinking middle class and the election of Donald Trump.

All the techno-grandiose wishful thinking in the world does not alter this

reality. The intelligent conclusion from all this ought to be obvious: Restructuring the American living arrangement to something other than “infinite” suburban sprawl based on limitless car dependency.

As it happens, the New Urbanist movement recognized this dynamic beginning in the early 1990s and proposed a return to traditional walkable neighborhoods, towns, and cities as the remedy. It has been a fairly successful reform effort, with hundreds of municipal land-use codes rewritten to avert the inevitable suburban sprawl mandates of the old codes. The movement also produced hundreds of new town projects all over the country to demonstrate that good urbanism was possible in new construction, as well as downtown makeovers in places earlier left for dead like Providence, Rhode Island, and Newburgh, New York.

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