

Michael Sorkin

How to make the Big Apple bear fruit

What would it take for New York to grow its own food?



Amsterdam Avenue in New York, as envisaged by NYC (Steady) State's environmental blueprint
Christopher Kompanek JULY 10, 2015

What would it mean if we were to take absolute responsibility for our consumption? This is the question New York-based architect Michael Sorkin pondered after reading about the “ecological footprint”, a concept created in the 1990s by professor William Rees and PhD student Mathis Wackernagel at the University of British Columbia, which uses an algorithm to quantify the strain human consumption puts on the world’s resources. Their findings showed that we would need the surface area of four planets if we all lived like Americans.

Sorkin, now 66, had been named head of graduate urban design at the City College of New York in 2000 and was teaching sustainable urbanism. “The question became how to unpack this,” he recalls, sitting on a couch in his Soho office. Sorkin instructed his students to study the actual area (as opposed to the conversion the algorithm produced) needed to generate enough food for the average New Yorker. Based on Department of Agriculture data, that worked out at 0.52 acres, or 22.1 times the area of New York City for all 8.39m residents.

This led 10 years ago to the creation of New York City (Steady) State, a project Sorkin developed with Terreform, his non-profit organisation. “We’re drawing a blueprint and looking at how far you could go if you weren’t so incrementally inclined,” Sorkin says of its scope, which stretches beyond the confines of regulations and bureaucracy to illustrate what is possible. This project will produce publications covering the “respiratory functions” (food, waste, air, water, climate, transportation, construction and energy) of the city. The first — on food, Home Grown — is out later this year.

“Each volume is an encyclopedia of practices that would be applicable in any city wanting to take greater responsibility for its ecological footprint, its rates of respiration and its impact on the planet,” Sorkin explains.

He describes “vertical agriculture” as a great romance of the past couple of decades, citing Singapore’s Sky Greens, which produces a tonne of vegetables every other day with five to 10 times the productivity of a conventional farm, and a new 60 metre-high vertical greenhouse in Linköping, Sweden, that will also house a 16-storey office building. Sorkin marvels at this kind of innovation while realising its limits.

Why don’t we take back one lane of every street and convert it from the automotive realm?

NYC (Steady) State found that with modifications to a 2,500-calorie a day diet to reduce consumption of red meat (which clocks 9.81 food miles per ½ lb vs 0.17 miles for potatoes), “you could produce enough food with this verticalisation to feed everyone in New York without disrupting residential life — but the energy inputs are insane with construction, heating and lighting”, he says. “It would take 20–30 Staten Island

atomic plants, which seemed not entirely realistic with the spirit of the exercise.”

Another architect might look at those findings and see a solution in sustainable energy sources, such as fuel cell technology, but Sorkin finds this problematic. “We put too much faith in technical fixes,” he says, hoping instead that we can remove “the need for some highly technologised means of personal mobility for everything. It’s still not working if you need a car to get a carton of milk”.

Sorkin notes that New York, which is “otherwise profligate in waste”, is one of the most energy-efficient cities because of its public transport. Still, Manhattan is clogged with cars, which contribute to air and noise pollution. NYC (Steady) State’s rendering of Amsterdam Avenue is bucolic by comparison, with a grassy median filled with plants dividing traffic from a bike lane. “Why don’t we take back one lane of every street and convert it from the automotive realm?” he asks. “Why are we paying to allow people to store private cars on our streets?”



Linköping's vertical greenhouse

For Sorkin, the key is a radical overhaul of our ideas of neighbourhoods — what and who they should contain and how they fit into the metropolis: “If you imagine a neighbourhood is a critical increment of autonomous living, that means neighbourhoods become more mixed. You live and work in the same neighbourhood. Immediately, you’re solving transportation on the demand side of the equation because you can walk to work. There’s also the social implication: if everyone who works in the neighbourhood can walk to work, that means there has to be housing for everyone. The barista, the banker, the teacher and cop are all provided for.”

Sorkin’s vision calls for a rethinking of zoning, which he likens to a “19th-century artefact”. “One of the premises of the study is that we are entering a post-zoning era of New York, potentially. If employment and manufacturing are not making too much noise or pouring out toxic smoke, there’s much more freedom in where they’re located.”

“Think of a raw space loft,” he says, “where the lines between living room, bedroom, and office are fluid and moving between them is seamless.”

Almost in the same breath, Sorkin, who has designed entire cities in China, also recognises the importance of neighbourhoods being unique. “There are all sorts of unanswerable ethical questions. For example, is it legitimate that there be a Chinatown?” Yes, he says, as long as there is upward mobility — the main distinguishing factor, he deems, between a neighbourhood and ghetto.

“One of our anxieties about the cities of the world is that they all become the same — same skyscrapers, same Starbucks. Given the imperatives for homogeneity, where will the differences between Prague and Marrakech and Baltimore and Paris come from in the future if local cultures are under stress?”

Sorkin's hope is that NYC (Steady) State will fuel a discourse between planners and designers that uses sustainability to push the boundaries of creativity.

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