

InfrastructureUSA

Guest on THE INFRA BLOG

David Owen, Author, *Green Metropolis* and *The Conundrum*

Conversation with Steve Anderson, Managing Director, InfrastructureUSA

David Owen:

The Conundrum and Green Metropolis

The Conundrum is about the difficulty of actually turning good intentions into good results and it applies to a number of areas. It grew out of my previous book *Green Metropolis*, which directly addresses some of the issues that you're interested in. That book in turn grew out of a New Yorker essay I wrote in 2004 in which I made the case that the greenest place in the United States isn't places like Boulder, Colorado or Portland, Oregon but is in fact, New York City, Manhattan. The reason is that the infrastructure of a dense city makes people use less energy and emit less carbon. It just inherently gives people a smaller environmental footprint. New York City residents live in smaller spaces, they are far less likely than other Americans to own automobiles, they're the only significant users of public transit in the United States, they use the smallest amount of energy in all forms per capita and they have the smallest carbon footprint.

Are We Willing to Sacrifice?

When people think about climate change and energy they'll say, "we need to make a greater investment in renewable energy sources," assuming that this is an issue, that they are concerned about. That's not really the underlying question. The underlying question is, "Do we have the will as a species to leave some very large fraction of the Earth's remaining fossil fuels in the ground, untouched forever?" That's a different question and it's one that's harder for people to say "yes" to. I think people tend to—when Americans think about sustainability—they tend to think, "pretty much the way I live right now but maybe with a different car. I will buy different products, I will buy different versions of the products that I use now. I'm willing to do that, assuming that cost is approximately the same." Or, as they are often told, that it will cost less. But I don't think that many of us, and I would include myself among the people that are not really ready to think about this, about doing the things that would actually be required to significantly reduce the carbon and energy footprints of the human race.

The Environmental Impact of Increased Mobility

The thing that I've argued that we tend to—automobiles are a prime example—we tend to think solely in terms of fuel efficiency, of miles per gallon, and I think

the far bigger issue, the *real* issue, is just miles. It's not miles per gallon; it's miles. And it's distance and mobility, and those are the critical environmental issues. The things that we tend to focus on are issues that don't really address the underlying environmental and energy and carbon problems, but in the long run, we're just talking about making our lives easier, making transportation less expensive for ourselves. When people talk, for example, about high-speed rail, it's a way of avoiding the real issue, which is an issue of mobility and just sort of swapping one energy hungry system for another. And usually not swapping it but just adding it on to an existing system. One thing you see, for example in my state, there's talk about building a high-speed rail line between southern Connecticut and southern Massachusetts; it's a distance of 70-80 miles, and it's always sold to people as it would alleviate traffic congestion on I-91, which is a nightmare at rush hour times. When they talk about that, they are not talking about eliminating I-91; they are not talking about taking up the asphalt since we put down the train line. The function of the train line, to the extent that it works, will merely be to move automobiles off of I-91 thereby solving the traffic congestion problem for the people who continue to use it. The end result, the long-term result, will be what the end result of all our infrastructure expansions have been in the past, which is just to increase our mobility, to increase the energy that we consume in transportation, not to make it go down.

It isn't the Hummer in the Driveway; it's the Driveway

The thing that I've argued in both books is that the main energy drain in a typical American suburb isn't the Hummer in the driveway: it's the driveway. It's everything that the automobile makes possible and necessary; the automobile is what is ultimately responsible for our oversized houses. Houses have doubled in size, since shortly before I was born, since the mid 20th century. All those larger houses not only consume more materials in their construction, but also consume more energy just keeping them going. They require more maintenance, they have bigger yards, they have bigger swimming pools. They require more infrastructure just to support them, the whole road network that attaches people to the places that they go. And as we have improved that infrastructure, we've made our roads better, widened our travel possibilities, as we've made our cars more efficient in every way. We have made them more pleasant to be in; we've made travel more efficient, by making it possible to go anywhere. I can walk out to my driveway right now and go anywhere easily, inexpensively. As we've done those things we've increased our environmental impact, our energy consumption, our carbon footprint. So this is the paradox of efficiency: as we get better at doing things, we do more things.

Decreasing Energy Consumption

We need to look at consumption, and figure out how do we consume less without making ourselves miserable. In 2008 the world did something that not even the most optimistic environmentalists had been expecting and that was that global

energy use and carbon output fell and by significant amounts, something that no one had anticipated. The reason was not that people suddenly acquired a green consciousness; the reason was that oil suddenly became very expensive in comparison to what it had been and the global economy imploded. And while nobody looks forward to recessions, but from an environmental point of view there are things to be said for them. Consumption fell. People who lose their jobs, or who are worried about losing their jobs, drive less. They turn down their thermostats. They don't heat their swimming pools. They don't travel as much. All those decisions are beneficial from an environmental point of view, but they have tragic consequences as we've seen: unemployment rises, people aren't able to afford medical care they need, people are hungry.

Where Do We Begin?

Well the only lever that we have that is big enough to move people is economics. Where we start is by discouraging the kinds of behavior that are most harmful, which means you make travel more expensive rather than try to figure out how to make it less expensive. You make reckless consumption more expensive. We know that works. People consume less when they have to pay more. We tend to look at it completely in the opposite way. If you look at air travel now, it represents something like between 2 and 4% of energy use worldwide, maybe 3 ½ something like that and similarly with carbon output. If you look at proposals, or what are we going to do about the carbon impacts and energy impacts of air travel, all the proposals are things like, we'll make jet engines more efficient, we'll make fuselages more aerodynamic, we'll use computers to make flight paths more efficient so that planes don't have to circle over cities. All those efforts though will merely serve to make air travel more convenient and less expensive than it is right now, and will therefore encourage us to do more of it. If you look at the history of air travel, modern jets are more than 70% more fuel efficient than the jets of the early 1960s, when I first rode on a jet. And yet that extraordinary increase in efficiency has not caused our consumption of jet fuel to fall, either cumulatively or per capita. In fact, it's fueled the rise; it's what makes it possible for me to decide right now that I want to go to Australia next week and to buy a ticket for a reasonable price and be there without almost thinking about it and so making that decision easier, less expensive, more convenient, will not make the energy and carbon problem get smaller; it will only do what it's done in the past, which is make it get larger.

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