

BACON'S REBELLION

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No Such Thing as a Free Park

"Free" parking is like a free lunch: Someone pays, whether they know it or not. Trouble is, the hidden subsidy for automobility increases driving and worsens traffic congestion.

By James A. Bacon



In Virginia's transportation debate, the role of parking comes as an afterthought. Let me rephrase that. The role of parking doesn't even come up. While politicians, pundits and lobbyists bray for billions more in spending for new roads and mass transit facilities, the number of speeches, editorials and position papers dedicated to the relationship between parking, automobility and other forms of transportation has been just about zero.

It goes without saying that if you want to drive somewhere, you need more than roads -- you need a place to park your car when you get there. But Virginians are clueless about the massive investment they collectively make in creating and maintaining millions of parking spaces, and the impact of that investment upon their transportation choices.

Fortunately, a UCLA urban planning professor by the name of Donald Shoup has dedicated his career to studying the economics of parking. In his 752-page tome, "The High Cost of Free Parking," he argues that the capital value of all the parking spaces in the United States in 1997 roughly equaled that of all

the automobiles *plus* all the roads in the country.

No, that's not a typo. In 1997, the capital value of motor vehicles in the United States amounted to \$1.144 trillion. The capital value of all the roads was \$1.359 trillion. Assuming an average value of \$4,000 per parking space, and assuming a ratio of three parking spaces for each of the nation's 200 million automobiles, Shoup argued, the capital value of parking spaces was roughly \$2.5 trillion. If you don't like Shoup's assumptions -- I personally think they're a tad high -- plug in your own. Whatever numbers you use, you'll still come up with a number in the hundreds of billions of dollars.

Shifting gears to annual spending, Shoup estimates that parking cost Americans between \$127 billion and \$374 billion in 2002. That would have translated into \$3 billion to \$10 billion a year in Virginia, and it compares to the Commonwealth's \$4.9 billion budget this year for all transportation spending

We don't realize that we spend so much on parking because we pay only a tiny fraction of that amount directly, maybe one to four percent, in cash outlays to parking lots and parking meters. The rest of the parking comes "free" -- free in the sense that motorists didn't open up their wallets for it, but not free in an

economic sense. Builders and developers pass on the cost of parking lots in the form of higher charges for housing, shopping space and office space. Municipalities pass on the cost of on-street parking in the form of higher taxes.

How, precisely, does Shoup's insight bear upon Virginia's transportation debate? Shoup argues that "free" parking amounts to a massive subsidy of automobility. People may pay a lot of money when they purchase their car, and even more when they fork over tolls and gasoline taxes to cover the cost building and maintaining roads. But they rarely pay the direct cost of parking their cars. As a consequence, people drive cars more often -- and avail themselves of mass transit less -- than they would if they shelled out a few shekels every time they parked.

The distortions of "free" parking ripple through the economy in other ways. City and county zoning codes mandate minimum parking requirements for houses, apartments, restaurants, strip malls and office buildings. Neighboring buildings with peak parking demands at different times of the day -- apartments (peak loads at night), office buildings (during the day) and stores/ restaurants/nightclubs (in the evening) -- get no break from the rules. As a consequence, far more space is dedicated to parking than required, and buildings are separated by greater distances than they need be.

That spatial separation limits

pedestrian accessibility and undermines the economics of mass transit. Bus lines and metro stops typically draw passengers from within a quarter-mile walking radius. The mandated excess of parking lots diminishes the number of buildings -- and, hence, the number of people -- located within walking distance. Fewer people means fewer prospective passengers.

In sum, ubiquitous "free" parking subsidizes the phenomenon of single-occupancy vehicles, discourages the use of carpooling, buses, rail and other forms of shared-vehicle transportation, and feeds the insatiable demand for more roads and higher taxes to pay for them.

So, what's to be done about it?

I'm still thinking through the implications of "free" parking, so I don't pretend to have all the answers. I certainly do not -- repeat, do not, not, *not* -- advocate artificially restricting the amount of parking in order to discourage automobile use. Rather, I think public policy in Virginia should be to let the marketplace decide how much parking is needed, to create a level playing field between transportation modes and to respect the resulting consumer choices.

There are three areas that require examination.

Reform zoning codes. First, we need to revisit zoning codes in every city, county and town in Virginia with the goal of deleting minimum parking requirements. Eliminating zoning mandates wouldn't mean an end to "free" parking, of course -- a free market would continue to provide it with some abundance. As a merchandising strategy, Wal Mart undoubtedly would continue to bundle "free" parking

with its stores to induce customers to visit. But a free market would provide less "free" parking than the regulated marketplace does now.

Real estate developers would have the freedom, for instance, to combine complementary land uses, as architect Burrell Saunders has done with condos, offices and retail in Virginia Beach Town Center (see "[Extreme Makeover](#)," August 28, 2006). Likewise, we might see more creative use of shared space, as in an arrangement I suggested in "[Parking Madness](#)" (June 6, 2006) whereby a church (Sunday peak loads), a synagogue (Saturday), and an elementary school (weekdays) could jointly maintain a parking lot.

Bottom line: Planners should back off, let private property owners decide how many parking spaces they need to serve their customers and encourage landowners to cluster complementary uses.

Make parking reflect its environmental costs. According to Shoup, if you combined all the parking spaces in the United States, they would take up an area roughly the size of the state of Connecticut. That's a lot of space -- and a lot of run-off.

Run-off from the impervious surface of roads and parking lots allows storm water to reach streams faster and in greater quantities than it otherwise would. Instead of seeping into the soil and recharging the groundwater, rain falling on parking lots scours out stream beds, accelerates erosion and deposits sediment and chemicals into Virginia's rivers, streams and waterways.

A common-sense system would gauge the cost of ameliorating

the damage from run-off and assign that cost to roads and parking lots. Each parking space would be charged a pro rata share. Whether an appropriate number would be \$1, \$10 or \$100 per parking space, I don't know but it should reflect the core principle that any human activity that damages the environment should be charged a fee to help offset that damage.

Establish a pricing mechanism for parking. One reason that so much parking comes "free" is that the transaction costs associated with collecting parking fees are so high that it's not worth the trouble except in areas where space is at a premium. But advances in GPS tracking technology promise unprecedented convenience and flexibility in parking policies.

Bern Grush, founder and CEO of Toronto-based Skymeter Corporation is close to commercializing technology that he hopes will revolutionize how parking is paid for. His satellite-based technology can track the exact location of any car equipped with a transponder and how long it resides in a parking space. The concept isn't new, but Grush claims to have solved the supposedly insolvable problem of the "urban canyon effect," in which buildings block the ability of satellites to get a fix on a car's movements in a city, and he has developed systems to produce irrefutable documentary evidence of a car's whereabouts, necessary to settle any possible billing disputes.

I had a chance to talk to Grush last week. I had read about him in a feature article in *Business 2.0* magazine, "[The Disruptors - 11 important technologies](#)." Around the same time, he had stumbled across my musings about congestion pricing in *Bacon's Rebellion*. We exchanged

e-mails, and the next thing I knew, Grush was introducing me to Donald Shoup's writings and explaining the wondrous benefits of applying pricing mechanisms to transportation and parking.

The major obstacles to implementing Grush's ideas are institutional -- the willingness of municipal bureaucracies to change the way they do things. He thinks he can win over local authorities by enabling them to fine-tune parking with far greater dexterity than they can now.

With Skymeter, pricing schemes can be extremely flexible, Grush says. To encourage turnover in a retail shopping district, for instance, a city could offer the first 20 minutes of parking for free, then start charging three cents per minute for an hour, and then escalate the charge to 20 cents a minute thereafter. Try doing that with parking signs and a meter maid!

Skymeter could solve the hassles of living in my old neighborhood in the Fan, where local residents buy decals to enjoy parking preference over the Virginia Commonwealth University students who park there and walk to class. The system could be jiggered to allow residents free parking within 500 feet of their house or to charge students a fee for parking in the neighborhood.

Another example: Instead of selling monthly passes for parking lots, which result in empty parking spaces on days subscribers don't show up, municipalities could sell parking passes in various configurations, throw in loyalty bonuses -- "park 10 times, get one day free" -- or

utilize other techniques to maximize parking space utilization.

The graphic below, taken from a Grush-authored publication contrasts how current parking practices (the signs in the upper row) could be modified by Skymeter (lower row).



Grush sees a multi-step process in implementing Skymeter in a city:

1. Develop a pricing map. Proceeding neighborhood by neighborhood, district by district, ascertain what your goals are and what kind of pricing strategy would best accomplish those goals.
2. Print and install new signs.
3. Set up network of automobile repair shops or other retail locations where motorists can sign up for the service and equip their cars with transponders.
4. Devise a marketing/communications plan to explain the new system to the public.
5. Set up a data center/call center to handle billing and resolve disputes.

(If there's anyone in Virginia who would like to discuss the process in more detail, Grush says, he would be happy to talk to them.)

Grush envisions using Skymeter technology to solve other transportation-related problems --

congestion pricing on highways foremost among them -- but parking, he believes, offers Skymeter the easiest entry into the marketplace. People have an entitlement mentality when it comes to driving on roads, and they resent paying taxes and tolls. By contrast, they're accustomed to paying for parking, in urban locations at least. Skymeter

would provide drivers far more flexibility and convenience while eliminating the aggravation of parking tickets.

But fine tuning parking policies is not an end unto itself, Grush says. It's a tool to address the much larger problem of traffic congestion. "Anything that hides the cost of parking, like getting free parking as a perk with your job, encourages you to drive," he says. "The single largest unexamined cause of congestion is our blindness to the linkage between parking and roads. If you want to solve the road problem, you've got to solve the parking problem."

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