Book reviews of *The High Cost of Free Parking*

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Book Review

The High Cost of Free Parking
Donald Shoup
Chicago, IL, American Planning Association (APA), 2005, 733pp., ISBN 1-884829-98-8

Over the past 50 years, the world has been transformed by the presence of the automobile. All over the globe, in industrialized and non-industrialized nations alike, landscapes and lifestyles bear its imprint. The car-centred policies of the last half-century have yielded many negative results: they have sprawled cities, deepened the disparities between rich and poor, and isolated the elderly, the young, and the disabled. Beyond this, they have endangered public health, deteriorated the quality of urban life and devastated the environment.

In this context, Donald Shoup's *The High Cost of Free Parking*, which assesses the significance of the contribution of free parking to the cause of urban ills, is so timely as to be overdue. Shoup argues that the policy of offering free curbside parking, as well as current requirements for off-street parking, have encouraged everyone to own a car, to drive wherever they go and to park at everyone else's expense. He explains that, initially, developers pay for the cost of required parking in a given area. Soon after that, however, it is tenants and their customers—including those who do not drive—who will pay indirectly for the cost of parking in the prices for everything else they consume. There is, therefore, actually no such thing as free parking: its cost is merely diffused throughout the economy. And since the cost of parking is hidden in the prices of other goods and services, no one can pay less for parking by using less of it.

The bundling of the true cost of parking into higher prices for everything else amounts to a kind of subsidization of car travel, which distorts travel choices toward the car and away from public transit and non-motorized modes of travel such as cycling and walking. The results have been increased traffic congestion and energy consumption, debased urban design, and a degraded environment. In this way, Shoup shows that, essentially, prioritizing free parking amounts to rewarding excessive reliance on the automobile and supporting systematic damage to urban areas in which we live.

The book includes an introductory chapter, three main parts comprising 20 chapters, and a fourth and final part which is home to conclusions and recommendations. In Part I, Shoup examines the current approach to parking planning, which consists of urban planners setting a minimum parking requirement for every land use, and requiring all new developments to provide ample on-site parking with the goal of meeting the peak demand for free parking. This approach is duly criticized for dominating the process of municipal land development, but more so because it is often based on poorly conceived and limited studies that neglect the many significant cost items associated with providing free

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parking. Such cost items include increased housing and rental prices, unjust subsidies for cars, distorted choices in the mode of travel (91% of all commuters in the US drive to work—and 95% park free at work—while only 27% of the seats on public transit systems are occupied), urban sprawl, social inequity, and environmental harm.

Once implemented, parking requirements start a vicious cycle: free parking increases the demand for automobiles, which in turn require more parking space. "Every jab of the parking needle relieves the local symptoms, but ultimately worsens the real disease—too much land and capital are allocated to parking and cars", Shoup states (p. 94).

Shoup's analysis of the 'cruising' aspect of the parking problem is presented in Part II. Herein, the author shows that free and low-priced parking policies have inadvertently created the incentive to cruise for curbside parking, resulting in an astonishing amount of excess vehicle-miles of travel. A measured estimate of the excess vehicle-miles of cruising within a 15-block commercial district in downtown Los Angeles, CA, resulted in a scarcely imaginable 945 000 annual vehicle-miles of travel, which is equivalent to 38 trips around the world or two round-trip journeys to the Moon! Cruising for curb parking in a mere 15-block area thus wasted 100 000 hours (11 years) of drivers' time, consumed 47 000 gallons of fuel and produced 730 tons of carbon dioxide emissions. Shoup takes pains to emphasize that the "aggregate consequences of all this cruising—congested traffic, wasted time, squandered fuel, and polluted air—are staggering" (p. 14).

Following discussion of the problems with current parking policies, their resultant driving habits, and the larger consequences for the city, the economy, and the environment, Part III offers some realistic solutions to the parking problem. Among them: charging fair market prices (varying by the time of day and by the day of the week) for curb parking; eliminating parking requirements; and returning all or part of parking revenue to the neighbourhoods in which it is generated. Shoup's argument here is that a well-functioning market price can balance a variable demand for curb parking, enabling drivers to find an available space near their destination. This will minimize cruising, reduce congestion, conserve energy, improve air quality and produce public revenue.

He goes on to propose that the political barrier to charging higher prices for curb parking will be alleviated by the return of all or part of the parking revenue to the neighbourhood in which it was generated. This revenue could be spent to clean sidewalks, plant street trees, improve store facades, put overhead utility wires underground and improve public safety:

> Our unwise parking policies have damaged our cities, our economy, and our environment. ... Cities can charge fair-market prices for curb parking, return the resulting revenue to pay for neighbourhood public services, and remove the requirements for off-street parking. (p. 601)

With this approach to parking policy and pricing, the high cost of parking will slowly become unbundled from the prices for everything else, the real cost of automobile travel will be highlighted, and as a result, people will drive less, will waste less time in traffic, will consume less energy, breathe cleaner air, and the nation will import less oil. Urban residents will also pay less for everything except parking.

Donald Shoup is undoubtedly the leading authority in the subject, and *The High Cost of Free Parking* with its technical detail, use of diagrams and abundance of comparisons reflects his expertise. Shoup's conviction in arguing his case is compelling, but it may also be the source of the book's one minor shortcoming: the consequences of free parking and parking requirements are repeated a few times in almost every chapter. Yet, when considering the five-decade-long neglect of the consequences of free parking and parking requirements, perhaps repetition is in order.

Francis Bacon, the English Elizabethan essayist, wrote: "Some books are to be tasted, others to be swallowed, and some few to be chewed and digested". *The High Cost of Free Parking* belongs to the third group. I strongly recommend it to every urban policy-maker, planner and transport engineer.

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Book Reviews

The High Cost of Free Parking
Donald Shoup
Chicago: American Planning Association, 2005
ISBN 1884829988 (hb)

"Parking is the unstudied link between transportation and land use" and in *The High Cost of Free Parking* Donald Shoup presents us with an impressive treatise on the impact parking policy can have over both our environment and economy. The work builds on an established publication record in the field and delivers a thorough and confident examination of the true costs of misguided parking policy.

The book focuses on the US and identifies how planning policy, specifically the requisite provision levels of off-street parking for new developments, has allowed parking and the private car to dominate development patterns.

Shoup identifies what may be described as a cyclical chain of actions that continue to exacerbate the associated costs of this situation. Whilst it may be argued at what point this circle began, it is clear from the

analysis that each element is a contributing factor to the ongoing growth of the problem and the solution will require some fundamental change.

Shoup opens with an assessment of the high growth levels of vehicle ownership across the globe, and employs some useful imagery, a feature throughout the text, to convey the true scale of providing sufficient parking spaces at all destinations for our vehicles.

He moves on to discuss the associated minimum parking requirements, which seek to address this task of parking provision by obliging all developments to 'cater' for any and all vehicles which may wish to park there. Here Shoup engages in great detail with the flawed methodologies or misinterpreted guidelines employed by some planners in setting such minimum parking requirements. He notes that planners will often either copy another city—leaving themselves liable to repeat the same mistakes—or consult the planning guidelines manual on trip generation rates when setting the minimum parking requirement. In the case of the latter approach, Shoup goes to great lengths to detail the often limited and dated information on which such guidelines are based. In one example from the 2003 US guidelines, the data plot for average trip generation to square footage for a type of fast food restaurant is based on just two observations. Whilst such a regression fails to meet the standards of significance established, a detailed rate of 153.85 trips per 1000 square feet during the day time peak is delivered! Herein, Shoup flags a critical issue, citing numerous examples of occasionally (unfortunately) amusing levels of trip generation rates which were generally constructed from a handful of cursory studies of peak hour demand for free parking in very specific circumstances. However, once printed in the guidelines, even the most inappropriate of estimates may be acted upon.

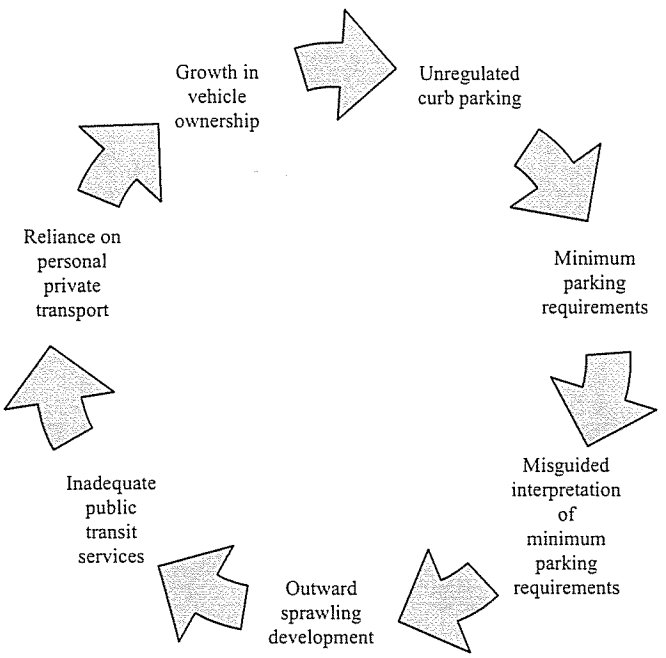

Figure 1. Parking cycle.

The text progresses to engage with the impact of such minimum parking requirements on development. Facing a high minimum parking requirement, many developers are pushed outward from the centres in their search for sufficient available and affordable development land. This in turn puts pressure on infrastructure to connect to these outlying development nodes and contributes to an accelerated urban sprawl. Whilst public transit might be an option, with such ample free parking and connecting roads, driving becomes the default option. In turn, then driving becomes even more entrenched as the dominant mode, and private car ownership becomes a requisite in itself for modern living in such an environment.

Rather than merely chastising people for pathological car use, Shoup defines his motives for seeking to address the 'free parking' problem. This is achieved by a meticulous, if understandably approximate, analysis of the costs associated with parking provision. Aside from negative impacts upon development patterns and social communities, Shoup utilises estimates of land cost, maintenance, associated congestion, pollution and other derived road transport externalities to lift the veil on how society is paying for 'free' parking.

Here, Shoup's broader perspective on the issues draws heavily on his background in both economics and urban planning. It is this dual appraisal that enables the book to establish clear connections between how something as seemingly innocuous as a minimum parking requirement in a planning guideline manual could have such dramatic impacts on urban form, modal choice, the economy and our environment.

In a European context, with older cities whose form and development often predates 'professional' planning, the scope to imitate the patterns in the US is somewhat restricted. However, with many European centres sprawling outwards in search of space for development, there are a number of valuable lessons within this text for planners and policy makers alike.

In his conclusion there is no trace of the light-hearted wit which permeates all other areas of this book. This, it should be noted, would surely carry even the casual reader through the engaging and broad scope of this 'parking' planning manual. Instead, Shoup tables two distinct futures, a bleak 'business as usual' scenario and a 'reformed' scenario with plausible general benefits predicated on the following three reforms.

(1) Establish a fair market charge for on-street parking which seeks to preserve a ~15 per cent vacancy rate.
(2) Ring fence the revenue from on-street parking for development of local amenities.
(3) Remove the requisite off-street parking requirements.

As a concluding remark, this text should and can easily be read by planners, policy makers and citizens alike. Shoup engages with his deceptively weighty topic in a clear and progressive manner accessible to anyone from amateur parking enthusiasts to planning professionals. The reader is brought confidently through the issues, arguments and potential reforms in an enjoyable witty style, comparatively unique in works of such academic rigour and of such importance to the planning of our future environment.

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The High Cost of Free Parking, by Donald Shoup. Chicago, IL: American Planning Association. 2004. 576 pages. $59.95 (hardcover).

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I had the best of intentions when I took on this assignment. But this book, at more than 600 pages, is downright intimidating: too big for me to carry on planes, my best reading time, and unwieldy even sitting in my favorite chair. When I told a group of transportation colleagues about the book, they expressed both disbelief and sympathy—how could there be that much to say about parking, let alone anything interesting? No wonder I put off reading it for so long.

But as Shoup adeptly shows, parking is interesting, and it is hugely important. The problem, as the title suggests, is parking that looks free but isn't. Shoup estimates the total subsidy for off-street parking—costs that are not directly paid for by drivers—at between $127 billion and $374 billion per year (p. 591). Seemingly free parking "seriously distorts individual travel choices toward cars" (p. 205) and leads to economic inefficiency in the form of excessive consumption of driving. Abundant parking also contributes to the problem by making driving easier and by making transit, walking, and biking less pleasant and less feasible. Shoup demonstrates how parking requirements often lead to more land area devoted to parking than to building—not an appealing environment for a pedestrian. The increment of driving attributable to free and abundant parking harms the environment, but it also harms driving by adding to traffic congestion. Shoup's analysis of parking at UCLA shows that each new space generates external congestion and pollution costs of at least $117 per month (p. 197).

Planners have done two things wrong. One mistake is setting minimum requirements for private off-street parking in residential and commercial developments. Through such requirements, planners aim to ensure an adequate number of spaces, or, more accurately, an adequate number of spaces to satisfy the demand for *free* parking. As Shoup notes more than once, planners define parking demand as the occupancy of free parking spaces at peak times and then set parking requirements to meet this demand; they do not consider the relationship between price and demand, and they rarely question the need to provide parking for the peak, even if it lasts only a few hours per year. Most cities set their requirements with the help of the Institute of Transportation Engineer's *Parking Generation*, by borrowing rates from other cities, or by using the "golden rule" of four spaces per one-thousand square feet for office buildings. Shoup documents numerous problems with each of these approaches and offers an especially damning critique of the ITE rates: a "breathtaking combination of extreme precision and statistical insignificance" (p. 46). The result is a "catastrophe" (p. 592); "minimum parking requirements are truly a great planning disaster—perhaps the greatest of all time" (p. 218).

Shoup's favored solution to the parking-requirements mistake is to eliminate parking requirements altogether. This would leave decisions about off-street parking to developers, property owners, and businesses. He recognizes, however, that it will not happen soon and will most likely have to happen gradually over time. In the meantime, he recommends giving developers the option to pay in-lieu fees that cities can use to provide public parking. Cities can also give developers

the option to reduce parking demand rather than increasing supply, through programs such as transit passes, parking cash-out, and car sharing.

A second mistake planners have made is to provide free curb parking in central business districts. In busy areas, demand often exceeds the supply of free curb parking. If off-street parking is available for a fee, drivers then have the choice to pay or to "cruise" until they find a free space. Apparently, people are universally willing to trade time for money: Shoup cites studies that document a century of cruising in cities around the world, with an average parking space search time of more than eight minutes. But cruising has impacts beyond time for drivers. Based on original data collection, Shoup estimates that cruising in Westwood, where UCLA is located, adds up to one million vehicle-miles-traveled a year, counting only the cruising that goes on between 8 a.m. and 8 p.m. This additional driving generates more pollution and helps to clog traffic in businesses districts, particularly when drivers wait in traffic lanes for others to vacate parking spaces.

Shoup offers an easy solution to this problem: charge for curb parking. With the help of new technologies, cities can easily implement pricing schemes that adjust to demand levels throughout the day and that do not unduly inconvenience drivers. More challenging are the politics of charging for parking that used to be free. One way to build support, Shoup argues, is to return the revenues raised by parking fees to the area that generates it through Business Improvement Districts. To deal with the spillover parking problem caused by downtown customers parking in surrounding residential areas, many cities resort to residential permit programs that lead to an underuse of parking space. Instead, cities should charge nonresidents for parking in these areas and return the revenues to the neighborhood in the form of public services and infrastructure improvements.

The two mistakes are related, Shoup argues, in that the first has come about in response to the second. Planners see the problem as the failure of the market to supply enough off-street parking. In response they establish minimum parking requirements to ensure what they define as an adequate level of parking. But the real problem is the failure of cities to charge market prices for curb parking. A combined effort is thus needed: charge fair-market prices for curb parking, return the resulting revenue to the areas affected, implement parking fees in surrounding neighborhoods if need be, and remove requirements for off-street parking. These reforms will align individual incentives with common interests and channel personal choices to produce public benefits. The Pasadena and San Diego examples presented in chapter 16 show how cities can combine these reforms to great success.

But could increased parking charges increase social inequities? Not necessarily, Shoup argues. Under current practices, "drivers park without paying, while nondrivers pay without parking" (p. 530), hardly an equitable situation. Shoup adds other arguments. Similar to high-occupancy toll (HOT) lanes, parking charges help ensure that even the poor can get quick, convenient parking when most needed. No one argues, he adds, that other essential goods—food, housing—should be given away free to ensure equity for low-income households, so why should parking be any different? Lifeline pricing and revenue sharing can also be used to reduce inequities. Eliminating parking requirements helps to improve equity as well by "unbundling" parking from other goods and services, so that customers are not forced to pay for parking through the prices of products and services. If parking lots are converted to buildings as a result, walking and other nondriving modes will become more attractive.

Shoup makes his case for changes in parking policies by citing what must be every important study done on parking in the United States. and elsewhere over the last eight decades, including several studies of his own. He combines this substantial empirical evidence with convincing economic analyses, including clever models of the choice to cruise versus pay or pay versus walk farther. Fortunately, Shoup balances economics with entertainment. The historical background on parking woven throughout the book is fascinating; the fact that parking was already the subject of study in the 1920s is telling. He quotes from Sinclair Lewis's 1922 *Babbitt* and from a 1990s Seinfeld episode. He uses analogies that range from lead poisoning and smoking, to ancient astronomy, to predator satiation in cicadas. He equates planners with the Wizard of Oz and compares the impacts of free parking to what would happen if restaurants were required to give diners free desserts. Riffing off recent pop culture, Shoup asks, where would Jesus park?

I worry, however, that the sheer length of the book will deter those who most need to hear his message. "Long" in this case means 605 pages of text to be exact, in twenty-two chapters, with more than one hundred pages more of appendices, references, and an index. I appreciate the extensive notes provided with each chapter; they make a useful reference for those wishing to dig even deeper. But the book feels overly repetitive at times, particularly in its early and late chapters, and keeping a handle on how the different analyses fit together into a coherent whole is sometimes challenging. The short articles that Shoup has published on this material (in, for example, *Access* magazine) will be important for enticing planners to take on the book itself; policy makers will need the CliffsNotes version. Planning students are another potential audience. Shoup notes that the standard textbook on land-use planning does not mention parking, and that few planning students learn anything about parking requirements. His book contains enough material for an entire course on parking, and specific chapters might be useful as a component of a broader course on transportation planning; specific analyses could be useful as illustrations in planning theory or public finance courses.

Of all of the compelling points Shoup makes, this one emerges as perhaps the most important: "we can let prices

do the planning" (p. 500). By publishing this book, the American Planning Association seems to have agreed that planners have made a mess of parking for nearly a century and that it is perhaps time to let the market take over for awhile. Planners would still have a role to play: while cities "should deregulate its *quantity* and instead charge market prices for curb parking," they "can and should regulate off-street parking to improve its *quality*" (p. 500). Although Shoup often seems overly optimistic about the political feasibility of the changes he proposes, I'm convinced they're worth a try.

Regional Plan Association NJ CT NY
Spotlight on the Region

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Book Review

The High Cost of Free Parking (American Planning Association 2005)
By Donald Shoup

Seeing the World Through the Parking Lot

Leo Tolstoy wrote *War and Peace* about, well, war and peace. People say it's worth the 1,500 or so pages. Certainly the subject area was expansive enough.

Donald Shoup wrote 700 pages or so about, well, the strips of concrete and asphalt within which we place our vehicles – namely parking. *The High Cost of Free Parking*, to be more exact. You might think that there is no way that such a dry subject could merit so many pages, or sustain a reader on anything but a forced march.

But what's astonishing about *The High Cost of Free Parking* is that Shoup, an urban planning professor at UCLA, has written what amounts to a crowd pleaser on a planning topic. He manages to both amuse and convince. M.F.K. Fischer, the famous food writer, used oysters and a piece of pate to show the wider world. Shoup uses parking. His analysis of the demand for and production of parking, within the context of government policy, leads him into analogies with the

erroneous practices of ancient medics. He quotes folks like Shakespeare, Lewis Carroll, the scientist Richard Feynman and others seldom seen in planning books to illustrate his points.

The gist of the book is that America's cities damage themselves by not charging a market rate for a valuable chunk of their street space. Giving away street space, or charging low rates, is not the only way cities subsidize parking, as Shoup makes clear. The other way is requiring businesses to provide parking. He shows how planners over the last century have essentially ignored doing a proper analysis of parking, creating a black hole of ignorance and ill effects into which our cities have fallen.

What's so good about Shoup's book is that he goes beyond this fairly linear thought – charge market rate for parking – to show how this could be effectively implemented. Economists such as Shoup often err in applying the simple tenet of their profession, which is that everything should be "marketized." But in Shoup's case he applies the principle with subtlety.

Take, for example, the immediate response that neighborhoods would raise a huge fuss if cities started to charge them for housing their cars on the streets outside their apartments. How could one get around this? Shoup advocates the carrot that neighborhoods who allow paid parking get to keep all or most of the revenue generated. The money is used to repair sidewalks, maintain street trees or even build neighborhood centers. This principle can often win over a recalcitrant neighborhood, Shoup says.

Similar principles are explored in downtown environments. Business and shopping districts that do not charge enough for street parking are burdened in several ways, Shoup shows. First, traffic goes up because of the extra quantity of cars circling the streets looking for a parking space. Secondly, city districts often look shabby because they have both a high amount of traffic and use, and not enough money to keep sidewalks and streets in good repair.

Things change, Shoup writes convincingly, when cities such as Pasadena start charging market rate for parking in and around their downtowns. There is an optimal pricing point where a certain percentage of the spaces are always available, lowering the endless circling of the block and reducing traffic congestion. Secondly, streets and sidewalks look good, because of all the money pouring in from parking revenues. This in turn, helps a shopping district increase its allure, which generates more customers, and ultimately more tax revenues. It's a virtuous circle.

Why haven't cities or towns generally charged for parking? Why did they start to require businesses to provide it? Shoup shows how these policies emerged gradually in the first half of

the 20th century, as car ownership became widespread. At first, when car ownership was relatively low, drivers delighted in parking easily on city streets. Then as car ownership grew, there was a certain shock to find out that there was more demand for that slot on the street then there were spaces available. It was thought that a few easy planning policies, such as requiring businesses to provide spaces, would quickly cure the paucity of parking. Which it did, but it also led to more car use and the destruction of walking environments, ill effects that policy makers never envisioned.

There's no doubt that Shoup's principles are applicable in and around New York. We have perhaps the most valuable street space in the country, yet we rent it out to drivers at exceeding low rates. Not long ago I drove into Nolita in Lower Manhattan from Brooklyn for the first time. I was stunned to find that there, on one of the highest pedestrian areas of the city, drivers could park their cars all day, for free. Imagine how much a store would pay for the same square footage! Naturally, with such a valuable commodity being given away, there were virtually no spaces available. I circled the streets for a half hour, contributing to traffic, until I found a space.

Imagine how much better Nolita or neighboring Soho would work if Shoup's principles were applied. If a market rate were charged for street parking, probably quite a few dollars per hour, then finding a space would be easy because by definition the price would be set high enough so that spaces would come free at frequent intervals. Few people would park their cars on the street all day. Because the price of parking would be high, more people would leave their cars at home and travel by mass transit, which would mean less annoying and polluting traffic. Residents who chose to keep cars on the street would pay the market rate, which again would be quite high, so fewer residents would choose to do that, which again would diminish traffic and open up parking spaces so that they would be available when really needed.

It's not just in Soho that Shoup's principles are applicable, but in neighborhoods and business districts all over the region. Of course, Shoup's rules and guidelines are just a starting point for policies that would have to be crafted for the dynamics of each area. But even if you're not a planner, or have no intention of changing parking regulations, you might give Shoup's book a try. Pour yourself a glass of wine, and curl up in bed with *The High Cost of Parking*. You might find yourself surprisingly engaged.

–Alex Marshall

Questions Or Comments On What's In This Issue? Send Them To The Editor Of Spotlight On The Region, Alex Marshall At **alex@rpa.org**

Book Reviews

Shoup, Donald C. 2005. *The High Cost of Free Parking*. Chicago: American Planners Press. 733 pp. $59.95 hardcover, ISBN: 1-884829-98-8.
DOI: 10.1177/0885412205280006

While the best things in life may be free, parking, according to Donald Shoup, is certainly not one of them. In more than 700 pages, *The High Cost of Free Parking* persuasively argues and demonstrates that free parking actually carries a steep price tag. According to Shoup, "drivers park for free for 99 percent of automobile trips in the US," and the cost of this "free" parking has been shifted out of the transportation sector and into the prices for everything else. Parking has been so heavily subsidized that "the annual subsidy for off-street parking may be about the size of the budget for national defense."

In *The High Cost of Free Parking*, Shoup also provides a wealth of resources, information, and ammunition for those seeking to change parking regulation, planning, and design paradigms. The book follows a logical order of argumentation in its division into three parts: "Planning for Free Parking," "Cruising for Curb Parking," and "Cashing in on Curb Parking." Part 1 starts by presenting the skewed pseudoscience of planning for parking. Of particular interest in this section is the biting criticism and mathematical disputation of prevailing transportation-planning toolkits responsible, for example, for the overestimation of trip-generation rates and exaggerated parking demands. Part 2 builds the case against the current use of metered and free curb parking. It starts by presenting the cost and waste associated with cruising—or the search for that illusive parking space. It shows that cities create an incentive to cruise around the block when they charge too low a price at the meter, basically creating an artificially lowered rent on prime downtown real estate. With prices at the meter often lower than those at garages, motorists circle to find a meter, unnecessarily adding to congestion and air pollution. In part 3, Shoup offers his central reforms—market-priced curb parking, allocating parking revenues to the area that generated them, and abolishing off-street parking requirements. Charging rates as high as the market will bear, and adjusting them to the time of day and the day of the week, is not a technological problem but a political one. However, this political barrier can be overcome by allocating the parking revenues to benefit the neighborhoods where they are generated. The results, according to Shoup, would be parking systems that not only are sensible, effective, and fair but also lead to denser places, viably served by mass transit, bicycling, and walking.

The High Cost of Free Parking could have benefited from a more expansive chapter on urban design as well as a discussion on changing physical and innovative paradigms for parking design. This minor omission may be due in part to overemphasizing the "science" of planning for parking while underemphasizing the "design" and "quality" of parking. For example, it is well known by designers that the singular use of a large area for parking creates unutilized space and a large expanse of impervious surface. Can parking be designed with the flexibility to be transformed during various times as well as in the future? Can the idea of using parking lots as urban plazas, a place to be used also without cars (or with them), be encouraged? Can parking be thought of as real estate in transition and be designed for future change? Furthermore, some may reasonably argue that parking, whether it is free or not, whether you have to search for it or it is readily available, is either the only transportation alternative or the preferable one. For as long as public transit continues to be neglected, or receives a poor grade for quality, driving and parking will remain a viable choice.[1]

There is no doubt that *The High Cost of Free Parking* is by far one of the best and most comprehensive books written on the subject of planning for parking. It not only presents bountiful information and argumentation but also provides normative solutions to transform existing parking-planning practices. Shoup does not shy away from criticizing colleagues and fellow professionals. His extensive account of the major urban-planning and transportation publications that fail to mention or discuss the impact of parking on our lifestyles and the design of our built environment is, frankly, shocking. (Kudo is due the American Planning Association for publishing this book even though it too does not escape Shoup's harsh criticism.)

Sharing and distributing his wealth of knowledge on the subject, Donald Shoup provided us with a book that should find its place on every aspiring and practicing urban planner's and transportation engineer's desk. It is a must read and a valuable toolkit for creating desirable change to our cities and towns.

Journal of Planning Literature, Vol. 20, No. 2 (November 2005).

NOTE

1. See, for example, the following report card for the Seattle metropolitan transit system (Sound Transit), which gives two *F*s and two Cs to four transit systems (rail and bus): http://www.effectivetransportation.org/docs/STReportCardV12.pdf.

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The High Cost of Free Parking

Donald Shoup

American Planning Association, Chicago, 2005, 606 pp., £38, (hbk), IBSN 1884829988

This is an extraordinary book. An appropriate descriptive subtitle would be "Everything you really wanted to know about parking but were afraid to ask!" It is a very long book about a small component of the built environment. It took me about 3 months to read it, sandwiched in between other things because it was too heavy to carry around on trips. But maybe its bulk is a great symbol of its importance. Through mountains of data and reference to the research literature, Shoup tells a true tale of the 20th century, a story that gives testimony to the love affair humankind has had with the automobile. An affair that is truly *une liaison dangereuse*. But, Shoup also provides solutions to the problems he documents. So, this book is practical as well as critical. Not only is it a story about how folly came to be but also a story about how to overcome it.

Before getting into details, I need to make some disclaimers. First, I am an architect and not an expert on the literature on parking or even urban design but I am currently working on a parking related project so the offer to review this book was timely. Second, my university has free parking for faculty. Third, on principle, I would never live beyond walking distance of my job unless I had excellent public transit access. I ride a bicycle in good weather and drive the 2 miles (8 minutes) if it is bad. I drive rather than take a bus because it is a lot cheaper, more pleasant and more convenient, and parking is free. I guess I am a 'reluctant driver' and paying for parking would certainly make me avoid driving altogether.

On with the review ... so what do you want to know about parking? There are few questions about this subject that you could ask that are not answered somewhere in this book. And the answers are truly disconcerting in some cases. For example, what is the total subsidy to off-street parking in the US? Shoup's estimate is somewhere between $127–374 billion for the year 2002. To put this in perspective, Medicare cost $231 billion and national defense cost $349 billion that year and this is only *off street* parking. So, why are politicians not making a name for themselves on this parking thing? Shoup argues that free off street parking is a hidden cost and because it is hidden, no one questions how much it really does cost, why municipalities require off street spaces and what the impact of this policy might be.

Through detailed analysis, data from his own research, the research of others, and evidence as simple and direct as photographs, Shoup makes a case for eliminating free parking in all but the places where it has no market value. In fact, he demonstrates that there is no really free parking—someone is paying for it because the cost is bundled in the cost of real estate development. And this is not

good, he argues. He shows how hiding the cost of parking distorts urban form and the economics of real estate development, creates an incentive to drive everywhere, contributes significantly to air pollution and causes unnecessary congestion in urban areas.

Since I was a student I wondered about the source of parking requirements. Why are so many spaces required when the lots are rarely full? Shoup estimates that most lots are, in fact, never more than 50% full except for a small number of days per year. I assumed, in my naiveté, that there was some solid research behind parking requirements. From this book, I learned, however, that the research on which they are based is highly suspect. Shoup rightly accuses planners who set these requirements as "practicing pseudoscience". Most requirements are simply copied from other jurisdictions. There are too few planners and researchers applying rigorous scientific methods to understand the economics and social impacts of parking. Shoup argues that studying the use of free parking is a dangerous way to estimate true demand. Demand calculated in this way is based on the assumption that parking costs nothing and no one pays for it. Nothing could be farther from the truth. In fact, he estimates the cost of constructing the parking available for each car to be twice the cost of the average value of a car! If the cost of parking were unbundled from the cost of building, and everyone had to pay for parking wherever they went, he argues, there would be far less vehicle miles driven and many fewer cars on the road. Demand would increase sharply for public transportation and desperate inner-city neighbourhoods would be desirable again. Free parking, he argues, subsidizes the cost of automobile commuting to the point where it does not pay the commuter to take public transit, and, hiding the cost of free parking drives businesses out of the city because it raises development costs significantly.

What can be done to address the distortions in urban design resulting from the provision of free parking? Shoup has a lot of ideas and provides information on practices that work. One of his most important proposals is that cities regulate the *maximum* amount of off-street parking provided by any land use, rather than the *minimum* amount. Cities that regulate the *minimum* number of spaces impose higher costs of development in the centre than on the periphery and thus create disincentives to locate downtown. Cities that regulate the *maximum* number of spaces, on the other hand, have greater densities downtown, which reinforces the unique qualities of central city locations. Shoup provides a provocative table that ranks cities around the world by percentage of parking coverage in the CBD. Guess which cities have the most and the least? Los Angeles has the most parking coverage of all and New York has the least of American cities. Some of the most desirable central business districts in the world are among those that have the least amount of land devoted solely to parking, e.g. London, Amsterdam and Tokyo. And three of the US CBDs we love to hate have the most: LA, Houston and Detroit.

A second key proposal is to enact policies that increase paid public parking or reduce the demand for parking. In the former category are fees in lieu of private parking. In the latter are incentives provided to employees to use public transit such as transit passes. Shoup reports on the benefits of such programmes in cities around the world. One important benefit of in lieu fees is the creation of revenue to build public parking, which reduces the cost of development and the overall amount of parking, concentrates parking in appropriate locations, is more efficient in the use of real estate and makes plentiful parking available at reasonable costs. Some detailed case studies show how these policies work. One of these case studies explained the mystery I experienced a few months ago in Beverly Hills. In one of the

most expensive shopping districts in the world, I paid $1.25 to park for two hours in an underground garage right in the middle of the retail district. Yet, in downtown Buffalo, where there are practically no stores left, I might have to pay $5.00 to park for the same time in a lot. Beverly Hills has an in-lieu of parking policy that works.

A third key proposal is to 'let prices do the planning' for kerbside parking. Shoup demonstrates that off street parking requirements are directly related to the availability of free kerbside parking. If kerbside parking is free, people will drive closer to their destinations to park and cruise for longer periods of time so it appears that demand is high for spaces in the area and that more off street parking is needed. But, if kerb parking is priced high enough to ensure that there are always some vacant spaces there would be no need for increasing off street parking requirements. There will always be spaces available for those who are willing to pay the market rate for convenience. Other people will park further away where the cost is lower and walk to their destination and others will take public transit, walk or ride a bike rather than drive. Shoup does not ignore the political opposition that residents of a neighbourhood and local businesses may have to such policies. He points out that when revenues from parking fees disappear into the general revenue stream, opposition will be substantial. But the use of 'parking benefit districts' can marshal support from residents, including businesses. Such districts receive a large portion, if not all, of the revenues from paid parking in their neighbourhoods and turn it back to the community by improving public streetscapes or making other neighbourhood improvements. Moreover, in residential areas, permit systems can be used to only 'tax the foreigners living abroad' rather than residents themselves. The key to gaining support for paid kerbside parking is to ensure that the fees obtained locally are put to local uses. The method of charging for parking also plays an important role in how a policy gets implemented. Shoup reviews new approaches and technologies that increase the convenience of paying fees, make it easier to enforce the rules, and that can allow prices to fluctuate by day or even by the hour to accommodate variations in demand.

While there are many other aspects of this book that could be described here, I believe, as with movies, a book review should not make it easy for the reader of the review to make believe he or she has actually read the book. This is even more relevant for a book as important and detailed as this one. But, before concluding, lest the reader think that this book is primarily technical, I wish to point out that Shoup grounds his arguments on some fundamental issues in urban design and planning.

One is demonstrating the value of using evidence from good research to ground practice. He calls free parking a "great planning disaster". He shows how what seemingly is a minor matter has huge unintended consequences on urban form and the health of cities. In the interest of providing a public good, planners have unwittingly exacerbated the problem they wish to solve. He uses the analogy of 'lead therapy' in medicine. Despite much evidence to the contrary, physicians continued to prescribe lead as a medicine until the 20th century. He demonstrates with very convincing evidence how destructive 20th century parking requirements and free parking policies have been, and, he also elucidates the availability of viable alternatives that will lead to healthier urban development. The book also includes the data and tools that can help practicing planners and urban designers implement new policies and practices. Thus, this book is a model for research in support of evidence-based practices.

A second fundamental planning issue that Shoup addresses is the classic commons problem. Free kerb parking is like communal grazing land. When a

community is small this communal use of land works well. But when it grows, unrestricted use of common land results in competition for scarce resources and less resources for each individual. At that point, self-restraint does not provide any individual reward. In parking, the increased competition for access to spaces (e.g. 'cruising') results in an enormous waste of resources and deleterious effects on the environment. Shoup argues that planners have misdiagnosed the commons problem resulting from free kerb parking: "Planners have identified the source of the problem not as the city's failure to charge market prices for kerb parking but as the market's failure to supply enough off street parking" (p. 8). So, this book provides some insight into a continually interesting and important issue in planning and urban design. How can we provide equitable access to a communal resource and protect the overall interest of the community at the same time? His answer is to regulate access by charging for kerb parking and then use the revenue stream created to improve the public environment that will make urban neighbourhoods and districts more viable and more attractive. In fact, he points out that charging for parking is like printing money. Since about 98% of parking is now free, there is a gold mine under every parked car waiting to be exploited by cash-strapped cities. By the way, Shoup estimates just how valuable that real estate is.

Should you read this book? Obviously, my answer is yes. It is an important book for any planner, urban designer and real estate developer to read and architects can benefit from reading it also. Not only is it informative and insightful, it is well written and even entertaining because Shoup liberally sprinkles humorous anecdotes, observations of human nature, interesting illustrations and astounding statistics throughout the book and he is good at irony and sarcasm. But be forewarned, it is long and dense in parts. And that brings me to my plea to the author. I am afraid that not enough people will read this book, especially the people that need to the most. I hope that Dr Shoup will develop a more popular and shorter book that will convey the story and the arguments in a really accessible manner. Since every urban dweller has their story about parking, their pet peeves and gripes, such a volume could be a best seller.

Finally, what questions were unanswered? One of special interest to me is the lack of research on reserved parking for people with disabilities. My research team developed the requirements of an accessibility standard in the late 1970s that found their way into the Americans with Disabilities Act Accessibility Guidelines and state building codes. At the time, we based the percentage of reserved spaces on the percentage of people who have severe disabilities, a conservative estimate of the people who would benefit. We also recommended that adjustments be made for different building types based on potential differences in utilization rates by people with disabilities (rates which are still unknown). This second recommendation was not adopted. We also recommended that research was needed to find out if the new requirements were effective. That research, as far as I know, has never been completed. I think that Shoup's analysis now provides a rationale for examining this issue further. My thought is that in some places there is not enough accessible parking and in many places, many of the spaces are unused most of the time. I think that new technologies and design ideas can address these problems in ways that were not possible in the late 1970s. Shoup does demonstrate how valuable reserved spaces can be by reporting on the scandals surrounding the misuse of reserved parking placards for people with disabilities.

I guess the biggest unanswered question for me is how can cities charge market rates for kerb parking without driving more people and businesses out to the suburbs

if parking there still remains free? The idea of generating revenue for cities while regulating congestion and increasing use of public transit with just this one seemingly simple move is tantalizing. I know this will work in Beverly Hills or in Boston where everyone wants to be, but I am wondering how it will work in Buffalo, Gary and other struggling cities. I am hoping suburban real estate developers will read this book and get greedy. If they started charging for parking in suburban strip lots and malls, then we might see real change happen quickly. And why not? Rather than build another strip mall, a developer can make more money from the land they already own by charging for parking and with far less investment and risk. This in turn, may result in revenue streams that can increase development density in existing retail centres rather than increasing sprawl by building more low-density centres.

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The High Cost of Free Parking, D. Shoup. American Planning Association Planners Press (2005). 733 pp., Hardback, $59.95, ISBN: 188482998 8

To those familiar with Shoup's previous papers, the topic of his new tome will come as no surprise: its 733 pages are devoted to the theme of free parking in new developments and at the kerbside, and the negative impacts that this can have on the built environment, traffic congestion, energy consumption and local economic development. This is a crucial subject, still poorly understood, and his in-depth treatment of the topic should be required reading for transport planners, town planners and traffic engineers.

The basis of Shoup's argument is that, since the 1920s, parking has been treated largely as an un-priced good that has to be provided according to formulae – the origin of which is largely unknown, yet which remain unquestioned – rather than being supplied in a market. This leads to an overprovision of parking as well as to perverse patterns of consumption, and stimulates additional car traffic as there is always an expectation that free parking will be available, and because developments are built at low density to accommodate the parking that planners demand developers should build. Shoup deals almost exclusively with the situation in the USA, but his arguments are still relevant to any country or region where parking standards for new development are set as minima, and where on-street parking is free or under-priced.

Shoup's work, dedicated to his wife Pat, starts with a short chapter that describes some of the problems that high car use has brought to the world – but especially to the USA – in the late 20th and early 21st century. He argues that the over-provision of free parking has done much to stimulate such car use. He then goes on to look at the US situation of planning for parking in new developments noting that, with a very few exceptions, the country's planners demand minimum amounts of free parking to be provided on new or re-developed sites and that these minima, as well as being in many cases excessive, can also stymie the redevelopment of existing sites. For example, he shows that some office developments end up with more parking spaces than there are employees, and cites surveys showing that much office parking space in US suburbs goes un-used. With a wry look at certain parking requirements, he also questions how they have been derived: why, for example, should a new rectory have three parking spaces for every four clergymen, or a swimming pool one space for every 2500 gallons of water?

In the next section of the book, Shoup deals with one of his other key research areas, that of "cruising" round streets where there is high parking demand, looking for an on-street space, because on-street parking is usually cheaper than parking off-street. He considers the traffic, time and energy costs of cruising and, based on 16 studies between 1927 and 2001, calculates that the average time spent looking for a parking space in larger cities is around 8 minutes, and that 30% of traffic is looking for an on-street space.

As well as a critique of the existing situation, Shoup also provides some suggested changes in policy. On minimum parking standards for new development, he suggests a

move to maximum standards instead, although he does not deal with this in great detail. He devotes more space to consideration of in-lieu fees (commuted payments) where developers provide payments to the planning authority to build separate car parks, instead of providing parking in new developments; and he also presents work on another favourite theme, cashing out employee parking – that is, paying an employee not to take a parking space at work. He is also a firm advocate, as might be expected, of charging for on-street parking in areas where demand exceeds supply and where there is a need to stimulate parking turnover.

This is a long book and, for the European reader at least, one that does not have to be read from end to end. What, then, are the highlights? Shoup devotes a short but important chapter to the cost of providing parking spaces, which is an under-researched area and therefore useful to all readers. He is the acknowledged expert on cruising for parking and his exposition of this topic, although lengthy, is of great relevance to all transport planners. Perhaps of most interest to European students and practitioners in the area of parking are the empirical examples that Shoup provides, from Old Pasadena (and its contrast with Westwood Village), both in the Los Angeles region, and also from San Diego, of Business Improvement Districts funded from on-street parking revenue. In these BIDs, the (increased) revenue from on-street parking charging is spent within these same areas to improve the urban environment and, in some cases, to provide off-street parking at lower prices than on-street. The examples that Shoup cites have been very successful in improving the local economy whilst the fact that revenues are spent locally, and that people know what the money is spent on, makes parking charges much more acceptable than if funds simply disappear into local government coffers.

Shoup's book is a little undermined by its length – it is not pocket-sized by any means, but this is because, in part, the key concepts are sometimes over-laboured. In addition, more attention could have been paid to experience outside the United States. There are a few examples from Western Europe of on-street parking charging and of limiting parking provision in new development but these are a little dated and very limited in comparison with the length of the book.

Nonetheless, Shoup's work is, overall, masterly: it deals authoritatively with a vitally important yet under-researched subject that has a crucial influence on our urban form and the way we travel and for this it is commended to academics and practitioners alike.

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IX. TRANSPORT

The High Cost of Free Parking
Donald Shoup, 2005, 752 pages, ISBN: 1 884829 98 8. Published by Planners Press, American Planning Association, Chicago, Illinois, and Washington DC, and available from http://www.planning.org/bookservice/description.htm?BCODE=AHCF.

In this book, an UCLA professor in the Department of Urban Planning dissects the economic, social and environmental impacts of current US parking regulations, criticizes current planning practice in relation to parking, and proposes reforms. The study demonstrates that free parking has contributed to auto dependence, rapid urban sprawl and extravagant energy use in the US. It explains how planners mandate free parking to alleviate congestion, but end up distorting transportation choices, debasing urban design, damaging the economy and degrading the environment. The other purpose of the book is thus to suggest how planners can frame an argument – economic, social, environmental and aesthetic – to initiate new approaches to plan for parking in a more sensible, effective and fair manner. The first two parts of the book analyze the parking problem, and the last part proposes solutions.

Part I examines current approaches to planning for parking in the US. The first chapters explain how planners set minimum parking requirements for every land use, based on studies that are poorly conceived and limited or reproducing faulty standards and policies from one city to the next. They highlight the problems with the tools and strategies used in the

planning for parking process, and convey the logic behind the set parking requirements. In Chapter 5, the author demonstrates through a series of case studies how these policies have engendered a great planning disaster, for instance by encouraging people's decision to drive, distorting urban forms and designs, causing higher housing costs, damaging the urban economy, and price discrimination. Chapter 6 compiles and assesses the different costs related to current parking policies, which can be quantitative, such as increased housing prices, unjust subsidies for cars, distorted transportation choices, sprawl, social inequity, and economic and environmental degradation; or qualitative, such as the degradation of landscapes. The cost of free parking is put in perspective in Chapter 7, to reveal its worthless – if not damaging – absurdity, exemplified, in Chapter 8, by the allegory of the minimum telephone requirements. Chapter 9 then makes a comparison between the costs of public and private parking, while Chapter 10 suggests that solving the parking problem is more about reducing demand than increasing supply, for environmental, economic and social reasons.

Part II shows that cities inadvertently create the economic incentive to cruise for kerb parking when they charge too low a price for it. Through examples from different cities in the US, Chapter 11 demonstrates that cruising for parking increases vehicle travel without adding either vehicles or real travel, and results mainly in congestion, squandered fuel and polluted air. Chapter 12 questions what price should be charged for kerb parking, and whether kerb parking can be considered a public good. Chapter 13 takes a more economic approach to show that underpriced kerb parking creates the incentive to cruise. The argument is illustrated in Chapter 14 with a study of cruising for parking in Westwood Village, California.

Part III offers new solutions to the parking problem. It explains how a well-functioning market with prices that vary with time of day and day of the week can balance a variable demand for kerb parking with the fixed supply of kerb spaces. If cities change market prices for kerb parking, drivers will usually be able to find an available space near their destination. The author argues, using economic analysis and concrete cases, that market-priced kerb parking will save time, reduce congestion, conserve energy, improve air quality and produce public revenue. He suggests that cities can persuade residents to support charging market prices for their kerb parking spaces by returning all meter revenue to the neighbourhoods that generate it. In this context, zoning requirements for off-street parking will no longer be required, and all the collective benefits will result from subsidizing people and places rather than parking and cars. Part IV summarizes the argument and draws conclusions.

The High Cost of Free Parking, by Donald C. Shoup. 2005. Chicago: Planners Press, American Planning Association. 733 + xvii. ISBN 1-884829-98-8, $52.95.

Donald Shoup's book was undoubtedly a substantial undertaking. It has four parts, 22 chapters, eight appendices, 78 tables, 74 figures, 681 pages of text and appendices, and 668 references, all about parking. The central theme is that free parking is not costless in economic terms. Rather, it has costs associated with it, and by being left unpriced, distortions in resource allocation occur. The first part of the book documents the problems that can arise by having the amount of parking determined by an administrative rather than market mechanism. The second part deals with the costs that society incurs by having free curb parking. The third part proposes some solutions to the free parking problem, while the last part presents the author's conclusions.

While the book is long, much of the material included in the text is there largely to provide support for certain basic propositions. In Chapter 1, Shoup makes the point that free parking reduces the costs of driving relative to other modes of travel, and leads to excessive vehicle ownership and too many trips by car. With all the cars and vehicle trips encouraged by underpriced parking, there is pressure on urban planners and municipal governments to ensure that adequate parking is available everywhere in a city. In Chapter 2, Shoup makes the point that land use agencies or planners do not have a solid basis for determining the optimal number of parking spaces per site, but that does not stop them from specifying minimum parking requirements for each land use (based on peak parking demand at suburban sites with free parking). This excessive parking supply leads to free parking, too many vehicle trips, higher road capacity to handle the increased demand for auto trips, and additional urban sprawl. In Chapter 3, he continues the discussion of Chapter 2 by providing additional evidence that off-street parking requirements "appear arbitrary and excessive even when planners have data that purport to predict parking demand" (p. 81). Once again Shoup states planners base parking requirements on the peak demand for free parking (p. 86). He also argues

parking requirements tied to land use can inhibit the redevelopment of old buildings for new uses because their sites may not accommodate the required number of parking spaces for the new use (p. 101).

Chapter 4 is short and presents the proposition that "planners fail to make the connection between parking prices and parking occupancy, and as a result they cannot accurately predict parking demand" (p. 120). That failure also leads them to require too much parking for particular land uses. Chapter 5 has the modest goal of showing that parking requirements "subsidize cars, distort transportation choices, warp urban form, increase housing costs, burden low-income households, debase urban design, damage the economy, and degrade the environment" (p. 127). Much of this demonstration is done by way of examples. The higher housing costs associated with parking requirements, for example, are discussed with respect to Oakland, San Francisco, Los Angeles, and Palo Alto (all cities in California). Again, Shoup discusses the inhibition of redevelopment of old sites that is imposed by parking requirements (p. 156), while at the same time failing to mention the externality that could be imposed on other individuals/businesses by allowing redevelopment without a parking requirement.

In Chapter 6, there are estimates of the costs of providing off-street parking spaces. The author uses data from parking structures at UCLA (where Shoup is on the faculty) to arrive at a "conservative" estimate of the costs (in 2002 dollars) of $127 per space per month. There are also external costs of a parking space (e.g., induced travel that increases congestion and environmental costs) that are estimated, again using data from UCLA, at $117 per space per month. Parking permits at UCLA are priced well below the cost of providing parking. Drivers are being subsidized and this point is argued further in Chapter 7. However, Shoup seems too quick to take one estimate of the parking subsidy (based on the estimated amount of priced parking relative to capital and operating costs of off-street parking) and treat it as a fact, while ignoring the costs of parking that are paid indirectly by drivers and nondrivers alike.

Chapters 9 and 10 present two policy options that municipal governments could adopt to reduce the size of the parking problem. First, cities could allow developers to pay a fee in lieu of providing the normally required parking space for the particular land use, which fees could then be used to provide public parking spaces. Second, they could try to reduce parking demand by lowering the cost of travel by alternatives to the car. For example, employers could be induced to provide transit passes (Eco Passes) for their employees. However, many employees will not choose to take transit even at a zero price because of the costly walk and wait time incurred in suburban collection and downtown distribution. Not everyone lives in the western United States, although most of the examples of Eco Passes being used are taken from there.

Chapter 11, the first in Part II of the book, is entitled "Cruising." The word is used to describe the search for free curb parking. Cruising might make sense to a driver because it can reduce or eliminate the monetary cost of parking, even as it increases the time cost, congestion cost, fuel cost, and environmental cost. In this chapter, Shoup provides brief summaries of 16 studies of cruising, the first one being for Detroit in 1927. In Chapter 12, he recommends reducing the high cost of cruising by setting curb parking prices, and allowing them to vary over the course of a day, so as to achieve an average occupancy rate of 85 percent. In Chapter 13 he presents a model of the choice of whether to cruise for free parking or pay for off-street parking. He derives the result that "charging the market price for curb parking—a price at least equal to the price of adjacent off-street parking—removes the economic incentive to cruise" (p. 342). In Chapter 14, he sets out to test the proposition that underpriced curb parking creates the incentive to cruise.

He and his assistants went out in search of parking in the Westwood Village commercial district near UCLA. Even though the average time to find a curb space was only 3.3 minutes, cruising for parking was still estimated to create 3,600 excess vehicle miles traveled in 1 day.

Chapters 15 to 21 make up Part III (and one-third) of the book. They contain the author's proposals for reducing the high costs of free parking. The proposals are rather nicely summarized: "charge fair-market prices for curb parking, return the resulting revenue to the neighborhoods that generate it, and remove the zoning requirements for off-street parking" (p. 15). Economists presumably would support the first proposal: using prices to allocate scarce resources. (By the way, Chapter 15 contains an interesting review of various technologies that can be implemented for collecting curb-parking charges.) The second proposal is more politically than economically motivated: returning parking revenue to parking benefit districts (defined by the neighborhoods that generate the revenue) should generate local support for a pay-for-parking plan.

The third proposal, while consistent with allowing the market to decide the quantity and price of off-street parking, does not seem to take fully into account possible externality problems. A store might wish to offer free off-street parking to its customers, but may find it costly to exclude customers of a neighboring store that does not offer parking. Administered parking requirements can solve such externality problems, but perhaps at too high a cost. In addition, while administered parking requirements can inhibit property redevelopment if the required parking cannot be incorporated into the new development, it can also provide for future changes in land use. For example, the present tenant on a site may have a relatively low demand for parking spaces to serve its customers today, but a future tenant that views the site as optimal given its customer base may have a much higher demand for parking spaces. If so, having spaces available makes the transition to a new use of the property much easier than trying to build the spaces on a site that cannot really accommodate them. In certain places, the author's book reads more like a polemic than a balanced and objective analysis of the parking problem.

Given how this book has been written, one might reasonably ask who the intended audience is. At over 600 pages, and with at least two chapters (Chapters 13 and 18) that are more technical, the book probably is not intended for the leisure nonfiction reader. It has a number of interesting observations on the parking problem and policy proposals on what to do about it, but they could be contained in a 200-page book for a larger general audience. The specialist reader, whether economist or planner, also does not wish to read a book with lots of material that really does not advance the argument, and with most of the major propositions and proposals repeated over and over again. For the technical or specialist reader, a different 200-page book should be written. In the end, by writing two different short books for two different audiences, Professor Shoup could reach a much larger number of people with his important insights into the high cost of free parking.

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Shoup, Donald. *The High Cost of Free Parking.* Chicago: APA Planners Press, 2004.

This massive volume of 733 pages provides the evidence that parking requirements in planning legislation or as advocated in industry standards are very costly, unnecessary, and even counter-productive. First on the firing line is the Institute of Transportation Engineers because of their industry-standard guidelines and surveys of transportation generation from various land uses. Their guidelines fill a planning resource void even though, as Shoup exhaustively demonstrates, they are founded largely on minuscule samples of suburban environments. Central cities are absent from the surveys, as are innovative suburban examples. Next up are municipal planners copying each other's guidelines, ignoring international experience, and pretending there is science behind the requirements. Finally, Shoup points out that American municipalities are actually supporting free parking by insisting on over-supply. He even hints that such over-supply of free parking fuels profligate car use, making it difficult to support public and non-motorized transportation. While evidence might be lacking for that particular claim, however logical it might seem, the author spends many pages investigating the hidden financial costs of parking provision. Parking provisions are routinely rolled into the development budget because they are a fundamental requirement in the earliest stages of the project. As a consequence, their real cost is often under-estimated, if it is estimated at all. In any event, rarely do charges cover the costs of provision, so that cost recovery is achieved by hiding the costs in higher prices for everything else. The "everything else" that Shoup looks at includes housing, downtown development, road infrastructure, goods, and services. The demonstration is supported by case studies with real financial data and hypothetical cases worked out in detail, for those who might be skeptical about the strongly stated claims of the author and the very high estimated costs associated with parking provisions.

This volume undoubtedly represents many years of careful study and documentation. Its primary message that planners should not require parking provisions at all would be a fairly dreary one, if it were not lightened by some interesting, even amusing analogies. The steady doses of required parking in our cities are likened to routine medical administration of lead, or to bloodletting. The unclear methods for arriving at the standards routinely applied by cities and their uneven application across cities are likened to blind faith in myth. If it is largely true that parking requirements are not the fruit of analysis, it might be an exaggeration to suggest all parking demand estimations are equally flawed. Parking demand studies routinely appear in environmental impact assessments, for which clear procedures are available. Because the public environment as a whole is more complex than a project, clear approaches for estimating global parking levels in a city have not emerged, which would have provided a parking standard for an individual project. It is also argued by some urban planners advocating a normative approach that parking standards should be set to harmonize with broad environmental goals, with those goals defined at the scale of the city. Shoup does not explore these angles on planning for parking, perhaps because they do not fit well with his theory that the most successful approach is to micro-manage control and financial benefit at the local level.

This work is a good example of a movement to introduce more market mechanisms in urban development and downplay the governmental role in urban planning. The withdrawal of local government from public housing was an earlier spectacular example, and the involvement of local government as a facilitator in privately initiated commercial development is another. Underlying this move toward self-regulation or private management of urban development is the belief that public goods, managed by public bodies, tend to be mismanaged. Garrett Hardin, in his well-known 1968 article "The Tragedy of the Commons," outlined the problem of a heterogeneous society attempting to define common values in support of public goods. Indifference to the issues and the predominance of personally held values are offered as explanations for the failure of public management at the scale of the city. Shoup proposes that public parking be managed and controlled by local area societies who would decide on allocations of parking and cost, as well as re-allocation to public projects. By implication, the full costing of curb parking would raise its price and then do the same for off-street parking. Higher prices for parking result in shorter duration parking. In this way, he believes that effective costing would tighten the supply. Private developers would elect to build less parking or pay in-lieu fees. If the demand is in fact stronger than was anticipated by the project developers, then that demand would spill over into street parking, raising its price. Although deliberately understated throughout the book, the implication is that market pricing would drive a substantial portion of trips into alternate modes of transportation.

The book, in making a clear and supported statement about the effects of government-required parking provisions, points to an interesting debate about the role of local government. Making

"foreigners" pay a differential fee for parking in another's neighbourhood also implies a level of control and definition for local areas that has not so far been a notable feature of our cities. Our city governments have mostly been broadly based regimes of control with weak local structures. The distribution of benefits from such a profitable resource as paid parking also raises interesting questions. The expected use of revenue to enhance the local public environment will produce pockets of substantial financial clout. Others might argue that the negative effects of local parking should be contextualized within the whole driving trip that also delivers negative effects to other areas, for which no income is available. The allocation of such revenue to local needs does, however, have the merit of actually working as a system. The question here is whether this is a good societal model.

The book is full of useful material with which planners should familiarize themselves, in the event that our society does not completely abandon municipal control over parking. The capital cost estimation methods are clear and understandable, and should be a part of planning practice in any event. Those who would like to see a more balanced transportation system with a greater emphasis on non-motorized and public modes of transportation could use some of Professor Shoup's arguments. The book is a great parting shot in the timely debate on the role of city governments in supplying infrastructure for private transportation.

John Zacharias
Concordia University

Issue 10 - Transportation - Spring 2006

REVIEW: Donald C. Shoup, The High Cost of Free Parking

by Dustin White

America's love affair with the automobile, and the toll it has taken on both the built and natural environments, has been well documented. Surprisingly, then, UCLA planning professor Donald Shoup's meticulously researched book, The High Cost of Free Parking, is the first to treat in depth the subject of automobile parking, the state in which the "average car spends about 95 percent of its life." It is a subject of great financial consequence: according to figures developed by University of California at Davis professor Mark Delucchi and updated by Shoup to account for inflation and the number of motor vehicles owned in the United States, in 2002 the subsidy for off-street parking alone was between $127 billion and $374 billion. This figure is roughly the same amount as our nation's Medicare or national defense budgets—without including subsidies for the free on-street parking that exists on most urban streets.

While many American cities believe they suffer from a parking shortage, the real problem is that they have too much free parking. Over the last sixty-plus years, planning for parking has meant planning to provide parking without cost, and America has provided enough to satisfy 99 percent of all automobile trips to the home, office, or shopping. This superabundance has had costs well beyond municipal subsidies: parking lots mar the urban landscape, the high cost of providing parking makes developing affordable housing more difficult, and free parking skews transportation choices toward driving, thereby increasing congestion and pollution and encouraging sprawl. And because the cost of providing parking spaces is bundled into the cost of development, Shoup explains, this so-called "free" parking is actually paid for by everyone. Off-street parking, required by municipalities for nearly every land use, is expensive to provide. But rather than directly charge drivers who use the parking, developers absorb the costs of providing parking. The higher cost of development translates into higher rents in residential and office buildings and into higher retail costs in commercial buildings. Not everyone chooses to drive; yet we all subsidize drivers indirectly by paying higher costs passed on to us.

Our cities' off-street parking requirements have resulted from deliberate and democratic decision-making processes based on traffic engineers' projections of supply and demand (not from any conspiracy by auto manufacturers, a notion Shoup smartly dismisses). But as any student of economics will attest, demand increases as prices drop; hence parking requirements that are based on the demand for free parking invariably oversupply parking.

Shoup's evaluation of off-street parking requirements, while detailed and insightful, is sometimes as laborious as the parking requirements themselves. And his examples too often focus on studies in his own backyard of Southern California. But his most important contribution, an unforgiving critique of the Institute of Transportation Engineers' (ITE) Parking Generation, the "parking bible" used to set off-street parking requirements in most American cities, is carefully crafted and has broad application. Shoup recognizes what many others have failed to see: that planners' blind application of Parking Generation's questionable data has led to an unwavering commitment to provide excessive space to accommodate the automobile.

According to Shoup, ITE provides uncommonly precise parking demand estimates for a myriad of land uses based on very small sample sizes. Planners tend to follow these guidelines without any consideration of local context. They also take ITE data that reflects the maximum demand for free parking, and use it to set minimum parking requirements. The results are evident in the parking lots of most retail establishments. Parking spaces remain largely unoccupied save the busy hours during the holiday shopping season. In his discussion on how parking requirements are set, Shoup couldn't be closer to the mark in concluding, "being roughly right is better than being precisely wrong."

He recommends two relatively simple reforms to off-street parking requirements: in-lieu fees and parking demand reduction. In-lieu fees offer developers an option to pay a fee rather than provide parking spaces; cities can then use the fee revenue to provide public parking spaces that are shared by

a variety of land uses. Parking demand reduction strategies are aimed at reducing the number of vehicles needing a parking space by reducing single-occupancy vehicle trips.

Shoup notes that the barrier to charging market prices for parking is not technological, but political. Nobody wants to pay to park, and parking is a very contentious issue at the neighborhood level. Local businesses fear that charging for parking will turn customers away, and residents generally believe that they are entitled to park for free in their neighborhoods. To overcome this political opposition and reduce demand for parking, Shoup proposes a system in which parking revenue is returned to the locations from which it is generated—via business improvement districts in commercial areas or "parking benefit districts" in residential neighborhoods. In commercial areas, businesses may be more likely to support charging for on-street parking if they can be guaranteed a portion of the revenue. These revenues could fund streetscape improvements or security enhancements to make their commercial district more attractive.

In residential neighborhoods, Shoup proposes a system in which residents could still park for free with a permit, but non-residents would have to pay for a permit to park on residential streets. The revenue generated from the sale of permits could fund sidewalk repairs or other improvements to residential neighborhoods. Residents are likely to support Shoup's "parking benefit district" concept because the benefits are concentrated at the neighborhood level, while the costs are distributed widely to those who live outside the neighborhood.

Shoup examines driver behavior in response to free or under-priced on-street parking in a chapter titled California Cruising. Shoup and his assistants conducted a study of cruising, the all-too-familiar practice in urban areas of circling the block in search of a parking space, in the Westwood Village neighborhood near UCLA. They found that parking spaces are hard to come by when there is no incentive to give one up. He argues that curb parking is difficult in many cities because it is drastically under-priced (and most often free). If on-street parking spaces went for market prices, finding a parking spot would not be the game of chance that it is in many urban neighborhoods.

Skeptics wondering how Donald Shoup could write 700 pages on the subject of parking need not look further than Chapter 14 of The High Cost of Free Parking, where he quotes Richard Feynman, the American Nobel Prize-winning physicist: "Everything is interesting if you look at it deeply enough." Shoup employs a methodical approach to document the destruction wrought on American cities by free parking and he pleads with planners and policymakers to rethink what many believe to be unassailable—the fundamental right to park their car for free wherever they go. In doing so, he provides a path for extending urban planning's familiar mantra of "planning for people rather than cars" to the way we treat the automobile where it spends most of its life—parked.

AMERICAN PLANNING ASSOCIATION. 733 PP. $59.95, HARDCOVER.

The High Cost of Free Parking by Donald C. Shoup

Places Discussed

- Urban areas in general
- San Diego
- Old Pasadena area
- Many others

Book Notes

Imagine a public policy that does the following:

- Wastes gasoline
- Increases traffic congestion and pollution
- Increases the cost of goods and services sold in a city
- Reduces the chances for old buildings to be used for new purposes
- Saddles businesses with requirements so burdensome that some entrepreneurs give up trying to start a business
- Produces a benefit--but only for the aggressive few who can seize a resource before anyone else can
- Locks up more land in terms of area and cost than the entire interstate highway system
- Wastes the time of people suffering its consequences
- Reduces the chance to create small, affordable housing units
- Endangers pedestrians and reduces the walkability of urban areas
- Shifts costs from the users of a resource--which they get for no cost or for a very low cost--to everyone else
- Is justified by circular logic and statistical analysis so flawed that any reputable scientist would condemn it

Would you support this public policy?

This public policy enforces an entitlement so ingrained in our culture that any attempt to modify it may likely lead to failure. In fact, suggestions to change this policy have been met with ridicule or indifference for many decades.

Even the hint that this public policy be overturned may cause a conservative person to whine and plead in favor of it, even though this policy is an

Related Links

- Donald Shoup, Professor of Urban Planning: author's Web site at UCLA.
- "The Twenty-first Century Parking Problem," Chapter 1 of *The High Cost of Free Parking*.
- "Free Parking versus Free Markets: A Review Essay on Donald Shoup's *The High Cost of Free Parking*," by Daniel Klein, Professor of Economics, George Mason University.
- The High Cost of Free Parking... And the Havoc It Wreaks on American Cities," Institute of Transportation Studies at the University of California, Berkeley, Review, Volume 3, Number 2, Summer 2005.
- "The High Cost of Free Parking," Ryan McGreal, *Raise the Hammer*, April 14, 2005.

Related Books

- *City-Building in America*
- *How Cities Work*
- *Dark Age Ahead*

anathema to free markets. Likewise, a liberal may howl in opposition to ending this policy because of (false) claims that it would hurt the poor and devastate the lives of everyone, even though this policy is a demonstrated burden on the poor and a drain on the environment.

What is being done about this public policy? Many things have been done for nearly a hundred years. Wild-eyed advocates repeatedly come up with solutions just as destructive as pouring gasoline on a forest fire. Their "solutions" make the problems this public policy engenders even worse, in a circular pattern, so that this public policy mires cities in problems and complaints by citizens that worsen and worsen. Clever politicians harness this anger and gain votes for themselves by implementing solutions that placate the populace but make the problem still worse in a perfect cycle for buying votes year after year. In fact, this public policy is a vicious kind of shackle for the inhabitants of cities. If you would want to destroy a civilization, you would accomplish your aim by enshrining this public policy as the prime directive for planning cities, as it would guarantee that healthy urban areas would never form.

Would you support this public policy?

Billions of people on every country on earth embrace this policy as their birth-right. You would likely react with dismissive ridicule and perhaps anger if anyone would even hint that this policy change. Likely you have never thought about this public policy. If you are a professional urban planner, you may have never studied this policy or even seen it mentioned in your textbooks.

Dr. Shoup explains this policy well in his far-ranging book. He carefully examines the spurious data used to support this public policy, and patiently documents how this policy causes problems. Dr. Shoup comes up with simple solutions that have clear benefits, are reasonable, and work within the great traditions of urban life and commerce.

His closing paragraph before the appendices of the book sums up his thesis eloquently:

> "These three reforms--charge fair-market prices for curb parking, return the resulting revenue to neighborhoods to pay for public improvements, and remove the

- *The City in Mind*
- *Get Urban!*

> requirements for off-street parking--will align our individual incentives with our common interests, so that private choices will produce public benefits. We can achieve enormous social, economic, and environmental benefits at almost no cost simply by subsidizing people and places, not parking and cars." (p. 602)

Shoup's accomplishment in this book is impressive. He brings to light an often-dismissed topic--parking--that has enormous impact on the urban form. I can't think of any other topic in all my reading about urban areas that has been so ignored and yet has such a demonstrated potential for improving urban life. Shoup's well-written, 733-page book covers this topic in great detail. Shoup makes a critical connection between policies about automobile storage and urban life. He raises issues about professional responsibility as Jacobs did in *Dark Age Ahead*. He shows how form-giving policies (such as parking requirements) have profound influence on what can thrive in a city, much as Marshall did in terms of roads in *How Cities Work*.

At its heart, Shoup's analysis asks us to do the following:

1. Admit that parking a car does cost money (direct, indirect, and opportunity costs)
2. Admit that parking a car does take up space (and therefore displaces other uses, including housing, retail, pedestrian walking areas, etc.)
3. Admit that shifting parking cost and needlessly increasing parking space has definite consequences on the urban form (the urban form becomes suburban, walking distances increase, traffic increases)
4. Choose a parking policy that admits the above and sets priorities that are publicy-known

Parking does have an enormous impact on how much automobiles dominate an area and how much room there is for other forms of transit and human beings. By ignoring parking policies, a city dooms its drivers and pedestrians to a tough existence. I hope awareness of the impact of parking spreads to public officials as well as citizens. People evaluating a city for relocation should know what kind of life is possible there, and finding out a city's parking policies may reveal a great deal.

Shoup, Donald The High Cost of Free Parking.(Book review). Todd Litman.
Canadian Journal of Urban Research 15.1 (Summer 2006): p141(3).

Shoup, Donald The High Cost of Free Parking Chicago: Planners Press, 2005 ISBN 1-884829-98-8 733 pp.

There are few planning decisions with more unintended consequences than those regarding the supply, price and management of motor vehicle parking. These decisions directly affect land use: incremental increases in parking supply result in more pavement and more dispersed development, and make urban infill relatively more costly than suburban development, stimulating sprawl. Abundant, free vehicle parking is a subsidy that significantly increases automobile ownership and use, and therefore traffic problems. It tends to be unfair and regressive, forcing people who own fewer than average vehicles to cross-subsidize those who own more than average vehicles, and reducing housing affordability.

Abundant parking supply also reduces the price that can feasibly be charged for parking, making parking free at most destinations. Society has essentially decided to give motorists a valuable gift, with costs borne indirectly through higher rents, taxes and retail prices, and lower employee benefits. This is irrational, in the literal sense: These practices fail to ration valuable resources efficiently, therefore increasing the total costs borne by society. It is time for planning professionals to ask, of all the goods and services that society could subsidize, why choose vehicle parking?

These issues and more are investigated with insight, wit and humor by Professor Donald Shoup in his new book, "The High Cost of Free Parking." The book examines in detail how current parking practices developed, what their diverse economic costs are, and how we can do better. Using numerous stories, examples, jokes and quotes, Shoup explains in a clear and persuasive way how individual consumers and society overall can benefit if parking is priced--rather than free--and provides specific recommendations concerning how this can be achieved.

Shoup points out that there really is no free parking, except in the game of Monopoly; the choice is between paying for parking facilities directly or indirectly. The book explains why "free" parking:

* is based on faulty planning practices and standards.

* is economically wasteful, imposing large costs on governments, businesses, and ultimately on consumers.

* increases automobile ownership and use, exacerbating problems such as traffic congestion, traffic accidents, pollution and sprawl.

* makes it more difficult to find an available parking space, leading to driver frustration and increased urban traffic congestion.

* distorts development patterns, increasing sprawl and reducing land use accessibility.

* degrades urban design, leading to ugly cities, buildings, streetscapes and parking facilities.

* reduces housing affordability

Shoup shows how, for the last half-century, the main goal of parking planning was to insure that abundant, preferably free parking is provided at every destination. The process used to establish recommended minimum parking supply standards was designed to err toward oversupply based on an assumption that, when it comes to parking, more is always better, and costs are of little concern. The resulting standards are incorporated into zoning codes and often applied rigidly, even in locations where geographic, demographic or economic factors reduce parking demand. Where parking supply reflects current standards, most parking facilities seldom or never fill, even during peak periods. These practices may be justified where the costs of building parking facilities are low, and where high levels of automobile ownership and use are not considered a problem, but they conflict with many current planning objectives, such as a desire to encourage urban infill and redevelopment, to encourage more efficient and balanced transportation, and to increase housing affordability.

The book describes successful examples of communities that have shifted from free to paid parking, and the benefits they have gained. It shows that communities which priced parking efficiently and used the revenues wisely have reduced their parking and traffic problems, and stimulated economic development.

Although the book is entertaining, with at an illustrative story or joke nearly every page of text, it takes no shortcuts. Quantitative factors are carefully analyzed and referenced. Like an investigative reporter tracking a hot story, Shoup has collected detailed information on parking facility, parking errors, and the true history of parking planning decisions. There are eight appendices, including detailed economic calculus of parking cost, and an investigation of the etymology of the word "parking."

The High Cost of Free Parking demonstrates that challenging subjects can be addressed in ways that are entertaining and accessible to a general audience, without compromising the depth of their analysis. It conveys the delight of scholarship like few other transportation or land use planning texts. I hope it becomes a classic and a model for future technical books.

Todd Litman Victoria Transport Policy Institute

Named Works: The High Cost of Free Parking (Book) Book reviews

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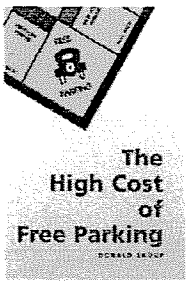
Thomson Gale Document Number:A155783077

The High Cost of Free Parking

Donald C. Shoup. APA Planners Press. Chicago. 2005. 733 pages. $59.95



When Donald Shoup buys or borrows a new book (and he must do this a lot), you can just see him running to the index, looking up the word "parking," and then making note of the relevant sentences, since every time the word parking has ever appeared in some other book, it seems, it is cited in this 733 page tome. Parking is a critical linkage between transportation and land use, and deserves more attention than it has historically received. This book, with its concomitant media coverage, has drawn focus to the topic. The ideas contained within are familiar to those who have read many of Shoup's academic articles on the topic. His critique of the Institute of Transportation Engineers Parking Generation (and Trip Generation) rates is classic, and should be noted by all planners who seek "appeal to authority" as a justification for their actions or beliefs.

"Appeal to authority" is, however, a technique Shoup frequently employs when turning from analysis to advocacy, citing just about every urban critic's rant against blacktop. According to Shoup, off-street surface parking is a Great Planning Disaster in the vein written about by Peter Hall (1982) in the book of the same name. The worldview suggests omnipotent (but obviously not omniscient) planners force minimum parking requirements onto defenseless developers, who have no choice but to comply. It only briefly notes the hassle and transaction costs of paying for parking at a meter (suggesting they are a thing of the past with new technologies). But those transaction costs (fumbling for quarters at meters) are much like the headaches with stopping at a toll booth before the advent of electronic toll collection, headaches which ultimately led to "free" roads paid for with gas and property taxes rather than toll roads paid for directly by users.

Clearly the parking requirements imposed by planners are a proximate cause, but are they really the underlying reason we have so much free parking? Alternatively, do we have lots of free parking because we (as a community) want spatial separation between our buildings in low-density suburbs, or do we have spread our buildings because we want space for free parking? One wishes that this question could have been answered somewhere in the text. Unpopular and uneconomic laws and regulations rarely last in democratic governments where legislators stand for elections whose campaigns are funded by developers. There are reasons the United States has "paved over paradise and put up a parking lot," and the ill-informed planner seems more likely a tool rather than an agent.

Shoup's insights about cruising for free or discounted curb parking are also important, and these likely do produce congestion in some dense urban areas. The models presented have pedagogical value, though the idea of a planning course using this as a text may be a bit excessive.

tions). We bundle to achieve efficiency by putting the cost o ing into the cost of everything else we purchase at stores, or of rent for offices. Without bundling in our economy, we risl drowning in a sea of small charges. This book essentially call full employment act for meter readers, and if carried through quite possibly end any unemployment problems remaining i U.S.

The solutions to the malaise are innovative, and in the Shoup reduces his many ideas to three sensible reforms: cha market prices for curb parking, return the revenue to neighb and remove requirements for off-street parking. I read with i his chapter on "Taxing Foreigners Living Abroad" (not only I wrote an article for *Access* with an identical title about toll being used more frequently in places with many nonresident as a way of changing the political dynamic and property righ ciated with the on-street parking lane by allowing neighborh business improvement districts) to retain the revenue from p thereby obtaining local buy-in.

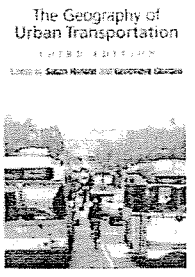
One cannot disagree with many of the proffered solutic having roles in specific crowded and high-density places, the places most planners prefer. Yet the vast majority of the Unit now possesses sufficient free off-street parking to make these tions irrelevant for decades to come.

David Levinson

Levinson is an associate professor in the Department of Civi neering at the University of Minnesota. In 2005 he was awar CUTC/ARTBA New Faculty Award. His books include *Fin Transportation Networks* (Edward Elgar, 2002), *Assessing the and Costs of ITS* (Kluwer, 2004), and *The Transportation Ex* (Oxford University Press, 2005).

The Geography of Urban Transportation, Third Edition

Susan Hanson and Genevieve Giuliano, editors. The Guilford Press, New York, 2 pages. $60.



The third edition of *The Geograp Urban Transportation*, publishe most 20 years after the first, ha updated to reflect the current paradign ing transportation policy. As with the edition, this book is an influential text introducing undergraduates and begin graduate students to the breadth of iss surrounding the urban transportation ning problem. Editors Hanson and Gi have assembled authors from a variety ciplines and have organized the book around the new face of portation planning, which considers the urban context, mult modes, the needs of varied users, and the environmental and consequences.

Journal of the American Planning Association, Spring 2006, Vol. 72, No. 2

Letter to the Editor

Parking Book Worthwhile Reading for Planners

Six months after the American Planning Association published *The High Cost of Free Parking* by Donald Shoup, *JAPA* published David Levinson's review of this 733-page book in its Autumn 2005 issue. Unfortunately, the review shows signs of haste and misrepresents the book. I would like to correct some misstatements in the review.

David Levinson says, "According to Shoup, off-street surface parking is a Great Planning Disaster in the vein written about by Peter Hall (1982) in the book of the same name." Shoup actually said that off-street parking *requirements* are a great planning disaster, and he provides ample evidence. Hall defined a great planning disaster as a planning process that costs a lot of money and has gone seriously wrong. Shoup shows that off-street parking requirements fit this definition perfectly. He shows that American drivers park free for 99% of their trips, and that parking subsidies in the U.S. range somewhere between what we spend for Medicare and what we spend for national defense. The high cost of parking disappears from sight when drivers park free, but it doesn't cease to exist. Shoup also presents convincing evidence that off-street parking requirements have gone seriously wrong, showing that they distort transportation choices, warp urban form, debase urban design, increase housing costs, burden low-income households, damage the economy, and degrade the environment. In short, off-street parking requirements *are* a great planning disaster.

Levinson also says that a worldview like that of Shoup's book suggests "omnipotent (but obviously not omniscient) planners force minimum parking requirements onto defenseless developers who have no choice but to comply." Here is what Shoup did say: "Urban planners have not *caused* this disaster, of course, because off-street parking requirements result from complicated political and market forces. Nevertheless, planners provide a veneer of professional language that serves to justify parking requirements, and in this way planners unintentionally *contribute* to the disaster" (pp. 127–128, emphasis in the original).

In one puzzling statement, Levinson writes, "I read with interest his chapter on 'Taxing Foreigners Living Abroad' (not only because I wrote an article for *Access* with an identical title about toll roads being used more frequently in places with many nonresident drivers). . . ." The line, which both Levinson and Shoup had quoted previously, is from Monty Python, but some readers might wrongly infer that Shoup borrowed Levinson's title without proper credit.

Shoup shows that parking is free to drivers only because its cost has been bundled into higher prices for everything from hamburgers to housing, and he makes an excellent case for unbundling. Levinson objects that, "Without bundling in our economy, we risk drowning in a sea of small charges. This book essentially calls for a full employment act for meter readers, and if carried through would quite possibly end any unemployment problems in the U.S." Like objections that toll roads will increase traffic congestion as drivers fumble for coins at toll booths, this argument ignores improved technology for charging for parking, which Shoup describes in great detail. Complaining about meter readers is as out of date as complaining about toll booths.

Levinson concludes by saying, "One cannot disagree with many of the proffered solutions as having roles in specific crowded and high-density places, the kind of places most planners prefer. Yet the vast majority of the United States now possesses sufficient free off-street parking to make these solutions irrelevant for decades to come." Most American suburbs do devote vast areas of land to free parking. Minimum parking requirements have created an accidental land reserve for housing right where we need it most. If cities reduce or remove the off-street parking requirements in their zoning ordinances, owners of shopping malls and office parks will probably find that some of their land makes a far more valuable site for housing than for parking. Building apartments and condominiums on underused parking lots at suburban employment centers, for example, will allow offices and housing to share parking, increase the housing supply, reduce housing prices, and provide real jobs-housing balance. Providing housing close to jobs will also reduce vehicle travel, energy use, traffic congestion, and air pollution. Converting free parking spaces into valuable housing sites can contribute to solving multiple urban problems for many years to come. But first cities must reduce or remove off-street parking requirements in their zoning codes.

Some of the misinterpretations in the review may stem from *JAPA*'s choice of a transportation engineer to review a book that criticizes the engineering approach to urban planning. The book quotes David Levinson as saying that parking is not even a part of the transportation system (p. 219). Most transportation engineers seem to assume that free parking will simply be there at the end of a trip, while most urban planners seem to assume that parking requirements are a transportation issue that engineers must study. Everyone seems to assume that someone else is doing the hard thinking.

The High Cost of Free Parking is an important book that explores a surprisingly unstudied and mismanaged link between transportation and land use. I recommend it highly to all urban planners.

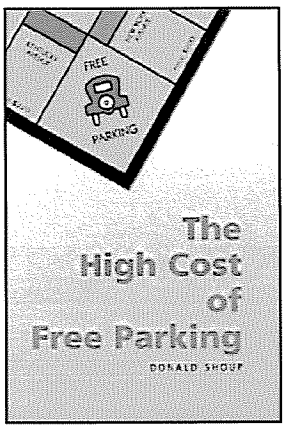
Peter Gordon
Professor of Urban Planning
University of Southern California

PLANETIZEN
THE PLANNING & DEVELOPMENT NETWORK

TOP 10 BOOKS 2006

The High Cost of Free Parking

By Donald C. Shoup
Planners Press



The hands-down favorite for Top Books status, *The High Cost of Free Parking*, despite its epic length, undoubtedly deserves high praise. Don Shoup, FAICP, an urban planning professor at UCLA, presents a tour de force on free parking, a dubious fact of city life planners have taken for granted for years, and which Shoup has studied for decades. We all know that cars, roads, and traffic have a huge impact on the urban landscape and the environment, yet few realize how critical parking can be. More than simply a spatial element of urban areas -- according to Shoup, parking is the single biggest land use in cities -- well-planned, cost-efficient parking schemes can serve vital economic development needs while decreasing congestion and lessening pollution on city streets. While drivers save time and energy by limiting their cruising-for-parking efforts (the more parking costs, the more frequently spaces empty out), the revenue generated from on-street parking can generate an elegantly simple income model for neighborhoods and commercial districts alike.

Shoup considered naming his engaging, entertaining book -- yes, an entertaining parking policy tome -- *Aparkalypse Now* or *Parkageddon*, and it's easy to see why. Not only does free parking explain "extreme automobile dependence, rapid urban sprawl, and extravagant energy use", skewing "travel choices toward cars and away from public transit, cycling, and walking", it "debases urban design, damages the economy, and degrades the environment." Essentially, there's no such thing as free parking: the policy actually ensures that the cost of parking is hidden everywhere else, meaning that everyone -- including those who don't even drive -- pays for parking when they go to a restaurant, shop at a store, or buy a house. Shoup estimates that in 2002 alone, cities paid between $127 and $374 billion for off-street parking subsidies. What to do? By charging fair-market prices for curb parking, returning the resulting revenue to neighborhoods to pay for public improvements (in the form of innovative Parking Benefit Districts), and removing requirements for off-street parking, cities can quash the hidden yet wide-ranging problems caused by providing free parking.

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'The High Cost of Free Parking' – A Textbook About Your Profession

By John Van Horn

Someone asked a New York Times critic why he wrote so many negative reviews. He said that finding bad things to say quickly filled the 17 inches of newsprint reserved for his piece. A good review is hard.

So it is with UCLA Professor Don Shoup's new book, "The High Cost of Free Parking." Suffice it to say that if you are in the parking or urban planning business, city government, or urban renewal or development, you should read this book.

This is a textbook of sorts, but its tone reflects its author. It is clear, fun and an enjoyable way to spend a few hours getting better at your profession. Of course, it helps if your profession relates to parking, as I would hope anyone who reads this does.

A textbook!! Gadzooks!! I got over them when I left college. Do I really want to wade through graphs, charts and endless, boring self-serving prose that was written simply to keep alive the "publish or perish" credo at a major university?

Yes, you do. "The High Cost of Free Parking" is a refreshing change from the tomes you schlepped back and forth to class in your undergrad days. It has one premise, and spends its 700-plus well-documented pages describing it, proving it and then providing a way to change its paradigm.

Shoup takes on the urban planning profession and quickly discounts virtually everything it does that relates to parking. His not so tongue-in-cheek comments should make the profession rethink its role in the design of the urban landscape. He not only says that much of urban planning is black magic that is typically wrong, but also proves it with example after example, some hilarious, of how planners have set the number of spaces required for a typical land use.

In the case of funeral parlors, the number of spaces is based on how many viewing rooms it has. It doesn't take into account that virtually never are all the rooms in a parlor in use at the same time or that it would be impossible for more than one funeral to take place at the mortuary simultaneously. Planners somewhere have set the number, and that is what it should be.

A shopping center's parking requirement is set based on the use for a dozen or so days a year. The rest of the time, the huge lots or the expensive structures around the centers are only partly used.

The list is endless.

Shoup's solution: "Drop the city's requirements for parking." Let the individual developer decide how much parking is needed, and keep the planners out of the process. Less parking would be built, and that's a good thing, he writes, since the vast majority of parking goes unused anyway and it would force commuters to look for alternatives.

The second part of "High Cost" concerns on-street parking, its availability and cost. The book includes studies that show drivers will cruise almost indefinitely looking for a free or low-priced space to park on-street, rather than park off-street at a higher price. This adds to congestion and pollution.

The solution: Price on-street parking so that 15% of the spaces are free at all times.

The book's third section, with the heading "Cashing In on Curb Parking," notes that in the past, the main difficulty for charging more for on-street parking was in collecting the money. Technology has solved that problem with in-car meters, pay-and-display/by-space, cell phone payments and other such technologies. Make parking available to everyone, but let the price do the planning.

I can hear the screams now. The city will be destroyed if parking were priced at that level. Shoup makes a good case for the contrary. However, the money from parking should be used for the infrastructure where it was collected, not simply dumped into the general fund, never to be seen again.

Citizen attitudes change when they can see the results of revenue collection: new streets, parks, lighting, security, and a cleaner environment. Plus, it's being paid for by visitors from outside the neighborhood. Suddenly, the attitude of the local property owners goes through its own paradigm shift. Examples of this from Pasadena, CA, on the plus side to the Westwood area of Los Angeles on the minus make his case in spades.

Unbundling parking costs is a key to the success of Shoup's proposal. If you charge market rates for all parking, you can reduce the price of the building the parking supports. Let the new apartment dweller decide if they want parking included with their unit, then charge more for those that do. Ditto the office buildings.

The market will then provide alternatives to auto use for those who elect not to pay the "true cost" of free parking -- which, Shoup shows graphically, is usually more than the actual cost of the vehicle itself.

You can easily skim the charts, graphs and technical jargon, or take time to review it if it piques your interest. However, the meat of this book is in the clear, well-written, interesting prose that makes a good case for how our industry can actually change the face of the urban landscape.

Oh, by the way, don't panic. Change as Shoup envisions would mean only more parking technology, plus more and better operators who would be properly paid for their services, and a more focused municipal and institutional parking environment, where the money collected would go to visible improvements in the urban landscape.

"The High Cost of Free Parking" is available from the American Planning Association (www.planning.org) or at Amazon.com.

Donald Shoup is professor of Urban Planning at UCLA, holds a doctorate in economics from Yale and is a Fellow of the American Institute of Certified Planners

PT

From *Governing*'s
June 2005 issue

ASSESSMENTS
ALAN EHRENHALT

Curbing Parking

Local zoning laws mandate parking spaces as if empty lots were a virtue.

Here's a question for you: How many parking spaces should a convent be legally required to provide?

If you immediately answered "zero," that's probably because you have some common sense. Parking at a convent shouldn't be a zoning question. The Mother Superior should be able to do whatever she wants. When there's a problem, the nuns will tell her.

In fact, however, that's not the way it works in most American cities. Convents usually have to have a minimum amount of parking to stay within the law. So do at least 265 other kinds of enterprises, including golf courses, zoos, sex shops, slaughterhouses, maternity hospitals and taxi stands. All of them are on a list compiled by Donald Shoup, an economics professor at UCLA, in a new book that is undoubtedly the most comprehensive study of parking ever undertaken in this country.

Shoup tells us, among other things, that the most common requirement for convents is one space for every 10 nuns in residence. That may seem a little arbitrary, but some of the others are worse. Taxi stands, for example. I've never met anybody who drove to a taxi stand, parked, and then hailed a cab. The average cabbie doesn't need parking either — he uses one vehicle, and it's on the road during business hours. And yet most cities not only require parking spaces at cab stands but also require a fixed number: one space for each employee on the largest shift, plus one for each taxi. Some zoning laws demand extra spaces for "visitors" — whoever they might be.

Where do rules like this come from? In general, they come from a

document called "Parking Generation," which was first published decades ago by the Institute of Transportation Engineers and has been updated periodically since then. As Shoup puts it, local zoning officials who consult Parking Generation "act like frightened supplicants bowing before a powerful totem. ITE's stamp of authority relieves planners from the obligation to think for themselves because simple answers are right there in the book."

Unfortunately for convents, taxi stands and countless other enterprises, the answers in the ITE book make very little sense. They tend to be based on a percentage of maximum occupancy — that is, the largest number of cars ever likely to use a facility at a given moment. The manual recommends enough spaces to ensure that virtually every driver will be able to find one virtually all the time. And then cities go ahead and require those spaces as a matter of law.

Think how odd that is. If I were building a hotel, and I knew that I could fill 200 rooms on the busiest day of the year, but only 50 on an average day, I wouldn't build 200 and leave three-quarters of them empty most nights. I wouldn't open a restaurant so big I couldn't fill it up except on Valentine's Day and New Year's Eve. Neither would you. You'd just accept it as a fact of life that once in a while, somebody will have to be turned away.

It's only when it comes to parking lots that planners and local governments insist on invoking a concept as foolish as maximum capacity. And that's for a rather simple reason: When it comes to parking, nobody worries about losing money. Parking, after all, is free.

Or, rather, they think it's free. Of course, it isn't. That's the idea that Shoup sets forth in abundant detail in his book, which he calls, appropriately, "The High Cost of Free Parking." If I were to tell you a 733-page book about parking is a great read, you probably wouldn't believe me. The fact is, however, that Mr. Shoup's opus not only is lucid and convincing but also witty, erudite and highly enjoyable. It quotes Albert Einstein and Robert Frost, Lewis Carroll and Graham Greene. It is filled with quirky little details about the way ordinary people go about their lives.

Most of all, however, it is filled with animosity toward free parking. Shoup hates free parking — especially the off-street parking that developers and businesses are required to provide in order to operate. He says it degrades urban life in ways that hardly anybody bothers to think about. "Because we never see the money we spend on parking," he says, "it always seems someone else is paying for it... but by prescribing massive overdoses of parking, planners are poisoning the city."

How, exactly? Well, for one thing, parking lots eat up a huge amount of land that could be used for more productive purposes. Many shopping malls devote 60 percent of their surface land to parking spaces and only 40 percent to the buildings. For the most part, that's not because developers insisted on all that parking. It's because zoning law forced them to create it. Either way, the result is oceans of asphalt and an ugly landscape as far as the eye can see.

All the land that's paved over and reserved for cars is land that can't be used for housing — affordable or any other kind. Because parking requirements have taken so much land out of development, they force up the cost of building on whatever land remains. Rents are higher than they would otherwise need to be. What's more, the parking requirements written into zoning law make smaller, moderately priced apartments difficult to produce anywhere.

Some cities in Southern California require residential developers to provide as many as 3.25 spaces per apartment. That often leaves as practical only two kinds of projects: a massive, sprawling condo complex that meets the requirement by paving over additional acres of land, or a boutique development that makes money by selling or renting luxury units at luxury prices. A densely built project filled with compact two- and three-bedroom apartments just doesn't cost out.

Meanwhile, in the central business districts of older cities, the amount of parking keeps increasing and the number of buildings keeps declining. Buffalo and Albuquerque devote more central-city land to parking lots than to all other uses combined. For anyone who wants to come downtown, a member of the Buffalo City Council lamented a couple of years ago, "there will be lots of places to park. There just won't be a whole lot to do here."

That's one of the simple ironies of this whole depressing subject. But there's an even bigger irony: The central city districts that have done really well in recent years aren't the ones that have provided the most parking; they're the ones that have provided the least. Portland, Oregon, instead of expanding its downtown parking capacity, has spent the past 30 years restricting it. There was less parking per capita in downtown Portland in the 1990s than there was in the 1970s. And Portland, as any visitor notices at once, has one of the most successful downtowns in America.

Los Angeles and San Francisco both opened new concert halls in the 1990s. Los Angeles included a six-level garage for 2,188 cars, built at a cost of $110 million. San Francisco, on the other hand, put in no garage — for a total cost of nothing. After each concert in L.A., the patrons head straight for their cars, leaving the area around the building deserted. After concerts in San Francisco, people spill out onto the local streets, spending money in local bars, restaurants and bookstores. Some of them have to walk several blocks to their cars parked along the curb, but every block they walk adds extra life to the neighborhood.

How smart do cities have to be to learn the lessons of all this? Smarter than most of them have been so far, apparently. But as cynical as Shoup can sometimes sound, he has a few modest proposals for dealing with the disasters of parking policy.

First, he suggests, instead of making developers build off-street parking, allow them to pay a fee in lieu of each space provided. If you make the fee less than the cost of building the space, most of them will accept that deal. Some 25 American cities are actually doing this. Most of them are small towns in California, or wealthy suburbs in the east, but there are some surprises. Orlando, Florida, allows subsidies

in lieu of parking. So does Chapel Hill, North Carolina. The developers get to spend more money on the actual project. And the fees go for public improvement in the area.

Then, since the amount of parking will be reduced, allow commuters to take the value of a free parking space in the office lot and trade it in for cash. They can use it on public transportation, and if they don't spend it all, they can keep what's left over. Different versions of this experiment have been tried in Denver, Dallas, Salt Lake City and San Jose.

Ultimately, though, as Shoup himself concedes, there's a more basic answer: Local governments have to rethink the whole idea of parking. Even here, there's something to report. Minneapolis and Chicago are now exempting the first 4,000 square feet of retail space in a new development from any parking requirements at all. That's a tiny step, but it's a step.

The asphalt jungle we have created will not disappear anytime soon. As Shoup says, "automobile dependency resembles addiction to smoking, and free parking is like free cigarettes...it will take decades for cities to recover from the damage." That's a sobering thought. On the other hand, as the Chinese would probably understand, sometimes even a journey of a thousand miles has to start with a single parking space.Ironically, the central city districts that have thrived in recent years aren't the ones that have provided the most parking; they are the ones that have provided the least.

Jack Pardue illustration

Environment and Planning B: Planning and Design 2007, volume 34, pages 755 – 760

doi:10.1068/b3404rvw

Reviews

The high cost of free parking by D Shoup; American Planning Association, Chicago, IL, 2005, 734 pages, $59.95, ISBN 1 884829 98 8

In contrast to the significant academic attention paid to the topic of road pricing—much discussed but rarely implemented—there are relatively few texts devoted to the more routine and currently important practice of regulating and pricing the space allocated for stationary vehicles. This is a significant lacuna as parking policy is one of the most important influences on traffic levels in and around urban areas, while the use of land for parking has significant implications for land economics. Hence Shoup's volume—at more than 700 pages in 30 chapters and appendices—is a weighty and valuable contribution towards furthering the awareness of parking issues.

Indeed, Shoup does not simply seek to win arguments, but apparently to overwhelm his opponents with a complex of detail and example: his is not a clinical, efficient approach, and some readers may seek his ideas in a more succinct format. At the same time, though, the book does serve as a detailed collation of evidence on the topic and represents good value for money at around US $60.00.

Shoup's writing offers an interesting, characteristic style, which succeeds in its determined effort to make a potentially dry topic stimulating to the lay, professional, or academic reader. The text is liberally mined with startling facts—such as the information that 95% of the life of a car is spent stationary, and 99% of parking acts, in the US at least, do not incur a parking fee at the point of use. However, the hyperbolic approach used in places, such as the analysis of slow poisoning by the lead content of past medications as a metaphor for current parking policy, may not appeal to those wishing a more consistently objective focus.

The volume is presented in three substantive parts and a fourth by way of a short conclusion. Part 1, comprising around half of the core text, develops 'the problem' of parking. The treatment of parking by the profession of urban planning is considered, addressing fundamentals such as the ways in which the full costs of allocating space for parking are generally externalised to society at large. This occurs through inequitable practices such as requiring payments by nonusers, for example through the costs of parking provision for residential developments which are almost always paid by all occupiers of a development, whether owning cars or not. The planning profession is also held to account for engaging in a particular kind of parking management, rather than devising and implementing effective parking policy. Hence, practice usually seeks to predict and provide for 'peak demand', with the aims of maximising motorists' convenience and minimising the impedance of traffic on highways, rather than seeking to determine affordable and desirable levels of parking, measured against wider societal objectives, including the realistic availability of space for moving vehicles.

Much of this first part generally confirms received wisdom about the strengths and weaknesses of different parking policies, but it is nonetheless valuable to have the evidence compiled for the reader in an insightful way.

The second part turns from considering the rationality of the planning system, to the rationality of cruising—the investment of additional time and vehicle operating costs to reduce parking costs. The section opens with a fascinating analysis of the social context of parking, ranging between themes such as the psychosexual imagery of parking acts to variation in the social acceptability of double-parking. The more central thread, however, reviews evidence about how much cruising takes place, and at what cost. The finding is an important and counterintuitive demonstration that cruising is indeed rational; while generally an unwanted activity on the part of motorists, given current market conditions their cruising behaviour in fact emerges as utility-maximising, once analysed in relative cost – benefit terms as a choice between driving directly to a premium-charged space or cruising for a free or cheaper space.

Naturally enough, then, part 3 develops the case for a freer and fairer market for parking, with costs fully allocated to users, to remove structural distortions and pricing employed as a tool to better relate supply and demand. The exposition is supported by cases of good practice, such as local economies that have become more productive due to better space utilisation, and where higher revenues have funded reinvestment in local infrastructure.

The book is published by the American Planning Association, and the detail of the discourse and most of the examples are firmly located in American cities, which for some readers may emerge as extreme cases. Nonetheless, although non-US readers may prefer to skip some of the detailed chapters on specific American planning tools, the broad conclusions of the analysis are of relevance to an international readership, standing as a stark warning of the economic and social consequences of interpreting the metaphorical linkages between libertarianism and car use too literally.

Graham Parkhurst
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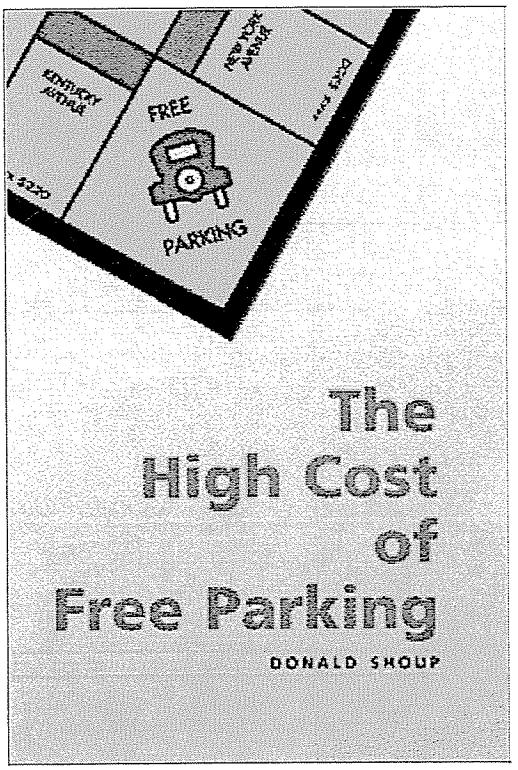
Books



The High Cost of Free Parking

Donald Shoup

Chicago: American Planning Association, 2005

576 pages
Hardcover
US$ 59.95
ISBN 1884829988

While our ultimate goal is to create cities without cars, in the meantime, we may be able greatly to reduce the role of cars in cities, and the amount of space they are allowed to consume. A new book from, surprisingly enough, The American Planning Association, offers information and guidance in recreating our cities to de-emphasize cars - and often generating sizeable revenue in the process.

Don't be intimidated by the length of Donald Shoup's The High Cost of Free Parking (Chicago: American Planning Association, 2005). It is long (about 600 pages, plus over 100 of appendices and references), but that's because it is packed with useful information and notes. Shoup is meticulous in documenting his claims, and a sense of humor makes the book not only a useful reference, but an interesting read.

His main point, as the title shows, is that "free" parking is anything but free. In the US, and in many other cities, parking requirements for different buildings are based on estimates of peak demand for free parking. Not only does this mean that most parking lots are partly empty most of the time, but consumers are being given a false choice, as they are

not paying directly for the cost of what they request. As Shoup points out, the peak demand for free anything is meaningless - so why do we rush to provide it for parking, but not for free desserts, or even affordable housing?

Since the cost of parking is bundled into the cost of everything else, other prices go up. People perceive parking as free, and thus the cost of parking does not deter anyone from driving. He then illustrates in a number of ways how this has disfigured different cities, led to outrageous costs for housing, and skewed our priorities so that we offer more space for cars than for employees, students' classrooms or playgrounds, residential parks, and so on. For instance, "a car parked at work typically occupies about a third more space than its driver does", and some schools in Los Angeles offer only 15 minutes of recreation a week for the students, partly because the playgrounds have given way to parking lots for the teachers' cars.

Some of the many parking-related issues Shoup covers includes the size of the problem, problems caused by free parking, advantages to charging for parking, how free parking affects transport decisions, efficiency and equity (how the poor subsidize parking for the rich), how markets can help resolve the problem (developers almost always would prefer to provide fewer parking spaces than required by zoning codes), how parking affects business, the concept of public space, parking and the environment, and space demands and cost.

"Bundling the cost of parking into higher prices for everything else skews travel choices toward cars and away from public transit, cycling, and walking. Off-street parking requirements thus change the way we build our cities, the way we travel, and how much energy we consume. All the required parking spaces use up land, spread the city out, and increase travel distances. "

Shoup also offers specific suggestions to remedy the ills. While many may object to his seeming friendship with the car, and acceptance of its place in US society, his recommendations are intended to motivate people to use transport other than the car, and to create cities that prioritize other space needs above the car. Charging market-based prices for parking that kept a certain percentage of parking spaces open would, he suggests, prove even more successful than congestion tolls on roadways at reducing car use, and the revenue could be used to improve neighborhoods - for instance, by fixing sidewalks and planting trees, thereby making the environment more conducive to walking and cycling. Shoup obviously also intends his book to be widely read by city planners, who might put down a book that openly declares war on the car.

Although the book is mostly about the US - Shoup is himself a professor of urban planning at UCLA - the book does include information about other countries, and specific suggestions for mayors from cities in the so-called developing world.

Given the political climate and the difficulty of promoting radical solutions, Shoup's less intimidating approach may be welcome as a first step towards removing cars from our cities; he even suggests repeatedly that drivers themselves will benefit, as it will be far easier to find parking spaces not by creating more of them, but by charging more for them:

"The curb parking revenue is thus not like a tax that transfers revenue from motorists to the government, but is instead a fee that reduces the motorists' time-and-fuel cost of cruising by as much as it increases their monetary cost of curb parking. The net burden on curb parkers is therefore zero because motorists save on cruising what they pay for parking, and the reduction in private waste is converted into new public revenue."

I personally hope that Shoup's book will create a revolution in city planning and zoning codes, with planners finally understanding the harm done by their baseless requirements for off-street parking, and reluctance to charge market prices for street parking. For all of us who care about freeing our cities from cars, Shoup's book is a vital tool.

Shoup's book can be ordered at: the APA store, and an on-line summary is available at: WBB Trust.

Reviewed by Debra Efroymson
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Regional Studies, Vol. 40.6, pp. 691–693, August 2006

Book Reviews

The High Cost of Free Parking, DONALD SHOUP, APA Planners Press, Chicago, IL (2005). 733 pp. US$59.95 (hbk). ISBN 1 884829 98 8.

Donald Shoup argues parking requirements comprise the most oft-ignored topic in transportation planning, although parking design, placement and size affect density, place and overall sustainability.

Americans are accustomed to parking for free. This perceived right forces planners to increase parking requirements, degrading urban form and the environment. Shoup argues that true parking costs are buried in higher prices for everything else, causing those who do not drive also to pay for free parking. This subsidy reduces use of more sustainable methods of travel. Shoup explores numerous parking-related issues within the book's first 14 chapters, painting a dismal picture of today's urban world, but offers a seemingly workable three-prong solution in the remaining eight chapters.

Shoup divides the book into four parts. Part 1, comprised of Chapters 1–10, examines planners' current approach to setting parking requirements, and introduces the problems created or exacerbated by it. Shoup presents free curb parking as a commons issue that planners misdiagnose by treating it as a lack of ample *free* parking rather than as a need to charge market prices for it. By treating free parking as an entitlement rather than a market, planners increase the demand for cars, thereby increasing traffic congestion, air pollution and energy consumption.

Chapter 1 defines the problem of free curb parking as a commons issue. Chapter 2 examines the current planning methods for setting parking requirements – national surveys, other cities' requirements or adherence to the 'golden rule', and how this amounts to planning for *free* parking. Chapter 3 examines what Shoup calls the pseudo-science of planning – the policies of calculating parking generation rates, and explores whose responsibility parking requirements are: urban planners or transportation engineers. Chapter 4 compares US cities using parking requirements with those using parking restrictions. In Chapter 5, Shoup argues that 'cars have replaced people as zoning's real concern' (p. 130). He presents five case studies separating parking costs from building costs to illustrate the effects on housing prices, land values and sprawl. Chapter 6 examines the cost of parking construction, the monthly costs of a parking space, and the external costs of congestion and emissions. Chapter 7 frames the cost of free parking in terms of total subsidy for off-street parking, and explores the capital cost of parking. Chapter 8 presents a brief parking/telephone allegory. Chapter 9 explores the use of in-lieu fees to construct public parking. Shoup surveyed planners in 47 cities that use the fees, and discusses the benefits, concerns and results of their use. Chapter 10 examines the use of incentives such as employer-paid transit passes, parking cash-out and car-sharing to reduce parking requirements.

Part 2, comprised of Chapters 11–14, expands upon the problems created by the current approach to parking. Shoup argues that cities create the economic incentive to cruise for parking by charging too little (nothing) for it. The consequences include congestion, wasted time, wasted fuel and polluted air.

Chapter 11 explores cruising for parking using 16 studies conducted in 11 cities. Chapter 12 examines the use of time limits versus market prices to address parking demand. Chapter

13 presents a mathematical model to determine whether to cruise or pay for parking. Chapter 14 examines Westwood, CA, as a case study of cruising using the park-and-visit method developed by the UK's Road Research Laboratory.

Part 3, comprised of Chapters 15–21, proposes a market approach as a solution. The author argues market-priced parking allows drivers usually to find available space near their destination. It could save time, reduce congestion, conserve energy, improve air quality and produce public revenue, but the barrier to this solution is political, not technological. Shoup suggests overcoming the political barrier by returning meter revenue to the neighbourhoods generating it. Charging market prices removes the spillover problem, so cities can remove off-street parking requirements. This approach, Shoup argues, can align individual incentives with collective interests.

Chapter 15 explores the history and development of parking meter technology. Chapter 16 discusses commercial parking benefit districts and presents Pasadena and San Diego, CA, as successful case studies of their implementation. Chapter 17 introduces residential parking benefit districts and the role they have played in neighbourhood improvements in some US cities. Chapter 18 presents a model of parking choice that suggests market prices provide a fair and efficient method of parking controls. Chapter 19 argues parking as the ideal source of local public revenue. Chapter 20 examines the effect unbundling parking spaces from apartment rents would have on housing costs, vehicle miles travelled and vehicle emissions, and argues that rents for the two should be separate. Chapter 21 calls for a paradigm shift from existing parking requirements to the use of parking benefit districts.

Part Four, comprised of Chapter 22, summarizes the author's arguments and condenses his solution into three reforms:

- Charge market prices for curb parking.
- Return parking revenues to the generating Central Business Districts/neighbourhoods to pay for public improvements.
- Remove off-street parking requirements.

Shoup provides eight appendices to explore further topics and studies introduced in the main text. Appendix A examines current planning methods for setting parking requirements. Appendix B analyses the US Department of Transportation's Nationwide Personal Transportation Surveys. Appendix C explores the worldwide language of parking. Appendix D explains the parking choice model introduced in Chapter 18. Appendix E discusses land values, construction costs and the recovery of surface lots for future redevelopment. Appendix F examines the interaction of people, parking and cities. Appendix G discusses the implementation of congestion tolls to create, then disperse, public revenue. Appendix H examines vehicle ownership in the world's nations.

Shoup has done his part to rectify parking's absence in the planning literature. This volume provides an exhaustive analysis of parking planning suitable for use in the classroom, workplace or for research.

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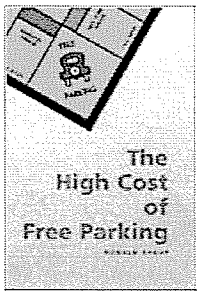
The High Cost of Free Parking



by Donald Shoup
(American Planning Association; 2004; 734pps)

Scholars align the beginning of the environmental movement with the release of Rachel Carson's Silent Spring in 1962. Since then, recognition of how automobiles contribute to environmental degradation (pollution, congestion, energy consumption, even international warfare) has grown. In his book The High Cost of Free Parking, Donald Shoup explains that rather than a love affair with the automobile, Americans have instead grown accustomed to a distinct set of land use policies and city requirements. Along with federal subsidies for oil companies, auto manufacturing, and road building, parking policies have greatly facilitated auto-dependency. Taken a step further, minimum parking requirements for development based on maximum demand have hurt our communities in profound ways. Shoup's book has the potential to be that seminal work in reforming the way cities cater to automobile travel through parking policies.

Critics have rightfully taken exception to the length of the 700-page book, where the author has chosen comprehensiveness over succinctness. However, taken a chapter at a time, or used as a reference document for specific applications, the book is a fabulous resource for planners, architects, engineers, and elected officials while at the same time targeting the general public who, understandably, like parking for free!

Shoup, an economist by training, astutely points out that even if you don't pay when pulling in or out, there is no such thing as "free" parking. With the average cost of a parking space ($30,000 - $50,000) being higher than the average cost of a car, those costs need be recuperated in the sale of goods and services. Thus "free" parking makes everything more expensive: clothing, movies, burgers, televisions or housing. Shoup uses a great deal of data and research, estimating that the total subsidy for parking is similar to what the nation spends on national defense or Medicare! But free parking has other costs: it distorts transportation choices, sprawls rather than compacts urban form, and degrades the environment.

It seems reasonable that citys require developers to provide onsite parking. Most folks in our society have automobiles (there is more than one vehicle for every man, woman and child in the United States). It stands to reason that when they go somewhere, they are likely to drive. But why is this the case? Should this be the case? The book does an exemplary job of answering the first question, providing a deep history, and insightful examples. If you are concerned with the health of the environment and the vitality of our communities, the answer to the second question is no. The automobile will continue to be a primary mode of transportation in the U.S., but its role will diminish once cities move away from minimum parking requirements and rethink how they want people in their communities to function and interact.

Shoup, like many others (except our political leaders) makes the case

that once the true cost (in dollars, opportunities, alternatives, and environmental degradation) are incorporated into automobile travel and storage, the beloved car ceases to be so desirable.

— Peter Brown, SLO City Planner

PLANNERS GONE WILD: THE OVERREGULATION OF PARKING

The High Cost of Free Parking. By Donald C. Shoup. *Planners Press,* 2005. 752 pages. $59.95.

Michael Lewyn[†] and Shane Cralle[††]

I. INTRODUCTION

Ever since the 1940s, most American cities have required landowners to provide customers, visitors, and guests with free off-street parking.[1] Courts have generally upheld these requirements against constitutional challenges.[2] In *The High Cost of Free Parking,* Donald Shoup asserts that off-street parking requirements make cities more automobile-dependent, subsidize driving, make housing less affordable, and discourage redevelopment of older buildings. Part II of this review addresses Shoup's critique of the status quo, while Part III discusses his rebuttals to possible defenses of current regulations.

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1. *See* DONALD C. SHOUP, THE HIGH COST OF FREE PARKING 22, 25 (2005) (noting that in 1946, only seventeen percent of a sample of cities surveyed had parking requirements, while by 1951, seventy-one percent of cities had parking requirements or were in the process of adopting them; today, off-street parking requirements are so common as to be one of "three basic sets of regulations" that are virtually universal). Shoup notes that "parking is free for ninety-nine percent of all automobile trips in the U.S." *Id.* at 1. In fact, some cities explicitly require that off-street parking provided by landowners be free. *Id.* at 24.

2. *See, e.g.*, Cent. Bank & Trust Co. v. City of Miami Beach, 392 F.2d 549, 550–51 (5th Cir. 1968); Stroud v. City of Aspen, 532 P.2d 720 (Colo. 1975).

II. THE STATUS QUO AND ITS CONSEQUENCES

According to the American Planning Association,[3] cities require parking for at least 662 different land uses.[4] For example, most cities require office buildings to provide visitors and employees with four parking spaces per 1000 square feet.[5] Because four parking spaces generally occupy at least 1200 square feet,[6] commercial landowners must often provide more space for parking than for offices. Similarly, cities often require large amounts of parking for shopping centers and other commercial uses.[7]

Parking requirements for residential housing are equally rigid. For example, the city code of Houston, Texas requires landowners to provide 1.25 parking spaces for every studio apartment and 1.33 parking spaces for every one-bedroom apartment—even though seventeen percent of Houston's renters do not have even one car in their households.[8]

At first glance, government-mandated parking lots surrounding offices, shops and apartments may seem like a costless convenience for drivers. But Shoup points out that minimum parking requirements create a variety of social costs that may exceed this benefit.

A. *Degraded Urban Form*

As a result of minimum parking requirements, landowners typically surround offices, shops and apartments with parking lots, thus creating a "strip mall" effect.[9] Government-mandated strip

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3. *See* Michael Lewyn, *Twenty-First Century Planning and the Constitution*, 74 U. COLO. L. REV. 651, 651 (2003) (describing the APA as a national organization of land-use planners).

4. *See* SHOUP, *supra* note 1, at 76.

5. *Id.* at 31.

6. *Id.*

7. *See* Michael Lewyn, *How Overregulation Creates Sprawl (Even In a City Without Zoning)*, 50 WAYNE L. REV. 1171, 1183 (2005) (describing a variety of parking rules under the Houston, Texas city code).

8. *Id.*

9. *Id.* at 1183 n.82. In Houston, "most shopping centers and restaurants are designed with parking out front, creating a strip mall effect." *Id.* Parking lots are generally in front of buildings because of the combination of minimum parking requirements and city ordinances requiring buildings to be set back from the street. *Id.* The "strip mall effect" exists partially because Houston requires commercial buildings to be twenty-five feet from the street or sidewalk. *Id. See also* JAMES HOWARD KUNSTLER, HOME FROM NOWHERE 138 (1996) (noting that setback laws generally "keep buildings far away from the street in order to create parking

malls create a sprawling, automobile-dependent urban form, by surrounding streets with a sea of parking. An Environmental Protection Agency report states that where buildings are set back behind yards of parking rather than being "flush with the sidewalk,"[10] a pedestrian "has less to look at [and] feels more isolated."[11] By contrast, "small setbacks and shopfront windows provide more interesting scenery for pedestrians and create a feeling of connection between the buildings and the public spaces bordering them."[12] Moreover, parking lots in front of buildings lengthen pedestrians' commutes by increasing the distance between streets and destinations such as offices and shops.[13] Where parking is in front of a shop or office, pedestrians cannot approach their destination without trudging through a parking lot, dodging cars with every step.[14]

B. *More Parking = Lower Density = Increased Automobile Dependence*

Minimum parking requirements artificially disperse population because land devoted to parking cannot be used for housing or businesses. For example, in 1961, Oakland, California began to require one parking space per dwelling unit for apartment buildings.[15] Within just three years, the number of apartments per acre fell by thirty percent.[16] The effects of parking

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lots all around the building"). If a landowner has to place something in front of a building, she might as well install a parking lot that customers can use, rather than installing something merely decorative such as landscaping—and as long as the landowner has to install a parking lot, she might as well place the lot in front of her property where motorists can easily see it. *See* SHOUP, *supra* note 1, at 107 (noting that parking in front of buildings is more convenient for motorists than rear parking).

10. REID EWING, SMART GROWTH NETWORK, PEDESTRIAN- AND TRANSIT-FRIENDLY DESIGN: A PRIMER FOR SMART GROWTH 10, http://www.epa.gov/smartgrowth/pdf/ptfd_primer.pdf.

11. *Id.*

12. Douglas G. French, *Cities Without Soul: Standards for Architectural Controls with Growth Management Objectives*, 71 U. DET. MERCY L. REV. 267, 280 (1994).

13. *See* Robert H. Freilich, *The Land Use Implications of Transit-Oriented Development: Controlling the Demand Side of Transportation Congestion and Urban Sprawl*, 30 URB. LAW. 547, 557 (1998) ("[L]arge expanses of asphalt devoted to parking often discourage pedestrian mobility" and make public transit inconvenient by impeding walking to and from transit stations).

14. *See* Gregory Smith, *Two Buildings Face Wrecking Ball for More Parking Space*, PROVIDENCE J. (Rhode Island), Nov. 4, 2002, at B1 (parking lots "force pedestrians to dodge vehicles crossing the sidewalk").

15. SHOUP, *supra* note 1, at 143.

16. *Id.* at 144.

upon job density are even more extreme: more than half of downtown Buffalo, for example, is devoted to parking.[17]

Such government-created low-density areas effectively force Americans into their cars for two reasons. First, if each apartment, shop, or office consumes large amounts of land, fewer of these destinations can be placed within a short walk of each other.[18] Thus, anti-density parking regulations reduce the number of people who can walk to errands or jobs.

Second, in low-density areas, very few people will live within walking distance of a bus or train stop, which in turn means that very few people can conveniently use a bus or train.[19] By contrast, more compact neighborhoods increase transportation choices because more people in an area means more potential riders within a short walking distance of a bus or train stop.

C. Subsidized Driving

While roads are at least partially paid for by user fees,[20] parking is nearly always "free" to its users.[21] But, such "free" parking is in fact paid for by landowners, who build parking lots and pass the costs of those parking lots on to society as a whole in the form of higher rents, and by their tenants, who (if they are businesses) then pass the costs on to society as a whole in the form of higher prices for goods and services.[22] Thus, minimum parking requirements are

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17. *Id.* at 130–31 (also citing other examples of parking-dominated downtowns).

18. *Cf.* Andres Duany & Emily Talen, *Making the Good Easy: The Smart Code Alternative*, 29 FORDHAM URB. L.J. 1445, 1447 (2002) (by contrast, in a neighborhood organized around the "mobility pattern of the pedestrian," most residents should live no more than a quarter of a mile from stores and schools).

19. *See* Freilich, *supra* note 13, at 552 n.18 ("[I]n order to effectively encourage transit utilization, a development must be located so that residents are not required to walk a distance of greater than a quarter mile to a transit station" otherwise "commuters are required to travel too far to transit stations."); *see also* EWING, *supra* note 10, at 5–6.

20. *See* Salvatore Massa, *Surface Freight Transportation: Accounting for Subsidies in a "Free Market"*, 4 N.Y.U. J. LEGIS. & PUB. POL'Y 285, 318 (2000–01) (noting that over half of state and federal highway spending is paid for by user fees).

21. *See* SHOUP, *supra* note 1, at 1 (explaining that ninety-nine percent of American auto trips involve free parking).

22. Shoup explains that:

> Initially the developer pays for the required parking, but soon the tenants do, and then their customers, and so on, until the cost of parking has diffused everywhere in the economy. When we shop in a store, eat in a restaurant, or see a movie, we pay for parking indirectly because its cost

essentially a sort of tax that redistributes money from society as a whole to drivers (or, phrased another way, from Americans in their roles as workers and business owners to their roles as drivers).[23]

How large is this tax? According to one 2002 study cited by Shoup, the cost of an average parking space is about $127 per month.[24] Assuming that a commuter drives to work twenty-two days each month, that commuter receives a parking subsidy of $5.77 per day to park free ($127/22).[25] Given that the same commuter spends far less than $5.77 to drive to work,[26] government-mandated free parking gives drivers more of a subsidy than would government-mandated free gasoline.

The same study estimates that the total social cost of free off-street parking is between $127 and $374 billion[27]—as much as the federal government spent on national defense ($349 billion) or Medicare ($231 billion) at the time of the study.[28] Given that a one cent per gallon gasoline tax increase would increase gasoline tax revenues by $1 billion per year, it would take an increase of as much as $3.74 in the gasoline tax to offset the social cost of off-street parking.[29]

In sum, government-mandated free parking provides a huge subsidy to drivers, which means that government-mandated free

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> is included in the price of merchandise, meals and theater tickets. We unknowingly support our cars with almost every commercial transaction we make because a small share of the money changing hands pays for parking.

Id. at 2.

23. *Id.* ("We don't pay for parking in our roles as motorists, but in all our other roles—as consumers, investors, workers, residents and taxpayers—we pay a high price. Even people who don't own a car have to pay for 'free' parking.").

24. *Id.* at 185–91 (explaining the logic behind the estimate). Shoup notes that many commercial spaces cost even more (perhaps $141 to $200 per month). *Id.* at 192.

25. *Id.* at 212.

26. In 2001, the average American commuter had a twenty-six-mile round trip commute and a car using twenty miles per gallon, and thus used up 1.3 gallons of fuel per day. *Id.* at 213 (noting that these are average commute and mileage lengths in the United States). Although gas prices fluctuate, as of the date of this writing (January 2007) gas prices are about $2.00–2.50 per gallon (with a nationwide average of $2.23 per gallon), so the hypothetical commuter cited above would pay approximately $2.60–3.25 per day. *See* GasBuddy, http://www.gasbuddy.com (last visited January 15, 2007).

27. *See* SHOUP, *supra* note 1, at 205–07 (explaining the basis for this conclusion).

28. *Id.* at 207.

29. *Id.* at 207–08.

parking increases driving, just as government-provided "free" pizza would increase the number of Americans eating pizza.[30]

Thanks to the parking subsidy, more Americans drive to work, which in turn means that fewer people use public transit than would otherwise be the case, which means that public transit agencies have less revenue, which means that those transit agencies must raise fares or provide less service, which means that even fewer people ride public transit.[31] And when more Americans drive, there is of course more demand for parking—which means that minimum parking requirements, by encouraging driving, may actually create parking shortages.

D. Increased Housing Costs

Minimum parking requirements reduce the true cost of car ownership by shifting the cost of parking into the cost of dwelling units, resulting in the subsidization of drivers by renters.[32] Shoup asserts that minimum parking requirements may add as much as thirty-eight percent to the cost of developing apartments.[33] Consequently, municipal efforts to ease parking problems may exacerbate housing affordability problems.

E. Bad for Business

Off-street parking requirements restrict the redevelopment of older buildings, thereby discouraging infill development and

30. *See* ANDRES DUANY ET AL., SUBURBAN NATION: THE RISE OF SPRAWL AND THE DECLINE OF THE AMERICAN DREAM 94 (2000) ("Of course there's never enough parking! If you gave everyone free pizza, would there be enough pizza?").

31. *See* Fitchik v. N.J. Transit Rail Operations, 873 F.2d 655, 665 (3d Cir. 1989) (Rosenn, J., dissenting) ("[I]ncreases in fares or reductions in the quality or availability of service have the tendency of reducing ridership, and the reduction in ridership in turn diminishes revenue."); Editorial, *To Bus or Not to Bus*, PROVIDENCE J. (Rhode Island), Oct. 18, 2004, at A8 (noting that cuts in bus service could "cause ridership to fall, deficits to swell and the 'death spiral' to become ever more costly to stop").

32. *See* SHOUP, *supra* note 1, at 141.

33. *Id.* at 148–51 (noting that parking spaces required by the city of Los Angeles increased construction costs of the Weyburn Terrace apartment project by thirty-two percent and requirements by Palo Alto increased development costs of Alma Place, a federal low-income housing system, by thirty-eight percent). *But cf.* TODD LITMAN, VICTORIA TRANSPORT POLICY INSTITUTE, PARKING REQUIREMENT IMPACTS ON HOUSING AFFORDABILITY 1 (2005), *available at* http://www.vtpi.org/park-hour.pdf ("[O]ne parking space per unit increases costs by about 12.5%, and two parking spaces increase costs by about 25%.")

forcing potential businesses out of established areas.[34] Suppose, for instance, that a barbershop closes in a city which requires two parking spaces per barber, and that a beautician who hopes to open a beauty shop in the same location must, under city parking regulations, create three parking spaces per beautician. Unless the beautician can obtain a zoning variance,[35] she must either: (1) provide more parking spaces, or (2) move to another building with more parking space. If the beautician's shop is surrounded by other buildings, provision of additional parking may be impractical,[36] so the beautician must move to another building with more space and allow the existing building to stay vacant unless another barber can be found for that location.[37] Thus, minimum parking requirements can discourage redevelopment of existing buildings.

This restriction on building redevelopment becomes particularly harsh and further stunts economic growth if a city increases its off-street parking requirements over time.[38] Existing buildings that do not conform to the new parking requirements generally receive "grandfathered" rights to continue business under the previous parking regulation.[39] But any change in building use triggers application of the new parking requirements, forcing nonconforming buildings to supply additional parking when redeveloped.[40]

F. Parking and the Poor

Twenty-seven percent of households earning less than $20,000 a year do not own a car, while ninety-nine percent of households with incomes greater than $75,000 own at least one car.[41] Nevertheless, these lower-income families, which are far more likely

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34. SHOUP, *supra* note 1, at 153–54.

35. *Id.* at 153 (noting that variances are difficult to obtain due to cost and a time consuming process).

36. *See id.* at 98, 153–54.

37. *Id.* at 153–54.

38. *See id.* at 97–98.

39. *See, e.g.*, Gladden v. D.C. Bd. of Zoning Adjustment, 659 A.2d 249, 253–54 (D.C. 1995).

40. *See, e.g.*, Page Assocs. v. District of Columbia, 463 A.2d 649, 651 (D.C. 1983) (explaining that Washington, D.C. zoning regulations require any building grandfathered from parking requirements to provide additional spaces when the building use is changed).

41. SHOUP, *supra* note 1, at 165.

to rely on public transportation,[42] still finance "free" parking through increased prices for goods, services, and rent.[43] So by redistributing income from drivers to nondrivers,[44] minimum parking requirements redistribute income from the (disproportionately carless) poor to the relatively affluent majority.

III. IS THERE AN ALTERNATIVE?

The most obvious solution to the negative side effects of parking regulation might be the complete elimination of parking regulation: just allow the free market to decide who can park where. But cities have traditionally rejected this remedy out of concerns that drivers unable to find parking spaces would congest the streets in search of parking. For example, the Colorado Supreme Court upheld one city's minimum parking requirements on the ground that such regulations were a rational means of preventing drivers from "moving slowly around block from block seeking a place to park . . . clog[ging] the streets, air and ears of our citizens."[45] Shoup rejects this argument on the grounds that: (1) most cities require far more parking than is actually necessary to prevent parking shortages, and (2) less damaging alternatives could prevent such "cruising."

A. Why Minimum Parking Regulations are Overbroad

In addition to attacking minimum parking requirements in principle, Shoup asserts that cities generally require landowners to provide more parking than drivers actually use.

Planners generally base parking decisions not upon consumers' willingness to pay, but rather on the collective hunches of nearby cities,[46] which in turn are often based on Institute for Transportation Engineers (ITE) parking data.[47] ITE engineers survey parking occupancy at various land uses, and create a

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42. NAT'L CENTER FOR TRANSIT RESEARCH, PUBLIC TRANSIT IN AMERICA: RESULTS FROM THE 2001 NATIONAL HOUSEHOLD TRAVEL SURVEY 37–43, 48 (2005), http://www.nctr.usf.edu/pdf/527-09.pdf.

43. SHOUP, *supra* note 1, at 165.

44. *See supra* Part I.C.

45. City of Aspen v. Stroud, 532 P.2d 720, 723 (Colo. 1975).

46. *See* SHOUP, *supra* note 1, at 26 (forty-five percent of planners surveyed nearby cities to decide how much parking to require for various land uses).

47. *Id.* (identifying ITE data as the second-most popular source of parking rules).

"parking generation" rate that measures the number of drivers who park at various types of enterprises.[48] ITE data are flawed in two respects. First, ITE data are based on data from sites with ample free parking and no public transit.[49] Thus, planners who rely on ITE data create a self-fulfilling prophecy: they set parking requirements based on data from automobile-dependent places, which ensures that cities enact stringent minimum parking requirements, which in turn helps to create the automobile-dependent places upon which ITE data are based.[50] Second, ITE data are based upon parking during peak periods, and thus dramatically overestimate day-to-day parking demand,[51] leading to government-mandated parking lots that are often more than half empty.[52]

B. Cruising: A Curable Problem?

As noted above, one common justification for minimum parking requirements is that by making it easy for drivers to use off-street parking lots, such rules reduce the pollution and congestion commonly associated with "cruising" for on-street parking by drivers.[53] Intuitively, consumers prefer unpriced parking to pay parking and while cruising for free parking is economically rational for the individual, it collectively harms society because it clogs traffic, wastes fuel, and causes air pollution.[54] Shoup proposes two reforms to reduce cruising: (1) allowing landowners to avoid minimum parking requirements by paying "in lieu of parking" fees,[55] and (2) setting market prices for on-street parking.[56]

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48. *Id.* at 31–32.

49. *Id.* at 32.

50. *See supra* Parts I.A–C (explaining how minimum parking requirements spur automobile dependence).

51. Jeffrey Tumlin & Adam Millard-Bell, *The Mythology of Parking*, LINE MAG. (Mar. 2004), http://www.linemag.org/_line/article_template1_print.php?a_id=146 (last visited Feb. 22, 2007).

52. SHOUP, *supra* note 1, at 81 (citing various studies supporting this proposition). In particular, Shoup cites an Urban Land Institute study showing that even during the busiest hour of the year, almost half of shopping center parking lots were never more than eighty-five percent filled. *Id.*

53. *See supra* note 45 and accompanying text. A related concern is "spillover parking"—the use of parking spaces in residential areas by visitors to neighboring businesses, thus depriving residents of parking spaces. *See* SHOUP, *supra* note 1, at 433 (describing this problem); *see also infra* note 84 and accompanying text (explaining how Shoup would reduce spillover parking by using market pricing).

54. *See* SHOUP, *supra* note 1, at 276.

55. *Id.* at 229.

1. In-Lieu Fees

Some cities allow developers to avoid minimum parking requirements by paying "in-lieu of parking" fees. With in-lieu fees, developers pay a fee to fund public parking facilities instead of providing parking themselves for customers, visitors, and employees.[57] Shoup prefers public parking to the status quo on the following grounds:

- private facilities whose peak parking occurs at different times (such as an office building commonly used during the day and a restaurant commonly used at night) can share public parking, meaning that fewer parking spaces are required to meet peak demand;[58]
- customers can park once and walk to multiple sites, reducing vehicle traffic;[59]
- older buildings may be redeveloped for a new use without having to provide additional parking;[60]
- fewer buildings will be surrounded by parking lots, as scattered parking spaces can be consolidated.[61]

But in-lieu fees are not a perfect solution to the cruising problem. Cities still tax landowners who pay such fees to subsidize parking and thus subsidize additional driving.[62]

2. Institute Fair Market Pricing

Ideally, Shoup would deter cruising by shifting to "fair market pricing" for on-street parking. Today, on-street parking is generally cheap or free, but is regulated through government-imposed time limits on parking.[63] This system encourages cruising, because

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56. *Id.* at 297.

57. *Id.* at 229. *See also id.* at 251–62, 266–67 (suggesting related alternatives of allowing employers to avoid minimum parking requirements if they paid for employees' transit usage, and allowing landlords to avoid minimum parking requirements by subsidizing use of "car sharing" services by carless tenants); *see generally* Zipcar, http://www.zipcar.com (last visited Feb. 22, 2007) (web page of car sharing service, explaining concept).

58. *See* SHOUP, *supra* note 1, at 231.

59. *Id.*

60. *Id.*

61. *Id.*

62. *See* Part II.C. (arguing that as long as parking is free, drivers are subsidized by landowners). Shoup also questions whether cities will build parking spaces as cheaply and efficiently as individual developers. *See* SHOUP, *supra* note 1, at 232.

63. *See* SHOUP, *supra* note 1, at 296.

cheap parking encourages people to drive to their destinations and then to cruise around an area searching for available free parking spaces.[64] Moreover, a driver who needs to park for more than the maximum time will have to waste time moving a car to another space, thus clogging traffic.[65]

In contrast, Shoup suggests that cities eliminate time limits for parking and instead charge a price that will deter just enough driving to eliminate parking shortages. Specifically, he suggests that at any given time, prices should be just low enough (or high enough) so that about fifteen percent of curb spaces should remain vacant, and the rest should be occupied.[66] After a city sets a price for parking in a certain location, it would periodically review prices to determine whether they produce the target occupancy rate; if the rates are too low, prices could be raised, while if the rates are too high, prices could be lowered.[67]

Shifting to market pricing for parking allocates parking spaces in a fairer and more efficient manner than the current system. Increasing the price of parking to reflect consumer demand eliminates the indirect subsidy that all consumers, even those who do not own a personal vehicle, pay to all drivers.[68] Instead, market pricing allocates parking spots to drivers who most desire them, because drivers who want spaces the most will pay the most.[69] The most convenient parking spaces will be predominately used for relatively expensive short-term parking, and less convenient parking will typically be occupied by long-term parkers and by those who place a low value on time.[70]

By eliminating parking shortages, market pricing will make it more politically feasible for cities to eliminate off-street parking requirements.[71] Businesses and employers can then decide whether

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64. *Id.* at 303.

65. *See id.* at 296–97. Moreover, time limits are difficult to enforce. Shoup cites a study in Seattle showing that the average parking duration in spaces with a one-hour time limit is over two hours. *Id.* at 297.

66. *Id.* at 297–99. Shoup suggests a "fifteen percent rule" because traffic engineers typically recommend a fifteen percent vacancy rate in order to ensure adequate ingress and egress from parking spaces. *Id.* at 297, 316 n.6 (citing numerous commentators).

67. *Id.* at 300–03 (describing technical details).

68. *Id.* at 165.

69. *Id.* at 398–99.

70. *Id.* at 483.

71. *Id.* at 495–96. *See supra* note 45 and accompanying text (noting that prevention of cruising is one justification for minimum parking requirements).

to subsidize parking for customers and employees; the choice will be theirs, instead of one made by a city planner.[72] Businesses may prefer to lose a few customers on busy days rather than pay for parking that ordinarily remains empty, allowing these empty spaces to be put to more productive use.[73]

It could be argued that market pricing of parking is just another tax, and is thus politically infeasible. Shoup responds that unlike many taxes, parking fees discourage a socially noxious activity (cruising).[74] Moreover, market-priced curb parking could be politically acceptable if parking meter revenue was used to benefit the areas with the parking meters. Specifically, Shoup suggests that revenue from market-priced curb parking be given not to a city's general treasury, but to neighborhood business improvement districts (BIDs) (that is, neighborhood associations in commercial districts),[75] who will use the revenue for neighborhood improvements that make these areas cleaner and safer.[76] If parking revenue funds are given to BIDs, BID members will be willing to support charging market prices for curb parking.[77] Similarly, in residential areas, cities can create "parking benefit districts" in which residents will be given the right to park free in a district, while nonresidents will have to pay market price, and the resulting revenue will be earmarked for neighborhood improvements.[78]

A more significant concern is that if market prices in one area (e.g. downtowns, which tend to be more compact and less parking-dominated than suburbs)[79] are higher than the market price in

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72. SHOUP, *supra* note 1, at 497.

73. *Id.* at 91.

74. *Id.* at 291.

75. *Id.* at 401.

76. *Id.* In BIDs, property owners voluntarily assess themselves to pay for "local public services that cities either do not provide (such as sidewalk cleaning) or do not provide at a satisfactory level (such as security) . . . because they recognize that their property's value depends on the quality of the surrounding environment." *Id.*

77. *Id.* at 401–02.

78. *Id.* at 434–37. A more common system is a residential parking permit ordinance which flatly prohibits nonresidents from parking in residential neighborhoods. *See, e.g.*, County Bd. of Arlington County, Va. v. Richards, 434 U.S. 5 (1977) (upholding such a law). Shoup faults such prohibitions as an "overreaction" because they leave many parking spaces vacant and thus underused. *See* SHOUP, *supra* note 1, at 433–34 (describing and criticizing such regulations).

79. SHOUP, *supra* note 1, at 158–59 (noting that parking lots are more expensive to build in dense downtown areas).

areas with a glut of off-street parking (e.g. suburban shopping centers), drivers may be deterred from visiting the former areas. Shoup responds by citing some success stories involving somewhat similar systems; for example, in Pasadena, California, and San Diego, California, cities substituted parking meters for free parking in order to finance neighborhood improvements such as street trees and street furniture, thus causing the revival of depressed business districts.[80] But Pasadena and San Diego are growing cities,[81] so neighborhoods in those cities might be reasonably likely to improve regardless of parking policy. By contrast, it is not clear whether similar policies would be effective in downtowns of declining cities: in more marginal areas where citywide consumer demand is weaker, charging for parking might deter more visitors than are now deterred by parking shortages.[82]

A related concern is that market pricing might be *too* successful, creating upper-class districts where parking is so expensive as to exclude low-income drivers.[83] In the absence of further experimentation, there is no way of knowing whether such "exclusionary parking" will be a significant problem.

IV. CONCLUSION

Regardless of the wisdom of in-lieu parking fees or market prices for on-street parking, Shoup persuasively argues that minimum parking requirements create a cavalcade of unintended harmful consequences, such as less pedestrian-friendly streets,

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80. *Id.* at 403–18 (describing improvements in downtown Pasadena); 418–27 (describing improvements in various parts of San Diego). But neither city has the kind of block-by-block market pricing system recommended by Shoup. Pasadena charges the "unusually high" rate of $1 per hour for downtown meters and allows businesses to avoid off-street parking requirements by paying only $115 per year to the city. *Id.* at 406, 408. But it apparently does not charge different rates for different locations or seek to figure out a market price. Similarly, San Diego sets a single price ($1.25 per hour) for all parking meters in the city. *Id.* at 425.

81. *See* U.S. CENSUS BUREAU, U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES: 2006, at 34–35 (Pasadena's population increased from 118,000 to 144,000 between 1980 and 2004, while San Diego's increased from 876,000 to 1.2 million).

82. Shoup suggests that fewer shoppers would be deterred by more expensive parking than by the parking shortages caused by underpriced curb parking. *See* SHOUP, *supra* note 1, at 398. This argument depends on the assumption that even in the most depressed areas, parking shortages are so common that they are more of a deterrent than market-priced parking an assumption that may not be true for all neighborhoods.

83. I thank Elizabeth DeCoux for this insight.

higher rents, and higher prices for other goods and services. As Shoup suggests, American cities should treat a restaurant's parking spaces the way we treat a restaurant itself: "Planners don't say how many restaurants a city must have. We let the market provide as many restaurants as people are willing to pay for. Similarly, planners should let developers provide as many off-street parking spaces as drivers are willing to pay for."[84]

Even if a free market in off-street parking might increase cruising, there is no reason to believe that this problem outweighs the negative consequences of existing regulations. So when in doubt, we should give the free market a try.

84. *See* SHOUP, *supra* note 1, at 496.

REVIEW ESSAY

Free Parking versus Free Markets

DANIEL B. KLEIN

Donald Shoup is a professor of urban planning at the University of California, Los Angeles. He holds a doctorate in economics from Yale. He has spent several decades researching parking, a subject on which he has long been known as the authority within transportation and planning fields. Now he has poured his learning into a massive book, *The High Cost of Free Parking* (Chicago: Planners Press of the American Planning Association, 2005).

The book persuades me that the impact of parking polices is much greater than I thought. Fundamentally, the policies in question are these two: city governments, first, mismanage curb parking and, second, require developers to provide extensive off-street parking.

Pesky policy wonkery? Shoup shows that the magnitudes are huge. Approximately 87 percent of all trips in the United States are made by personal motor vehicles, and parking is free for 99 percent of these trips (p. 590). Free parking is not, however, a spontaneous outcome. The required parking lot at a restaurant usually occupies at least three times as much land as the restaurant itself. Shoup reckons this excessive set-aside a *subsidy* to parking, and he estimates the U.S. total of this subsidy to be between $127 billion and $374 billion a year. "If we also count the subsidy for free and underpriced *curb* parking, the total subsidy for parking would be far higher. . . . Do we really want to spend as much to subsidize parking as we spend for Medicare or national defense?" (p. 591)

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Like freeways and free schooling, free parking is not free. "We don't pay for parking in our role as motorists, but in all our other roles—as consumers, investors, workers, residents, and taxpayers—we pay a high price" (p. 2). Meanwhile, when motorists drive downtown and cannot find a parking spot, they curse and increase congestion, exactly as they do on freeways.

The extent of free parking is so enormous and so normal that people think of it as nature's endowment, like air. Everyone feels entitled to free air and free parking. Hence, "most people do not see it as being any subsidy at all" (p. 591). The upshot, however, is that "[b]ecause parking costs so much and motorists pay so little for it, the hidden subsidy is truly gigantic" (p. 591). Yet scholars hardly notice parking at all. Having surveyed various leading textbooks and sources, Shoup concludes: "Somehow, the urban land use with the biggest footprint and a profound effect on the transportation system has been invisible to scholars in every discipline" (p. 25).

Parking requirements "increase traffic congestion and air pollution, distort urban form, degrade urban design, increase housing costs, limit homeownership, damage the urban economy, harm the central business district, and penalize poor families" (p. 592). Mandated on-site parking "skews travel choices toward cars and away from public transit, cycling, and walking" (pp. 2–3).

Shoup's book is marvelous and wonderful. It explains that parking policy is stuck in a self-feeding cycle. It brilliantly criticizes the culture of parking policymakers. It tells all facets of the history. It provides theoretical underpinnings. It displays rich empirical evidence. It makes novel connections and illuminates old issues. It bubbles with illustrations, cultural allusions, and ripe quotations. And its 734 pages are gracefully written. It is one of the best policy books I know. The book represents a life's work in understanding the problem and enlightening the public.

Spontaneous Order Forsaken

The main thrust of Shoup's analysis is that parking should be left to the invisible hand. He wants to remove zoning requirements for off-street parking. As for the street, he does not propose full-fledged privatization, but something in that direction. The government should create local districts that receive the revenue of paid street parking and use that revenue for district improvements. Thus, Shoup advocates a radically decentralized form of government control and residual claimancy. The virtues he describes are precisely the virtues of private ownership. Why not just privatize? (More on that question later.)

Shoup explains that parking requirements are "a disastrous substitute for million of individual decisions—by developers, merchants, employers, and drivers—about how much a parking space is worth" (p. 497). In the proposed arrangement, parking will be a spontaneous order:

- "Parking will increasingly become unbundled from other transactions, and professional operators will manage more of the parking supply" (p. 496).
- "Emancipation from parking requirements will especially encourage adaptive reuse and infill development in older areas where providing more parking is difficult and will also favor development at locations with good public transit" (p. 498).
- "If cities charge market prices for curb parking, drivers will usually be able to find an available space near their destination" (pp. 14–15).
- "To solve the curb parking commons problems without imposing inept land-use regulations, cities can instead let the market do some work for the public good" (p. 594).

Binding Minimums

Perhaps the surest way to know if parking requirements are distorting the decisions of developers is to consult revealed preference: Do developers often decide to build *more* than the minimum? Studies show that they rarely do so. Moreover, Shoup tells of his own experience on the design review board of the Los Angeles City Planning Department: "I reviewed the plans of all development in Westwood between 1994 and 2003. I saw many projects where the parking requirements limited the floor space of a building, prevented changing its use, or disfigured its design. But I never saw a project with significantly more parking than the zoning requires" (p. 90).

Most of the time when you go to the shopping mall or supermarket, there is a superabundance of empty spaces. It may not seem this way, because you focus on the area near to the entrance. Shoup tells of a study of suburban office developments in ten Southern California cities, which found "that the peak parking occupancy averaged only 56 percent of capacity" (p. 82). Investigate the top floor of office-park parking structures: not only are there no cars, there are few oil spots.

Parking requirements do not require that parking be free. The regulatee may charge for parking. However, as Shoup reports, citing the results of Urban Land Institute's 1999 survey of shopping centers: "Only 2 percent of the centers charged for parking, and they validated it for customers. Only 1 percent charged employees for parking." *Free* parking is a matter of supply and demand: "if there are more than enough spaces to satisfy the peak demand at a zero price, why charge for them?" (p. 87).

The Intervention Dynamic

At the heart of the parking mess is an intervention dynamic. Motorists park on the street and fill the spaces. Tight parking is a great aggravation, so when people hear that a new building is planned, they fear even greater aggravation—an "externality." But a large part of the aggravation arises from open access at the curb, as well as from failure to use better technology. Parking requirements then seem to be a reasonable

imposition. "Planners set off-street parking requirements because the government fails to charge fair-market prices for curb parking, not because the market fails to provide enough off-street parking" (p. 498).

Then the situation is misconstrued: "Planners have identified the source of the problem not as the city's failure to charge market prices for curb parking, but as the market's failure to supply enough off-street parking" (p. 8). By setting parking requirements, they save us from the vagaries of the marketplace. Less beneficent souls also find parking requirements useful. For example, the opponents of a large development usually invoke parking requirements as a reason to reject it or to scale it back (p. 495).

Quack Professional Culture

Shoup explores how planners set requirements. Mainly, they copy each other. "[T]wo surveys suggest that planners set requirements close to the average of other cities" (p. 31). No matter how defective, professional standards become self-validating. The other method is to consult the manuals of the Institute of Transportation Engineers (ITE), which produces the documents *Parking Generation* and *Trip Generation*. These authorities estimate "demand" as peak utilization. Price is not a variable. "The maximum observed demand thus becomes the minimum required supply" (p. 24). Shoup explores the ITE in depth and makes clear its quackish nature, yet this institute's numbers constitute the professional convention. "As a result, *Parking Generation* directly governs many of the cities' parking requirements" (p. 53). The presupposition of free parking becomes self-fulfilling: "[U]rban planners who use these parking generation rates to set minimum parking requirements are shaping a city where almost everyone will drive wherever they go and park free when they get there" (p. 32).

The amount of parking generated by a site depends on many variables, including the price of parking, so it is hard to predict or control. Moreover, if the planners tried to fine-tune the requirement, the developer would simply provide misleading information and projections. "To avoid these problems cities usually require parking in proportion to something known when a building permit is granted, is difficult to change without another permit, and can be measured easily to verify compliance. For this reason, cities usually require parking in proportion to the built floor space at a site, even if this is a poor prediction of parking demand" (p. 78). These foolish practices are cemented in by legal considerations: "Admitting the flimsy basis of the parking and trip generation rates would expose land-use decisions to countless lawsuits from developers, neighborhood groups, and property-rights advocates, all of whom could rightly question the legitimacy of the 'science' used to establish parking requirements and could argue for either more or less parking" (p. 53).

Shoup's analysis of the professional culture is powerful, though always rounded at the tip. Consider this bit of language analysis: "Even the phrase 'set a parking requirement' is humbug. The word 'set' suggests the possession of special expertise

or technical ability to calibrate a finely tuned instrument. But urban planners have no special expertise or technical ability to predict parking demand, and parking requirements are not finely tuned instruments. Planning for parking is a skill learned on the job, and it is more a political than a professional activity. Perhaps planners merely 'impose' parking requirements" (p. 88). Shoup is on the edge of saying that the establishment of parking requirements involves vanity plus coercive power. He notes that "parking requirements result from democratic decision making" (p. 22) and that "[u]rban planners who establish off-street parking requirements . . . have no financial incentive to get things right" (p. 497).

Technology Neglected

Technology is an important part of the story. Before the days of electronic technologies, paying for curb parking involved unsightly parking meters and the handling of coins. With new devices, the motorist need not have coins, need not pay for unused minutes, and need not confront the spectacle of metering posts. One type of device is the multispace pay-and-display meter—you display the printed permit after paying for a selected number of minutes. Another is the multispace "pay-by-space" meter, which eliminates "meter anxiety" (that is, worrying about not getting back before your paid time is up). The most significant development, however, is the in-vehicle parking meter. The meter ticks away visibly inside the vehicle as the vehicle sits in the rented parking space. It is like paying for long-distance telephone calls with a prepaid calling card. These developments are not pie-in-the-sky ideas, but rather tangible and off-the-shelf technologies. The in-vehicle system is used successfully in Aspen, Colorado, and other U.S. cities. Shoup tells of coming developments that use satellite technology, global positioning, and payment by mobile phone. Just as electronic toll technology eradicates any argument for freeways, electronic metering technologies undermine arguments for free curb parking. The government's mismanagement of curb parking, then, amounts not merely to not charging for it, but to a more general failure to keep current with technology. Awareness of the new technologies helps one to envision how parking will work in Shoup's proposed arrangement.

The Parking Benefit District

Again, the core of Shoup's reform package comprises, first, the removal of parking requirements and, second, the semipropertization of curbside parking capacity as a resource of the newly created "parking benefit district" (PBD). Shoup's arguments for propertization are superb. He writes that the rents "need the right recipients who will demand price reforms, and these right recipients are those for whom the benefits of efficient management are concentrated rather than dispersed" (p. 528). PBDs, he says, "provide an excellent example of how a neighborhood can capture the economic and social benefits from cooperative use of a scarce urban resource" (p. 598). Shoup

envisions the PBD as being not only the residual claimant, but also the authority over parking decisions: "Shifting the decisions about parking to the neighborhood level will thus create the great advantage of a superior interest in the results. In each neighborhood, the residents, businesses, and property owners will see the results every day" (pp. 598–99).

Shoup makes a strong case that PBD propertization will improve resource management. This reform strategy also has a second important advantage, however, as a political strategy: "Unless the revenue benefits a group who can insist drivers should pay market prices for curb parking, the politics of parking will not change. . . . [R]eturning revenue to the metered neighborhoods will create a countervailing interest and incite a passion to charge for parking" (p. 522). PBDs will "create place-based voting blocs of residents who want revenue to improve their neighborhoods" (p. 525).

"Not Privatization"

The issue, says Shoup, is not government property versus private property, but rather open access versus enclosure. "With curb parking, public property is not the problem, and private ownership is not the solution" (p. 596). "[T]he enclosure of curb parking does not imply private ownership of the curb space. Rather, I am using the term 'enclosure' to mean charging market prices for curb parking and then spending the resulting revenue for local public improvements" (p. 595).

He insists that "[c]ity life requires common ownership of much land (such as streets, sidewalks, and parks)" (p. 7), but all of his reasoning and argumentation really favor more thoroughgoing privatization. Why not fuse residual claimancy with decisive authority more completely? Why not allow divestiture and recombination in ways more flexible than in the PBD plan? For example, suppose reforms held that along designated government streets, the property owners obtain transferable prescriptive rights to the curb parking capacity along the abutting curb. Property owners could then combine to set up associations to manage the resources, or, even better, they could sell the rights to entrepreneurs who would own the prescriptive rights and professionally manage the resources. There would be freedom of exit, better fusion of residual claimancy and authority, better utilization of local knowledge, and ongoing marketization of the resources. This system, if we could get there, would be less politicized than the PBD plan, which might create the sort of perpetual democratic fecklessness typical of homeowners' associations. Shoup never makes arguments against more radical privatization of prescriptive rights or against the outright privatization of the street, but he makes reference to Fred Foldvary's classic work on private community (*Public Goods and Private Communities: The Market Provision of Social Services* [Aldershot, U.K.: Edward Elgar, 1994]) and so surely is aware of such theories.

In addition, technological developments might recommend a different reform strategy. In-vehicle meters might be easily adapted so that the driver punches in a parking-merchant code, which the meter then displays. This system could operate

nationwide among all who wanted to participate. Call it the Acme system. For example, if you wanted to rent out space in your own personal driveway as parking space, you simply put up a sign announcing the rates and saying that the customer must have an Acme system meter and punch in the merchant code (provided by the sign). You then monitor parked vehicles for compliance. A car without an in-vehicle meter or with the wrong merchant code or perhaps with the wrong rate code displayed would be a trespasser, and it could be booted or otherwise held to account. You then collect your payments from the Acme system, which, like American Express, takes a cut. With such an Acme system, we will easily be able to imagine a reform movement in favor of capturing the potential revenues of parking supply.

Esoteric Writing and Bargaining

Leo Strauss famously developed theories of esoteric writing whereby authors put much of what they have to say between the lines or in various beards and disguises. They write this way for strategic reasons specific to the discourse situation, such as placating censors or gatekeepers. It is tempting to read parts of Shoup's book in such a light. The book is admirable not merely in its wisdom and learning, but in its success in discourse where such wisdom and learning are crucial. The book is published by the American Planning Association. Imagine if Ludwig von Mises's 1922 work *Socialism* (translated by J. Kahane [Indianapolis: Liberty Fund, 1981]) had been published by the Soviet Politburo. That circumstance would have made the book and the author even greater. But what if such an achievement requires some fudging? Surely we ought to favor some fudging to advance enlightenment where it is of great consequence.

Shoup says time and again that his proposal preserves public property, but all of his argumentation makes a case for private property. He often quotes others who point to private property, and he remains silent about why not to privatize (pp. 594–600). Likewise, some stinging criticisms of government come by way of quotation (for example, on p. 483).

Shoup is bargaining with planners, and he must be careful not to insult them or impugn their motives. "[M]ost planners who implement off-street parking requirements are public-minded people trying to do what is best for their communities" (p. 596), he states. Although he points out the greed of construction companies and others in rigging forecasts (p. 61), he absolves planners: "[D]oes the systematic upward bias in the estimated parking and trip generation rates stem from any economic interest in the results? I think the answer is definitely *no*. . . . Mistakes are not being made to advance anyone's private interest" (p. 62). For planners, it is a case of honest error.

One must read Shoup's book through strategic lenses, which may help us to see and understand the sheer size of his work. The comprehensive nature of the work makes it impossible to ignore or overlook. Anyone who pretends to be a scholar or

a professional dealing with parking policy will simply have to contend with Shoup's book. Shoup packs it with powerful criticism, but also with caresses and assurances. For example, he assures planners that reform can be introduced gradually (p. 495) and that cities and planners should regulate parking *quality*, but without really making a case for doing so (pp. 101ff., 602).

Other Strategic Sacrifices

Shoup's strategic writing involves sacrifice, however. Where he uses spontaneous-order insights—that is, the importance of particularism, local knowledge, ownership, freedom, entrepreneurship, incentives, and market forces—he writes only of how these principles narrowly relate to parking. He eschews the connection to the broader body of spontaneous-order learning. This strategy may be to the good. Had he developed his book in the more scientific way—for example, "here are principles, and now I will apply them to parking"—the planners would have been embarrassed and unfriendly in their response. Still, some readers may regret his failure to connect directly and openly to the great train of liberal social theory.

Shoup's parking analysis eschews not only invisible-hand theory, but also the application of the insights that illuminate parking to issues directly related to parking. He does apply these insights to one related issue, highway congestion, and he makes the case for tolling highway usage and remitting the revenue to local highway benefit districts. However, he completely neglects the application of spontaneous-order principles to the issue of transit, including buses, shuttle vans, jitneys, taxis, and on-the-spot carpools. This omission is significant for two reasons. First, because the same set of principles applies so straightforwardly. Shoup explains that "[e]very transport system has three elements: vehicles, rights-of-way, and terminal capacity" (p. 9). For the personal motor-vehicle system, he analyzes the breakdown in terminal capacity: parking. Likewise, urban route-based transit (buses, jitneys, vans) fails miserably because of the same breakdown in the terminal capacity of that system—namely, the bus stops, bus stations, and pick-up areas, which generally are government owned (this insight is the gist of Daniel B. Klein, Adrian T. Moore, and Binyam Reja, *Curb Rights: A Foundation for Free Enterprise in Urban Transit* [Washington, D.C.: Brookings Institution Press, 1997]).

Moreover, in transit, restrictions on private freedom—the government barriers to entry and restrictions on operation in the would-be private bus, van, jitney, taxi, and carpool markets—play a big role, just as parking requirements do in Shoup's story. These transit-policy issues are not only theoretical parallels to Shoup's parking analysis, but also important to Shoup's vision. Shoup's reforms will lead to more paid parking. Treating parking space as a scarce resource will produce an increase in the demand for transportation modes that do not necessitate that you park at your destination—notably buses, vans, taxis, and so forth. But this new demand cannot be well served if those services are tightly bound, as they are now, by government restrictions. Although Shoup notes repeatedly that better parking policy would increase transit usage, he never deals with

the inadequacy of transit services and the need for parallel reforms there. Besides the transit application, other parallel applications, such as the property-rights approach to automobile emissions made possible by remote sensing, are important to Shoup's vision. These omissions, again, are due not to a lack of insight, but to strategic considerations. Shoup is picking his battles. If the book called for decontrol and property rights not just in parking, but across the range of transportation policy, then it clearly would be a libertarian book and hence less effective with the planners, engineers, academics, bureaucrats, politicians, and environmentalists.

The appeals Shoup makes to planners and others' ideological sensibilities are a final aspect of his strategic sacrifices. Characterizing the current parking policies as subsidies to the private automobile, he often appeals to the antiautomobile frame of mind. He writes about how parking subsidies degrade the environment, increase global warming, increase energy consumption, create suburban sprawl, reduce the usage of public transit, reduce walking and cycling, and so on. He is probably mostly right in all this, but the tenor of this argument sometimes comes across as too tender toward those hostile to the dominance of automobility and dispersed development. Shoup never lets on that automobile dominance is quite ineluctable, and for good reasons, and that in many respects his policies would actually make driving more attractive relative to other travel modes.

All in all, however, I tend to see the various shortcomings as strategic sacrifices and hence not as flaws. They are necessary to the book's great achievements, so they are redeemed.

Beitrag für strasse & verkehr

Rationale Parkstandsbereitstellung: Auch eine Besprechung von D. Shoups „The High Costs of Free Parking“

KW Axhausen

May 2006

IVT Institut für Verkehrsplanung und Transportsysteme
Institute for Transport Planning and Systems

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

1 SN 640 281[1] und kein Ende

In den industrialisierten Ländern müssen seit gut 70 Jahren im Zuge von Neu- und Umbauten auf dem entsprechenden Grundstück Parkstände erstellt werden. Damit soll in einer Welt, in der Parkstände in der Regel nicht bewirtschaftet werden, verhindert werden, dass sich die Grundbesitzer ihre Verantwortung für die Fahrzeuge ihrer Mieter, Gäste oder Kunden auf Kosten Dritter entledigen. Was damals logisch erschien, ist heute eine der am heissesten umstrittenen Regulationen im Planungsrecht und in der Verkehrsplanung, da sich die Beteiligten nicht mehr einig sind, welche Form dieser Ansatz heute nehmen soll und welche Ziele mit ihm verfolgt werden sollen.

Die Überarbeitung der Schweizer Normen zu Geometrie und empfohlenen Menge der Parkstände hat eine entsprechend heftige Reaktion ausgelöst. Im Zentrum der Diskussion steht die Norm SN 640 281 *Parkieren: Angebot an Parkfeldern für Personenwagen*, die demnächst veröffentlicht werden wird. Einzelhändler und Immobilienverbände haben sie z.B. in verschiedenen Studien überprüfen lassen (Enz, 2006; Steffen, 2005). Der Konflikt entsteht durch die unterschiedlichen Perspektiven der volkswirtschaftlich argumentiertenden Norm und der betriebswirtschaftlich denkenden Einzelhandelsinteressen sowie wegen unterschiedlicher Einschätzungen der Möglichkeit und Wünschbarkeit von Verhaltensbeeinflussung durch Parkraumregulierung. Dieser Konflikt wird ausgetragen, ohne dass bestimmte, aus meiner Sicht zentrale, Zusammenhänge verlässlich geklärt sind (siehe unten).

Ich möchte in diesem Beitrag einen Schritt nach hinten gehen und fragen, was die erst- und vielleicht zweitbesten Lösungen für die Bereitstellung von Parkraum wären und wie man die historisch gegebene Situation verbessern könnte. Donald Shoups[2] aktuelles Buch (2005) ist dabei *sparring partner*, da es die Summe seiner langen, intensiven Beschäftigung mit diesem Thema ist.

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[1] Der Autor ist Mitglied der EK 2.01, die die umstrittenen Normen entwickelt hat.

[2] Er ist Ökonom und Professor für Stadtplanung an der University of Carlifornia, Los Angelos

2 Erstbeste Welt

Die Autofahrer konsumieren Ressourcen, wenn ihr Auto knapp 23 von 24 Stunden des Tages parkt. Dieser Verbrauch sollte den Autofahrern in Rechnung gestellt werden, um eine volkswirtschaftlich unangemessene Übernutzung zu vermeiden. Diese Anlastung würde auch verhindern, dass Nicht-Autofahrer Autofahrer quersubventionieren, wenn die entsprechenden Kosten in den Preisen der Waren und Dienstleistungen, einschliesslich Wohnraum, auch an sie weitergereicht werden. Es gibt keine kostenlosen Parkplätze; nur unterschiedliche Arten, die Kosten zu verteilen.

Unter der konservativen Annahme, dass in Amerika für jeden PW im Durchschnitt über das ganze Land drei Parkplätze vorgehalten werden, zeigt Shoup, dass der Kapitalwert des Parkplatzbestandes der USA deutlich höher ist als der Kapitalwert der Fahrzeuge oder der Strassen, die sie nutzen. Dies dürfte auch in der Schweiz wahr sein, wenn auch der Abstand wegen der teurern Fahrzeuge und geringeren Anzahl Parkstände je Fahrzeug nicht ganz so ausgeprägt sein sollte. Entsprechende Schätzungen fehlen aber für die Schweiz.

Da Zahl der lokal relevanten Parkplätze nicht kurzfristig erweitert werden kann, sollten sie bewirtschaftet werden, um Externalitäten zu vermeiden. Shoup zitert eine grosse Anzahl von Studien, die zeigen, dass unbewirtschaftete Parkplätze in Bereichen hoher Nutzungsintensität umfangreichen Suchverkehre und damit neben den allgemeinen Externalitäten des PW Verkehrs auch entsprechende Behinderungen des unbeteiligten, fliessenden Verkehrs erzeugen. Er schlägt deshalb vor, den Preis des Parkens so festzulegen, dass zu jedem Zeitpunkt mindestens ein Parkplatz pro Strassenabschnitt, Parkhaus[3] etc. frei ist. Niemand sollte nach einem Parkplatz suchen müssen. Eine solche Regel führt zu zeitlich und räumlich variierenden Preisen, wobei an Orten geringer Nutzungsintensität der Preis Null sein wird, da es keinen Wettbewerb üm die Parkstände gibt.

Die durch Regulation (in der Schweiz durch Parkierungsordnungen, Baureglemente usw.) erzwungene Bereitstellung von Parkplätzen, wie sie heute weltweit üblich ist, und weltweit Streit zwischen Behörden und Bauherrn auslöst, wäre dann unnötig, da für alle Beteiligten klar erkennbar wird, ob sich die Investition in Parkraum lohnt. Shoup schlägt deshalb auch vor, die Entscheidung über den Parkstandsbau den Bauherren zu überlassen.

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[3] Die beste Grösse der jeweiligen Strassenabschnitte ist zur Zeit noch unklar, da keine Erfahrungen vorliegen. Shoup schlägt vor, die Regel jeweils für Abschnitte zwischen zwei Kreuzungen anzuwenden, soweit eine gewisse Mindestanzahl von Parkplätzen in diesem Abschnitt vorhanden ist.

Ein rationaler Bauherr, ob eines Einkaufszentrums oder eines Einfamilienhauses, könnte dann abwägen, ob er die vorhandenen Flächen einem oder mehreren Parkständen oder doch lieber Verkaufs- oder Wohnflächen widmen möchte. Bei kommerziellen Flächen sollten die Kapital- und Betriebskosten des letzten noch gebauten Parkstands seinem Grenzertrag entsprechen, d.h. bei einem Einkaufszentrum dem sonst verlorenen Deckungsbeitrag, bei einem Bürogebäude dem sonst verlorenen Mietzins. Der Bauherr und der Mieter müssten dann wissen, wie wichtig den Kunden oder Mitarbeitern die Parkplatzsuch- und Zugangszeit bei der Ziel- und Arbeitsplatzwahl ist, respektive ob andere Aspekte des Einkaufserlebnisses oder des Arbeitsplatzes allfällig höhere Such- und Zuganszeiten ausgleichen.

In einer Welt ohne Bauzwang würde die Umnutzung von Flächen oder Gebäuden nicht mehr an unrealistischen behördlichen Parkstandsminima scheitern.

Es muss angemerkt werden, dass es meines Wissens weder in der Schweiz noch anderswo methodisch zufriedenstellende Untersuchungen zum einzelwirtschaftlichen Grenzertrag von Parkständen gibt. Es gibt für die Schweiz auch keine Studien, die die Zielwahl im Einkaufsverkehr als Funktion aller Eigenschaften eines Einkaufs erklären: generalisierte Kosten des Weges und des Parkplatzes, Atmosphäre und Qualität des Geschäftes und Preisniveau des Warenkorbs. Dies gilt genauso für die Ausgabenverteilung im Raum.

Nochmals, zusammenfassend, in einer erstbesten Welt bestünde kein Bauzwang, aber zur Verhinderung der Externalitäten des Suchverkehrs bestünde ein Bewirtschaftungszwang der Parkstände, wobei die Erträge den Besitzern zufliessen würden. Wie immer wäre abzuwägen, ob die Höhe der Externalitäten die Kosten der Bewirtschaftung rechtfertigen. Es wäre auch zu prüfen, ob man gesellschaftlich bereit wäre, gewisse Externalitäten zu akzeptieren, obwohl sie durch eine Bewirtschaftung über Preise oder Rationen zu verhindern wären.

3 Zweitbeste Welt

Wir sind von dieser erstbesten Welt weit entfernt. Der Versuch, die Externalitäten des Suchverkehrs der Nutzer eines Gebäudes durch den Zwang, Parkplätze auf dem jeweiligen Grundstück anzulegen, ist im wesentlichen gescheitert. Das Scheitern nimmt unterschiedliche Gestalt an. Einmal führt der Bauzwang in manchen Fällen zu unsinnigen Kosten, die bestimmte Nutzungen und Umnutzungen verhindern, die eigentlich keine (zusätzlichen) Parkstände benötigen. Der Bauzwang reduziert die Gestaltungsfreiheit des Bauherrn, so dass Innovation und damit auch die Auswahl der Nutzerinnen eingeschränkt wird. Er scheitert auch daran,

dass die Externalitäten der Parkplatzsuche nicht die einzigen sind. Die durch eine lokal neue Nutzung veränderten Nachfragemuster führen zu erhöhten Belastungen, die dann über den Ausbau der sonstigen Infrastruktur abzufangen sind, respektive zu verhandeln sind. Darüberhinaus erzwingt der Bauzwang in anderen Fällen Parkstände, die im wesentlichen ungenutzt bleiben, da die Anzahlen in vielen Richtlinien auf einen Spitzenbedarf ausgelegt werden, dessen einzel- und volkswirtschaftliche Sinnhaftigkeit nie umfassend überprüft wird. Diese grossen, leeren Flächen reduzieren auch die Attraktivität der effizienten nichtmotorisierten Verkehrsmittel. In anderen Fällen schreiben die Richtlinien Obergrenzen vor, die für Bauherren unwirtschaftlich niedrig sind.

Alle Beteiligten sind aber mit der jetzigen Situation vertraut. Die Autofahrer erwarten die scheinbar kostenlosen Parkplätze in der Nähe von Geschäften und Dienstleistern[4]. Die Einzelhändler könnten ihre vorhandenen und teuren Parkstände nicht kurzfristig produktiver nutzen. Im Rahmen der räumlichen Konkurrenz ist niemand bereit, den ersten Schritt zu einer Bewirtschaftung zu tun. Es erwarten aber auch viele Anlieger, dass ihnen der öffentliche Strassenraum für scheinbar kostenloses Parken zur Verfügung gestellt wird[5]. In manchen dichten Stadtteilen sind die Anlieger dann lieber bereit, ihr Auto oft nicht zu nutzen, um den Parkplatz nicht zu verlieren.

Jede Veränderung produziert deshalb in der Regel Verlierer, die sich wegen ihrer räumlichen oder sachlichen Kohärenz leicht organisieren können, z.B. eine Nachbarschaft, deren Strassenraum bewirtschaftet werden soll, oder Immobilienentwickler, denen durch zusätzlich geforderte Parkstände Zusatzkosten ohne Zusatznutzen entstehen. Shoup's Vorschlag ist es, deshalb lokale Gewinner einer Bewirtschaftung zu schaffen. Sein Instrument ist die Verteilung der Einnahmen aus der Parkraumbewirtschaftung an die Anlieger. Sein Paradebeispiel ist die Altstadt von Pasadena, wo diese Einnahmen unter der Kontrolle der lokalen Einzelhändler für die systematische Verbesserung des lokalen Umfelds eingesetzt wurden; so erfolgreich eingestetzt wurden, dass die Altstadt heute wieder ein attraktives und stark frequentiertes Einkaufsziel ist. In anderen amerikanischen Fällen werden die Einnahmen verwendet, um die Bürgersteige und Grünflächen der Nachbarschaft zu unterhalten, respektive auch in Grenzen mit der Gesamtstadt geteilt. Im Schweizer Kontext, in dem der öffentliche Raum

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[4] Das Überleben von Einzelhandel und Dienstleistung in den parkraumbewirtschafteten Innenstädten zeigt aber, dass die anderen Aspekte (siehe oben) wesentlich genug sind, um für bestimmte Kunden diese zum bevorzugten Ziel ihrer Einkaufswege zu machen.

[5] Die Opportunitätskosten der nicht erhobenen Parkraumgebühren sind höhere örtliche Steuern.

nicht wegen mangelnder Steuereinnahmen verwahrlost ist, würde es sich anbieten, die Einnahmen zur Senkung der örtlichen Steuern zu verwenden.

Der Bauzwang könnte nur dann aufgehoben werden, wenn kommerzielle Parkhäuser in allen Teilen der Stadt gebaut werden dürfen. Das Preissignal der bewirtschafteten Parkstände im öffentlichen Raum muss mittelfristig zu zusätzlichen privaten Parkständen ausserhalb des öffentlichen Raums führen können. Sie dürfen also nicht durch unverhältnismässige technische oder gestaltertische Vorgaben verhindert oder überteuert werden[6].

4 Die drittbeste Welt heute und die SN 640 281

Neben den schon erwähnten Problemen zeigt Shoup, dass die vorhandene Evidenz zum Parken dünner ist als für rationale Entscheidungen eigentlich notwendig. Er zeigt, dass viele amerikanische Städte ihre Vorschriften und Zahlen zu den geforderteten Parkständen unkritisch voneinander abschreiben. Er zeigt auch, dass die Zahlen im ITE *Parking Generation Handbook* fehlerhaft analysiert und angewandt werden. Er weist gar nicht darauf hin, dass im *Handbook* viele Variablen fehlen, die man eigentlich für eine vollständige Analyse der heutigen Situation ohne Bewirtschaftung bräuchte. Die amerikanischen Behörden und Planer fliegen eigentlich blind. Die europäische Situation ist nicht wirklich besser (siehe unten). Ich weiss nicht, ob die Bauherren wirklich über so viel bessere private Informationen verfügen, denn auch hier wird eher mit Faustregeln, denn mit detaillierten Analysen gearbeitet.

Die Zahl der zu errichtenden Parkstände wird deshalb heute immer wieder zum Streitpunkt zwischen Bauherrn, Behörden, Bevölkerung und Interessenverbänden. Es hilft nicht, dass, wie oben erwähnt, bisher keine Modelle zum Verhalten der Kunden vorliegen, die transparent und methodisch vollständig entwickelt wurden. In dieser Situtation versucht die neue Norm einen Mittelweg zu gehen, um die Rechtsicherheit für alle Beteiligten zu erhöhen. Für kleinere Projekte wird mit pauschalen Zahlen gearbeitet, die die heutigten Gewohnheiten und damit hoffentlich auch das kollektive Wissen der Behörden, Planer und Bauherrn zusammenfassen. Eine detaillierte volkswirtschaftliche Analyse der Vorgaben, oder eine umfassende Sammlung aller Erfahrungen und Zahlen war während der Erstellung der Norm nicht möglich gewesen. Für grössere Projekte wird vorgeschlagen, dass alle Beteiligten durch einen Modellie-

[6] Es wäre aber sicherlich sinnvoll, wenn der Bauherr des Parkhauses seine unmittelbaren Nachbarn für deren allfälligen Wertverlust entschädigt.

rungsprozess öffentlich und transparent Rechenschaft über die Wirkungen des jeweiligen Projektes ablegen. Ja, das kann im Vergleich zu heute zusätzlicher Aufwand sein, der sich aber durch die Erhöhung der Rechtssicherheit und des Wissenstandes bezahlt machen sollte. Alle sind so gezwungen, ihre Annahmen zu überprüfen. Die Expertenkommission (EK) und die VSS erwarten, dass sich hier bald Standards entwickeln werden und dass auch bald deutlich mehr und neues empirisches Wissen in den Prozess einfliessen wird, so dass der Aufwand überschaubar bleiben wird. Meine persönliche Erwartung ist, dass sich der Planungsprozess beschleunigen wird.

Die EK hat darauf verzichtet, eine volkswirtschaftliche Kosten-Nutzen-Analyse vorzuschlagen, die durchaus sinnvoll wäre und die das angemessene Gegenstück zur vorgeschriebenen Umweltverträglichkeitsprüfung ist. Der Grund sind die sachlichen Schwierigkeiten, den volkswirtschaftlichen Nutzen eines neuen Standorts abzuschätzen, z.B. Umverteilungs- von echten Produktivitätswirkungen zu trennen, den Wohlfahrtsgewinn durch ein breiteres Angebot zu schätzen oder die räumliche Inzidenz der Wirkungen zu ermitteln.

Die Norm erscheint dem Autor ein sinnvoller Kompromiss, der die Interessen der Allgemeinheit und der Bauherren berücksichtigt. Der Normungsprozess ist flexibel und schnell genug, um zukünftiges neues Wissen zügig in die Norm einzuarbeiten. Wichtig ist aber, dass dieses Wissen nachvollziehbar ist, was von allen Beteiligten mehr Offenheit verlangt.

Die EK versucht im Moment die Datenlage, auf zwei Wegen zu verbessern. Ihre neue Norm SN 640 015 *Dokumentation der Messung von Verkehrserzeugungsraten (Metadaten)* beschreibt, welche Daten bei einer Messung der Verkehrserzeugung eines Einzelstandorts erfasst und dokumentiert werden sollten. Diese Datenanforderungen reflektieren ein Modell der Verkehrsnachfrage, respektive der Parkplatznachfrage. Die EK sieht dies als Beginn eines Prozesses, der zu einem allgemein akzeptierten Modell führen soll. Metadaten ohne Daten sind schön, aber nicht hilfreich. Die EK vertritt den VSS in einer gemeinsamen Arbeitsgruppe mit der FGSV und der FVS, die sich zum Ziel gesetzt hat, dass vorhandene Wissen zur Verkehrserzeugung und Parkplatznachfrage im deutschsprachigen Raum zu mobilisieren. Sie begleitet Arbeiten am IVT, die eine webbasierte Datenbank zu Ziel haben, die allen Interessenten ermöglich soll, Messungen zu archivieren, zu vergleichen und zu analysieren. Eine einzelne Firma, Beratungsunternehmen, Behörde oder Hochschule wird praktisch nie genügend Daten haben, um alleine verlässliche Schätzungen zu erhalten. Nur durch das Teilen der Daten werden solche Schätzungen möglich. Die Datenbank wird dem einzelnen Datenlieferanten seine eigenen Daten umfassend zugänglich machen, während die öffentlichen Ergebnisse entsprechend aggregiert, anonymisiert, aber auch präziser sein werden.

5 Mehr zu Shoup's Buch

Die wesentlichen Themen des Buches sind schon oben diskutiert worden. Seine bekannten und auch umgesetzten Vorschläge zur Verwandlung von subventionierten Parkplätzen am Arbeitsplatz in einen wählbaren Gehaltsanteil (*cash out*) (Shoup, 2005b) finden im vorliegenden Buch keinen Platz, was aber bei knapp 650 Seiten etwas verwundert. Diese Länge ist das Ergebnis eines Stils, der sicherstellen will, dass jeder, aber auch jeder Leser seine Argumente versteht. Ich denke, dass Shoup sich damit keinen Gefallen getan hat, da die Dicke des Buches und das Fehlen eines knappen Übersichtskapitels, sprich einer Zusammenfassung für den eiligen Leser, die meisten Fachkollegen abschrecken wird. Sein Argument, dass der Verzicht auf Parkraumbewirtschaftung bei gleichzeitigem Bauzwang von Parkständen, deren Anzahl methodisch zweifelhaft festgelegt wird, zu vielfältigen Fehlentwicklungen geführt hat, ist überzeugend. Die Berechnungen zum Kapitalwert der Parkstände sind erschreckend. Man darf sich fragen, ob wir als Gesellschaft nicht bessere Verwendung für dieses Kapital hätten.

Sein Ziel, Parkplatzsuchzeiten zu eliminieren, setzt er absolut. Hier fehlt eine Begründung, da es ja möglich sein könnte, dass gesellschaftlich ein gewisses Mass an Parkplatzsuche längeren Fusswegen vorgezogen würde. Es wäre aber sicherlich fruchtbar, eine hypothetische Welt zu simulieren, in der seine Ideen umgesetzt sind, um deren Wirkungen im Detail zu verstehen.

Trotz der Länge ist „*The High Cost of Free Parking*" ein sehr empfehlenswertes Buch. Ich hoffe, dass es bald möglich sein wird, ähnliche Zahlen und Beispiele zum Parken und seiner Organisation auch aus der Schweiz und Europa berichten zu können.

6 Ausblick

Die Regulation der Parkstandsbereitstellung und –bewirtschaftung ist immer noch nicht zur Zufriedenheit aller Beteiligten: Nutzerinnen, Betreiber, Behörden und Allgemeinheit geregelt. Der Bauzwang, oder aus mancher Sicht manchmal Bauverhinderung, in einer Welt in der zu häufig auf die Bewertschaftung der Flächen verzichtet wird, wird so zu einem Spielball der Interessengruppen.

Es ist klar, dass die Diskussion unter dem Fehlen dreier wesentlicher Informationen leidet: a) Angaben zum kommerziellen Grenznutzen eines Parkstandes, b) zu den Grenz- und Durch-

schnittskosten der Parkstände und ihres Betriebes und c) zu relativen Wichtigkeit der Parkplatzsuche und Parkierungsgebühren für die Zielwahl bei Einkauf und Ausgang. Es wäre wünschenswert, dass diese Wissenslücken in Zusammenarbeit von Investoren, Behörden und Wissenschaft bald geschlossen werden.

7 Literatur

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