

## **Redwood City Shoups Up Parking**

By Fred E. Foldvary

Redwood City, California, is pioneering efficient high-tech parking. Instead of old-fashioned coin-operated fixed-time meters, the city will be using electronic meters which have flexible charging and no time limit. The economic theory of this parking policy was developed by Professor Donald Shoup, the world's leading expert on parking.

After the high-tech boom of the 1990s, I and my colleague Daniel Klein discussed how there was no book on how advancing technology affects the rationale for the economic policies of government. We recruited experts in fields such as electricity, water, roads, pollution, and parking. Donald Shoup, chair of the department of Urban Planning, University of California at Los Angeles (UCLA), wrote the chapter, "Buying Time at the Curb."

Our book was published in 2003, entitled *The Half-Life of Policy Rationales: How New Technology Affects Old Policy Issues*. Donald Shoup's book, *The High Cost of Free Parking*, was published in 2005.

Most streets are owned and operated by governments, and in crowded times and areas, the city typically charges for street parking with meters. The main purpose of a parking meter is not revenue but to allocate the use of scarce parking space. Merchants want customers to be able to find a parking place, so the old-fashioned meters have time limits, so that a parker does not tie up the space all day.

The problem with antiquated coin-operated fixed-time meters is that their rigidity prevents the most efficient allocation of space. It creates meter anxiety, as the user has to rush back to the car to avoid a parking ticket when the time is up. Someone to whom it is important to park there longer is not permitted to; usually it is illegal to extend the parking time beyond the maximum set by the meter. It is also inconvenient to have to have the right coins. More importantly, the fixed meter charge cannot allocate the space with efficient precision.

Enter new technology. Advanced meters, including in-vehicle meters, can charge the time electronically, either with credit and debit cards, or by billing the user. The charge can vary during the day, and there is no fixed time limit. Economically, the user is paying a rental for the use of street space. The economic function of charging a rental for space is to efficiently allocate the use of the space to those who most highly value the space, maximizing the social benefit of that space.

Professor Shoup, being an excellent economist, is well aware that parking meters in effect charge a space rental. Chapter 19 of his book is entitled, "The Ideal Source of Local Public Revenue." Guess what it is! Shoup provides the answer: it is Henry

George's proposal to use land rent for public revenue. And parking meters are an application practiced by almost all cities throughout the world. But, as Shoup shows, it can be done better with advanced meters.

A worse problem than old-fashioned meters is so-called "free parking" as well as the excessive use of space and resources for parking. As Shoup explains, where there is congestion or alternative uses of the site, the space is not economically free, even if there is no user charge. There is an economic rent, the implicit amount that users would pay if the space were auctioned off for its best use. I call this the geo-rent. If the rent is not explicitly paid, this creates economic inefficiency, a waste of scarce resources.

Shoup calculates that the typical city parking space costs more than a car! The costs are hidden in rentals for business and housing, in taxes, and in economic loss and waste. Parking is hugely subsidized, which then distorts transit choices, urban development, and the environment. Shoup's theory is exactly what Henry George said: rent should be collected by the community not just as the ideal source of public revenue but also for economic efficiency. The remedies for space waste are the elimination of arbitrary restrictions on the use of land, including zoning, and charging market prices for space, including parking.

The ideal charge for parking is just high enough to eliminate the congestion, so that a driver can find a parking place within a block of his destination. Modern meter charging can set the price per hour according to the typical demand at that hour. When there is no congestion, the meter charge is zero, free parking. "I call it the Goldilocks Principle," says Donald Shoup. "With parking spaces, prices shouldn't be too low or too high. If there are a few vacant spaces, the price is just right."