CHAPTER 7

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Informal Parking on Sidewalks: The Broken Windows Effect

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Cities regulate every aspect of parking, using everything from time limits for on-street parking to zoning requirements for off-street parking. Cities also employ legions of parking enforcement officers to ensure that drivers obey these regulations, and tickets for parking violations are a major revenue source. Los Angeles, for example, earned $134 million from parking tickets in 2011 (City of Los Angeles 2012: 307). If so much parking is formal, regulated, and policed, what then is informal parking? What do we learn about the practice of informal parking and about better formal parking policy from the neighborhood around UCLA?

Informal Parking

Informal parking markets operate outside the regulated system, and they fill market niches hard to serve in any formal way. They often appear near the Los Angeles Coliseum, for example, where residents charge nonresidents to park in their driveways on game days. Drivers may have to walk a few blocks to the stadium. But after the game they can leave from a residential driveway much faster than they can leave from a large stadium lot that takes a long time to clear when everyone tries to exit at the same time. The residents park their own cars on the street and rent space on their driveways to ticket-holders, some of whom are regular customers. Drivers may think that paying for parking is un-American, but residents who receive the revenue know that paying for what you use is a traditional American value.

Nonetheless, informal parking can create problems. Where on-street parking is underpriced and overcrowded, many drivers feel they have no alternative to illegal parking. For example, the *Los Angeles Times* describes the chaotic informal parking in Mexico City: "Cars dominate nearly every square inch of Mexico City's public space. Vehicle owners double- and triple-park on the streets, to say nothing of curbs, sidewalks, gardens, alleys, boulevards and bike paths" (Dickerson 2004: 26).

This anything-goes informal parking is more common in developing countries, but drivers also park on sidewalks in some California cities, although it is clearly illegal:

> No person shall stop, park, or leave standing any vehicle whether attended or unattended . . . on any portion of a sidewalk, or with the body of the vehicle extending over any portion of a sidewalk (California Vehicle Code §22500).

Despite this legal prohibition, Los Angeles has adopted a policy of "relaxed enforcement" of the law against parking on sidewalks.[1] The informal custom of parking on the sidewalk has evolved in some neighborhoods in response to a shortage of free parking spaces on the streets and the city's failure to enforce the law.

Informal parking on the sidewalks in North Westwood Village

I began to study informal parking on sidewalks in 2005 when teaching a course on Urban Transportation Economics at UCLA. Many of the students lived in North Westwood Village, a neighborhood next to campus. They mentioned that drivers often park on the aprons of driveways (the paved area between the sidewalk and the street), with part of the car extending over the sidewalk (Figure 1). Parking enforcement officers ignored this violation because the North Village is a student area and its city councilmember had requested relaxed enforcement.

Figure 1. Cars parked on the sidewalk in North Westwood Village

Most cars are too long to park entirely on the apron, and many drivers park with the front of the car extending over the sidewalk. Some also park on the driveway with the back of the car extending over the sidewalk (and no part of the car on the apron). No matter how far the cars extend over the sidewalk from either the apron or the driveway, drivers call it apron parking.

The Broken Windows Effect

Unfettered parking over the sidewalk is a good example of what George Kelling and James Wilson referred to as the "broken windows" theory of urban disorder:

> Social psychologists and police officers tend to agree that if a window in a building is broken and is left unrepaired, all the rest of the windows will soon be broken. . . . one unrepaired broken window is a signal that no one cares, and so breaking more windows costs nothing (Kelling and Wilson, 1982).

If we substitute cars parked on sidewalks for broken windows, North Westwood Village illustrates this theory: Where enforcement officers do not ticket the first cars parked on the sidewalk, more drivers will park on the sidewalk. Eventually, drivers will park on sidewalks throughout the neighborhood. Because the city has relaxed parking enforcement, an informal parking market has taken over the sidewalks.

Informal Protocols

North Village residents have developed several informal protocols for dealing with apron parking. For example, if cars are parked on the apron, how do residents who park in the garage of an apartment building get out? To solve this problem, some apron parkers exchange car keys and can move apron-parked cars blocking the driveway. They also text each other about any plans to use their cars, so that owners can move apron-parked cars that are blocking someone who wants to leave.

On days when parking is prohibited on one side of the street for the weekly street cleaning, every car illegally parked on the side of the street being cleaned usually gets a ticket. Cars illegally parked over the sidewalk on the other side of the street, however, rarely receive a ticket. The parking enforcement officers selectively ticket street-cleaning violations and ignore parking on the sidewalks. If an apron-parked car extends into the street on the side being cleaned, however, it *always* receives a street-cleaning ticket. In North Westwood Village, parked cars are more important than pedestrians.

The Magnitude of the Problem

My students began to study the informal parking problems in the North Village. They counted parking spaces and parked cars, analyzed census data, interviewed residents and property owners, and documented the situation with many photographs. Table 1 summarizes their findings about apron parking in the North Village.[2]

Table 1

Street	Curb Parking Spaces	Legally Parked Cars	Cars Parked in Aprons	Other Ilegally Parked Cars	Total Illegally Parked Cars	Total Occupancy (percent)
	(1)	(2)	(3)	(4)	(5)=(3)+(4)	(6)=[(5)+(2)]/(1)
Landfair	118	112	54	24	78	161%
Roebling	25	21	16	0	16	148%
Glenrock	46	46	15	1	16	135%
Midvale	89	84	26	1	27	125%
Levering	97	90	26	3	29	123%
Gayley	79	77	15	3	18	120%
Kelton	129	125	23	5	28	119%
Ophir	61	59	9	1	10	113%
Strathmore	136	129	17	2	19	109%
Veteran	70	68	4	3	7	107%
Le Conte	7	6	0	0	0	86%
Total	**857**	**817**	**205**	**43**	**248**	**124%**

Curb Parking Occupancy Rates in North Westwood Village

The students counted 205 cars parked on the driveway aprons. The 2000 Census showed that 11,021 residents live in the North Village and they own 5,879 cars. This suggests that only 3.5 percent of the residents' cars are parked on the aprons (205 ÷ 5,879), and only 1.9 percent of residents park their cars on an apron (205 ÷ 11,021). Although only a tiny minority of residents park on the aprons, their cars extend over the sidewalks on every block.

Population Turnover

A population shift toward residents who do not own a car can happen quickly. The 2000 Census found that almost half the residents in the North Village had not lived there one year before. A population turnover of 50 percent per year is understandable because student apartments naturally have a high turnover rate. And living in the North Village without a car is manageable because it is a short walk to campus. Anyone who owns a car needs a parking space, but not everyone needs a parking space

because not everyone owns a car. If only 205 residents without cars replace residents who park on the aprons, the reduction in parking demand will be enough to clear the sidewalks of parked cars.

Since there are not enough apron parking spots for all tenants who want one, landlords either charge tenants for parking on the aprons (usually about $50 a month) or give them permission to apron-park when they lease an apartment (and presumably charge higher rent for the privilege). If landlords could no longer rent apron parking spaces to tenants, car owners would find apartments without off-street parking less desirable.

Someone who owns a car and cannot find an apartment in the North Village with off-street parking should not expect to park on the sidewalk. Anyone who cannot get along without a car might find that another part of town with more off-street parking would be a better place to live, and a student who does not own a car can then rent the North Village apartment without off-street parking. As a result, more apartments would become available at lower rents to students without cars. Clearing cars off the sidewalks would also make the North Village more walkable.

Political support for apron parking

Michael Dukakis, former Governor of Massachusetts and Democratic candidate for President in 1988, lives in the North Village when he teaches in the Luskin School of Public Affairs at UCLA during the winter. He walks to campus, and was appalled to see the chaos on every block as he threaded his way between cars on the sidewalks. He contacted city officials to seek remedies but, much to his dismay, was ignored. Nevertheless, due to his celebrity, Dukakis became notorious for protesting apron parking in the North Village.

Political uproar followed, at least in the blogosphere. Residents who apron parked in the North Village vilified Dukakis (and occasionally me) in blog posts, many scatological but a few amusing. Apron-parked cars are like squatters, and ending informal but illegal squatting is difficult once it has become established. As Oliver Wendell Holmes said, "A thing which you enjoyed and used as your own for a long time, whether property or an opinion, takes root in your being and cannot be torn away without your resenting the act and trying to defend yourself, however you came by it" (Holmes 1897). When it comes to parking, informal does not mean easily changed.

Many people have a stake in apron parking and do not want it to end. Landlords who now rent apron parking privileges to their tenants would lose revenue to which they have no legitimate claim. Residents have also come to depend on apron parking, even if they realize they are blocking the sidewalks.

The Americans with Disabilities Act

Informal parking on the sidewalks may seem solely a local issue, but in 2003, the U.S. Supreme Court ruled that the Americans with Disabilities Act (ADA) applied to sidewalks. The decision in *Barden v. Sacramento* requires cities to make public sidewalks accessible to the disabled. Because of this ruling, cities must remove barriers that block access for people with disabilities.[3] This decision has created a serious liability for Los Angeles because the city has informally allowed drivers to park their cars on the sidewalks in North Westwood Village, although it violates both California and Los Angeles law.

Two ADA lawsuits against the city have spurred reform. Both lawsuits deal with broken sidewalks and cars parked on the sidewalks. The lead plaintiff in one was a UCLA student who uses a wheelchair and had to make a long detour on the way to campus because cars parked on the sidewalks prevented taking the shortest route through the North Village (Pesce 2007). The lawsuit alleges:

> Due to his mobility disability, Named Plaintiff Victor Pineda uses a motorized wheelchair. Plaintiff Pineda is a graduate student at UCLA and lives in residential North Westwood Village . . . Plaintiff Pineda has consistently experienced apron parking on a number of sidewalks . . . The narrow spaces between the vehicles on the sidewalk prevent Plaintiff Pineda from traveling along the sidewalk. As a result, Plaintiff Pineda often must travel on the street to reach his destination, literally risking his life.[4]

After years of neglect, lawsuits have forced the city to reconsider the informal policy of relaxed enforcement for apron parking violations, and to decide exactly what should be legal and what should not.[5]

Regularizing apron parking

Because of the ADA lawsuits, city staff proposed allowing apron parking that does not extend over the sidewalk or too far into the street. Figure 2 illustrates the proposal.[6] Cars parked on the aprons could extend onto the street as far as the width of the parking lane, and cars could also parallel park on the street in front of the apron if they have a permit. Parking with part of the car extending over the sidewalk or into the street beyond the parking lane would remain illegal.
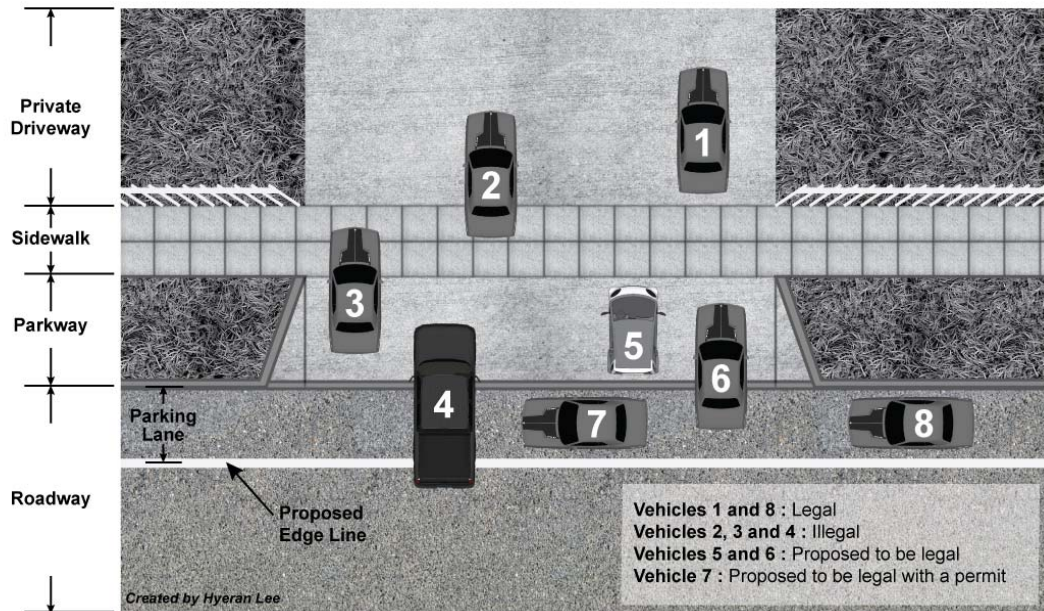
Figure 2. Proposal for legal apron parking in Los Angeles.

The easiest reform is illustrated by Vehicle 7 in the figure—parallel parking in front of one's own driveway. Some cities already sell permits that allow residents to parallel park on the street in front of their own driveway. Parallel parking on the street in front of a driveway does not accommodate as many cars as perpendicular apron parking does, but the parked cars do not extend over the sidewalk or into the street beyond the parking lane. Residents can use these block-your own-driveway permits to provide guaranteed parking for guests, home help, and service vehicles.[7]

Parallel parking in front of a driveway is illegal in Los Angeles, but enforcement officers do not issue citations in front of single-family houses unless someone complains – another example of relaxed enforcement. Parallel parking in front of an apartment building's driveway poses difficulties, however, because it can block all the residents' cars parked off-street. Nevertheless, it may work if residents cooperate by sharing keys to the parallel-parked cars that block the driveway.

Formal rules for apron parking can cure the problem of informal parking on the sidewalks only if the city enforces these rules consistently, but Los Angeles' proposed apron-parking rules would be hard to enforce. The city must first establish criteria for citing cars that extend too far over the sidewalk (from the apron or the driveway) or too far into the street. How far is too far? If apron parking is made legal for vehicles 5 and 6 in Figure 2, parking enforcement officers cannot see from their patrol cars whether

any of vehicles 2, 3, 4, 5, and 6 illegally extend over the sidewalk. In this scenario, they have to get out of their cars to examine each vehicle.

Easing the path to formality

Given the threat of ADA lawsuits over inaccessible sidewalks, all cities that informally allow illegal parking on sidewalks will need to find ways to mitigate the withdrawal pains caused by enforcing the law. Fortunately, Los Angeles has already established one program that promises to ease the path to formality: dedicating curb parking spaces for shared cars.[8]

Car sharing's greatest benefit is to divide the fixed costs of automobile ownership (including parking) among a group of potential users. Because all residents have access to the shared cars, the neighborhood becomes more attractive to everyone who does not own a car. Shared cars in the North Village could serve the approximately 5,000 residents who do not own a car, attract even more residents who do not own a car, and thereby reduce the demand for curb parking. In public meetings, however, some residents who park on the street vehemently opposed car sharing because of the loss of curb parking.

Reducing Parking Demand

Despite this opposition, the city contracted with Zipcar, a car sharing company, to place its cars on the streets. The city has dedicated seven on-street spaces in the North Village to Zipcar, and the company has obtained four more off-street spaces. The survey of on-street parking found 857 legal curb spaces in the North Village (see Table 1). While the shared cars remove seven curb spaces from the parking supply (0.8% of the total curb spaces), they probably reduce parking demand by many more spaces by reducing the demand for private cars. Several studies have estimated that each shared car replaces between 9 and 13 private cars (Osgood, 2010; Martin and Shaheen, 2011), so the 11 shared cars in the North Village may have reduced the demand for parking by between 99 and 143 spaces. The shared cars can thus reduce, rather than increase, the competition for curb parking.

Similar opposition to car sharing arose in 2010 when Hoboken, New Jersey, reserved curb spaces at corners throughout the city for 42 shared cars, so that 90 percent of the population lives within a five-minute walk of a shared car. The city estimated that each "Corner Car" would replace 17 private cars, but some residents strongly opposed the loss of curb parking:

At the beginning of the program, 42 of the city's roughly 9,000 on-street spaces were sacrificed to a city car-sharing program, known as Corner Cars, leading many residents to decry the arrival of new vehicles on their blocks, where claims to curbside space have long been regarded as sacrosanct. . . . As of July 2012, nearly a quarter of the program's roughly 3,000 members said they had given up their cars or decided against buying one because of the car share. Since 2009, the number of people with residential parking permits has decreased by about 1,000, to 16,000 total parking permits (Flegenhimer 2012).

We can use the Hoboken data to estimate how dedicating 42 curb spaces to shared cars reduced the demand for parking. If a quarter of the 3,000 car-share members shed one car, each shared car replaces 18 private cars ($750 \div 42$). And if car sharing explains the 1,000 fewer residential parking permits, each shared car reduces the demand for curb parking by 24 spaces. Allocating a few curb spaces exclusively to shared cars can thus improve parking even for residents who park their cars on the street.

Like peer-to-peer parking reservations, car sharing is another example of collaborative consumption based on sharing rather than owning resources. Because sharing a car also means sharing a parking space, it can greatly reduce the demand for parking. The internet is key to the ease of finding and reserving the shared cars, so the growing ubiquity of smartphones helps to explain the growing popularity of car sharing. The web-based formal market for car sharing may thus eventually help to resolve the problems caused by informal parking on sidewalks.

A formal parking market for curb parking

The loss of apron parking in the North Village will increase the already high demand for curb parking. Many students say the parking shortage already makes life in the North Village miserable. Residents who rely on curb parking say they have to plan their lives around finding a parking spot, and they often cruise for 20 minutes to find a curb space. Visitors also find it frustrating to hunt for a curb space when visiting the North Village.

To address these problems, Los Angeles can allow the residents of any block in North Westwood Village to adopt an Overnight Parking Permit District that prohibits overnight parking on the street except by permit-holders. Enforcement officers need to make only one visit during a night to cite all cars parked without permits. Los Angeles charges residents $15 per year (less than half a cent per day) for each permit in an Overnight Parking Permit District. Residents can also buy guest permits for $1 per night.

Rationing or Market Pricing

Given the high residential demand for on-street parking in North Westwood Village, the demand for overnight permits priced at $15 a year will greatly exceed the supply of on-street parking spaces. The city can keep the permit price low and limit the number of permits in some way, such as by a lottery. Alternatively, the city can charge a fair market price for the permits, so the number of permits demanded will equal the supply of on-street parking spaces.

Suppose Los Angeles charges the same price for a North Village parking permit that UCLA charges students for a parking permit in the nearby campus residence halls–$89 a month. If the city charges $89 a month (about $3 a day) for 857 overnight permits (equal to the number of on-street parking spaces in the North Village), the new revenue will amount to about $76,000 a month (857 x $89), or $915,000 a year. If the demand for permits priced at $89 a month is more or less than the 857 curb parking spaces, the city can nudge the price up or down. The right price for the overnight permits is the lowest price that will prevent a shortage of curb parking.

Directing Parking Revenue to Local Needs

Charging for curb parking will never be politically popular, but residents will be able to find a curb space more easily. To increase the acceptability of this market-based solution, the city could spend all the new parking revenue to improve public services in the North Village. The city could use the revenue to repair broken sidewalks, plant street trees, and fill potholes—all of which the North Village needs. These public improvements would greatly increase the livability of the North Village, and could satisfy the city's impending obligation to make the sidewalks accessible for the disabled.

The revenue from parking permits could quickly pay to repair all the sidewalks in the North Village. Because it usually costs less than $20 per square foot to replace sidewalks in Los Angeles, the parking revenue of $915,000 per year would pay to replace at least 46,000 square feet of sidewalk per year. Because the sidewalks in the North Village are five feet wide, the revenue would pay to repair at least 9,000 linear feet, or 1.7 miles, of sidewalk per year. The North Village has about five miles of sidewalks, so about three years of parking revenue would probably be enough to completely renew all the sidewalks. Replacing only the damaged parts of the sidewalks would of course cost much less and would be completed much faster.

Some may object that charging for curb parking and giving tickets to cars parked on the sidewalks would

place an unfair burden on many low-income students who live in the North Village. But if drivers can no longer park on the sidewalks and have to pay for parking on the street, fewer people with cars will want to rent apartments without parking. Rents may decline, but people without cars will then rent the apartments. That does not seem unfair to students who are too poor to own a car.

Crime Reduction

In addition to fixing sidewalks, the city could also use the new parking revenue to increase police patrols in the North Village. In 2012, this 17-block neighborhood experienced three rapes, 15 robberies, 20 aggravated assaults, 58 burglaries, and 89 larceny thefts (see Figures 3 and 4).[9] I am *not* saying that the city's failure to enforce the law against apron parking *causes* any of this crime. I *am* saying that using the revenue from charging market prices for curb parking can *reduce* some of this crime. Which policy will make North Westwood Village a better place to live: free parking, broken sidewalks, and high crime, or paid parking, good sidewalks, and a safer neighborhood?
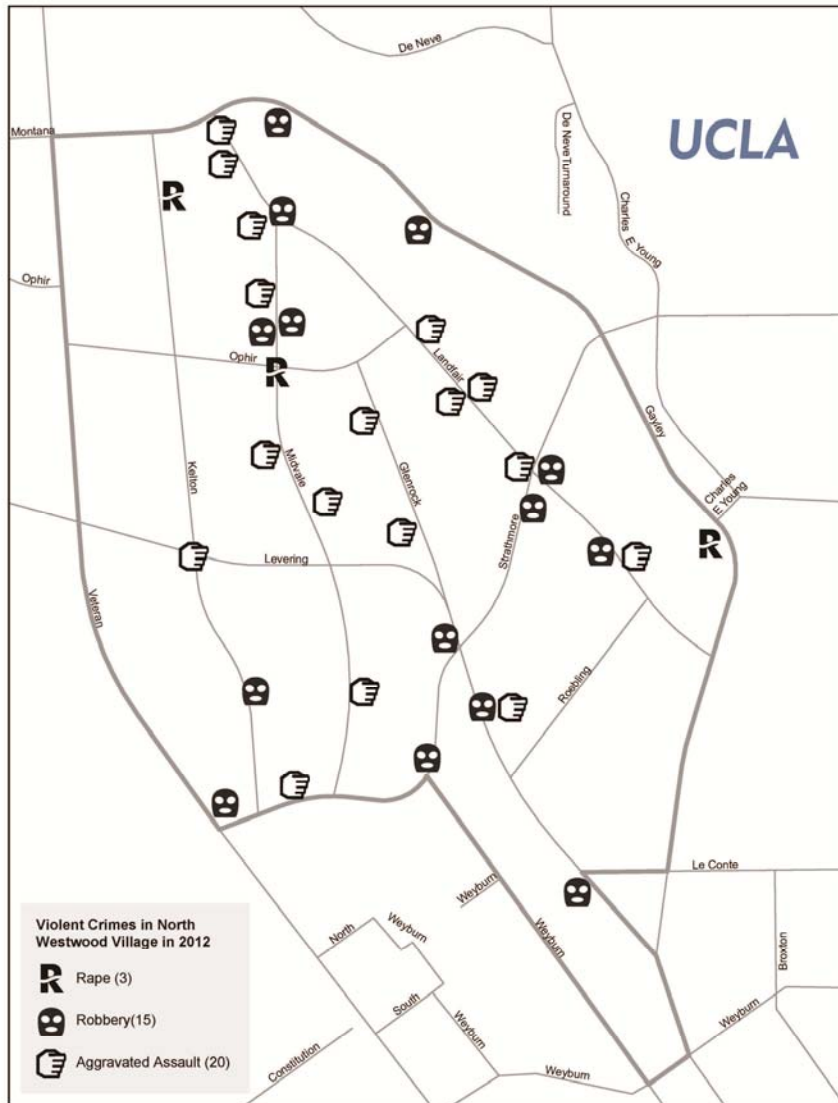
Figure 3. Violent Crimes in North Westwood Village in 2012

Even drivers who park on the street can be better off with paid parking, for at least three reasons. First, overnight parking permits will guarantee them on-street parking spaces in convenient locations. Second, their cars will be safer. In addition to the crimes listed above, four cars were stolen and six were broken into in the North Village in 2012. Third, the drivers will be safer while walking from their street parking
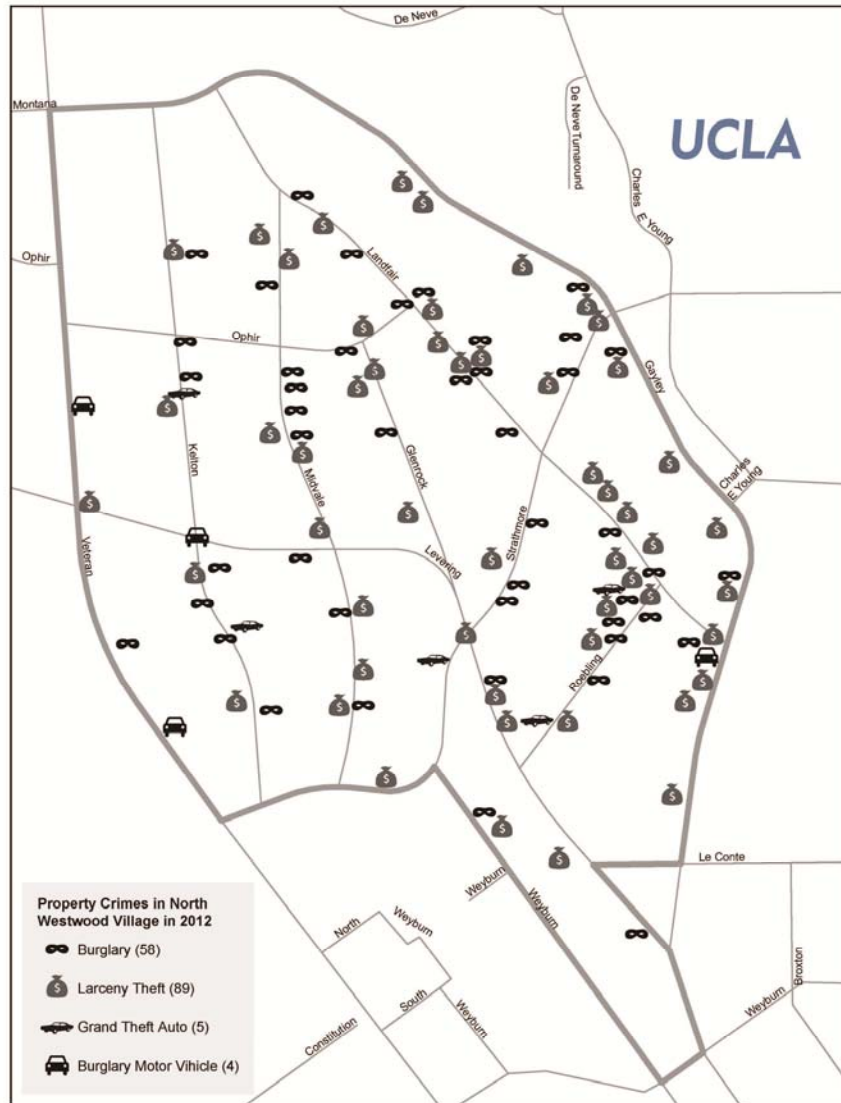
Figure 4. Property Crimes in North Westwood Village in 2012

spaces to their residences. If the choice is between free parking and high crime, or paid parking and more police protection, even the small minority of North Village residents who park on the street may prefer paid parking.

Daytime Parking

Overnight parking permits will not solve all the curb parking problems in the North Village. Commuters to UCLA, for example, may try to park free in the North Village during the day. In this case, the city can

add a daytime permit district on blocks that request it. If the residents agree, the city can also allow nonresidents to pay for parking on blocks that have daytime vacancies, and the revenue will pay for even better public services.

Dedicating parking revenue to the neighborhood that generates it has built political support for paid parking in other cities (Kolozsvari and Shoup 2003; Shoup 2011). The 857 motorists who park on the streets overnight will pay a fair market price for their permits, but they will also find it much easier to find a curb space. All the rest of the 11,000 people who live in the North Village will pay nothing, but will live in a better neighborhood.

The sound of change

A solution to the problems created by apron parking in North Village will have long-term economic and environmental benefits but also short-term political costs. As Niccolò Machiavelli wrote in *The Prince* in 1532, "There is nothing more difficult to plan or more uncertain of success or more dangerous to carry out than an attempt to introduce new institutions, because the introducer has as his enemies all those who profit from the old institutions, and has as lukewarm defenders all those who will profit from the new institutions." Or as Woodrow Wilson said almost 400 years later, "If you want to make enemies, try to change something."

Most people want sustainable cities, great public transportation, less traffic, and more walkable neighborhoods. But they also want free parking, which conflicts with all these other goals. Fortunately, few people will have to give up a car if the city enforces the law against parking on the sidewalks in the North Village. Instead, a few car owners will decide that the North Village is not the best place to hunt for an apartment, and people who cannot afford a car will take their place. During the transition, the whining will be the sound of change.

Conclusion: Turning the problem into an opportunity

Informal parking markets often respond to the failure of cities to create formal markets for on-street parking. Even on some of the most valuable land, cities offer free curb parking on a first-come-first-served basis. In dense neighborhoods, such as those surrounding UCLA, how could informal markets for this free parking not emerge?

If curb parking is free, entrepreneurs will find ways to create informal markets that serve drivers who are willing to pay for convenience. These informal markets respond to the problems caused almost entirely by free curb parking. The shortage of free curb parking is not merely a problem, however. It is also an opportunity to create a formal market with fair prices that allocate land for parking efficiently: *parking reform is land reform*. A fair, formal market for on-street parking will reduce traffic congestion, air pollution, and greenhouse gas emissions, and will generate ample public revenue.

Fair market prices could end the Hundred Years' War over free curb parking in Westwood and similar urban areas. The new parking revenue could provide a peace dividend to rebuild neglected public infrastructure. Livable, walkable cities are worth far more than free parking on the streets and sidewalks.

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Endnotes

1.   San Francisco also has an informal policy of not citing cars parked on the sidewalk if the cars leave some room for pedestrian access: http://shoup.bol.ucla.edu/ParkingOnSidewalksInSanFrancisco.pdf.

2.   The students' research is available online at: www.its.ucla.edu/shoup/NorthWestwoodVillageDatav3.pdf.

3.   Shoup (2010) explains ADA requirements for sidewalk accessibility.

4.   Pages 8–11 in the lawsuit, Pineda vs. City of Los Angeles: www.its.ucla.edu/shoup/PinedaVsCityOfLosAngeles.pdf. The second lawsuit that involves apron parking on sidewalks is Willits vs. City of Los Angeles: http://shoup.bol.ucla.edu/WillitsVsLosAngeles.pdf.

5.   When I first learned that the ADA requires accessible sidewalks, I wrote to the Los Angeles City Attorney to explain the informal parking problems in North Westwood Village, and asked him if the city would begin to enforce the law against parking on sidewalks. Perhaps naively, I expected an answer. When I received no answer, I wrote to Los Angeles City councilmembers, the Mayor, and the Deputy Mayor for Transportation (who was a former student), but never received a single reply to any of my 30 letters and email messages. This correspondence is available online at: www.its.ucla.edu/shoup/ParkingOnSidewalksInNorthWestwoodVillage.pdf..

6.   Memo from the Los Angeles Department of Transportation to the City Council, "Apron Parking/Parking in Front of Driveways," November 7, 2011: http://shoup.bol.ucla.edu/ApronParkingReform.pdf.

7.   Hermosa Beach, for example, issues permits for drivers to block their own driveways: http://shoup.bol.ucla.edu/HermosaBeachDrivewayParkingPermit.pdf.

8.   See Osgood (2010) for an explanation of how cities allocate on-street parking to shared cars.

9.   I am grateful to Jonathan Kwan in the University of California Police Department for providing these crime statistics.