
AUTO THEFT IN CENTRAL PHILADELPHIA

by

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Abstract: *Auto theft is a major concern for cities attempting to revitalize their centers. Tourists, shoppers and workers will avoid this region of the city if they think their property may be stolen. This research is an attempt to identify whether public and private facilities about which parked cars are expected to be clustered at specific times of the day provide a focus for auto thieves. Using the Spatial and Temporal Analysis of Crime computer program designed to identify spatial clusters of criminal events, auto theft in Central Philadelphia is shown to cluster about various sites at different times of the day. This information can be used to help local police focus directed patrol on these "hot" localities when they are hot.*

Motor vehicle theft constitutes a substantial proportion of criminal incidents. In 1992, it accounted for 6.9% of all index crimes and 9.3% of all index property crimes reported to the police and documented in the Uniform Crime Reports (UCR) by the Federal Bureau of Investigation (1992). This figure does not count vehicle thefts in a small but growing number of cases involving thefts at gunpoint (Freid, 1991), which are counted as robberies in the UCR. In Los Angeles, armed robberies made up 6% of vehicle thefts in 1990 (Dean, 1991).

Motor vehicle theft is a legitimate concern of the public. Be-

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tween 1958 and 1989, motor vehicle theft increased by about 400% (Clarke and Harris, 1992). The public pays both direct and indirect costs for this crime. The direct costs to victims are estimated to average \$242 after taking into account recoveries and insurance reimbursements (Harlow, 1988). The indirect costs are more difficult to estimate. They include loss of earnings if the victim misses a day of work to replace a car or appear in court, the rental of a temporary vehicle until the stolen car is replaced, and the emotional trauma of finding one's car stolen, sometimes in an unfamiliar environment. Other indirect costs include the cost of insurance, the cost of measures taken by car owners to reduce their risks of theft (such as the "club"), the cost of accidents incurred in joyriding in a stolen car, and the criminal justice costs of auto theft (Clarke and Harris, 1992). Taking many of these indirect costs into account, Field (1993) estimates that the total social cost of auto theft in the U.S. in 1985 was \$4 billion, or about \$35 per automobile in use. In 1981, Brobeck (1983) estimated the total cost of motor vehicle theft to be at least \$3.3 billion.

These costs are not distributed evenly across the population. Brill (1982) argues that the costs of vehicle theft fall disproportionately on the less-affluent motorists who live in higher-risk areas, cannot park their cars in garages, and cannot afford to purchase preventive devices or comprehensive insurance. These costs also fall disproportionately on those individuals who may not be less affluent, but who choose to live and/or work in high-risk areas. Clarke and Mayhew (1994:94) note that in Britain "there are large differences in risk, with the highest risks in inner cities, multi-racial areas, and the poorest council estates."

Rengert and Bost (1978) investigated where auto thieves who lived on the outskirts of Charlotte, NC were most likely to commit their crimes. A bimodal distribution emerged with most of the crimes occurring around offenders' homes in multi-racial low income neighborhoods and in the Central Business District of Charlotte. In other words, when the auto thieves left their own community, they most often chose the neighborhoods near the center of the city to commit a crime. Rengert (1981) discovered an identical scenario for residential burglaries in Philadelphia. Auto thieves generally go on foot or use public transportation. Otherwise, they would leave a car or bicycle in place of the car they stole. Therefore, they are unlikely to travel long distances to commit crimes and more likely to drift toward the center of a city than outlying areas (Costanzo et al., 1986). According to the Na-

tional Crime Survey (Harlow, 1988), vehicle-theft risk varies with proximity to the center city, with inner-city residents experiencing the highest risks and residents of rural areas the lowest. Clarke and Harris (1992) calculated the disparity between cities and rural areas as a ratio of 6.6 to 1 in 1989 — a ratio much higher than for all other index crimes save robbery. There is little doubt that urban areas in general, and the central parts of urban areas in particular, are the main targets of auto thieves.

The degree to which these crimes focus on the central sections of major cities has caused considerable concern among urban planners and government officials. The large investment in the physical infrastructure of this region of the city would be sacrificed if users abandoned these neighborhoods (Adams, 1988). For example, large department stores would not be economically viable if middle- and upper-income customers traveled to suburban malls to do their retail shopping. Corporate headquarters would encounter difficulty arranging business meetings if their clients perceived the central city as being a dangerous place to conduct business. Capitalizing on this perception in Philadelphia, the CIGNA insurance corporation has offered \$100,000 insurance policy to any business person to compensate them for assault, robbery, or kidnapping while not at home or on the job (Wedo, 1994).

The business and civic leaders of Philadelphia believe the city center can be revived (Liedman, 1991). They have organized and held many strategy sessions to identify solutions to their problems, foremost of which was the perception that the city center was no longer safe. Not only was perceived violent crime a problem, but so was property theft. Especially important is the trauma that occurs when one returns to one's car from a center city function and discovers that it is no longer there. Although auto theft may not be as traumatic as other property crimes (Clarke and Harris, 1992), the trauma increases if one is left stranded in an unfamiliar environment or if the car is stolen at gunpoint (Dean, 1991).

Business and civic leaders decided that the issue of crime in the center of Philadelphia must be addressed directly. First, they wanted to assess the extent of auto theft in the city center. Second, they wanted to know where in the city center these thefts were taking place. Third, they wanted to know what variation existed in the time of day the thefts were taking place. Finally, there was the issue of the interaction between time and place —

whether all places were being victimized at equal rates at various times of the day.

This is the temporal-spatial aspect of the problem. Each of these questions will be addressed in the following section of this article. We begin by identifying the theoretical reasons to expect auto theft to vary at different times and in different places in central Philadelphia.

THEORETICAL BASIS FOR AUTO THEFT

The prevalence of auto theft in our society is not surprising when one considers that its targets are widely available, they offer a variety of strong temptations to thieves, they are afforded little guardianship by their owners, and they seem comparatively easy to enter and steal (Clarke and Harris, 1992). Criminologists have formulated a variety of theories to explain these characteristics of auto theft.

Consider the fact that motor vehicles are widely available. Differential opportunity theory states that crimes will take place when a motivated offender encounters an opportunity to commit a crime. Both the motivated offenders and the crime opportunities have a spatial structure in metropolitan regions. Motivated offenders can be understood in terms of Merton's (1968) concept of anomie, in which access to legitimate avenues of success are blocked to certain portions of society, causing them to turn to crime. Considering that inner-city schools are not on the same level as suburban schools, one would expect to find more motivated offenders in inner-city neighborhoods. For example, the teacher-pupil ratio in Philadelphia public schools is nearly 40 to 1, while in most suburban schools the ratio is closer to 20 to 1. Under these circumstances, it is not surprising that the Philadelphia school system experiences a very high dropout rate relative to suburban schools. This leaves many young people with extra time on their hands, which can be used to commit crime and experience its associated thrills (Rengert and Wasilchick, 1985). Fleming et al. (1994) have identified joyriding as a major motive for auto theft.

Opportunities for auto theft are widely available. However, they may be more available in center city locations because of a relative lack of guardians in these areas. Most cars in the city center are left unattended while owners go about their business or are

asleep at night. This idea is best articulated in the routine activity approach to property crime.

The routine activity approach holds that crime will be most prevalent where three elements converge in time and space: (1) motivated offenders, (2) suitable targets, and (3) absence of capable guardians (Cohen and Felson, 1979). This approach is important because it recognizes the significance of time as well as place. An opportunity for auto theft may not exist at the location of a desirable car if the owner is in the driver's seat. However, a few minutes later, the owner may be on the twentieth floor of an office complex, making the car an excellent target of theft. On the other hand, if the car is parked in an attended lot or one equipped with surveillance cameras, it will not be a good target for theft. Both time and guardianship are important concepts in the routine activity approach to crime.

There is a final aspect to auto theft that incorporates the time dimension. This is the fact that automobiles are not stationary objects that remain at the same location at different times of the day. They are moved from place to place following a daily rhythm of leaving home in the morning, arriving at work or shopping, moving to a location for leisure activity, and finally returning home for the night. An important concept here is the location of a specific activity or facility, which attracts the car's owner to a specific location at a specific time. This is the element left out of the routine activity approach; it does not identify the factor that brings a motivated offender in contact with a suitable target in time and space.

Brantingham and Brantingham (1995) refer to these elements or activities as "crime attractors," which attract many users to a specific location for a specific time period and provide opportunities for crime. For example, the parking lot of a store may be nearly deserted before the store is open for business and after closing hours. Similarly, office buildings and tourist attractions may only be open to the public at specific hours. On the other hand, we also must consider "crime generators" (Brantingham and Brantingham, 1995). A drug treatment center may spatially cluster many motivated offenders at a specific location at specific time periods when it is open to clients. These motivated individuals may exploit any opportunity for crime located near them. In other words, a location that clusters motivated offenders at a specific location at a specific time (crime generators), and locations

that cluster opportunities for crime in time and space (crime attractors) are likely to be the "hot spots" of auto theft.

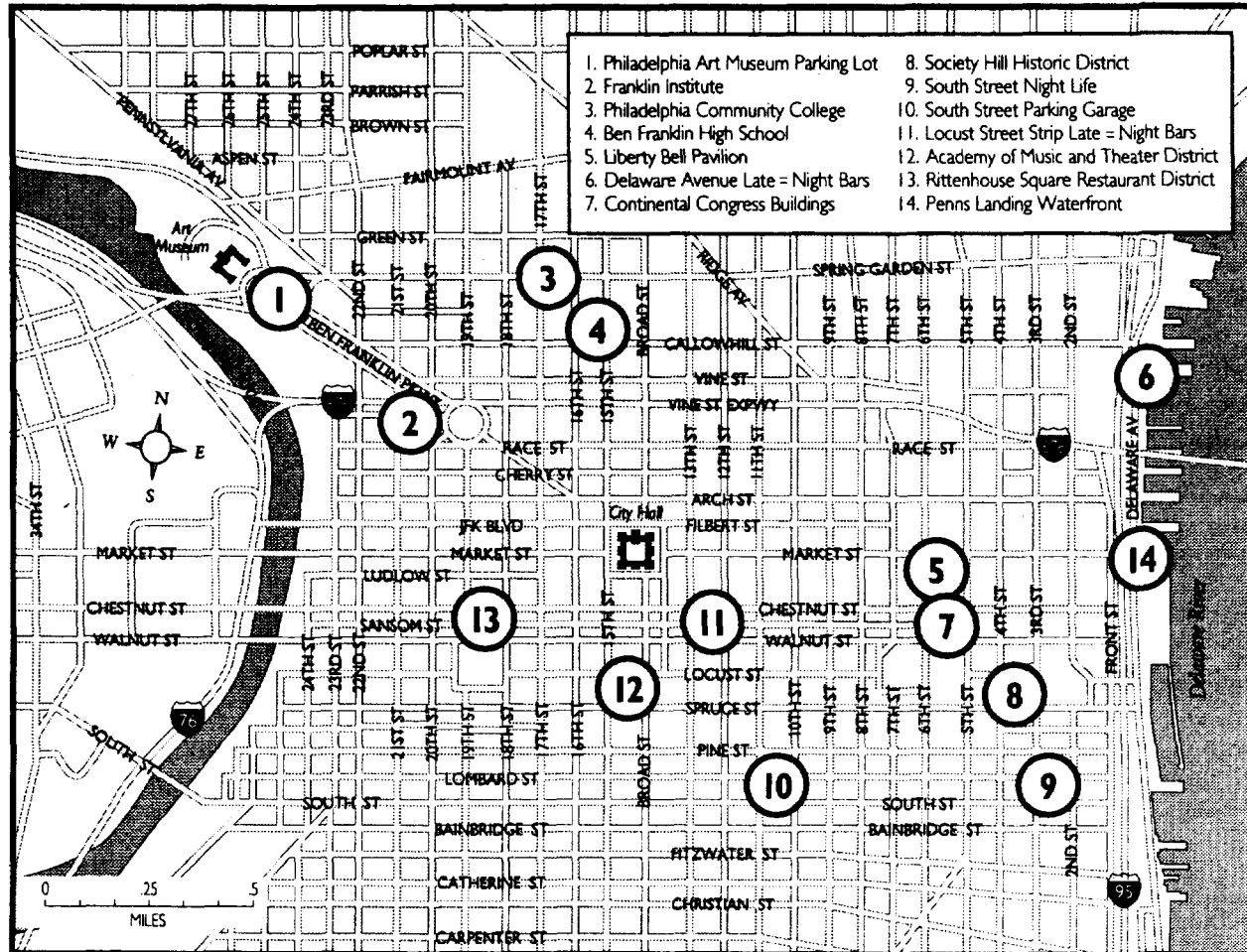
In the following analysis, we consider the spatial location of important crime generators and attractors in Philadelphia's center. We identify those times at which they are likely to attract users who leave cars available for theft, or attract motivated offenders who are likely to cluster their crimes spatially around their locations. We begin with an overview of the entire region, followed by a spatial-temporal analysis of auto theft.

ANALYSIS OF AUTO THEFT IN CENTRAL PHILADELPHIA

The central region of Philadelphia is defined as the sixth and ninth police districts, which encompass what is traditionally defined as the Central Business District of Philadelphia. This is the area between the Schuylkill and Delaware rivers on the west and east, from Popular to South streets on the north and south. This area is approximately two square miles.

Figure 1 illustrates the extent of the study area. It includes the major crime attractors that are expected to have parked cars clustered about them, and the crime generators that cluster motivated offenders in time and space. The data consist of auto thefts reported to the Philadelphia police. These data are likely to be more accurate than those of other property crimes, since insurance requirements dictate that victims report motor vehicle theft to the police in order to recover damages. Harlow (1988) estimates that at least 90% of all motor vehicle thefts are reported to the police. In the first part of 1993, 262 cars were reported stolen in this area. The National Crime Survey states that 59% of auto theft takes place at night (Harlow, 1988). These data lead us to expect that most cars in central Philadelphia also are stolen at night. On the other hand, most businesses and tourist attractions are only open in the daytime; at night only theaters, nightclubs and restaurants are open for business. This leads us to expect that considerable auto theft occurs during the day in central Philadelphia. We will examine which of these alternative scenarios holds true.

Figure 1: Anchor Points That Cluster Parked Automobiles



Our data follow closely the two crime surveys. Of the 262 cars stolen in early 1993, 50 were reported stolen between 7:00 a.m. and 3:00 p.m., 83 were reported stolen between 3:00 p.m. and 11:00 p.m., and 129 were reported stolen between 11:00 p.m. and 7:00 a.m. These times coincide with the three police tours each day. If half the 83 cars stolen between 3:00 p.m. and 11:00 p.m. were added to those stolen 11:00 p.m. and 7:00 a.m., we estimate that 170 cars were stolen at night and 92 during the day. From this estimate, we calculate that about 65% of these cars were stolen at night. Clarke and Harris (1992) postulate that the night figure is higher because most auto theft occurs outside a victim's home, and nighttime is when there is likely to be the least surveillance by owners or other guardians at these locations. That our figure is slightly higher than that of the National Crime Survey is unexpected since much of our study area is non-residential. Further clues that explain this small difference will come from our analysis of facilities that cluster auto theft in space at the different time periods.

The analysis now turns to an identification of the locations that we expect to explain spatial clustering of auto theft at different times of the day. Clarke and Harris (1992) combed the literature to identify where cars are most likely to be stolen. National Crime Survey data for the years 1973-85 (Harlow, 1988) placed the largest proportion of vehicle thefts (37%) on the street outside the victim's home. A further 19% were in non-commercial parking lots that are generally unattended, and 16% were in other street locations; only 4% occurred in garages. The British Crime Survey showed that risks of auto crime were greater in areas where more residents walked to work or took public transportation than where they drove, which might reflect the greater tendency of victims to leave their cars unattended for longer periods of the day (Hope, 1987).

Clarke and Mayhew (1994) found that parking in a domestic garage at night is safer by a factor of 20 to parking in a driveway, and safer by a factor of 50 to parking in the street near home. Most cars parked in a city center are not parked in a domestic garage. Finally, Saville and Murdie (1988) found that auto thefts were most common in "areas of easy availability," which included those with the greatest number of car dealerships, unprotected parking lots and mixed residential-industrial activity.

Figure 2: Opportunity Theory

Time	Tourist Attraction	Theater	Restaurant	Late Night Bars	College	Expensive Housing	High School	Police Tour 1: 7 am to 3 pm	Police Tour 2: 3 pm to 11 pm	Police Tour 3: 11 pm to 7 am
12 am				*		*				*
1				*		*				*
2				*		*				*
3				*		*				*
4				*		*				*
5						*				*
6						*				*
7								*		
8					*		*	*		
9	*				*		*	*		
10	*				*		*	*		
11	*				*			*		
12 pm	*				*			*		
1	*				*			*		
2	*				*			*		
3	*				*		*		*	
4					*		*		*	
5					*		*		*	
6			*		*				*	
7			*		*				*	
8		*	*		*				*	
9		*	*						*	
10		*	*						*	
11		*	*							*

The above figures describe a central city location as being a preferred area of auto theft. Notice, however, that none of the studies reviewed by Clarke and Harris (1992) identify specific facilities beyond the more general residential areas or non-commercial parking lots. In fact, Sherman et al. (1989) argue that auto theft may not cluster to the same extent as some other property crimes, such as robbery. This would be consistent with findings that many incidents involve cars parked on the street outside people's homes. On the other hand, Rengert and Bost (1978) determined that auto theft is clustered in the center of Charlotte, NC. In the following analysis, we will determine if auto theft is further clustered about specific locations at specific times in central Philadelphia.

We identify the major attractions that would cluster users and the major institutions that might cluster motivated offenders at specific times of the day. Also, the times of the day when each of the three police tours are active are identified in order to illustrate how the focus of police attention must change depending on what time of the day they are on patrol.

Figure 2 illustrates categories of these locations, and the police tours in which they are expected to have parked cars clustered about them. Notice that Police Tour 1 operates from 7:00 a.m. to 3:00 p.m. Tracing a line to the left from these times intersects periods when high schools are open and are clustering motivated offenders, and when colleges and tourist attractions are open and are likely to cluster opportunities — cars of their users are in nearby parking lots or on the street. Police Tour 2 is active between 3:00 p.m. and 11:00 p.m. Tracing a line to the left from these hours intersects the closing hours of high schools that cluster motivated offenders and of colleges, restaurants, and theaters that cluster opportunities for auto theft. These are the locations of potential concern for police officers working the second tour. The third police tour works from 11:00 p.m. to 7:00 a.m. Tracing a line to the left of these hours illustrates that police may expect auto theft to cluster in expensive housing areas with on-street parking and late-night bars.

These are the locations at which we expect to cluster opportunities and motivated offenders for auto theft in central Philadelphia. We will analyze each police tour in turn to determine whether there is empirical evidence for the expected results. We begin with Police Tour 1.

We expect auto theft during Police Tour 1 to cluster spatially around tourist attractions, high schools and colleges. In central Philadelphia, there are two major districts that are visited daily by large numbers of tourists. On the west side of the study area is a complex that attracts many visitors from the Philadelphia metropolitan area on a regular basis as well as tourists from outside the region. This complex is anchored to the north by the Philadelphia Art Museum (Figure 1, #1) and to the south by the Franklin Institute (Figure 1, #2). Within this cluster is the Museum of Natural History, the main branch of the Free Library of Philadelphia, and the Rodan Museum.

Out-of-town visitors are more likely to be attracted to a complex of tourist attractions on the east side of the study area. This is a historical district anchored to the northwest by the Liberty Bell Pavilion (Figure 1, #5), to the east by the Penns Landing waterfront on the Delaware River (Figure 1, #14), and to the south by government buildings of the Continental Congress (Figure 1, #7).

The largest high school in this region is Ben Franklin High School (Figure 1, #4); the largest college, Philadelphia Community College located on Spring Garden Street near the middle of the study area (Figure 1, #3). This is a very large college enrolling over 30,000 students, some of whom park on the surrounding streets. There are smaller medical colleges in the study region that do not enroll enough students to provide an attraction for auto thieves.

The Spatial and Temporal Analysis of Crime (STAC) program developed by the Illinois Criminal Justice Information Authority (1989) is used in this analysis. STAC identifies areas of the map which contain the densest spatial point pattern of incidents. It then utilizes the standard deviational ellipse to draw the best-fitting ellipse about these clusters of incidents. These ellipses are termed "hot spots." STAC uses a comparative procedure in that it identifies spatial clusters that are more densely patterned than other areas of the map. We wish to determine whether these spatial clusters or hot spots are focused on the locations identified earlier for each police tour.

Figure 3 illustrates six hot spots of auto theft on Police Tour 1. The first centers on Ben Franklin Parkway, which connects the tourist attractions of the Philadelphia Art Museum to the north with the Franklin Institute to the south. To the right of this cluster of auto theft is a second hot spot containing Ben Franklin High School and the parking area of the Philadelphia Community

College. This is a small, compact, circular hot spot biased toward the northwest, which is the direction most of the high-school students are coming from; most of the land to the south is slated for institutional use. To the right is a third hot spot located between the Liberty Bell Pavilion and Penns Landing tourist attractions. The remaining three hot spots are not located near the public facilities identified in Figure 2. The bottom left and bottom right seem to center on expensive housing areas. The smaller circular hot spot between these two centers is the South Street multi-level parking garage. South Street attracts many regional customers who visit the specialty shops from 7:00 a.m. to 3 p.m.

It is quite clear that the major tourist attractions of Philadelphia, plus the Philadelphia Community College, are locations that attract auto thieves between 7:00 a.m. and 3 p.m., and that the high school clusters motivated offenders. However, only 50 cars were stolen during this time interval.

We turn now to Police Tour 2, operating between 3:00 p.m. and 11:00 p.m. during which 83 cars were stolen in 1993. During this tour, we expect to find concentrations of auto theft around high schools and colleges, theaters, and restaurant districts (Figure 4). Figure 1 illustrates the locations of these public facilities in central Philadelphia. Notice that Philadelphia Community College (Figure 1, #3) is located near a large high school (Ben Franklin High School, Figure 1, #4), which is expected to cluster large numbers of motivated offenders near the opportunities of large numbers of college students parking cars on the streets. There are four major restaurant districts. The first is in the gentrifying area to the right of the Philadelphia Art Museum (Figure 1, #1). The second is in China Town between 8th and 12th streets from Arch to Vine; the third is in the historic district east of the Liberty Bell Pavilion (Figure 1, #5); and the fourth is in the eastern half of South Street (Figure 1, #9). The theater district centers on the Academy of Music on South Broad street (Figure 1, #12) in the center of the map.

Figure 4 illustrates the hot spots of auto theft during Police Tour 2. The first two hot spots have moved to the right off Ben Franklin Parkway, as expected, since the tourist attractions are closed. The upper hot spot is not explained by a public facility that might attract or generate criminals. The lower of these hot spots centers on the restaurant district in the art museum area.

To the right is a hot spot that has enlarged from Tour 1. It contains both Philadelphia Community College and a major high

school, as expected. The small hot spot to the right is not explained by a public facility; it is centered on a used car lot in a low income neighborhood. To the right, we have two small hot spots around the Independence Mall restaurant district.

At this point there is an unexpected finding. Notice that the southeast quarter of the study area does not contain a hot spot. This area contains South Street (made famous by the song lyrics "where all the hippies meet"), a major attraction for young adults who frequent the restaurants, clubs and stores that remain open in the early evening. This area is well-represented by hot spots during the other police tours. However, between 3:00 p.m. and 11:00 p.m. is when South Street is most active. The only explanation of why this is not a hot spot of auto theft during the second police tour is that there are so many young adults on the street that they act as guardians of the parked vehicles. This finding follows closely the ideas of Angel (1968) that pedestrian traffic will inhibit crime. Also, the Philadelphia police saturate this area to protect the early evening party-goers. Either of these reasons may explain why there is not a concentration of auto theft near South Street in the early evening hours.

Finally, we have a large aggregation of auto theft between Logan Circle and Rittenhouse Square. This is largely a restaurant, theater, office building and upscale housing area that is too large to be explained by a specific node or facility. It is probably dominated by on-street parking in the upscale apartment buildings of this area.

Last, Police Tour 3 auto thieves are expected to concentrate around late-night bars and expensive housing areas. Figure 5 illustrates these locations. Expensive housing is widespread; it is not a single node. The only area of low-income housing is the upper-right quarter of the study area. We do not expect a large hot spot of auto theft in that area. We do expect small elongated hot spots to configure late night "strips" of bars along infamous streets. The first of these is an upscale series of bars along Delaware Avenue in the upper-right corner of the region (Figure 1, #6). The second is known locally as the "Locust Street Strip," which is located between Locust and Market Streets (Figure 1, #11). It caters to another type of clientele, with peep shows and topless bars.

Figure 3: Auto Theft 1993 Tour 1: 1000 Ft. Radius

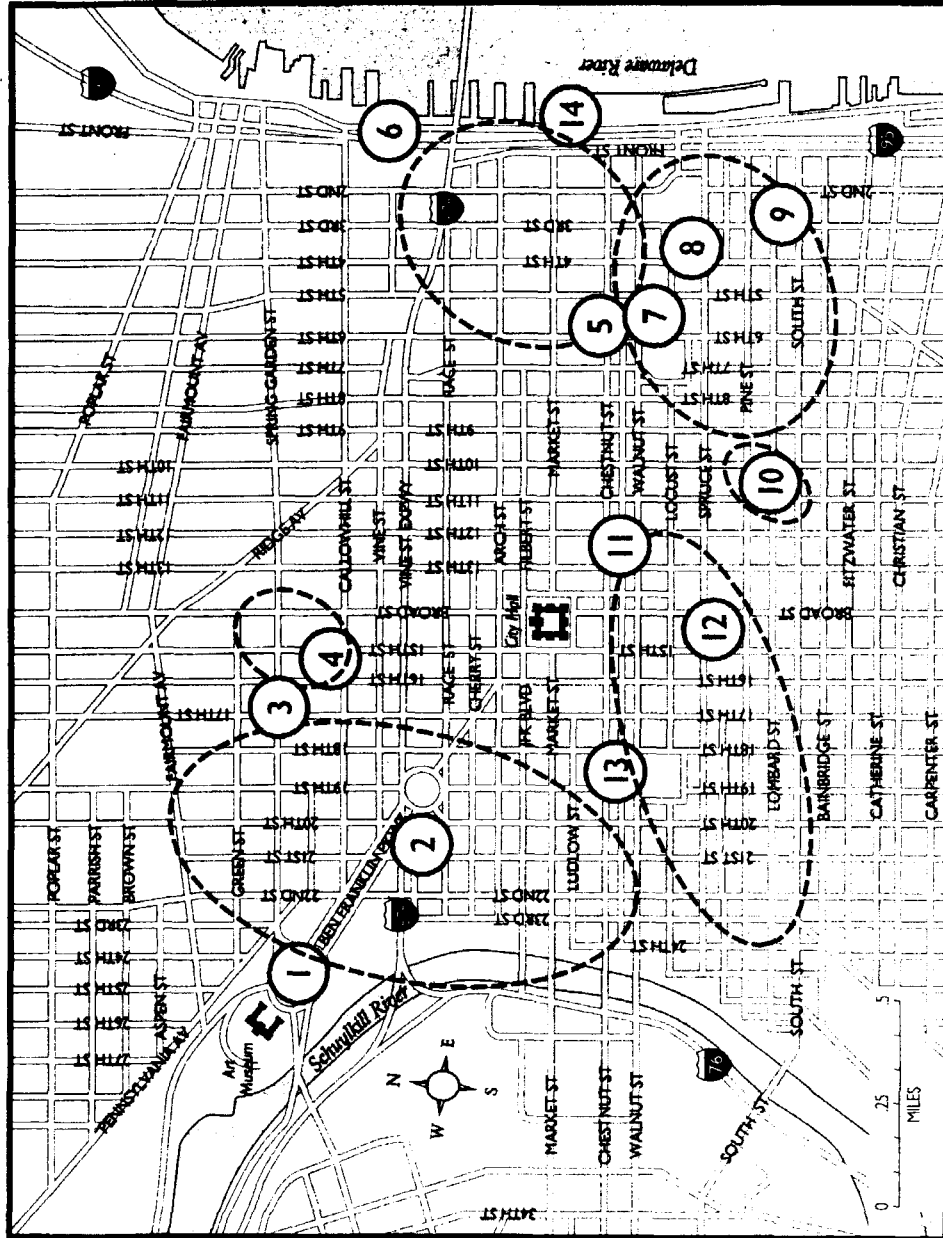


Figure 4: Auto Theft 1993 Tour 2: 1000 Ft. Radius

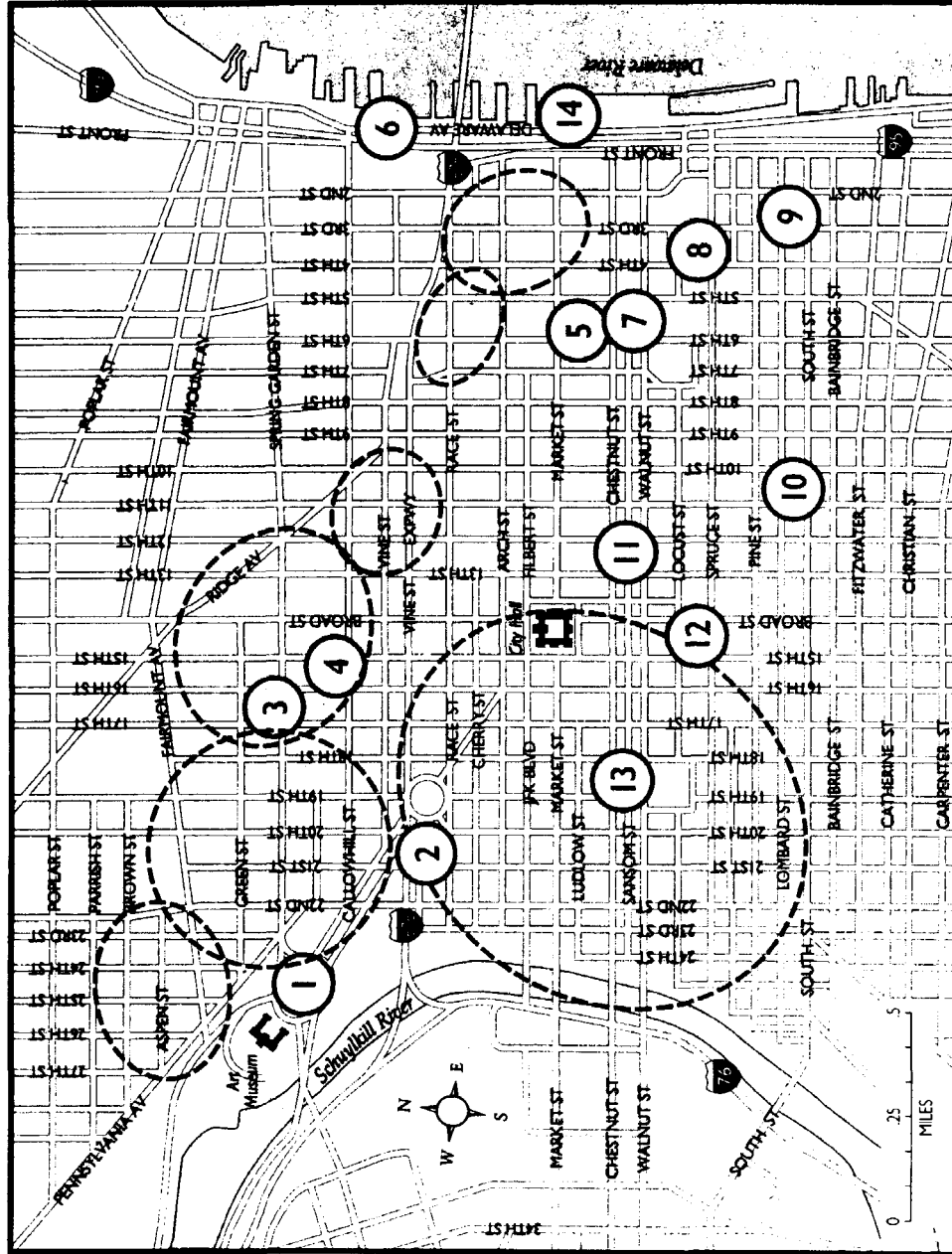
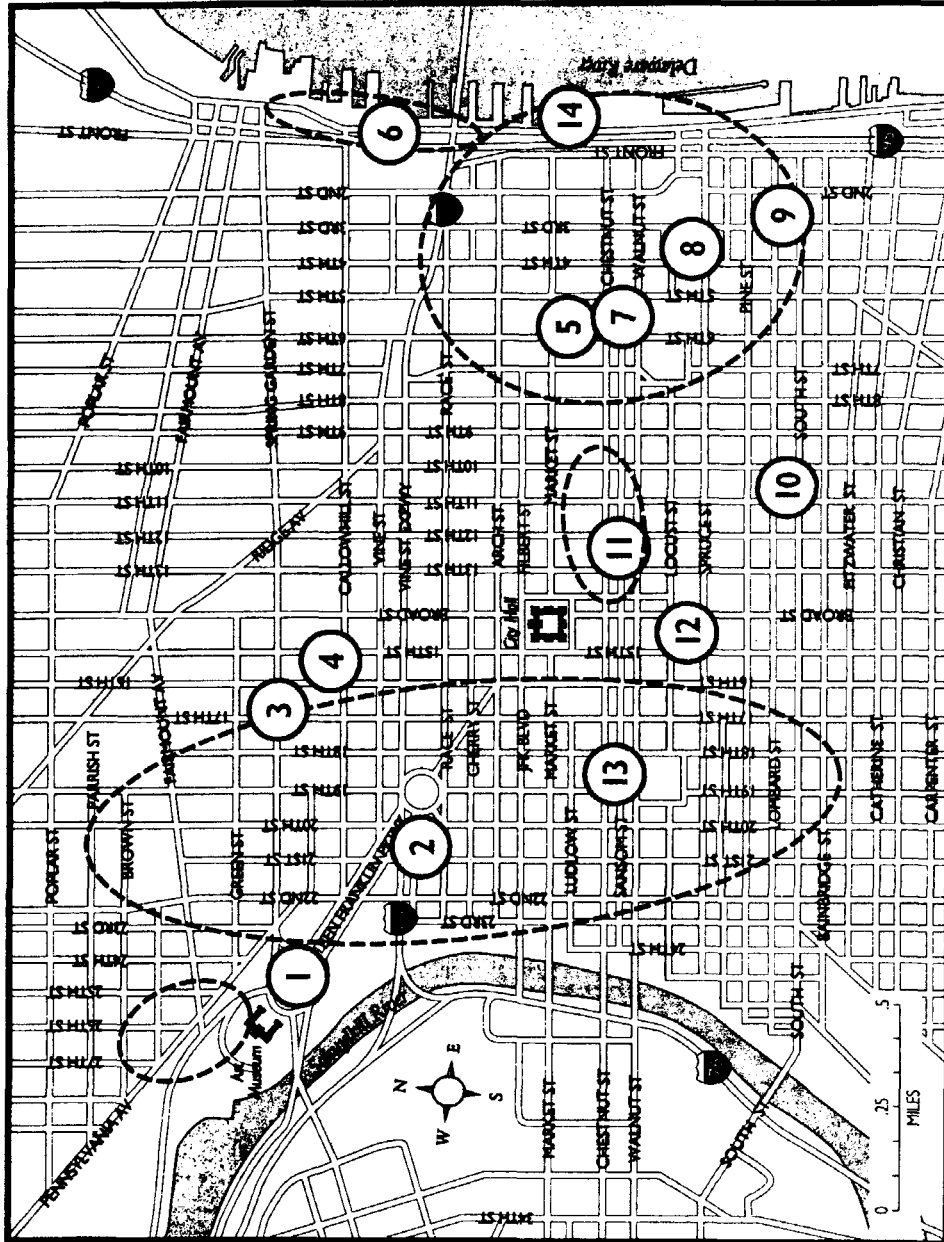


Figure 5: Auto Theft 1993 Tour 3: 1000 Ft. Radius



An examination of Figure 5 yields empirical support for our expectations. Since we have already discussed the large expansive hot spots associated with expensive housing areas, we will only note that there are no hot spots in the northeastern quarter of the region centered on low-income housing. More dramatic are the very distinct elongated hot spots centered on the "strips" of late night bars; we find both the Delaware Avenue and the Locust Street strips well-defined as hot spots of auto theft on Police Tour 3. Notice the elongated nature of these hot spots compared to the more circular nature of hot spots centered on a single node. Expensive housing areas tend to have a shape between these two extremes.

SUMMARY AND POLICY OPTIONS

Whether or not auto theft is less clustered spatially than robbery or burglary is yet to be determined. However, part of the spatial uniformity may be due to the aggregation of temporally specific attraction nodes onto a single map. Disaggregating this aggregation into specific time periods helps to identify distinct clusters of auto theft centering on public facilities that are expected to concentrate either opportunities or motivated offenders of auto theft. In the above analysis, such locations were intuitively identified for each of three police tours and objectively associated with spatial clusters (hot spots) of auto theft. The degree of spatial correspondence is remarkable.

Policy options related to police patrol are obvious. Police officers who patrol a different tour every week will also need to change their focus concerning auto theft every week. When they once should have concentrated on strips of late-night bars and expensive housing, the next week they must change their focus to tourist attractions and colleges. Most police will know this intuitively. However, patrol routes tend to become habit-forming unless special effort is made to alter them (Dyreson, 1972). The above knowledge should provide the incentive to change the spatial focus of patrol if auto theft is a concern to the police and public.

Improving the retention rate of urban high schools to reduce the number of motivated offenders and the time they can spend on auto theft should be a top priority of public officials. That nearly twice as many difficult-to-teach students are assigned to each teacher in central Philadelphia, while half as many better-

prepared suburban students are assigned to each teacher, is a recipe for crime and disorder in our city centers. Further discussion of this issue is beyond the scope of this article, but its importance cannot be emphasized enough. The fact that auto theft is spatially clustered around the major high-school in central Philadelphia at closing time should focus efforts in the schools and by the police to alleviate this specific problem.

Owners of high-performance cars who must park them on the streets of central Philadelphia should be encouraged to "layer" protective devices such as fuel cutoff switches, steering wheel locks and alarms to protect their vehicles (Clarke and Mayhew, 1994). If at all possible, they should park in a domestic garage or a guarded lot. Those who must leave their cars parked on the street at night must realize that they are extremely vulnerable to theft. Every possible precaution should be taken (including perhaps, a window sign stating there is no radio or valuables in this car). One must consider whether expensive accessories are practical for a car that must be parked in a vulnerable location on a regular basis.

In cases where the clusters of auto theft are small, such as along strips of late-night bars or colleges, increased guardianship in the form of attended parking lots or electronic surveillance may be practical. It certainly is in the best interests of the late-night clubs to provide for the security of their patrons, who may otherwise choose to patronize more secure establishments. In the ever-more competitive world of higher education, secure campuses are an important consideration for students who can choose to go anywhere. Colleges and universities must consider that the theft of an automobile has a multiplier effect as the news is spread from student to student, or, more importantly, from prospective student to prospective student.

The same is true of cities that are attempting to expand their tourist industry. Millions of dollars are spent to attract tourists and conventions to major cities. However, those who greet their out-of-town guests with a stolen car are likely to find that negative advertising travels nearly as fast as positive. Since saturation patrol may be the reason for the lack of a hot spot of auto theft along South Street during Police Tour 2, this is an option along Ben Franklin Parkway and the Historic District of Penn's Landing during the business hours of Police Tour 1. On the other hand, cities in Scotland are using closed-circuit television to improve the surveillance of wide sections of their city centers (MacGee, 1995).

Perhaps this idea will prove fruitful and expand to U.S. cities, as predicted by Gold (1970) decades ago.

South Street deserves more discussion. This area has all the ingredients for an auto theft hot spot during Police Tour 2. It attracts young adults 16 to 25 years of age to party along the street, much like the French Quarter in New Orleans. This concentration of individuals in their most crime-prone ages should provide an abundance of "motivated offenders." The other side of the coin is an abundance of opportunities for crime, since the streets are filled with parked cars every night for two or three blocks on either side of South Street.

All the ingredients for a hot spot of auto theft are present except one — the presence of guardians. As mentioned above, the police saturate this very volatile area in the early evening hours. Furthermore, the crush of people on the streets would make it difficult for an auto thief to break into a car unnoticed (Angel, 1968). It seems that the presence of guardians (Cohen and Felson, 1979) is what keeps this area relatively safe from auto thieves.



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