IMPROVING THE MANAGEMENT OF RENTAL PROPERTIES WITH DRUG PROBLEMS: A RANDOMIZED EXPERIMENT

by

John E. Eck

University of Cincinnati

and

Julie Wartell

San Diego Police Department

Abstract: *Theory and practice point to the link between place management and the likelihood of drug dealing and criminal behavior at places. Theory suggests that drug dealers select places that have weak management. In an experiment conducted in San Diego, CA, 121 rental properties that had already been the target of drug enforcement were randomly assigned to two approximately equal-size treatment groups, or to a control group that received no further police actions. One treatment group received a letter from the police describing the enforcement and offering assistance; the other met with a narcotics detective under threat of nuisance abatement. Results show more evictions of drug offenders for both treatment groups relative to the control group, but more evictions for the meeting group than the letter group. Property owners in the meeting group also had a sizeable reduction in reported crime within six months of the intervention. There is also some evidence in support of a crime reduction effect of the letters, but it is less conclusive. Implications of these findings for theory and practice are discussed.*

This paper describes a test of a crime event theory and an evaluation of a drug sales prevention tactic. The theory is that people who manage places help prevent illicit activities. The tactic is designed to

Crime Prevention Studies, volume 9 (1998), pp. 161-185

pressure landlords with drug problems on their rental property to improve their management practices. The test and evaluation is a randomized experiment, conducted with the cooperation of the San Diego (CA) Police Department, involving rental places with drug problems.

PLACE MANAGEMENT AND ROUTINE ACTIVITIES

Routine activity theory describes the conditions necessary for crime events to occur and the situations sufficient to prevent crime. Originally, the theory focused on offenders and targets (people and things) coming together in situations without guardians (those present to protect the target [Cohen and Felson, 1979]). Places were settings where offenders, targets and guardians meet — or fail to — but were not an active element in this early version of the theory (Eck, 1995a). In 1986, Felson drew from control theory (Hirschi, 1969) and added handlers to routine activity theory. Handlers are people who have an interest, typically an emotional bond, in keeping potential offenders out of trouble (Felson, 1986). Places became a key element in routine activity theory when Felson (1987) described the "metropolitan reef" and how spaces are increasingly controlled by private organizations.

Guardians may be available to protect some targets of predatory crime, and handlers can sometimes reduce the deviant behavior of the people they care about. But there are many settings where guardians and handlers are not available and where consensual crimes (not predatory) occur. Is there anyone who can control consensual crime, such as drug buying and selling, under these conditions?

Research into the structure of drug markets in San Diego, comparing drug dealing places to places without drug dealing, pointed to the role of property owners and their representatives (place managers) in controlling drug sales (Eck, 1994). Eck (1994) modified routine activity theory to include place managers. This expansion results in a theory with three necessary conditions for crime: a target, an offender, and a common place, as well as controllers — guardians, handlers, and managers — for each of these conditions.

Felson (1995) made the most recent elaboration of routine activity theory when he examined each type of crime controller and divided them into four categories: personal, assigned, diffuse and general. Though these categories apply to all three controllers, we will focus on how they apply to managers. An example of a personal manager is

a home owner or store owner. Personal managers have a high stake in the place. Many places are owned by corporations, businesses or governments, where personal managers are seldom present. Assigned managers are people hired and employed to regulate behavior and to ensure the proper functioning of the place. Store clerks, shipping and receiving personnel, janitors, factory workers and foremen, college professors, lifeguards and librarians are examples of assigned managers. Diffuse managers are people who have regular contact with the place but neither own the location nor are employed by the owner. Two examples of diffuse managers are the driver of a food delivery truck who regularly visits convenience stores and the copier service agent who regularly fixes machines in a suite of offices. Finally, general managers are people, such as customers and visitors, who come to and go from places. Picnickers are examples of general managers of a park when they enforce park rules, aid other park users and generally contribute to the functioning of the park. In this paper we will focus on personal and assigned managers of residential apartment complexes. The experiment described is a test of the importance of place management for controlling crime.

Place management has received some attention from policy makers in regard to crime and disorder problems. Efforts to control bar fights and drunk driving have sometimes involved training bartenders and bouncers (assigned managers). Such programs instruct these assigned managers on how to recognize drinkers who have consumed too much alcohol, how to cut off further drinks while minimizing disruptions and how to eject unruly patrons without starting fights (Felson et al., 1997; Homel and Clark, 1994; Homel et al., 1997; Saltz, 1987; Wagenaar and Holder, 1991). Evidence from evaluations of these programs in the U.S. and Australia suggests that they may be effective at preventing assaults and drunk driving (Eck, 1997).

The police and prosecutors have recognized the importance of personal and assigned managers for controlling drug dealing. In their attempts to eliminate drug dealing locations, they have increasingly relied on nuisance abatement statutes (Green, 1996; Davis and Lurigio, 1996) and landlord training programs. Implicit in these programs is a recognition that property owners have the power and responsibility to regulate the behavior of people using their property. Further, the absence of regulation of place user behavior makes places more susceptible to crime.

Nuisance abatement is a civil process by which a government agency, business or private citizen sues the owner of a property that is the source of a public nuisance (for example, drug dealing, prosti-

tution activity, or a public health hazard) to compel the end of the nuisance. Recently, the threat of nuisance abatement has been applied to personal and assigned managers found to have persistent drug dealing on their property. If a property owner does not cooperate with the police in getting rid of drug dealers, then the local government may go to civil court to close the property or gain ownership. This is a time-consuming process that can only be applied to a few very persistent dealing locations.

Landlord training programs are the carrot to the nuisance abatement stick. These training programs are generally directed at small-scale landlords. The programs teach rental property owners and managers how to recognize and eliminate drug dealing through property management procedures. Training programs target many more places than nuisance abatement. However, many of the trainees may not need the training because their properties may not be attractive to drug dealers. In addition, there is often no followup to assure that what was taught was put into practice.

The San Diego Police Department was interested in determining if there was an effective way of preventing and eliminating drug problems at locations susceptible to dealing — an approach that could be widely applied but would be directed at the rental properties that were the greatest problem. To this end, a small program was established that addressed rental properties where police had already conducted some form of drug enforcement. To determine if this program reduced drug dealing and crime, a randomized experiment was designed. This report describes this experiment and its results.

THE PLACES AND THEIR MANAGEMENT

Drug dealing is not randomly spread throughout neighborhoods. Some places are attractive to drug dealers while other places are repellent (Eck, 1994). This suggests that the presence of drug dealers may be a good indicator that the property and the property owner should be targeted for preventive actions to forestall future drug dealing.

From June through November 1993, all residential rental properties that were subject to some form of drug enforcement by the narcotics unit, as well as a number from other uniformed sections, were assigned to this experiment. This yielded 121 locations. Business sites, public places and locations where the drug dealer owned the property were not included in this experiment.[1] The vast majority of these 121 rental drug places (96%) were brought into this study as

the result of actions by the Narcotics Unit. One place was entered into the study because of the actions of patrol officers. Four were entered because of the actions of uniformed Neighborhood Policing Teams, special squads in each patrol division that focus on neighborhood concerns.

The enforcement action taken against the drug dealer at the property in over half the cases was a search warrant-based raid (Table 1). Three other tactics were used less frequently. Knock-and-talk actions occur when police officers go to a location, tell the inhabitants that they are police officials and ask to be allowed in to search for drugs. If the inhabitants consent to a search, then the police enter the structure and look for drugs. A buy-bust involves an undercover officer or informant making a controlled buy of drugs followed shortly by the arrest of the seller, usually by other nearby officers. Parole searches and Fourth Amendment waiver actions occur when a suspected drug dealer's condition of parole or probation requires him or her to submit to warrantless searches by officers.

Table 1: Enforcement Actions at the Places (N=121)

	percent
Search warrant	51.2
Knock and talk	16.5
Buy-bust	11.6
Parole search/4th amendment waiver	11.6
Other	3.3
Unknown	5.8
TOTAL	99.9

Drugs were found in all but three locations (97%). At 57% of these places only a single drug was found, while two or more types of drugs were found at over 40% of the places. We see in Table 2 that crack cocaine was found in over a third of the places; powder cocaine and methamphetamine in over a quarter of the places. Though marijuana and heroin are prevalent, these two drugs were more likely to be found with other drugs than alone. Marijuana was associated with methamphetamine, but not other drugs, and heroin was associated with powder cocaine, but not with other drugs.

Table 2: Drugs Found at Places (N=121)

	percent
Crack cocaine	36.4
Powder cocaine	27.3
Methamphetamine	27.3
Marijuana	30.6
Heroin	20.7
Other	2.5

Several types of data were collected for each place. Police agency records were collected describing the suspects arrested during the first enforcement action. Police records also provided information on crime and drug events at the sites for three months prior to the original enforcement, and for three months subsequent to that effort. Similar data was collected for 30 months following treatment to assess the long-term results of the experiment. A log of police interactions with the owners in the two treatment groups was maintained, and observers collected data on the environmental characteristics of each site. A telephone survey of owners conducted after the experimental period obtained information on their property management practices, characteristics and methods of handling the tenant/drug dealer who precipitated the original enforcement. Owners were identified by property records checks conducted by the police department using city records. Finally, narcotics unit detectives went to each of the sites in the study and attempted to buy drugs as a method of determining if they were still available at the location.

Environmental surveys provided data on the physical structure from which drugs were sold. A visit was made to each property in the experiment, and observations of the physical features, setting and conditions were recorded. Most of the drug places are in apartment buildings (Table 3). Of the remainder, about 20% each are in duplexes and single-family homes. Table 3 also shows that most apartment complexes (in the experiment) with drug dealing are relatively small. Over 48% had fewer than 11 apartment units; about 79% percent had 20 or fewer units. Apartment buildings with over 50 units were rare. Earlier research in San Diego showed that cocaine and heroin dealers seem to prefer smaller apartment buildings over

larger complexes (Eck, 1994), a finding consistent with those of the present study.

Table 3: Type of Structure (N=121)

		percent
Apartment buildings		56.2
Number of units	% of apartment buildings	
< 11	48.5	
11-20	30.9	
21-30	8.8	
31-40	5.9	
41-50	2.9	
> 50	2.9	
	99.9	
Duplexes		24.0
Single-family houses		19.8
TOTAL		100.0

The overwhelming majority of these properties (94.9% of 119) were owned by individuals or partnerships (Table 4). Only six properties were owned by corporations or other entities (usually banks); managers of these latter properties are assigned. Because 95% of the managers in this study are personal, we will use the term "manager" to refer to personal managers.

Table 4: Type of Ownership (N=119)

	Percent of owners
Individual	73.9
Partnership	21.0
Corporation	2.5
Other	2.5
TOTAL	99.9

Few of the structures were under 10 years old, though many owners had acquired the property recently (Table 5).

Table 5: Age of Structures and Years Owned

	Percent of Owners	
	Age of Structure (N=115)	Years Owned (N=118)
1 - 5 years	4.3	44.1
6 - 10 years	8.7	23.7
11 - 20 years	11.3	22.0
21 - 30 years	19.1	5.9
30 years	56.5	4.2
TOTAL	99.9	99.9

On average, these properties increased in value from the time of purchase to the interview. The mean purchase price of the structures was $367,712, and owners' estimated current valuation had a mean of $390,114. The mean change in the value of the properties was an increase of $14,618. This change is relatively modest when one considers that the mean change as a percent of purchase price was 7%. Further, almost 57% of the properties (for which this information was provided, n=76) either had not changed or had dropped in value. Almost 83% of the owners had some outstanding debt on the property.[2]

These owners stated that they could afford to spend relatively little on their properties (Table 6). Almost 40% of those who answered this question claimed they could spend nothing to improve their property. Another 23% claimed to be able to afford less than $1,000, while less than 10% of the owners could afford to spend over $5,000.

The reason for this becomes apparent when one considers that 51% (56) of the 110 owners answering the question stated that the rent either just covers costs or that the costs exceed the rental income. Of these 56 owners, 89.3% (50) said that costs were greater than the rent. Further, when asked how important it was for them to have all of the units rented all 12 months of the year (Table 7), 72% indicated that it was "very" or "extremely" important.

The financial constraints owners face may have some influence on their management practices. Slightly over half of the owners said they did not have a property manager (52.1% of 117). Of those with a manager, 58.9% said that the property manager was not located on the property. This implies that 80.3% (of 117) of the properties did not have someone permanently located at the place.

Table 6: Maximum Amount Owner Could Spend To Improve the Property (N=103)

Maximum Dollars	Percent of Owners
$0	37.9
$1 - $1000	23.3
$10001 - $5000	29.1
> $5000	9.7
TOTAL	100.0

Table 7: Importance of Renting All Units All 12 Months to Meet Financial Objectives (N=108)

	Percent of Owners
Not at all	0.0
Not very	5.6
Somewhat	21.3
Very	50.0
Extremely	23.1
TOTAL	100.0

Since property owners and their managers did not live near the property, owners had to make visits to monitor the behavior of tenants. About 45% of the owners visited their properties every week or more (Table 8); a third, monthly; almost a quarter, less frequently than monthly; and a very few, never.

Background checks can help landlords determine whether an applicant for a rental unit will pay his or her rent and maintain the property. Owners were asked whether they checked on the background of the person leasing the unit where the police believed drugs were being sold. Credit and reference checks were the most frequently conducted (see Table 9), followed by employment checks. No local criminal conviction checks were conducted, and in over a quarter of the cases no background check was conducted at all.

Table 8: Frequency of Visits to Property by Owner (N=116)

	Percent of Owners
Weekly or more	44.8
Monthly	31.9
Every other month	11.2
Biannually	6.9
Yearly	3.4
Never	1.7
TOTAL	99.9

Table 9: Background Checks Conducted by Owners

	Respondents Giving Answers (n)	Percent of Respondents
Credit check	110	38.2
Reference check	112	41.1
Bank check	110	1.8
Employment check	110	29.1
Criminal conviction check	110	0.0
No check	110	26.4

THE EXPERIMENT

Randomization was accomplished as follows. Drug enforcement actions by the Narcotics Unit and other sections of the San Diego Police Department were reported to the Crime Analysis Unit daily. The research assistant for the project (Wartell), based in the Crime Analysis Unit, conducted an initial screening to determine if the enforcement had taken place at a residential rental location. If the place met this criteria, it was assigned a control number. The control number and address were faxed to the principle investigator (Eck) in Washington, DC. A computer-generated random number was drawn to determine the treatment assignment and a coded assignment number was faxed back to San Diego. Assignments were confirmed by telephone on the same date.

At a third of the places, following the initial enforcement action, nothing further was done by the police. These places constituted the control group against which places in the two treatment groups were compared. There were 42 places in the control group. By comparing outcomes at these places to outcomes of places in the two treatment groups, the experiment could show whether police follow-up contacts with place managers were superior to drug enforcement alone.

A special unit of the police department, the Drug Abatement Response Team (DART), sent a letter to owners of another third of the places. The letter informed them of the drug activity, and explained that the police would assist them if they needed help to get rid of drug dealers. The letter also warned the owner that under California law, if repeated drug dealing was found the City of San Diego could take the owner to court. If this occurred, the property could be closed for up to one year and the owner fined up to $25,000. The letter was designed to be an inexpensive, informative reminder to property owners. Once the letter was sent, the special unit made no further follow-up with the rental property or its owner, unless the owner requested assistance. The letter group contained 42 places.

DART sent owners of the last third of the places a letter emphasizing the legal action the city could take if the drug problem was not addressed. The letter also stated that the owner should contact DART, or a DART detective would contact the landlord and schedule an interview at the property. The detective then called and scheduled a meeting with the landlord (or a representative) and a member of the city's Code Compliance Department. At the meeting, the detective, code officer and owner inspected the property and began developing a plan for preventing future drug dealing. The detective then worked with the property owner to assure that the changes were made. Thirty-seven places were randomly assigned to the meeting group.

The DART Unit recorded the actions it took on each case on activity logs developed for the project. The DART detective and supervisor wrote short narrative descriptions of activities, by date, for each case they worked on. These were collected by the on-site research assistant. These activity descriptions were then grouped into categories of similar activities. When there were ambiguities in the recorded activities, the on-site research assistant interviewed the detective to clarify the log contents. These logs include actions initiated by DART (e.g., calling owners and making recommendations) and actions initiated by owners (e.g., calling DART or the owner's attorney sending a letter to DART). Table 10 shows the proportion of places in each group that received at least one action or no action. As planned, none

of the places in the control group and all of the places in the meeting group received at least one action. The letter group was almost evenly split between action and no action. Though it is possible that some actions were taken that were not recorded, monitoring of cases by the on-site research assistant suggest that this was unlikely.

Table 10: DART Action by Treatment Group

	Percent of Places in Group		
	Control (42)	**Letter (42)**	**Meeting (37)**
Action	0.0	52.4	100.0
No action	100.0	47.6	0.0
TOTAL	100.0	100.0	100.0
DART meetings with owners/managers		**Letter (22)**	**Meeting (37)**
Unable to inspect property		4.5	5.4
Meeting held with owner or manager		4.5	91.9
Includes building inspector		0.0	81.1

At meeting treatment sites, DART was to meet with property owners or managers; gaining the cooperation of owners and managers for such meetings was relatively easy. DART was unable to arrange a property inspection for only two sites. The bottom panel of Table 10 shows that in over 80% of the meeting places, the DART representative met with the owner or manager and that a representative of the Code Compliance Department was also present. At only one of the letter places did the DART detective meet with the owner or manager, and the code compliance representative never met with the owner or manager.

DART unit activity logs recorded the actions of place managers. We see in Table 11 that place managers in the meeting group expressed greater willingness, as well as greater hesitation, to evict than managers in the letter group. The letter-group managers may have been more ambivalent about evictions than the managers in the meeting group, who faced more intrusive intervention by the police. Offenders were more likely to have left meeting-group places than letter places, according to DART logs. Finally, DART was more likely to recommend management changes to meeting group managers. DART logs show that meeting-group managers were slightly more likely to renovate their property and make recommended manage-

merit changes. The DART logs noted whether the codes inspector found health and safety code violations; the inspector never reported such infractions.

Table 11: Evictions and Property Improvements

	Percent of Places in Group	
	Letter (22)	**Meeting (37)**
Owner/manager willing to evict	36.4 (8)	56.8 (21)
Owner/manager hesitant to evict	4.5 (1)	13.5 (5)
Drug offenders have left	27.3 (6)	43.2 (16)
DART recommends management changes	22.7 (5)	51.4 (19)
Owner renovation rental property	0.0 (0)	10.8 (4)
Changes in property management	0.0 (0)	10.8 (4)

Place manager interviews provide another perspective on evictions. Table 12, which compares all three treatment groups, demonstrates that the more intrusive the police intervention the greater the chances that the drug offender was evicted. Though the chi-square statistic is not significant at the .10 level, the correlation between treatment and eviction is significant.

In summary, it appears that compliance with the treatment conditions was high. None of the control-group places had any contact with DART. Though half of the letter group had a phone contact with DART, only one of these cases had a meeting. Finally, all but one of the meeting places had a face-to-face meeting. All but two of the meeting places were inspected by DART, and over 80% of the meeting places were inspected by a representative of the Code Compliance Department. Given this high level of compliance, we will examine the effects of the three groups as they were assigned — control, letter, or meeting — by the experimental design, rather than the way they were implemented.

These treatments appear to have led to some changes in management practices, particularly the evictions of drug offenders. However, the relationship between treatment and managerial changes are moderate at best, and in some cases, weak. Did these changes reduce crime? In the next section we will try to answer this question.

Table 12: Was the Offender Evicted?

	Percent of Places in Group		
	Nothing	Letter	Meeting
No	63.3 (19)	55.2 (16)	34.8 (8)
Yes	36.7 (11)	44.8 (13)	65.2 (15)
TOTAL	100.0 (30)	100.0 (29)	100.0 (23)

	Value	df	T-value	Significance
Chi-square	4.38944	2		.11139
Spearman Correlation	.22154		2.03203	.04547

FINDINGS

The San Diego Police Department's Crime Analysis Unit provided the number of reported crime incidents for each site in the experiment for a 30-month period following treatment. These data, aggregated into five six-month intervals, allow us to describe the long-term effects of the treatments and to determine if effects wear off or remain constant over time. The number of reported crimes at a single place, even a place with multiple residents, is small. To detect a significant reduction in crime it was necessary to aggregate across all felonies reported to have occurred at experimental places.

Table 13 shows the mean number of reported crimes for the places in the three groups, for each of the five six-month periods following treatment. In all five periods, the letter and meeting groups had fewer crimes than the control group. In the first, second and fourth periods, the meeting group had fewer reported crimes than the letter group. Over the entire 30-month post-treatment period, the places in the control group had an average of two more crimes than the meeting group, and one and two-thirds more crimes than the letter group. Note that the control group means drop from period one to period two, and then fluctuate over subsequent periods. Crime in the letter and meeting groups are relatively constant over the five periods insofar as they do not show dramatic period-to-period shifts.

These results suggest that the letter and meeting treatments reduced crime at places relative to the control group. But before we reach this conclusion we should examine the significance tests. This experiment was designed to detect differences at a p value of .10 or less.[3] In other words, if a p value is greater than .10 we will not reject the hypothesis that the findings are due to chance. This will not

mean that there is no treatment effect, but that we cannot be confident that the treatments caused the observed results. Further, it implies that even if the treatments caused the observed differences between the control and treatment groups, the substantive effect is small.

Table 13: Mean Number Reported Crimes, by Group and Period (Standard Deviation)

6-Mo. Period	Control (N=42)	Letter (N=42)	Meeting (N=37)
1	1.52 (2.27)	0.74 (1.36)	0.62 (0.89)
2	0.83 (1.41)	0.79 (1.63)	0.76 (1.23)
3	1.02 (1.69)	0.50 (0.80)	0.59 (1.19)
4	0.76 (1.56)	0.76 (1.03)	0.41 (0.76)
5	0.90 (1.39)	0.52 (0.94)	0.65 (1.34)
All	5.05 (6.30)	3.31 (4.18)	3.03 (3.93)

Additionally, we need to account for pre-treatment differences in crime among the places in the three groups. To account for the pre-treatment crime levels, multiple regression models were estimated using the reported crime after treatment as the dependent variables and the reported crime for the three months prior to treatment as independent control variables. Treatment variables were included as dichotomous independent policy variables (0 when absent and 1 when present). The regression models' constants reflect the control group crime levels, adjusting for the number of crimes in the pre-treatment period. The coefficients for the letter and meeting variables show the reduction in crime due to the treatment (again, holding pre-treatment crime constant), relative to the control group. That is, a negative coefficient indicates that the average treatment place has fewer crimes than the average control place. The coefficients for the pre-crime variables reflect the possibility that some places are more crime-prone than others, regardless of the treatment they receive.

Six regression models were estimated, one for each six-month period and one for the entire 30-month period. All of the regression models were significant. The results of these models are shown in the Appendix. Over the entire 30-month period, 40% of the variation in post-treatment reported crime is explained by the treatments and the number of crimes in the three-month pre-treatment period.

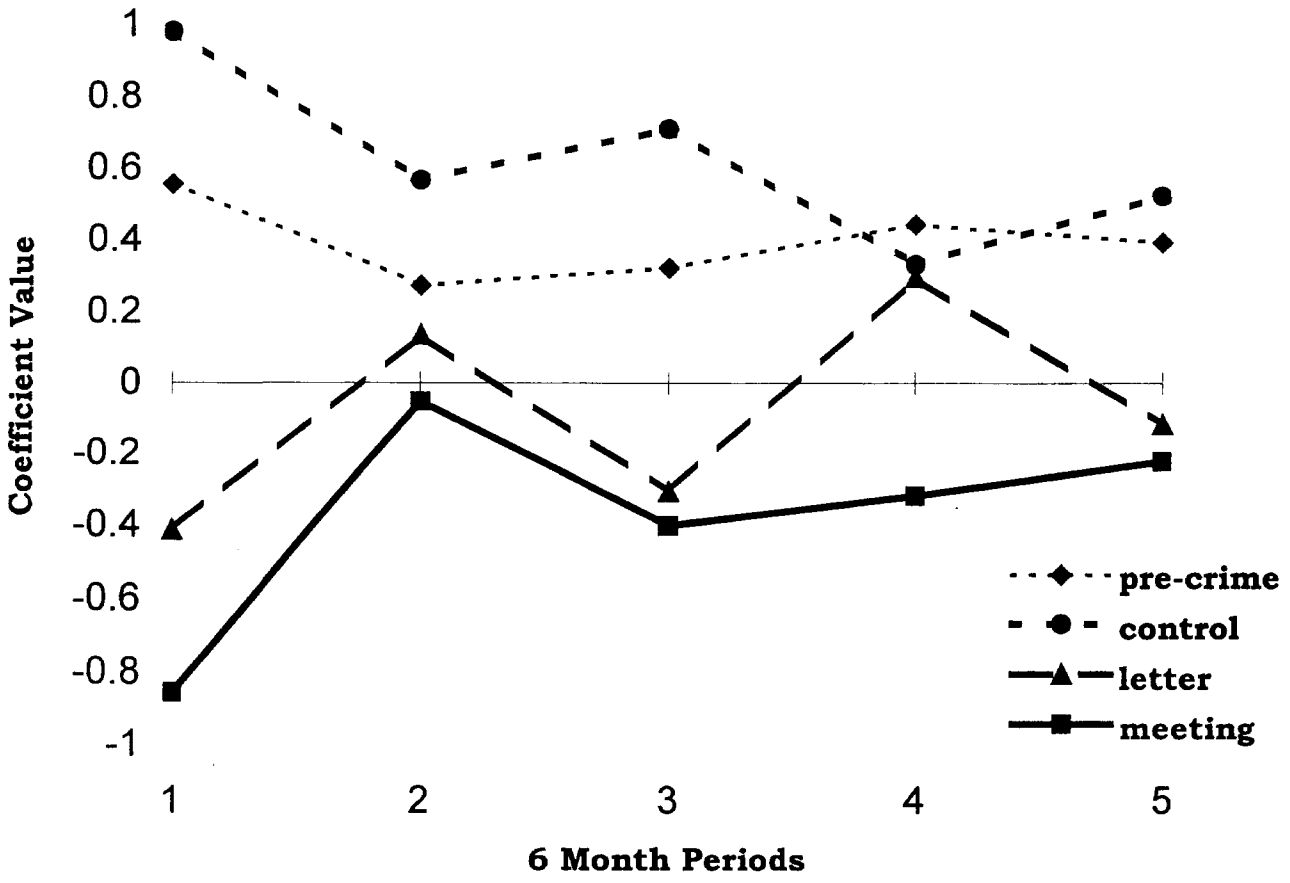
Figure 1 summarizes the results for the five six-month period models. It shows how the values of the coefficients for the independent variables fluctuate over the six-month periods. Pre-treatment crime is a significant positive predictor of post-treatment crime in all five periods and for the entire 30-month period, when the treatment is controlled for. These results suggest that there are systematic differences among places that make some properties more susceptible to crime, relative to other places. These differences appear to be stable over time, as the coefficient hovers around 0.4 over the five periods. That is, for every crime occurring at a place during the three months prior to treatment there is, on average, four-tenths of a crime taking place in every six-month period following treatment, or about two crimes in the entire 30-month post-treatment period (see also the estimates for the 30-month model shown in the Appendix).

The control group places, on average, had almost one crime in period 1, when prior crime reports are controlled. Control group crimes dropped in subsequent periods. On average, there were more than three crimes per control group place during the 30-month period, controlling for pre-treatment crimes. The estimates for the control group were significant for all periods.

The letter treatment coefficients are negative for three of the five periods and the entire 30-month period. Despite the fact that during periods 2 and 4 letter places had more crimes than control places, over the entire 30-month period letter places had fewer crimes, taking into account the number of crimes in the pre-treatment period. Over the entire 30-month post-treatment period, the average letter place had .41 fewer crimes than the average control group place. In no period was the coefficient for letter group places significant. Thus, we cannot rule out the possibility that the fewer crimes at the letter places are due to chance.

The meeting treatment coefficients are negative in all six models, indicating that meeting places had less crime in all periods (and over all 30 months) than the control places, once pre-treatment crimes are accounted for. The biggest decline occurs in the first six-month period when the average meeting place had almost .86 fewer crimes than meeting places. Over the entire 30-month follow-up period, the average meeting group place had 1.85 fewer crimes than the average control group place, after pre-treatment crimes are accounted for. In the first period and for all 30 months, these results are significant. We can, therefore, reject the hypothesis that chance created the differences between the control and meeting groups.

Figure 1: Summary of Regression Results



The crime control effects of the meetings are substantial. The percent reduction in crime,[4] relative to the control group places and taking into account the pre-treatment crime levels, is shown in Figure 2. With pre-treatment crime accounted for, the control group places have about three crimes per place over the entire period. The meeting group places have more than one and a quarter crimes per place over the same period, once pre-treatment crimes are accounted for. This means that there is a 60% reduction in crime in the meeting places relative to the control places over the entire 30-month period.

About 46% of the crime prevention due to meetings occurred in the first six-months following treatment when there were almost 87% fewer crimes at meeting places than at control places. The remaining 64% of the prevention effects of meetings trickled in over the next 24 months. Hence, there is good evidence that the meetings had an effect throughout the 30-month period.

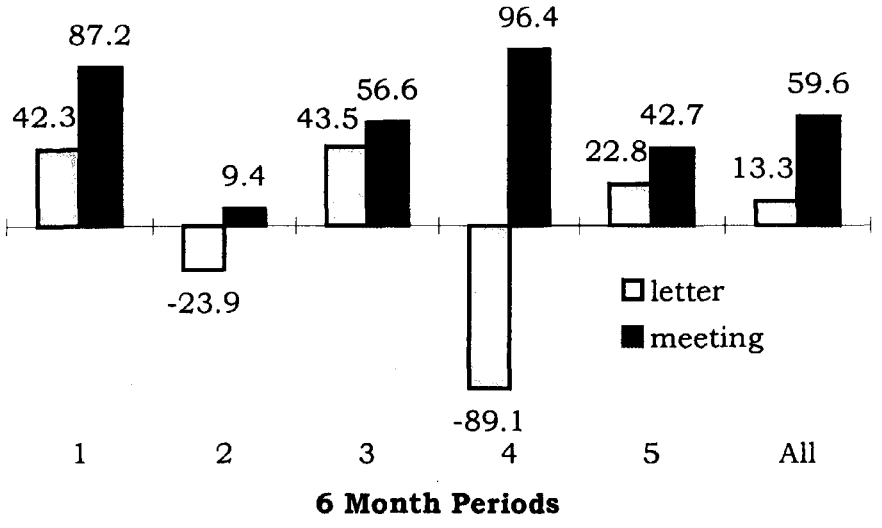
The absence of significant effects during periods 2 through 5 is probably because the effects of meetings deteriorate over time, and the frequency of crime is low. Where the treatment effects were stronger (as measured by coefficient size in period 1 and the entire 30-month period), and where the base rate of crime was higher (the entire 30-month period), we found significant results. In other words, it is likely that similarly designed experiments, with more places in each of the treatment groups, would detect significant reported crime reduction effects for meetings in periods 2 through 5.[5]

We cannot be as certain of the effectiveness of the letter treatment. Still, during period 1 letters may have reduced crime by about 42% and over the entire 30-month period by over 13%. During periods 2 and 4, the letter group places had more crime than the control group places, once pre-treatment crime is accounted for. Letters might have a crime reduction effect but these effects are likely to be weaker than the meeting effects.

IMPLICATIONS

This paper has explored the role of place managers in controlling drug dealing on rental properties, and the consequences of their behavior for crime at these places. We have seen that in San Diego, these managers were not in strong financial positions and were unable or unwilling to regulate the behavior of some of their tenants. The majority of the apartment complexes had less than 20 units. Though most of these places were old, many had been purchased in

Figure 2: Percent Reduction in Crime Relative To Control Places



the last 10 years. These observations are consistent with Eck's (1994; 1995b) theory of the geography of retail drug dealing: poor financial positions reduce place management and reduced place management in turn increases the chances of drug dealing on properties. One of the implications of this theory is that improvements in the management of rental places could reduce drug dealing. By curtailing dealing, crime at the location could be reduced. The experiment described in this paper simultaneously tests this theory as well as policies to improve place management.

The experimental findings provide strong support for the policy of having police and code enforcement officials meet with property owners following drug enforcement. These meetings appear to result in large reductions in crime. There is weaker evidence that letters, alone, to property owners may have some effect on crime. We cannot be very certain of this effect, however.

Though we do not have cost figures for either of these treatments, they are not particularly expensive. The DART unit had a single detective conduct the follow-up meetings, and only one city code en-

forcement officer was involved; letters are even cheaper. When one considers the costs of a drug raid (and the risks to officers, suspects and uninvolved citizens), the marginal costs of either of these follow-up tactics are minimal. Meetings appear to be a cost-effective method of reducing crime, and despite weaker evidence on effectiveness, letters are so inexpensive that they may very well be worth using as well. Though place managers for rental properties with drug problems may have fewer financial resources than rental place managers without drug problems, following drug enforcement it may not take much more effort on the part of the police or major changes on the part of managers to create substantial reductions in crime.

The findings from this experiment are consistent with recent experimental (Mazerolle et al., in this volume) and quasi-experimental evaluations (Green, 1995) conducted in Oakland, CA, and with quasi-experiments in St. Louis, MO (Hope, 1994). All of these evaluations had moderately strong to very strong designs (Eck, 1997), so we can be fairly confident of the results. One evaluation found little evidence that residents' perceptions of drug dealing or personal safety were changed by nuisance abatement, though observations of ten sites indicated that eight of them showed declines in drug dealing (Lurigio et al., 1993; Lurigio et al., this volume). This study employed a particularly weak evaluation design, so we can be much less confident of its results than we can of the results of the other evaluations (Eck, 1997). However, there are other possible explanations for the differences in findings among these studies including state laws, administrative procedures and rental markets.

The collective findings of this experiment and others provide considerable evidence that place management is causally related to crime and drug dealing. This chapter and earlier research (Eck, 1994; Eck and Wartell, 1997) showed how financial considerations influence management, and how economic investment, zoning and land use policies influence the financial viability of properties.

Criminology needs to pay closer attention to the economics of property ownership and the management of places. These concepts may help shed light on the growth of physical and social incivilities in deteriorating communities (Skogan, 1990). Sloan-Howitt and Kelling (1990) illustrate this point in their description of the effects of improved place management on graffiti in the New York City subway system. The economics of place management is also plausible as a rival hypothesis to common theories of community crime patterns. Crime concentration in urban communities may be partially due to economic disinvestment, leading to weak place management and in-

creased crime and disorder, rather than the breakdown in social controls among individuals and families within communities (Shaw and McKay, 1969; Bursik and Grasmick, 1993). Or it is possible that the erosion of place management is part of a larger process that simultaneously undermines guardianship and handling. Clearly, place management is a concept that has substantial implications for crime theory and crime prevention practice.

Address correspondence to: John E. Eck, Division of Criminal Justice, University of Cincinnati, P.O. Box 210389, Cincinnati, OH 45221-0389. E-mail: <JOHN.ECK@UC.EDU>.

Acknowledgments: This research was supported by grant no. 90-IJ-CX-K006 from the U.S. National Institute of Justice to the San Diego Police Department. Points of view are those of the authors and do not necessarily represent the official position of the San Diego Police Department or the National Institute of Justice.

The authors thank Chief Jerry Sanders of the San Diego Police Department for his support of this experiment. We also thank Kimberly Glenn and Patrick Drummy of the Crime Analysis Unit for providing a home for this, research, and Lieutenant Guy Swanger and Detective Kathy Healey for their support and hard work. Craig Uchida and Richard Titus have been gracious National Institute of Justice project monitors throughout this endeavor. Finally, we thank Lorraine Mazerolle and Jan Roehl, and two anonymous reviewers, for their comments and suggestions. Though we had many people helping us, all mistakes and misinterpretations in this paper are ours.

REFERENCES

Bursik, R.J. Jr. and H.G. Grasmick (1993). *Neighborhoods and Crime: The Dimensions of Effective Community Control.* New York, NY: Lexington Books.

Cohen, L.E. and M. Felson (1979). "Social Change and Crime Rate Trends: A Routine Activity Approach." *American Sociological Review* 44:588-605.

Davis, R.C. and A.J. Lurigio (1996). *Fighting Back: Neighborhood Anti-drug Strategies*. Thousand Oaks, CA: Sage.

Eck, J.E. (1994). "Drug Markets and Drug Places: A Case-Control Study of the Spatial Structure of Illicit Drug Dealing." Unpublished dissertation, University of Maryland, College Park.

———(1995a). "Examining Routine Activity Theory: A Review of Two Books." *Justice Quarterly* 12:783-797.

———(1995b). "A General Model of the Geography of Illicit Retail Marketplaces." In: J.E. Eck and D. Weisburd (eds.), *Crime and Place*. Crime Prevention Studies, vol. 4. Monsey, NY: Criminal Justice Press, pp. 67-94.

———(1997). "Preventing Crime at Places." In: L. Sherman, D. Gottfredson, D. McKenzie, J. Eck, P. Reuter, and S. Bushway (eds.), *Preventing Crime: What Works, What Doesn't, What's Promising: A Report to the United States Congress*. Washington, DC: U.S. National Institute of Justice.

———and J. Wartell (1997). "Reducing Crime and Drug Dealing by Improving Place Management: A Randomized Experiment." Report to the U.S. National Institute of Justice. San Diego, CA: San Diego Police Department.

Felson, M. (1986). "Linking Criminal Choices, Routine Activities, Informal Control, and Criminal Outcomes." In: D. Cornish and R. Clarke (eds.), *The Reasoning Criminal: Rational Choice Perspectives on Offending*. New York, NY: Springer-Verlag.

———(1987). "Routine Activities and Crime Prevention in the Developing Metropolis." *Criminology* 25:911-932.

———(1995). "Those Who Discourage Crime." In: J.E. Eck and D. Weisburd (eds.), *Crime and Place*. Crime Prevention Studies, vol. 4. Monsey, NY: Criminal Justice Press.

———R. Berends, B. Richardson and A. Veno (1997). "A Community Policing Initiative to Discourage Abuse of Alcohol." In: R. Homel (ed.), *Policing for Prevention: Reducing Crime, Public Intoxication and Injury*. Crime Prevention Studies, vol. 7. Monsey, NY: Criminal Justice Press.

Green, L. (1995). "Cleaning Up Drug Hotspots in Oakland, California: The Displacement and Diffusion Effects." *Justice Quarterly* 12:737-754.

———(1996). *Policing Places with Drug Problems*. Thousand Oaks, CA: Sage.

Hirschi, T. (1969). *Causes of Delinquency*. Berkeley: University of California Press.

Homel, R. and J. Clark (1994). "The Prediction and Prevention of Violence in Pubs and Clubs." In: R.V. Clarke (ed.), *Crime Prevention Studies,* vol. 3. Monsey, NY: Criminal Justice Press.

——M. Hauritz, R. Wortley, G. Mcllwain, and R. Carvolth (1997). "Preventing Alcohol-Related Crime Through Community Action: The Surfers Paradise Safety Action Project." In: R.V. Clarke (ed.), *Policing for Prevention: Reducing Crime, Public Intoxication and Injury.* Crime Prevention Studies, vol. 7. Monsey, NY: Criminal Justice Press.

Hope, T. (1994). "Problem-Oriented Policing and Drug Market Locations: Three Case Studies." In: R.V. Clarke (ed.), *Crime Prevention Studies,* vol. 2. Monsey, NY: Criminal Justice Press.

Lurigio, A.J., R.C. Davis, T.A. Regulus, V.E. Gwiasda, S.J. Popkin, M.L. Dantzker, B. Smith and L. Ouellet (1993). *An Evaluation of the Cook County State's Attorney's Office Narcotics Nuisance Abatement Unit.* Chicago, IL: Illinois Criminal Justice Information Authority.

Saltz, R.F. (1987). "The Role of Bars and Restaurants in Preventing Alcohol-Impaired Driving: An Evaluation of Server Education." *Evaluation in Health Professions* 10:5-27.

Shaw, C.R. and H.D. McKay (1969). *Juvenile Delinquency and Urban Areas.* Chicago, IL: University of Chicago.

Skogan, W.G. (1990). *Disorder and Decline: Crime and the Spiral of Decay in American Neighborhoods.* New York, NY: Free Press.

Sloan-Howitt, M. and G.L. Kelling (1990). "Subway Graffiti in New York City: 'Gettin Up' vs. 'Meanin it and Cleaning it.'" *Security Journal* 1:131-36.

Wagenaar, A.C. and H.D. Holder (1991). "Effects of Alcoholic Beverage Server Liability on Traffic Crash Injuries." *Alcoholism: Clinical and Experimental Research* 15:942-947.

APPENDIX: Regression Results

Models for period	Coefficients (standard errors) [p value]				Model Statistics (N=121)		
	constant	letter	meeting	pre-crime	F	R^2	Signifi-cance
1	0.981 (0.231) [.0000]*	-0.415 (0.310) [.1836]	-0.855 (0.315) [.0077]*	0.556 (0.084) [.0000]*	14.509	0.271	.0000*
2	0.566 (0.229) [.0148]*	0.135 (0.307) [.6609]	-0.053 (0.312) [.8645]	0.274 (0.083) [.0012]*	3.668	0.086	.0143*
3	0.710 (0.196) [.0004]*	-0.309 (0.264) [.2433]	-0.402 (0.268) [.1365]	0.322 (0.071) [.0000]*	8.342	0.176	.0000*
4	0.331 (0.160) [.0406]*	0.295 (0.215) [.1728]	-0.319 (0.218) [.1463]	0.442 (0.058) [.0000]*	20.570	0.345	.0000*
5	0.522 (0.179) [.0042]*	-0.119 (0.240) [.6206]	-0.223 (0.244) [.3635]	0.392 (0.065) [.0000]*	13.106	0.252	.0000*
All 30 months	3.109 (0.647) [.0000]*	-0.414 (0.870) [.6350]	-1.853 (0.884) [.0383]*	1.986 (0.235) [.0000]*	26.009	0.400	.0000*

* Significant at the .10 level

NOTES

1. Non-residential, non-rental properties were excluded because the experiment was premised on the theory that place management influences crime, and that different types of places require different types of management. Though the generic police intervention might be the same across different places, the specific police intervention would have to vary, and the responses of the place managers might vary. Such divergence could reduce the statistical power of the experiment. Although places owned by drug dealers were also excluded from the experiment, no such place came to the attention of the experimenters during this project.

2. We have no information on how these figures compare to the average rental property in San Diego. However, since the majority of the properties in the experiment were within two low-income neighborhoods, it is likely that these places had smaller increases in value than comparable properties in other parts of the city.

3. A . 10 level of significance was used in this experiment for two reasons. First, given the rate at which places were expected to become available for allocation to treatments, the time available to conduct the experiment and the costs of collecting all of the data needed, we established that a .10 significance level would be the most reasonable if we were to examine enough cases to detect a moderate effect in this experiment. Second, the most intrusive intervention in the experiment (the meeting) is much less intrusive than most police interventions (e.g., arrests). Thus, the social and policy costs of a Type I error (reporting a treatment difference that was in fact due to chance) were lower for this type of intervention than for most other police experiments. This justified the use of a lower threshold for significant testing.

4. The mean number of crimes at meeting places is c+m, where m is the meeting group coefficient for a period and c is the constant for that period. Thus, (c+m)/c is the proportion of crimes at meeting places relative to control places, and l-[(c+m)/c] is the proportion of crimes prevented. Since l-[(c+m)/c]=m/c, 100*m/c is the crime prevention effect as a percent. Substituting the letter coefficient for the meeting coefficient yields the percent crime prevention effect of the letter treatment.

5. Of course, the test of this conjecture is a larger scale experiment.