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# Bicycle patrols: an underutilized resource

Bicycle patrols

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## Abstract

**Purpose** – The purpose of this paper is to provide information on the activities of police bicycle patrols.

**Design/methodology/approach** – A participant/observation research design was used. A five-city, 32-shift study on the output of police bicycle patrols was conducted. Same and similar ride-alongs were conducted with bicycle and automobile patrols. All contacts ( $n = 1,105$ ) with the public were recorded and coded. These data included: number of people, tenor, seriousness and origination for each contact.

**Findings** – Analysis of these data provides evidence that bicycle patrols result in over twice as much contact with the public compared with automobile patrols. The field observation perspective revealed clear tactical advantages to bicycle patrols.

**Research limitations/implications** – With a limited prior study of a police bicycle patrol's activities, this study is a significant initial step.

**Practical implications** – With evidence of tactical and numerical public contact advantages, more attention and resources aimed at deployment of police bicycle patrols appear to be warranted.

**Originality/value** – With large US cities and other departments using bicycle patrols, preliminary information on effectiveness appears to be both original and of value.

**Keywords** Bicycles, Policing, Employee participation

**Paper type** Research paper

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## Introduction

In the past 20 years the use of bicycles for police patrols has gone from none to many, if not most, departments having some sort of bicycle unit. The use of bicycles by police departments is actually a return to bicycles for patrols. In the late 1800s and early 1900s, bicycle patrols were used by many major city police departments (Fox, 1998, p. 2). Early in 1987, the Seattle police department started deploying bicycle patrols in their downtown area to augment foot patrols. This is thought to be the start of the current movement to deploy bicycles (Herlihy, 2004, p. 318).

Police departments having bicycles is wide spread. The International Police Mountain Bike Association (IPMBA) reports 82 percent to 100 percent of all departments serving populations of 25,000 more have patrol bicycles. The higher the population number served the greater the likelihood a department had bicycles to use. In smaller departments

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the ratio of bicycles to officers is higher. This is most likely explained by the reality that in smaller departments any introduction of bicycles impact more dramatically. The reported use of bicycles has grown over the period between 1999 and 2003 (Bureau of Justice Statistics Periodic Report on Local Police Departments, Hickman and Reaves, 2001, 2006). The Federal Law Enforcement Training Center provides a Police Bicycle Training Program available to officers from the 80 federal agencies with which it partners. This information provides evidence that bicycle units are present in most large law enforcement agencies, as well as high percentages in smaller departments. The question remains regarding the activities of these bicycle patrols.

Little research has been conducted on bicycle patrols. Considering the increased usage levels across the country, an investigation of the deployment of bicycle patrols is justified. The research on this method of patrol conveyance is lacking. Currently, newspaper stories are the primary source of information on bicycle patrols. Research on police patrol effectiveness has focused on automobile (Kelling *et al.*, 1974), foot patrols (Trojanowicz, 1982; Police Foundation, 1981) and even horse patrols (Fine, 2001). Like the bicycle itself, research on bicycle patrols is fleeting. The landmark Kansas City Preventive Patrol Experiment (Kelling *et al.*, 1974) revealed important information on random motor patrols. With an increased focus on community policing, accompanying support for foot patrols has grown. IPMBA members have published numerous articles in their newsletter detailing the effectiveness of bicycle patrols in their communities. These assertions are based on internal statistics and can provide little basis for comparison. The bicycle patrols themselves have been deployed in coordination with other efforts, such as redevelopment and community revitalization efforts, displaying a clear before and after measure (Richardson, 2002; Gallivan, 2005), but the effects cannot be solely attributed to bicycle patrols.

Keazor's (2003) dissertation, "Fighting Crime on Two Wheels," provides evidence that crime did not rise when bicycle patrols partially replace motor patrols in Baltimore. Even as recently as August 19, 2005, Suzanne Smalley (2005), a Boston Globe staff writer, published a story entitled, "Pedal Power Driving Out Crime, Boston Police Say," furthering the claims by police departments that the use of bicycle patrols is effective.

In June 1995, a single night's observation with Boston Police officers who were on bicycle patrols was conducted as a graduate project. Observations were made of where officers went, who they talked to and with how many people they talked. These officers were averaging conversations with a dozen different citizens or groups of citizens every hour. These contacts ranged from simple salutations and recognitions, to arrests, one of which was an actual physical take-down. This amount of activity seemed to evidence a higher level of contact with the public than would be practical from a patrol car. No point of comparison was included, however (Menton, 1995).

Wesley Clark (2003) provides information on an internal study by the Cincinnati Ohio Police Department. Higher levels of activity for bicycle patrols compared to automobile patrols were reported. Regularly documented activities were compared for bicycle and car patrols, displayed in Table I.

### **What is effectiveness?**

The mission of police is multidimensional and sometimes contradictory, yet the function of police is clear, they are imposers of social control and maintainers of social order. The

Officers weekly average	Officer in car	Officer on bike
Hours on duty	40.00	40.00
Arrest – felony	01.00	02.25
Arrest – misdemeanor	02.98	09.49
Juvenile arrests and referrals	00.88	02.11
Field interview report (FIR)	00.23	01.69
Vice incidents	00.48	04.67
Property recovery incidents	01.22	02.87
Warrants served	04.86	09.74
Crimes discovered	00.44	01.55
Misdemeanor cleared/follow-up	00.51	02.55
Parking violation	02.80	09.78
Motorist assists	00.64	06.57

**Source:** Clark (2003)

**Table I.**  
Activities of officers in  
cars compared with  
officers on bikes

devil as usual is in the details. Most current statistics generated by police departments offer arrest numbers or other official activities as measures of effectiveness. This can be problematic, for if the measure of success is based on numbers of arrests, then it would follow that police are being encouraged to arrest more.

Observations in this study revealed something quite to the contrary, as a rule. The mission of police is to de-escalate situations. In a few instances an arrest was required due to the nature of the individual's activity. Other times, when an arrest could be prevented, avoiding an arrest was the preferred response (Linn, 2006). Arrests can be incredibly time-consuming activities. If a better alternative is available, police officers often utilize such options. Many departments use civil citations for issues such as public drinking and other "quality of life" offenses. Yet even the tracking of civil citations does not provide an adequate picture of the police activity and effectiveness. The scope of this study offers evidence which compares car and bicycle patrol activity. As a result of this focus, outcomes viewed as one measure of effectiveness (Moore and Braga, 2003) were beyond the scope of this study.

Identifying value and measure in assessing policing was investigated by Moore and Braga (2003). They argue that the products of policing are both output and outcomes. The parameters of the present study focused on output. Moore and Braga (2003, p. 2) acknowledge the value of output as more than simply a means to an outcome but an end in themselves. Simply accessing opportunities to observe police activities posed challenges.

### Accessing ride-alongs

The "We-they" perspective has been used to describe the world view held by police (Gaines *et al.*, 2002, p. 349). From prior experience with observers, or the belief that the job cannot be understood by an outsider, distrust or at a minimum, leeringness, of non-police persons exists. The idea that policing is an occupation so particular that only other officers can be trusted to understand what transpires while on the job is pervasive (Roberg *et al.*, 2005, p. 378). The present study imposed upon this perspective by placing the observer for full shifts either on bicycle or in an automobile with police officers.

Different police departments and personnel demonstrated different levels of resistance to having an observer join the patrol. Including an observer added a critical third party during all encounters. Variations in officer resistance to this observation can be attributed to either departmental or observer issues. There were two main issues within the departments. First was the perceived disruptive potential of an observer and second, the route the observer used to have access. The perceived disruptive potential of having an observer along seemed more pronounced with auto patrols, particularly in autos staffed by two officers. The observer riding in the back seat would cause the extra step of opening the secured back door at each stop. The perceived disruptive potential of the observer while on bicycle patrols was negligible. It is possible that any wariness by the bicycle patrol officer was blunted by the novelty of having the camaraderie of a fellow cyclist. This observer, being an experienced cyclist, was able to keep up with the cycling pace of the officers. A comfort level with the cycling observer was such that in four out of the five departments, and with 30 out of 31 officers, consent was granted to video record their activities.

“Who sent you?” or “Why are you here?” were important and preliminary questions asked by officers considering or compelled to allow a ride along observer. The amount of resistance by individual officers was less if the initial request for ride-alongs was made to an officer, sergeant or lieutenant rather than an upper level administrator. Access to these departments was secured through a variety of contacts. In Charlotte, the Law Enforcement Bicycle Association (LEBA) web page was the starting point. The president of the LEBA group was an officer for that department. In Hartford and Washington, the International Police Mountain Bike Association provided contact information with IPMBA certified officers in these departments. IPMBA provided contact persons for numerous police departments. These departments did not participate due to a variety of reasons, including unsuitability or non-receptivity to this study.

An observer issue that seemed to affect police officer resistance was the observer’s background. Most departments ran a criminal record check on the observer. It was a given, therefore, that the observer had no criminal record. The background on the observer greatly influenced an officer’s receptiveness. Other observers present at roll calls were family and friends of the officer or police explorers scouts. The observer for this study is a retired public safety officer. This previous occupation seemed to allay the wariness of officers. The word spread within a department that this observer was “all right” because of the prior occupation. Academic credentials had no comparable effect.

### **Methodology**

The data gathering in this study was through the participant-observer method model. The criteria constituting a unit of analysis was an observation of the police having a contact with members of the public. A tally of all these contacts and a brief description, as well as the time and number of people involved, was recorded during a total of 32 tours of duty in five cities. Boston, Charlotte, and Providence were each observed for four mid-week and four weekend shifts. Two weekend shifts were observed in Hartford and six shifts were observed in Washington. Half of the patrols observed were in a car and the other half were on a bicycle. The two modes observed were matched to be comparable in area, number of hours, shifts and days of the week. The police officers were asked to conduct their tours of duty as they normally would without an observer

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present. Generally and overall, that is what happened. Officers' acceptance of being observed was discussed in a previous section. These observations took place from July through October of 2005. Overall, four of the initial eight matched shifts observed were during the day the remainder were second shift. A practical reason for selecting second shift was that bicycle patrols were deployed most frequently during the evening.

This present study considered policing outputs to be the appropriate measure to seek. Outcome measures were inaccessible and have historically been difficult to attribute to isolated causation. Output has been studied as credible productivity measures for policing research (Moore and Braga, 2003).

The genesis for this study comes from a prior unpublished work where two Boston police officers patrolling on bicycles were observed for one evening. Notes were taken during that observation and a later tally revealed that the bicycle patrol officers had contact with an average of 12 people every hour. This included: breaking up fights; enforcing a restraining order; giving directions; taking a report on an assault; calling an ambulance for someone in distress; chatting with local merchants; and talking to citizens ranging from a neighborhood association president to prostitutes. Keazor's (2003) study of police 911 calls would have missed close to 90 percent of these activities simply because police contact with the public is mostly informal, not call based and not always documented.

Another issue in the present study is the classification of the contacts observed. Whereas Parks *et al.* (1999) examine amount of time per eight-hour shift that officers were in contact with members of the public, the present study counts and classifies the contact. Traditional classification of police contacts with a citizen and the categorizations found in the literature such as law enforcement, conveyance norm, order maintenance or rendering services (Gaines *et al.*, 2002) can be as confusing as it is clarifying. What may be considered by the officer as a law enforcement function may be, by the observer, considered an order maintenance function. Therefore, a different coding system was developed. All police contacts with the public were recorded. Each contact constituted a single case. The number of people in that case were counted and recorded. The tenor of each case, whether it was positive, negative or neutral, was coded into the record. Coding tenor was based on the observer's perception of the mood of the principal individual in the contact. How that person's situation or attitude was affected by the contact factored into determining if the contact was classified as positive, negative or neutral.

The character of the contact was also coded. The categories were: serious, somewhat serious and non-serious. Contacts classified as serious were: arrests; impoundment of property such as a car; responding to the scene of a major crime; or the event having a major impact on an individual's wellbeing. Somewhat serious contacts were encounters that caused the direction or knowledge of the individual to change (such as being detoured or receiving guidance) or resulted in a modest consequence. This would include solicitation of directions or other information that the police had regarding referrals or legal procedures, issuing of citations for civil violations or traffic violations, and delaying someone's movement in order to run an identification check. Non-serious contacts consisted of salutations, chatting, or speaking to people in the neighborhood regarding events that take place. One example of non-serious contact would be an apartment complex manager describing to the officer the timeframe that prostitutes and johns use the dead end street behind the

complex. Often, the non-serious contacts were nothing more than a “hi, how are you”, and on other occasions involved extensive conversations with members of the community which provided police with insights on what was taking place in the area. These records were created while the encounter was happening.

Raw notes taken on-site were subsequently transcribed into a narrative log and converted into values which were entered into a database. A contact constituted a case. For each case, a set of variables included: number of people; tenor of contact; character of contact; whether on bicycle or in car; origin of contact, time, date and city. While riding a bicycle, recording all contacts was at times not possible, both in number of encounters and number of people. In those instances either a conservative count was estimated from quick notes or the contact was not recorded. No similar instances with auto patrols were noted.

**Results**

Calculating the number of contacts and the total number of people contacted was divided by the mode of patrol: car or bicycle. The number of contacts and people per hour was averaged for both patrol modes. As can be seen on in Table II, bicycle patrols had more than double the number of contacts as car patrols. The results were 3.3 contacts per hour from cars compared to 7.3 contacts per hour from bicycles. When considering numbers of people contacted per hour, the car patrols averaged contact with 10.5 people in an hour and the bicycle patrol had contact with 22.8 people per hour, again more than double. From the point-of-view of volume of contact with the public, the bicycle is obviously superior. Even though bicycle patrols had over twice as many contacts with citizens, what were the seriousness levels of these contacts? Do motor patrols handle the serious calls and are bicycle patrols relegated to public relations? What was the function of bicycle patrols?

Coding enabled the examination of tenor and character of contacts. Tenor and character addresses the bicycle patrol function question. In classifying whether the contact with a member of the public (tenor) was positive, negative or neutral, a judgment was reached by the observer on the attitude of the principal person involved in the contact based on body language, language and also the nature of the contact. Bicycle encounters were more positive in tenor at a significance level of 0.01.

Seriousness of the contact was determined by how much of an effect the contact had on the member of the public. Serious contacts included: arrests; impoundment of motor vehicles; and taking a report on a recent crime. Somewhat serious contacts were any contacts where a member of the public’s knowledge or direction was affected by the contact, such as citations or receiving directions. The ranking of the contacts were: non-serious, somewhat serious and serious. Bicycle patrol encounters were less serious at a significance level of 0.01 (Table III, with a simpler version in Table IV).

This difference at first blush would seem to indicate that bicycle patrols do indeed handle the minor incidents and leave the “real” policing to automobile patrols. An

**Table II.**  
Police contact with the public

	Car patrols	Bicycle patrols
Average numbers of contacts with the public per-hour	3.3	7.3
Average number of people in police contacts per-hour	10.54	22.82

Positive/negative/neutral encounters <sup>a</sup>				Seriousness <sup>b</sup>			
Car		Bike		Car		Bike	
Mean	0.051	Mean	0.420	Mean	-0.241	Mean	-0.601
S.D.	0.343	SD	0.235	SD	0.250	SD	0.177
N	15	n	16	N	15	n	16
Df	14	df	15	Df	14	df	15
T Comparison	3.48			T Comparison	-4.60		
Significance	Significant at the alpha = 0.01 level (accept alternative hypothesis that bike mean is greater than car mean; i.e. bike encounters are on average more positive in nature)			Significance	Significant at the alpha = 0.01 level (accept alternative hypothesis that bike mean is less than car mean; i.e. bike encounters are on average less serious)		

**Notes:** <sup>a</sup>Positive = 1, Negative = -1, Neutral = 0; <sup>b</sup>Serious = 1, Not serious = -1, Somewhat serious = 0

**Table III.**  
Tenor and seriousness of encounters

	Positive/negative/neutral encounters <sup>a</sup>		Seriousness <sup>b</sup>	
	Car	Bike	Car	Bike
Mean	0.051	0.420	-0.241	-0.601

**Notes:** <sup>a</sup>Positive = 1, Negative = -1, Neutral = 0; <sup>b</sup>Serious = 1, Not serious = -1, Somewhat serious = 0

**Table IV.**  
Positive/negative/neutral encounters (Simpler version)

analysis was conducted that excluded non-serious contacts. This provided an opportunity to compare serious and somewhat serious activity, as well as to compare these two levels added together. When comparing hourly averages of somewhat serious, serious and both combined, no statistical significant difference between bicycles and motor patrols existed. Bicycles essentially did the same level of serious and somewhat serious work as motor patrols. As can be seen in Table V, serious contacts were similar between the bicycle and the automobile patrols. Somewhat serious contacts were a bit higher for the bicycle patrol. No statistical significance difference existed for either of these characterizations individually and when combined.

Non-serious contacts for the bicycle patrols were overwhelmingly higher – nearly three times that of the automobile patrols. Why would we want the police to bother with non-serious contacts, given that it may detract from their ability to do the serious duties? This greater amount of non-serious activity of bicycle patrols simply masked

	Car	Bike
Serious encounters/hr	0.467	0.333
Somewhat serious encounters/hr	1.373	1.870
Somewhat serious or serious encounters/hr	1.840	2.203

**Table V.**  
Type of encounters per hour per mode



the finding that substantive contacts of bicycle patrols were at least equivalent, and in some cases, tactically superior to auto patrols. No depletion of serious contacts is revealed, simply an enhancement of non-serious contacts. These non-serious contacts, in ways, may have a positive effect on the perception by the public of police, particularly in the areas that are patrolled and are a mark of increased police output. Generally, the locations used in this study were downtown areas or areas of modest socio-economic means and oftentimes predominantly racial minority communities.

The three measures given here, frequency of contact, tenor of contact and seriousness of the contact are not negatively affected, and in some cases, are positively affected, by the use of bicycle patrols. This should give cause for reflection. The other advantages of bicycle patrols will be discussed later, but at this point, the sheer contact with people clearly is superior on bicycle patrols, with the exception of one area, radio calls.

#### *Radio calls*

In this category, the origins of all contacts were classified as to whether or not they were initiated by a radio call. Contacts not initiated by a radio call resulted from a citizen flagging down a police officer, or a police officer initiating the contact. When a citizen flagged down a police officer, this was not categorized as a radio call. Not all radio calls were in response to a 911 call. Often, officers would respond to a radio call that was an incident not initiated by a 911 call, such as another officer asking for back up. Contacts which were not radio call initiated included contacts that ranked as somewhat serious and serious. It was not unusual for a radio initiated call response where no one was at the call location or the location did not exist. Of the 1,105 contacts recorded over 32 shifts of data gathering, 108 or 9.77 percent were radio call initiated. Less than one-third of the radio calls (35) were ranked as serious.

In Parks *et al.* (1999, p. 506) analysis of causation of patrol encounters with the public reported 50 percent were radio call initiated. With an officer assigned to a police community specialist, the percentage of calls were far lower, at 12 percent. These community specialists spent less time on encounters with the public (Parks *et al.*, 1999, p. 501). That is different than the 9.77 percent for radio calls in the present study.

Patrol cars in this study responded to 79 calls. Bicycle patrols responded to 29 calls. On the face, these numbers would seem to indicate that police on bicycles cannot answer as many calls. This is the logic that often seems to be employed when thinking about call response: police officers must traverse great distances to get to that call and therefore bicycle patrols are assumed to be the less preferred responders. In densely populated and downtown areas, bicycles often have better access. Either by habit or by deployment policy, police on bicycles were not called upon to answer radio calls at a rate similar to police in motor vehicles. It is not that the police on the bicycles got and refused calls, or got and were unable to respond to those calls. They simply were not called as often as motor patrols.

In many cases the calls the police officers responded to were some distance away – a mile or so. The police officers traversed these distance on a bicycle in a short period of time. Officers on bicycles sprinting to the scene of an important call can arrive there in a relatively short amount of time and from their vantage, have a fuller view of a scene. Oftentimes radio initiated calls were longstanding and not time sensitive. These might have been calls regarding a crime that had taken place perhaps hours before. The issue

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of bicycle patrols responding to calls that, upon further examination, might yield information. The number of calls per hour, 0.71 for cars and 0.25 for bicycles, demonstrates a clear difference. However, data analysis in Tables II–V provide evidence of bicycle patrol capabilities in spite of the lower radio summons rate. Despite close to a third less radio calls bicycle patrols output was more.

### Discussion

Police patrol has been thought of as essential in the fulfillment of the police mission. O.W. Wilson called patrol the “backbone” of policing (Gaines *et al.*, 2002, p. 200). Patrols are relied upon to provide order maintenance, traffic regulation and law enforcement functions. Additionally patrol personnel are asked to do various duties. Patrol is generally the first face the police show. Patrol is the epitome of what Lipsky (1980) calls the “street level bureaucrat”. The patrol officer is the contact point between the citizenry and the government. This makes the patrol officer key in addressing the needs of the citizenry and expressing the will of the government. These first impressions are important and provide opportunities. As the adage tells us, there is no second chance. First impressions are a substantive component of police citizen contact. The more accessible, less dramatic bicycle patrol afforded more opportunity for contact between police and the public.

Contact is a variable affecting citizens’ perception of police (Gaines *et al.*, 2002, p. 462). Cheurparkobkit (2000) found higher rates of negative perception from people who had had contact with police. This negative perspective begs the question, who has contact with the police? Those receiving the attention of the police have gotten this attention for cause, generally their need or the government’s will. Often citizen police contact is precipitated by criminal behavior or traffic or civil violations. Even in these areas, a respectful demeanor and approach by an officer can positively impress even an errant individual (Sherman, 2004).

Substantial numbers of the public have contact with the police as an officer is providing a service. These services may involve taking a crime report or perhaps a response to a car accident. In these occurrences, the police officer can become associated with the negative event. In some situations, the police can be erroneously perceived as contributing to the citizen’s misfortune. For example, during an investigation of an auto theft operation, the police learned that keys imbedded with “theft proof” computer chips were being fraudulently obtained. The police discovered the vehicle identification numbers of a targeted car and notified the owner after the vehicle was stolen, but prior to the owner discovering the theft. In the media the owner accused the police of using the car as a decoy (Colorado Department of Law and the Office of the Attorney-General, 2006).

Many members of the public who have contact with the police are grateful for the support and service the police provided. On a bicycle, the public is more apt to say thank you and the officers are in a better position to hear their words. However, in some cases, rather than engendering gratitude from some citizens, the contact they experienced leaves them resentful of the capabilities police have which they, as an ordinary citizen, do not have. The public does not share the police powers over life, liberty and movement. These capabilities may generate resentment among members of the public, particularly among individuals who need the police or were unable to solve the problem which was dealt with by the police.

### **A new first impression**

The police officer came rolling down the sidewalk on a bicycle to the address of the call he had been assigned. He came from the right. There was no time between being seen by the caller and engaging the caller in conversation. The caller's license plate had been stolen from his vehicle and he did not know what to do. The officer was ready to take the report and provide guidance. The citizen was unsure of how he could fix the situation. He had questions. Where could he get a replacement license plate? Could he drive the vehicle? If the officer had arrived in a patrol car, he would have had to engage in a functional ritual. This ritual would have included flashing blue lights, double parking and a noticeable wait time between coming upon the scene and attending to the citizen's issues. In this particular case, the officer arriving on a bicycle, without the above ritual, may have provided some solace.

The additional contact bicycle patrol officers had with the public provided more opportunity for access. These additional contacts were generally positive and non-serious. These low stake encounters with the police should serve to enhance police community integration. The demeanor of the officer is inclined to be different from motor patrol personnel. The clothing, agility, and lack of a car allow the officer to present an entirely different first impression.

### **Tactical advantages**

Also observed was a willingness by individuals or groups to stop or approach the bicycle officer to report an event or to indicate when the officer should come back to observe the illicit activity. Being in a position to know what was going on is a clear advantage. The stealth of police bicycle patrols is often cited as a superior tactical capacity. This was observed in the following example of a coordinated convergence in a housing complex.

The motor patrol officer assigned to an area suspected illegal activities were occurring at a specific apartment. The location of the apartment allowed a lookout to see a patrol car entering the apartment complex from a distance and to simply close the door to the apartment. Three bicycle patrol officers were able to come in from the opposite direction on a footpath and confront a man with drugs in his hand standing in the front door of the apartment.

Incidents of public drinking, urination, and pot and crack smoking were more readily discovered and dealt with by bicycle riding officers. Often, a simple civil citation was issued. This provides immediate and potential long-term deterrence: immediate deterrence by the confiscation and citation and a potentially long-term deterrence because the violators have the knowledge that the police can virtually appear from nowhere with the bicycle's stealth capabilities.

The issue of stealth is an important one. But the tenor of bicycle policing is something that needs to be considered. There is clearly less drama of bicycles rolling up without a sound. Bicycle patrol officers can quickly situate themselves into the context of a situation. This allows for more effective response. The dynamics of not having to park the car, get out of it, adjust a gun-belt and walk over to the situation create a whole different set of circumstances. There is no time to hide the joint or the open container, and further, the police may be in a better position to address other issues ranging from quality of life to serious crimes.

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The following is an example of a serious crime disrupted during the course of this study. A call from a tenant of a housing development was placed to 911. She was afraid to identify herself, but willing to telephone information which the police could act on. The bicycle patrol was in an area that was part of an anti-gang, anti-crime unit. Ten officers strong, they received the call from the dispatcher of shots fired. They split up and entered the apartment complex through various walkways and driveways. A second phone call was received saying the assailant with the gun had seen the officers coming from all directions and seeing no escape threw the gun in a dumpster. After a quick search of all the dumpsters on the property, a large clip semi-automatic handgun was found. The overwhelming response by the police may have inspired the second assisting phone call and thus removed a serious weapon from the streets. The response by many members of the public in the areas patrolled by bicycles was quite positive. It seems to provide an opportunity for people to express their positive feelings for public safety personnel.

Bicycle patrol officers make no attempt to disguise who they are. The time and space between recognition of the officer's presence and his or her functional engagement is generally less for the bike officer than for motor patrol. This gives the bike patrol officer advantages. One of these advantages is regarding what Fyfe (1986) calls the "split-second syndrome." Split-second syndrome refers to the use of unnecessary violence because an adequate solution cannot be devised by an officer during an encounter. According to Fyfe (1986, pp. 212-214), three factors regarding the encounter affect the probability of unnecessary violence: urgency, involuntariness and the public setting. On a bicycle, the lack of the functional ritual in alighting from a car eliminates the perception that the police are ignoring the urgency of the encounter. The involuntariness of an encounter persists with bicycle patrols. The encounters continue to be public but the intrusiveness of the bicycle is negligible compared to the blue lights flashing and siren blaring from a colorfully painted full-size sedan. Bicycle patrols can influence two out of three of Fyfe's factors and thus provide a patrol approach with the potential to decrease unnecessary violence.

Enhanced access is another tactical advantage. Alternative routes, including closed roads, sidewalks, alleyways, footpaths, paths through parks, and other parkways and walkways, and even steps, are accessible to bicycles and not to cars. Bike patrol police officers have made it their business to know and use these cut-throughs and footpaths which allow them to be present from unexpected directions. Non-roadway accesses to hotspots were commonly employed by the bicycle patrol units.

From both a tactical and practical point of view, training becomes an important issue. Four of the five departments observed provided bicycle patrol training to their personnel. Three were based on national professional organization curriculums (IPMBA or LEBA). One department received training from a state contracted vendor and one department refrained from providing training. Because the training differed from city to city, it is difficult to determine to what extent performance was affected by training versus departmental differences. Riding/patrol skills training will enhance safe, efficient bicycling (Martin and Blair, 1996, p. 53). Certain skills can be taught, including: preliminary safety checks before going out; how to shift, brake and steer appropriately; route selection; obstacle management (i.e. stairs and curbs); mounting and dismounting; and placement of the dismounted bike. These and other tactical capabilities allow officers to quickly and quietly appear on the scene. Smooth shifting,

braking and steering allow for quick and safe riding. Route selection, both on an immediate level and a longer term level, allow for the safest and shortest distances to traverse. The ability to manage obstacles further enhances the ability of the officer to get to the scene or to cover territory more effectively. Mounting, dismounting and placement of the bicycle will vary according to the situation for which the police officer can benefit from training. Again, training and as well as experience will inform the police officer on the best strategy to employ in specific circumstances.

### **Examples**

In Charlotte, in addition to observing patrols in low socio-economic residential areas, observations were conducted of bicycle patrol units deployed as a major component to a special saturation patrol of the downtown entertainment district. This area, approximately four by seven city blocks, contains a number of restaurants, clubs and bars. Tryon Street, the main thoroughfare, has become a cruising event on weekend evenings, with heavy, slow traffic moving in both directions. The sidewalk on Tryon Street, in places was extra wide, with park benches perpendicular to and abutting the street. Other sitting areas were available in front of set-back, high-rise buildings. The bicycle officers usually assigned to the area patrolled in two pairs, from 3:00 pm to 7:00 pm. At 7:00 pm, officers from other districts on bicycles, motorcycles, cars and on foot were redeployed. They were briefed and assigned to the area. Two officers on foot were assigned to each intersection on Tyron Street. Motorcycle officers were directed to traffic enforcement within the grid. Two patrol cars were assigned to remain on the perimeter to deploy for arrestee transport when needed. About 25 officers in all were redeployed to this operation.

Because this operation depended heavily on officers not usually assigned to the central district, the four officers on the bicycles who were regularly assigned to the downtown area circulated continuously, advised, prodded and modeled what should be done by these officers unfamiliar with the area. Large numbers of people congregated away from the intersections, on benches provided on the sidewalk. There was almost constant social control present with the additional bicycle units from other districts. The ongoing order maintenance was under the supervision of a captain and a sergeant. A plan was methodically developed and carried out in large measure by the downtown bicycle officers.

The intent of the plan was to wind down activity during the later part of the evening. The plan focused on cruising cars, crossing pedestrians and crowds, in that order. Cruising of cars was disrupted prior to the bars closing by shutting off Tryon Street and rerouting traffic to the secondary roads. This disruption effectively deterred people from continuing to cruise the downtown area. The diverting was done in a cascading fashion, which decreased the traffic backups on secondary roads. When the bars closed and the patrons emerged from the drinking establishments, it was to a quieter environment with a seemingly large police presence. A reasonable time after last call, the bicycle patrol officers started to patrol the parking lots, eventually denying vehicle egress and mostly gently urging folks to go home. The message from the bicycle units seemed lower key, yet as serious as any approach by any other police officer.

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The bicycle patrol can function like surgical tool. It can insert the officer into a situation without finding a place to put the cruiser, nor delay in alighting from it. In one moment the officer is not there, and in the next moment, he or she is present.

### **Who rides bicycle patrols?**

Police officers who ride bicycle patrols are predominantly male, as are the police departments observed. The nature of the activities of this duty assignment requires and attracts officers who are in good to excellent physical condition. The riding observed took place in up to 100-plus degree temperatures, yet officers were able to sprint to the scene, and in one case, chase down a car. At least one unit of the New England bicycle patrol rides during the winter. Officers doing this will naturally have a high level of exposure to the public and therefore, at some level, must have an affinity towards “meet and greets”.

All the officers riding bicycles were volunteers, most of whom were certified by a training organization. Many of the officers were assigned part-time to the bicycle patrols and in some cases, even had the option of using motor patrol instead of bicycle patrols. Generally speaking, these were sought after positions and being reassigned to motor patrols or other duties was a cause for disappointment in those officers.

### **Conclusions**

The evidence from the current study suggests bicycle patrols may be an effective and valuable tool for enhancing community policing relations. Bicycle patrol units perform well to superior in most dimensions of patrol duties. In some activities they perform more productively. Under community policing philosophies, closer relations with the public is an objective. Bicycle patrol units provide that closer exposure and relationship with the public. This study provided evidence that is consistent with assumptions based on departmental crime statistics, anecdotal observations, and intuitive conclusions. Bicycle patrols are more approachable for pedestrians and for those in motor vehicles. They are more likely to roll up on illicit activities or situations where people are in need because on a bicycle, officers can see, hear, and even smell better from their perch. On a bicycle, one sits over six feet high and is unimpeded by air conditioning noise and the cage construction of a motor vehicle. The view is unfettered as are the other senses. A negative is that the physical protection the patrol car provides is gone.

The IACP Bicycle Patrol Model Policy, IPMBA and LEBA training recommend alternative protections. The introduction of portable data link devices will enhance bicycle patrol system capabilities. Having a data link allows bicycle patrols the same information access as a motor patrol vehicle. Wants and warrants on vehicles and persons and electronic text copy of calls is but the tip of the information iceberg a data link can provide. When bicycle patrols are equipped with data devices, the information advantage of the patrol car disappears and the tactical and statistical advantage of bicycle patrols should become more apparent.

In one situation, suspects in a stabbing were located in a slight blind alcove, in a downtown area, and a motor patrol officer was overhead saying, “I didn’t even know this place existed.” This was a place where four homeless men had been camping out and had either witnessed or were participants in a beating and stabbing incident which sent another man to the hospital.

How bicycles are used and the strategies of their deployment should play an integral role in patrol deployment. Although not all officers on motor patrol and other assignments felt that bicycle patrols were as safe or effective in providing a show of force, the overwhelming relationship between motor patrol and bicycle patrol was that of mutual assistance and respect. One motor officer asserted that there should be no foot patrols, they should all be converted into bike patrols. Another lamented that the call he was going to for a second time that evening for reports of shots fired, was going to continue to be ineffective because the people who were involved would simply slip through the backyards and end up on the next street over which was not easily accessible from the call site. He said that bicycle patrols could easily address this issue. In a prior example cited, a motor patrol officer asked for the bicycle patrol to assist in shutting down an apartment seemingly dedicated to illicit activities.

In interviews with Officer Wes Branham, the president of the Law Enforcement Bicycle Association, and with Maureen Becker, the executive director of the International Police Mountain Bike Association, both individuals talked about the increased use of bicycle patrols in a number of other fashions for crowd control and for tactical purposes. In Boston, bicycles are used for gang suppression and crime control. The bicycle unit is deployed in response to incidents in specific neighborhoods. Their patrolling tactics are tantamount to a saturation patrol strategy. Perhaps bicycle patrols responding to more calls and taking more calls may increase their profile in patrol and bring them to the attention of command staff. Bicycle patrols deserve positions as integrated components of policing in metropolitan areas.

This current study is an initial foray of bicycle patrol research. With the high percentages of bicycle use reported (Hickman and Reaves, 2006), further investigation is warranted. The nature of bicycling is so commonplace it becomes virtually invisible. From a tactical stand point this is an advantage. This advantage turns into a disadvantage with regard to police administrators considering bicycle deployment. Chiefs viewing bike riding on patrol as a simple task ("Its like riding a bike") requiring little training and expense invite deployment destined for unsatisfactory results. The study of properly trained and equipped bicycle patrols is needed in light of the pervasive usage.

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