

DISCRETION OR DIRECTION?:  
AN ANALYSIS OF PATROL OFFICER DOWNTIME

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## ABSTRACT

Proactive policing reforms emphasize that during downtime (all time not responding to citizen calls for service) patrol officers should engage in both self-initiated and directed activities based on crime analysis and problem identification. In general, community-oriented policing and problem-oriented policing stress decision making by line officers based on their own observations and knowledge of the area they are assigned to patrol, but also on crime information made available to them by supervisors. Hot spot policing and managerial approaches such as Compstat, place the responsibility for planning and implementing patrol activities on commanders, lieutenants, or other supervisory personnel.

This study provides a descriptive analysis of officer downtime to address two issues inherent to proactive policing strategies within the confines of the Baltimore Police Department. First, whether patrol officers who are required to respond to citizen calls for service have time to engage in proactive policing activities. Second, whether proactive policing strategies from the numerous movements in police reform and crime prevention over the last 40 years have made it past administrative implementation to the front lines of policing.

The findings of this research suggest that on average, over three quarters of a Baltimore patrol officers' shift is downtime. During this time they primarily self-initiate routine patrol, or back up other officers on calls to which they were not dispatched. Only six percent of downtime activities are directed by superiors, other officers or citizens. Two percent of these activities are directed by supervisors. The only activities that are more likely to be directed than self-initiated are serving warrants and subpoenas, and

attempts to locate suspects, witnesses or informants. Compared to self-initiated activities, directed activities are significantly more likely to occur on private property and the use of directives is influenced by district. However, the directives provided do not appear to be a means of operationalizing problem oriented or community oriented policing theory or proactive policing strategies. These activities are probably more correctly conceptualized as activities that are not self-initiated (in other words, activities that result due to instructions, information or requests of officers, supervisors and citizens).



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## CHAPTER ONE INTRODUCTION

In 1965, Elaine Cumming and colleagues reported that the ordinary work routines of police officers included relatively little law enforcement and comprised a large variety of other activities which came to be known as peace keeping and order maintenance. Since then, many scholars have theorized about and studied how patrol officers spend their time, and how much of their time is spent on law enforcement or crime control (Bayley, 1979; Bittner, 1974; Frank, Brandl, & Watkins, 1997; Greene & Klockars, 1991; Goldstein, 1977; Haller, 1976; Reiss, 1971; Rumbault & Bittner, 1979; Skolnick & Bayley, 1986; Smith, Novak & Frank, 2001; Webster, 1970; Wilson, 1968). Over time, researchers have consistently reinforced Cumming's findings. However, in 1979, Cordner noted that the characterization of police work as crime- or noncrime-related obscured the ambiguous quality of most of what patrol officers actually spent their time doing, and that

police patrol work includes two principal components: one is *reactive*, in which patrol officers are asked to handle a wide variety of ambiguous problems and situations, few of which are clearly either crime- or noncrime-related; and one is *proactive*, in the sense that patrol officers have the opportunity to determine what their workload will be during the uncommitted portion of their patrol time. The latter component of patrol work is also largely ambiguous, because the conduct and effect of preventive patrol are not clear, and many of the self-initiated activities undertaken are not strictly crime- or noncrime-related... (59; *emphasis added*).

Almost 25 years have passed since Cordner's observations yet the proactive component of patrol work remains largely ambiguous, even though "[p]reventive patrol remains the predominant operational strategy of policing in terms of time spent..." (Scott, 2000:86; see also Bayley, 1998). Bayley (1998) reports that "in modern democratic countries, 60 to 65% of police personnel are assigned to patrol" (26), and

recent studies suggest that at least 20 to 30 percent (approximately 1 ½ - 2 ½ hours) of an officer's eight-hour shift is spent engaged in general patrol (Frank et al, 1997; Parks, Mastrofksi, DeJong & Gray, 1999; Smith et al, 2001).

Numerous movements in police reform and crime prevention have surfaced since the late 1960s and early 1970s, e.g. team policing, community policing, problem-oriented policing, broken windows and zero tolerance, hot-spot policing, and Compstat.<sup>1</sup> All have been directed at making policing more proactive. Through the adoption and implementation of most of these policing philosophies, patrol officers have complained that they do not have enough time for the directed or self-initiated activities that are required because they are too busy responding to calls for service (Mazerolle, Rogan, Frank, Famega & Eck, 2001; Sparrow, Moore & Kennedy, 1990; Webster, 1970).

The purpose of this study is to provide a descriptive analysis of officer downtime (all time not responding to calls for service) to address two issues inherent to proactive policing strategies within the confines of the Baltimore Police Department. First, whether patrol officers who are required to respond to citizen calls for service have time to engage in proactive policing activities. Second, whether proactive policing strategies from the numerous movements in police reform and crime prevention over the last 40 years have made it past administrative implementation to the front lines of policing.

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<sup>1</sup>In the extant literature, "these ideas are variously referred to as movements, philosophies, models, paradigms, strategies, theories, programs, schools of thought etc. Just what they should be called isn't certain, nor is it that important" (Scott, 2000:97). For the purposes of this study, they are subsumed in the term "proactive policing."

Compstat is explained in more detail in Chapter Two under the section: Proactive Patrol Strategies.

### **Police Patrol Work**

How patrol officers spend their time is influenced by many factors: Citizen demands (e.g. improving race relations, community involvement in crime prevention); societal demands (e.g. dealing with the mentally ill and other non crime-related situations); officer demands (e.g. professionalization, legitimization, autonomy, and responsibility); and political influence (e.g. the Regan era war on drugs; New York Mayor Giuliani's "clean up the streets" initiative). These factors have varied over time and place. What has remained constant is the predominant role that calls for service have played in organizing patrol operations since the development of the 911 emergency system in 1968 (Walker, 1992). Colton, Brandeau, and Tien (1983) found that the principal consequence of 911 installation has been an increase of nonemergency (routine incidents) rather than emergency calls, and "[c]ommentators on police service argue that the police have become a 'slave to 911' " (Kessler, 1993:488).

In spite of the improvements that have been made in resource allocation and call management strategies since the late 1970s (patrol shift scheduling by call volume rather than equal staffing around the clock, proportional need coverage rather than equal geographic coverage, call prioritization guidelines and priority dispatch/delayed response, telephone reporting etc.), Scott (2000) states that police patrol operations remain principally structured around three operational strategies: the handling of routine incidents, emergency response, and preventive patrol.

### ***Routine Incident Response***

Most reactive police business is handled using the routine incident response operational strategy. Routine incidents are packaged as a “call for service.” The response entails collecting information, and classifying the situation (crime, information exchange, civil matter, etc.). Generally, the objective is “to restore order, document information or otherwise provide some immediate service to the parties involved” (Scott, 2000:86).

### ***Emergency Response***

The emergency response operational strategy is used less frequently than the routine incident response, as it encompasses situations where human life is most directly at risk (crimes in progress, officers’ requests for immediate assistance, traffic accidents with injuries, natural disasters etc.). “The general objective is to save lives, minimize injury and restore a basic level of order. Until the police achieve these objectives, they can employ no other operational strategy of police work” (Scott, 2000:87).

### ***Preventive Patrol***

Preventive patrol is the operational strategy in which “uniformed police officers are expected to operate when they are not otherwise compelled to operate differently” (Scott, 2000:86). The objectives of preventive patrol are to prevent and detect offenses and promote feelings of security. The underlying logic is that the presence of uniformed police officers will deter citizens from committing offenses, and will increase the probability that officers will interrupt offenses in progress (Bayley, 1998; Scott, 2000).

There are few formal performance indicators to measure preventive patrol, some police departments have tried to quantify the amount of time officers spend on preventive patrol on foot, or to record vehicle mileage (Scott, 2000). Other departments emphasize that officers self-initiate activities based on their own knowledge of the “problem areas” in their beats, and/or information provided to them by supervisors. Officers may be expected to engage in activities such as checking on premises and suspicious citizens, serving warrants, checking abandoned vehicles, pedestrian checks and field interrogations but the occurrence of these activities is not routinely measured.

### ***Downtime***

For the purpose of this study, downtime time is defined as: all time not responding to dispatched calls for service (or reacting). Downtime includes preventive (random/routine/general) patrol time, but also time spent on on-view situations or problems, administrative tasks, and personal tasks (non-police related).

Studies that have attempted to identify the amount of downtime in various police departments, have, naturally, arrived at different percentages of the total patrol time. As Cawley and Miron stated in 1977 (and as Scott [2000] implies is still the case) “the existence of this time is not in question since all police administrators have traditionally used it for random preventive patrol” (Cawley & Miron, 1977:55). However, in light of the current widespread perception that police patrol work is driven by 911, it is important to determine *how much time* is downtime, before examining what patrol officers are doing during this time.

### ***Proactive Policing***

Routine police work can be classified by two concepts, reactive police work and proactive police work. These concepts “derive from the study of individual action, the former referring to actions originating in the environment, the latter to those originating within the actor” (Black, 1980:87). Using this classification for the three primary operational strategies discussed above, routine incidents and emergencies are considered to be reactive police work as they are predominantly citizen-initiated. Preventive patrol is proactive police work as it is initiated by the officer.<sup>2</sup>

In a report examining the first 20 years of problem-oriented policing,<sup>3</sup> Scott (2000) states that “[p]reventive patrol remains the predominant operational strategy of policing in terms of time spent, all research questioning its effectiveness notwithstanding” (86). Though the logic underlying preventive patrol has remained the same – that the presence of uniformed police officers will deter citizens from committing offenses, and will increase the probability that officers will interrupt offenses in progress (Scott, 2000) – one has to question if the patrol tactics which are employed have not changed in 20 years, in light of the efforts to incorporate proactive policing strategies into the reactive/incident driven policing approach. Operational strategies including differential police response, directed deterrent patrol, saturation patrol, crackdowns, foot patrol, field interrogations, and problem solving have been proposed to use downtime or preventive patrol time more productively for crime prevention. Sherman (1995) notes

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<sup>2</sup> A substantial part of vice work is considered proactive police work as well, e.g. narcotics, gambling, prostitution, the sale of pornography, and the sale of alcoholic beverages in violation of local regulations. Police departments normally have special divisions and units to handle vice separate from the patrol division, therefore, these proactive police activities are beyond the scope of this analysis.

that there is some evidence that law enforcement authorities have begun to use prevention-oriented strategies.

Many police departments claim to have implemented one or more proactive policing reforms, but efforts to evaluate their success have been difficult for several reasons. First, many departments that claim to have implemented a reform have adopted some of the strategies but have ignored the theory behind it, such as doing problem solving but not problem-oriented policing. Second, many reforms have become buzzwords, especially community policing. “The reality is that, while everyone talks about it, there is little agreement on meaning... the variety of activities associated with it seem to have little in common” (Skolnick & Bayley, 1988:4). Third, and related, police departments have taken tactics from many reform programs and created variations of programs, e.g. community policing specialists that do not routinely answer calls for service and thus are encouraged to patrol on foot, this variation of community-oriented policing could be more accurately described as “split-force community foot patrol.” Skolnick and Bayley (1988) note that “...most police forces are using community policing to embellish rather than transform traditional strategies” (16; see also Maguire, 1997). Fourth, even the academic literature has erased the lines that once delineated reform philosophies from one another. “Community-oriented” policing and “problem-oriented” policing are often used synonymously. Broken Windows, zero tolerance policing, and aggressive order maintenance have fallen under the community policing umbrella. As Skolnick and Bayley (1988) state “[t]his lack of programmatic clarity is cause for concern” (4).

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<sup>3</sup> Scott, M.S. (2000). *Problem-oriented policing: Reflections on the first 20 years*. Washington DC: U.S. Department of Justice, Office of Community Oriented Policing Services.

The concern is twofold. Without adherence to the philosophy of these reforms, in the future they may be viewed as failures, when in fact the failure may be due to hasty and half-hearted implementation (Gaines & Kappeler, 2003). The second concern is that collectively, these obstacles have hindered efforts in developing concrete goals and evaluating whether objectives have been achieved. An alternative way of examining what patrol officers are doing during downtime, and whether proactive policing reforms have trickled down from department implementation to patrol officer actions, is to examine patrol officers' activities and the catalysts for mobilization.

### *Self-Initiated versus Directed Activities*

Proactive policing reforms emphasize that officers engage in both self-initiated and directed activities based on crime analysis and problem identification. In general, community-oriented policing and problem-oriented policing<sup>4</sup> stress decision making by line officers based on their own observations and knowledge of the area they are assigned to patrol, but also on crime information made available to them by supervisors. Hot spot policing and managerial approaches such as Compstat, place the responsibility for planning and implementing patrol activities on commanders, lieutenants, or other supervisory personnel. Few studies have examined patrol officer downtime activities in any depth, even fewer have attempted to tap the concept of direction.

Lipsky (1980) notes that the behavior of street level bureaucrats when aggregated make up agency policy. Examining the impetus for officer mobilization for activities, specifically, whether downtime is spent on self-initiated tasks without input from

supervisors (discretionary), or whether it is spent on tasks assigned by a supervisor, or other officers (directed), takes the focus off the reform “program,” and provides a clearer picture of what officers are actually doing on the street.

### **Limitations of Existing Research**

#### ***Studies of Proactive Policing Strategies***

Most studies examining proactive policing reforms have been aggregate level surveys, case studies of specific programs by department, or reports on temporary controlled experiments. For example, studies have used macro level data to examine: levels and patterns of community policing implementation by geographic region and department size (Maguire, Kuhns, Uchida & Cox, 1997; Trojanowicz, 1994); and to examine whether departments that claim to have implemented proactive policing reforms have made the “necessary” organizational changes (e.g. deformatizing, delayerizing, civilianizing; for community oriented policing; Maguire, 1997). These studies cannot measure whether the administrative implementation of a strategy has filtered down to street level officers’ activities.

Case studies of beat policing (Criminal Justice Commission, 1995); problem oriented policing and problem solving (e.g. Eck & Spelman, 1987; Mazerolle & Terrill, 1997) and community policing (e.g. Weisel & Eck, 1994; Wycoff & Skogan, 1994), report outcome measures of crime reduction and/or displacement (among other outcome measures), but do not report the amount of time officers spend on the activities to achieve these outcomes. Reports on temporary controlled experiments such as crackdowns (e.g.

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<sup>4</sup> “Although Goldstein originally conceptualized this approach as a managerial tool, it has evolved in the field into a more decentralized structure emphasizing a participative and collegial approach (Eck & Spelman, 1987). As practiced, it places on police at the operational level the

Sherman & Rogan, 1995b), directed patrol (e.g. Cordner, 1981), and hot spots (e.g. Sherman & Rogan, 1995a; Sherman & Weisburd, 1995; Weisburd & Green, 1995), provide more detailed descriptions of activities and time. However, many of these experiments use specialized units or teams of officers that are exempt from responding to calls for service, and thus are not examining proactive policing during downtime (but see Sherman & Weisburd, 1995).

### *Studies of Patrol Officer Time Expenditures and Workload*

Greene and Klockars (1991) correctly observed

the determination of whether the police are focused on crime, order maintenance, or service has... been influenced by several methodological factors. The classifications systems used to record police behaviors, the level and kind of data used to measure workload, and the interpretive framework used by the investigators all contribute to our definition of police work (274).

The limitations of existing research on patrol officer workload in terms of illuminating reactive and proactive work, will be addressed using these three methodological factors.

### *Interpretive Framework*

As Greene and Klockars (1991) note, previous studies of police workload have generally used a base of all calls for service received (reactive work), or total patrol officer shift time. Greene and Klockars chose to use as a base “only that time in which the police officer is actively engaged in responding to calls for service or self-initiated activity.”<sup>5</sup> Using Greene and Klockars’ framework, reactive patrol work (responding to calls for service), and proactive patrol work (self-initiated/directed activities) are indistinguishable. To date, little research has been conducted using a framework of

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primary burden for identifying and analyzing problems, selecting and implementing response strategies, and assessing the results” (Mastrofski, 1990:27).

<sup>5</sup> Greene & Klockars (1991) study is examined in detail in Chapter Two: Studies Using Dispatch Records.

patrol workload during downtime, using as a base only that time in which the police officer is not responding to calls for service. Cordner (1979) found that most studies either ignored free patrol time, or presented only very general information. He noted, as free patrol time “accounts for about 50% of all patrol time – this is a serious omission” (52).

### ***Level and Kind of Data***

Early patrol workload studies using dispatch records (e.g. [Bercal, 1970; Lilly, 1978] as cited in Cordner, 1979) focus on the number and types of calls dispatched to patrol officers (reactive work) but do not permit analyses of officer activities when not responding to calls for service (proactive work). Field observation studies of police have examined the amount of time community officers versus patrol (beat) officers spend on proactive activities (e.g. community based service, problem focused, problem solving), but these activities are reported in percent of total time (average minutes per shift, or percent of eight-hour shift), not percent of downtime (see Frank et al. 1997; Parks et al. 1999; Smith et al. 2001).<sup>6</sup> Thus, some of these activities may be within the response to a citizen call for service. The field observation data used for the present study permit separate analysis of both reactive work (calls for service) and proactive work (downtime activities).

### ***Classification Systems Used to Record Police Behaviors***

In most studies, large numbers of original activity categories are collapsed into seven or eight general categories (e.g. assisting citizens, general citizen/business discussions, and security checks, are collapsed into “service”). The percent of time spent on service is reported, but there is no information provided as to which service activity

consumes the most time, e.g. assisting citizens or performing security checks. In addition, researchers have not consistently classified the same activities into the same broad categories e.g. response to a residential alarm may be classified as crime-related or service, depending on the study. This unnecessarily limits what is known about the amount of time spent on different patrol activities. This study focuses on downtime activities without unnecessary collapsing of activity categories.

### *Studies of Police Behavior*

The more detailed analyses of field observation data have focused on police *encounters* with citizens rather than police *activities*. Research on police situational choices in *encounters* has included police decisions to use force (e.g. Bayley & Garofalo, 1989; Friedrich, 1980; Klinger, 1995) and police decisions to arrest (e.g. Smith & Klein, 1982, 1984; Smith & Visher, 1981; Smith, Visher, & Davidson, 1984; Worden & Pollitz, 1984). Field observation research has also examined the effect of different variables (citizen characteristics, officer characteristics, situational characteristics, organizational characteristics etc.) on police choices and behavior in general (Bayley, 1986; Black, 1980; Klinger 1996; Novak, 1999; Sykes, Fox, & Clark, 1976), as well as the effect of specific variables on police choices, e.g. police department organizational scale (Mastrofski, 1981); citizen characteristics and citizen demeanor (Klinger, 1994; Lundman, 1994; Worden, 1989; Worden & Shepard, 1996). A few studies have reported the average time per shift that officers spend initiating encounters with citizens (see Whitaker, 1982). However, research on police situational choices and *activities*

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<sup>6</sup> These studies are reviewed in Chapter Two: Studies Using Field Observation Data.

has been limited to classification of activities into general categories, such as general patrol, meeting other officers, traffic surveillance and personal business (Kelling, Pate, Dieckman, and Brown, 1974; Cordner, 1982; Whitaker, 1982). *Except for ethnomethodological studies, there has been no research explaining their decisions about how unassigned time is used* (Mastrofski, 1990:5; *emphasis added*).

This study does not focus on the individual correlates of officer decision making regarding how downtime is used, but rather on the broader preliminary question of whether officers *are* making the decisions about how downtime time is used i.e. are officers being directed in their downtime activities or are they self-initiating all downtime activities? As well, this study attempts to explore whether there is evidence of decision making regarding downtime activities (whether self-initiated or directed) being guided by a key component of proactive policing – problem identification.

### ***Summary***

The existing studies of proactive policing, patrol officer time expenditures and workload, and police behavior, have neglected three issues in policing: proactive policing activities at the street level; patrol officer use of downtime and the activities officers conduct during this time; and factors influencing police decisions about how downtime is used. In order to develop a theory of police behavior, it is important to know what police do with their downtime, and what factors influence their decisions. Since most of the recent policing reforms rely on proactive behaviors, it is important to know whether patrol officers have the opportunity to engage in proactive activities, and also, to what extent they are responsible for initiating activities.

This study moves beyond traditional studies of patrol officer time expenditures and workload by providing a descriptive analysis of: first, how much downtime patrol officers have; second, what activities patrol officers are engaged in during downtime and to what extent activities are self-initiated or directed; and third, factors which may explain variation in officer self-initiated and directed activities during downtime. In this manner, the present study contributes to what is known about proactive policing activities at the street level.

### **Limitations of the Present Study**

Data for the present study were initially collected during 1999, as part of a larger study funded by the National Institute of Justice (Grant 98-IJ-CX-0067). The primary purpose of the larger study was to assess the impact of implementing alternative methods for handling non-emergency citizen calls for police service on the quality and quantity of policing. Non-emergency call systems in four U.S. cities were examined and compared, Baltimore was one of these cities. The Computer Aided Dispatch data (CAD) and the field observation data collected for the larger study are used for the present research. It is important to note that decisions regarding the data collected and the methods used were driven by the purposes of the larger study (e.g. selection of sample patrol areas for field observation, sampling patrol rides) the specific limitations of the data collected are addressed as they arise in Chapter Three.

### ***Baltimore as the Study Site***

#### ***The 311 System***

Baltimore introduced a 311 non-emergency call system on October 1, 1996. One of the goals of the implementation of 311 was to divert non-emergency citizen calls for service away from 911 and a prioritized patrol unit response, to a 311 telephone number

and an alternative police response (which was not supposed to involve dispatching a patrol unit). Relieving patrol officers from responding to non-emergency calls for service was intended to provide patrol officers with more time to engage in proactive policing activities. Results from the larger study indicate that this objective had not yet been achieved at the time of study. Ninety-nine percent of the 311 calls for service that were dealt with using the alternative police response, were also first dispatched to a patrol unit in the usual prioritized response manner – the alternative response was more accurately, an additional response (See Mazerolle, Rogan, Frank, Famega & Eck, 2001). Results from the larger study indicate that there was virtually no change in the number of patrol units handling calls for service before and after the implementation of the 311 system<sup>7</sup> (See Mazerolle, Rogan, Frank, Famega & Eck, 2002). However, the study did find an overall decrease in the time spent handling calls for service (both 911 and 311) after the implementation of 311 (an 11 percent decrease per unit per shift; see Mazerolle et al. 2002). Through computing “blocks” of downtime (more than 30 consecutive minutes of downtime), this decrease in time spent per unit per shift responding to calls for service, did not translate into significantly more time slots available for patrol officers to engage in problem-oriented and community policing activities.

From the patrol perspective, 311 calls are handled the same way as 911 calls, they are dispatched to units from the communications center, and thus, are reactive patrol work. In fact, through conducting field observations of patrol officers it became apparent that officers rarely knew the origin of a call for service (911 or 311), as dispatchers did not provide this information to the officers. As well, a patrol officer

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<sup>7</sup> The pre- and post-intervention periods are two years preceding and following the implementation of 311 on October 1, 1996.

survey revealed that the majority of responding officers stated that they did not perceive 311 to have had an impact on the quantity or quality of calls to which they were dispatched, or the amount of discretionary time available (Mazerolle et al., 2002).

In light of these findings from the larger study, it is probably safe to conclude that the existence of the non-emergency call system in Baltimore is not an *additional* factor in the generalizability of the findings from the current research to police departments (and cities) that do not have a non-emergency call system. It appears that the non-emergency call system in Baltimore has little effect on how Baltimore patrol officers spend their time, or the amount of time available to engage in proactive policing activities.

### ***Crimestac and Sector Management***

At the time of study, the Baltimore Police Department employed a strategy known as Crimestac. Similar to Compstat, Crimestac uses computerized crime incident mapping to identify patterns and crime trends. District Majors (commanders) and Sector Lieutenants (managers), are provided with the data to structure unit (e.g. patrol, community outreach, flex, neighborhood services) operations in their area of responsibility. Crimestac meetings are held monthly to review and discuss the measures that commanders are using to address crime problems in their districts.

Using crime data to structure patrol operations is neither new nor unique to the Baltimore Police Department. The extent to which these data are used to direct patrol officers may, however, depend on the management style of the agency and the individual styles of supervisors. The Baltimore police department employs a *sector management* approach. Each of the department's nine districts are divided into sectors, all districts

have three or four sectors which are subsequently divided into posts (beats). The sectors are determined by geographical boundaries and activity level. A lieutenant is assigned to each sector as the sector manager, and is responsible for crime and policing within their sector 24 hours a day, seven days a week (in contrast to the traditional shift lieutenant position which required the lieutenant to be responsible for policing in the entire district, but only during a designated shift). The presumption is that the sector managers can then concentrate their efforts on developing crime control/prevention and policing strategies that are most applicable to their designated area, and that both lieutenants' and officers' responsibility for ongoing problems will increase. Under this management approach it is plausible that lieutenants (Sector Managers) may make more use of directives (as compared to traditional shift lieutenants) because of the great level of autonomy they are granted in managing their sectors. However, this study cannot and does not control for individual supervisor style.

### *Summary*

The use of Crimestac and the sector management approach should be considered when interpreting the results of this study, but the Baltimore police department is similar to police departments operating under different management philosophies in many ways. The Baltimore police department is a large department that receives a high number of calls for service from citizens dealing with the typical urban issues of drugs, crime and economic decline. The above issues raise questions as to the generalizability of the findings to other police departments but are not detrimental to the study. The next chapter, (Chapter Two) reviews the literature examining patrol officer workloads.

## CHAPTER TWO REVIEW OF THE LITERATURE

This chapter provides a review of the existing literature which examines the amount of downtime available to patrol officers to engage in proactive policing activities; proactive patrol strategies that have been employed to structure officer's downtime; and officer self-initiated and directed activities. Prior studies of officer workload are examined in depth to explore the nature of, and time spent on activities conducted during downtime.

### **Downtime**

Recent estimates suggest that patrol officers spend somewhere between 20 percent and 40 percent of their shift responding to citizen calls for service (Frank et al. 1997), this still leaves an average of 60 to 80 percent of an officer's shift available for proactive activities. Earlier studies have found that between 37 and 85 percent of an officer's shift is downtime (Boydston, Sherry & Moelter, 1977; Reiss, 1971, respectively).<sup>8</sup>

Kessler (1993) notes that "some of this idle time is consumed on administrative tasks, but much of that idle time is uncommitted time—that is merely being available and waiting for an emergency to occur" (489). He argues that "much of the alleged overwork [of patrol officers] is an exaggeration", citing a staffing study conducted in the Houston Police Department in 1983:

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<sup>8</sup> The studies conducted by Frank et al. (1997), Boydston et al. (1977) and Reiss (1971) are reviewed in this chapter under the section: Studies of Patrol Officer Time Expenditures and Workload.

Officers claimed to be responding to 10 calls per shift. Statistics indicated, however, that the average number of calls per shift ranged from a low of 1.87 to a high 3.52 per officer per shift. Officers argued that these statistics overlooked backups...but supervisors noted (and some officers also admitted) that officers were “wolf-packing.” Because the workload was low, all available officers would respond to the same call and report it on their work cards, while citizens wondered why so many officers were at the scene (488).

Other studies of time availability have suggested that officers have more discretionary time than they report (Eck & Spelman, 1987; Skolnick & Bayley, 1986), and it has been suggested that it is the unpredictable element in the dispatching of calls that leads officers to believe that they spend their shifts running from call to call (Gay, Schell & Schack, 1977). The amount and use of downtime are more closely examined in this chapter under the section: Studies of Patrol Officer Time Expenditures and Workload.

### **Proactive Patrol Strategies**

In the late 1970s, police researchers and administrators began to examine ways to use downtime or preventive patrol time more productively. In a prescriptive package to improve patrol productivity,<sup>9</sup> Gay et al. (1977) described the then-current use of downtime:

...[W]hen officers are not responding to calls for service, they are engaged in preventive patrol: quasi-random movement through their beats.... In the typical department, officers are given total discretion with regard to how they use preventive patrol time. Sergeants will sometimes identify priorities for officers during roll call; and, occasionally a department will supply patrol officers with crime trend analysis which can be used to plan self-initiated activities. In most instances, however, officers are free to use this time as they want and receive little direction from their immediate supervisors or other patrol managers (5).

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<sup>9</sup> Sponsored by the National Institute of Law Enforcement and Criminal Justice, the Law Enforcement Assistance Administration, and the United States Department of Justice.

They also noted that “noncommitted time has frequently been regarded as a residual having little function other than to insure the availability of officers to repond [sic] quickly to service calls,” and that “[t]he attention paid by police managers to calls for service and response time has not been matched by an equal commitment to understanding and improving officer activities when they are performing preventive patrol...” (4, 10). This report came on the heels of three studies conducted within the Kansas City Police Department.

First, the controversial Kansas City Preventive Patrol Experiment (Kelling, Pate, Dieckman & Brown, 1974),<sup>10</sup> which was “an attempt to test the effectiveness of traditional preventive patrol, at least as practiced in the Kansas City Police Department” (Larson, 1975:268). The experiment (in spite of methodological problems) suggested that “the noncommitted time of the police officers (60 percent in the experiment) can be used for purposes other than routine patrol without any negative impact on public safety” (McNamara in Kelling et al. 1974:vi). Second, The Kansas City Response Time Study (Kansas City Police Department, 1977), which, although limited to Part I crimes, suggested that rapid response time is critical to only a limited number of calls for service, such as crimes in progress and medical emergencies, because citizens’ delays in calling the police often exceed the police response time, and most crimes are discovered long after the offender has left the scene of the crime (see also Spelman & Brown, 1981). Third, another study of response time which examined the relationship between response time and citizen satisfaction with police services (Pate, Ferrara, Bowers & Lawrence, 1976), found that citizens were equally satisfied with response time whether a unit

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<sup>10</sup> Findings from this experiment are reviewed in more detail under the section: Studies of Patrol Officer Time Expenditures and Workload later in this chapter.

arrived in five minutes or in 45 minutes, when notified of the approximate arrival time (see also Cahn & Tien, 1981; McEwen, Connors & Cohen 1986; Worden 1993).

In light of these findings, one of the goals of the Gay et al. (1977) report on improving patrol productivity, was to indicate how patrol managers could more effectively structure and use preventive patrol time in order to accomplish specific patrol objectives. They focused on directed patrol programs utilizing crime analysis and employing crime deterrence tactics such as saturation patrol and field interrogation. They also identified “variations in directed patrol programs” (Gay et al. 1977:124) that departments had been experimenting with at that time, community-oriented policing, directed deterrent patrol, and directed apprehension patrol.

One of the programs identified in the prescriptive package was a community-oriented policing (COP) program implemented in San Diego with the focus of improving deteriorating police-community relations in the late 1960s and early 1970s. The Community Profile Development Project (see Boystun & Sherry, 1975) put the principal responsibility of analyzing police-related problems on patrol officers, giving them tools such as census data, crime trend analysis, and traffic information, to organize and plan beat-specific, and goal-oriented activities for their unassigned patrol time. The program was based upon “an extensive effort to decentralize many patrol decisions from command levels to individual police officers,” and the assumption that “each patrol beat or community within a city has unique social and law enforcement problems that can only be adequately addressed when patrol officers have a clear understanding of these problems” (Gay et al. 1977:127).

Directed deterrent patrol programs were implemented in various cities, among them: Kansas City, Missouri; New Haven, Connecticut; and Cleveland Heights, Ohio. Like the San Diego community-oriented policing program, the Kansas City directed patrol program was also an experiment in decentralized decision-making, but put the responsibility of planning and implementing directed patrol activities on patrol sergeants, rather than individual officers. Kansas City developed a management information system which catalogued crime prevention, deterrence, and apprehension oriented patrol tactics for problems identified through crime analysis. Where COP emphasized the importance of the patrol beat, in Kansas City directed patrol de-emphasized the beat and made the sector (an area patrolled by a sergeant and several officers)<sup>11</sup> the focus for planning activities “beat boundaries are regarded only as administrative districts and sergeants are free to redeploy officers within sectors according to short-term service demands and crime trends” (Gay et al. 1977:130). New Haven, Connecticut employed a directed deterrent patrol program which relied almost entirely on visible preventive patrol. Patrol activity was directed by detailed crime analysis, written directions were prepared describing in detail the way the problem areas were to be patrolled, and patrol directives were activated at specific times determined by crime analysis. The directed deterrent runs (D-runs) were performed during time that was formerly devoted to random patrol, and D-runs were assigned the same priority as dispatched calls for service (Gay et al. 1977).

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<sup>11</sup> This method of resource allocation and deployment is similar to the “sector management” approach employed by the Baltimore Police Department.

The Wilmington, Delaware Police Department implemented a directed apprehension patrol program that was evaluated by the National Institute of Justice. Referred to as the Wilmington Split-Force Experiment (Tien, Simon & Larson, 1978),<sup>12</sup> the experiment examined the utility of splitting the patrol service into two groups – one to handle calls and the other to pro-actively suppress crime by providing concentrated patrol coverage in areas of the community experiencing high crime rates. A directed patrol experiment was also conducted in Pontiac, Michigan during 1978 and 1979, assigning the sole duty of conducting D-runs to a specific group of officers (see Cordner, 1981).

A national assessment of police directed patrol (Fennessy, 1983) found that “[d]irected patrol’s main advantages over the traditional model of preventive patrol appear to be more in the area of improved management of the patrol force than in impact on crime, despite some program examples to the contrary” (1). Fennessy also noted that “[s]uch a program, if carefully planned and managed, should not degrade police capabilities for responding to calls for service” (1).

In 1979, Goldstein introduced his “problem oriented approach” to policing, which called for “the police to take greater initiative in attempting to deal with problems rather than resign themselves to living with them” (Goldstein, 1979: 491). Unlike COP and directed patrol, the problem oriented approach was not a program or patrol strategy, but a call for the police “to improve their understanding of the underlying conditions that give rise to community problems and to respond to these problems through a much wider range of methods than they have conventionally used” (Scott, 2000:2). Goldstein identified that many of the problems that police deal with are only symptoms of other

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<sup>12</sup> Findings from this experiment are reviewed in more detail under the section: Studies of Patrol Officer Time Expenditures and Workload later in this chapter.

(larger) underlying problems, and that many calls from citizens that may seem unrelated, are actually due to the same underlying problem. Problem oriented policing does not seek to deal with the underlying causes of deviance, disorder or crime, but instead, “it is concerned with those constellations of mediating factors that can be practically controlled” (Bittner, 1990). In 1981, Goldstein and his associates worked with the Madison (Wisconsin) Police Department in the first formal experiment applying his model, and other departments soon followed (Baltimore County Police Department, 1983; Newport News Virginia Police Department, 1984).

Soon after, Wilson and Kelling’s (1982) “Broken Windows” theory asserted that police are the key to order maintenance, and that by “having the police and community address the many minor community incivilities and signs of neglect, more serious crimes and disorder will be prevented” (Scott, 2000:24). They believed that foot patrol was a strategy which could improve public order and reduce citizen fear in deteriorating communities (even though a prior [Police Foundation study] concluded that foot patrol did not reduce crime rates; see also Trojanowicz, 1983).

More recently, technological advances in crime analysis and crime mapping have led to operational strategies such as Compstat<sup>13</sup> (Crimestac in Baltimore) and hot-spot policing. In essence, Compstat is a crime analysis method by which computerized crime statistics and quality of life incidents are analyzed for their commonalities and patterns and presented to operational commanders, who are then responsible for developing operational tactics to respond to emerging crime patterns (Scott, 2000). Compstat meetings are held regularly, and are known as “the place where precinct commanders are

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<sup>13</sup> The name “Compstat” arose from “Compare Stats,” a computer file name, and not, as is commonly thought, from an abbreviated version of “computer statistics” (Silverman, 1999).

grilled on crime-reduction efforts. This impression reinforces the patrol officer's desire to combat crime" (Silverman, 1999:194). Hot-spot policing uses crime mapping to establish relationships between crime and disorder and other geographic phenomena, so that police may "concentrate their attention and resources on places where and times when there is a significantly high volume of demand for police services" (Scott, 2000:24; see also Sherman & Weisburd, 1995).

In light of the theory and research addressing proactive policing that has emerged over the last 25 years, one would hope that when officers are not responding to calls for service, they are *not* engaged in "quasi-random movement through their beats...." (Gay et al. 1977:5). But somewhere along the way, we have lost sight of one of the initial goals of policing reform – to make policing more proactive and less reactive through the restructuring of preventive patrol time to accomplish patrol objectives. The focus has become the reform programs rather than the available patrol time. Departments have created specialists, units, and teams that do not respond to calls for service, to implement the programs, which among the program goals were to make patrol time more productive. As Goldstein (1979) noted, the police often become so preoccupied with their methods of operating that they lose sight of the purpose for the operational decisions. As a result, we still know surprisingly little about what patrol officers are doing during downtime, and whether preventive patrol has in fact become more proactive.

## Self-Initiated versus Directed Activities

### *Self-Initiated Activities*

Many scholars have commented on the discretion exercised by patrol officers in performing self-initiated activities. Webster (1970) notes that officers are not monitored in conducting self-initiated activities as they are in responding to calls for service via completion of reports, and that for self-mobilized events, officers can choose the citizens with whom they make contact. He states that police are mobilized more often by the action of the private citizens and police headquarters than by patrol initiative. Yet Mastrofski, Parks, Reiss, Worden, DeJong, Snipes, and Terrill, (1998) found that on average 74 percent of a beat officer's shift is self-directed time, during which officers are engaged in self-directed tasks (as opposed to a task assigned by a dispatcher or supervisor). They provide no information regarding the self-directed tasks that officers are engaged in but state

[s]elf-directed time is not necessarily time uncommitted to a focused task. During self-directed time, an officer may *choose* to initiate contact with the public or to respond when someone waves him down. Or the officer may *choose* to engage in other problem-focused activities, such as traffic surveillance, business security checks, or doing paperwork. Thus, an officer with a great deal of self-directed time may nonetheless be a busy officer, albeit at his or her own choosing (41).

Without any information about the tasks that officers are doing during self-directed time it can only be concluded, for this (anonymous) police department, that on average 74 percent of an officer's shift time is downtime (not responding to calls for service), and that supervisors in this department do not provide beat officers with directives (thus all downtime is self-directed time). Officers may be self-initiating security checks, traffic surveillance or citizen encounters during this time, or they may be self-initiating meal breaks, personal errands or random patrol.

Not everyone has been a proponent of (or at least without reservations about), officer self-initiated proactive policing. Webster (1970) comments “[t]hese [self-initiated] activities except for the security check do the least good for the community and produce tremendous hostility” (112). Boydston et al. (1977) state

with the exception of field interrogations (which were shown by an earlier Police Foundation/San Diego Police Department Study to have probable crime deterrent effects) and traffic citations (which are known to produce revenues), there is little evidence that officer-initiated activities are of practical value to law enforcement. It may be that unit “readiness” or time available for assignment to additional calls is more important than unit activities performed during the available time (53).

The few studies which examine officer self-initiated activities are more closely examined in this chapter under the section: Studies of Patrol Officer Time Expenditures and Workload.

### *Directed Activities*

With the exception of studies which categorized dispatched calls as directed activities (directed by the dispatcher), there is little research on the day to day directed activities that patrol officers engage in or how much time is devoted to directed activities. The Kansas City Directed Patrol Project (Kansas City, MO Police Department, 1980), reported that sergeants successfully used uncommitted patrol time for directed patrol activities (saturation, investigative followup, tactical deployment and community crime prevention) which amounted to ten percent of their patrolling.

The lack of research on directed activities may be, as Whitaker (1982) suggests, because patrol activities “are usually not directed either by supervisory personnel or by conscious planning of the patrol officers themselves” (217). Greene and Klockars, (1991) note that patrol activities are “generally unsupervised or undersupervised either by the law or legal system, or by police supervisors and administrators” (274). The

increased emphasis on crime analysis and problem identification suggests that supervisors should be providing more direction to patrol officers to structure downtime activities. However, with a few exceptions, studies of specific initiatives in hot-spot policing and police crackdowns using directed patrol indicate that police administrators are using specialized units (or the split-force approach) for directed patrol activities, which raises the question once again, what are patrol officers doing during their downtime?

### **Studies of Patrol Officer Time Expenditures and Workload**

Researchers and theorists have been analyzing patrol officer time and tasks for years. Multiple methods of data collection have been used to conduct these analyses: dispatch records, patrol officer surveys, activity reports (officer logs) and field observations of officers. The type of data reported across studies varies considerably. The strengths and weaknesses of these data collection methods, and the types of data reported are summarized below.

#### ***Data Collection Methods***

The most frequent source of data for patrol workload studies are dispatch records ([Bercal, 1970; Lilly, 1978] as cited in Cordner, 1979; Reiss, 1971; Webster, 1970; Wilson, 1968; but see also Boydston et al. 1977; Greene & Klockars, 1991; Tien, Simon & Larson, 1978). Dispatch records are collected at the communications center of a police department. The primary advantages of using dispatch records are "the ease of data collection, the frequent availability of computerized records, the accuracy of the time data, and the simplicity of relating incidents to patrol time consumed handling them" (Cordner, 1979:51). Cordner notes that dispatch records do not include information

concerning tasks performed by patrol officers about which the dispatcher is not informed, or information concerning what police officers do during their free patrol time, and that much of the information is self-reported by patrol officers and therefore may be suspect. For example, when officers report to the dispatcher that an encounter has ended, this indicates that the officer is free for reassignment, thus an incentive exists for officers to delay such reports (Whitaker, 1982). More specifically, Whitaker (1982) notes that some dispatch records do not record encounters initiated by officers or citizens "in the field", and that traffic stops are also frequently not recorded unless a citation is issued.

Activity reports or officer logs maintained by officers during their tours of duty, are the second most often used data collection method (see [Arkell & Knight, 1975; Martin & Wilson, 1969; Miller & Weeks, 1972; O'Neill & Bloom, 1972] as cited in Cordner, 1979). The advantages of officer logs are that all members of a police department can be included, and that information can be recorded soon after the completion of activities (Cordner, 1979). Activity reports have two general weaknesses. First, they are self report data, and therefore are subject to bias and error; "their accuracy is dependent on the cooperation, honesty, and interest of individual patrol officers" (Cordner 1979:51). Second, although they present information about the extent of free patrol time, generally there is little or no information about how that time is used. "It may in fact be difficult or pointless to sub-classify the use of free patrol time, but these studies present no data on which to make a judgment" (Cordner, 1979: 56).

Surveys or questionnaires can be used to collect information on officer estimates of average allocation of time and frequency with which they perform activities. These have not been used very frequently (but see [Cordner, 1978, Galliher, Donovan &

Adams, 1975] as cited in Cordner, 1979). The advantages are that information can be obtained easily and cheaply. The disadvantages are that self-reporting is the source of the data, "and that officers may be unable to accurately estimate their average time utilization or frequency of task performance" (Cordner, 1979:51).

Systematic social observations (field observations) use trained observers accompanying officers on patrol to record the use of patrol time and the nature of patrol tasks. Observer reports may be less biased than dispatch records because they are less likely to be used for management of individual officers (Whitaker, 1982). Cordner states "the use of observers should result in the most accurate and detailed information, as the observer can concentrate on collecting data, is more aware of the aims of the research, can account for every minute of the tour of duty, and is not personally the object of the study" (1979:51). The major disadvantage is that they are costly. Few studies have relied on field observations as the source of their data (see Cordner, 1979; Kelling et al. 1974; but see also Frank et al. 1997; Parks et al. 1999; Smith et al. 2001; Whitaker, 1982). Observation studies have been criticized because observers may be restricted from accompanying certain officers or responding to certain types of calls, and concern has been expressed that officers may behave atypically with an observer present (reactivity; Cordner, 1979). However, Cordner's (1979) review of thirteen studies conducted between 1965 and 1978 examining patrol workload, found that the two observation studies provided the highest estimates of patrol time allocated to nonpolice activities, and the most detailed descriptions of police use of free patrol time. He concluded that "there seems to be strong evidence in favor of the use of the observation method of data

collection, at least for those studies that purport to describe or analyze the totality of patrol workload” (1979:57).

The present review of studies of patrol officer time/workload, focuses only on those studies which have used data collected from dispatch records or field observations of officers for two reasons. First, field observation data has been suggested to be the most detailed source of data (Cordner, 1979). Second, one of the objectives of the present study is to compare field observation data to dispatch data to determine how much “downtime” officers have, and whether dispatch data can be used as a substitute for more expensive observation data.

### *Type of Data Reported*

Cordner (1979) notes that the type of data reported in studies of patrol workload, is an important consideration in reviewing and comparing results across studies. In his review of studies, Cordner found six general categories of information to be differentially reported: 1. calls to police, 2. patrol calls dispatched, 3. activity time (in addition to or in place of data about numbers of calls, some reported information about the time spent on calls by patrol units), 4. self-initiated activities (some reported information about discrete, specific tasks such as traffic stops that patrol officers initiate themselves), 5. administrative time (report writing, vehicle maintenance, reporting to sergeant, and taking breaks), and 6. free patrol. In addition, Cordner found that information regarding the categories of patrol calls, activity time, self-initiated and administrative activities were reported in over half of the studies he reviewed. Slightly more than one third of the studies reported information about calls to the police. Less than one third reported data about officer use of free patrol time. "Inasmuch as free patrol time is estimated to

account for about half of all patrol time nationally, the failure of most studies of patrol workload to analyze the use of free patrol time is a substantial and damaging omission.... Most patrol workload studies have failed to investigate 50% of what patrol officers do and are regularly cited as evidence of the true nature of police patrol work” (Cordner, 1979:52).

Unlike many previous studies of patrol workload which have focused on calls for service, calls dispatched, and the time spent responding to various types of situations (law enforcement, service, order maintenance), the interpretive framework of this study is patrol workload during downtime. The primary focus of this study is on activities engaged in during officer downtime, or time not responding to dispatched calls for service. Studies using data collected by dispatch records or field observation which do not include measures of activity time by activities other than calls dispatched to patrol are not included in this review (e.g. [Bercal, 1970] as cited in Cordner, 1979; Cumming, Cumming & Edell, 1965; [Lilly, 1978] as cited in Cordner, 1979; Wilson, 1968). However, studies which examine time spent on administrative activities, patrol, personal activities, and self-initiated activities are reviewed because collectively, these activities constitute officer downtime.

### ***Studies Using Dispatch Records***

#### ***Webster, 1970.***

Webster (1970) studied the patrol division in the police department of "Baywood" a city with a population of nearly 400,000 citizens. Every assignment to which patrolmen [sic] were dispatched over a 54-week period was accounted for and cataloged. Webster reports on a total of 599,211 assignments for the period: 540,481 Primary assignments

(unit initially assigned to a call for service), and 58,730 Cover assignments (additional units assigned to a call). The time consumed on each individual assignment was also recorded. Primary dispatches accounted for 277,475 hours, cover assignments used 23,652 hours. The total consumed time was 301,127 hours.

Each assignment to which an officer was dispatched was coded (homicide, assault, rest break etc.). The nearly 600,000 assignments were reduced to 109 types of events which were further grouped into 6 categories: 1. Administration: coffee breaks, meals, community relations, taking reports, running errands, attending court, serving warrants, performing as police technicians; 2. Crimes against property: burglary and burglary alarms, burglar alarms, auto theft, petty theft, defrauding a cab driver or inn keeper, malicious mischief, suspicious persons, bad checks; 3. Social services: family crisis, drunkenness, mental illness; 4. Traffic: accidents, abandoned vehicles; 5. Self-initiated assignments: walk stop, car stop, security check, autostatis, warrant check; and 6. Crimes against persons: murder and non-negligent manslaughter, rapes, assault and battery, robbery (see Table 2.1).

Table 2.1: Time Patrol Officers Spent on Dispatched Assignments in “Baywood” Over a 54-Week Period

Activity	Description of Activity	Frequency (%)	Consumed Time (%)
Administration	attending court	39.28	50.19
	coffee breaks		
	community relations		
	meals		
	performing as police technicians		
	running errands		
	serving warrants		
	taking reports		
Crimes against Property	bad checks	13.76	14.82
	burglary and burglary alarms auto		
	defrauding a cab driver, inn keeper		
	malicious mischief		
	petty theft		
	suspicious persons		
	theft		
Social Services	drunkenness	17.27	13.70
	family crisis		
	mental illness		
Traffic	abandoned vehicles	7.16	9.20
	accidents		
Self-Initiated	autostatis	19.68	9.10
	car stop		
	on-view		
	security check		
	walk stop		
	warrant check		
Crimes against Persons	assault and battery	2.82	2.96
	murder and non-negligent manslaughter		
	rapes		
	robbery		
Total		99.97	99.97

*Note.* Adapted from “Police Task and Time Study,” (p. 106), by J. A. Webster, 1970. In *Policing: A view from the street*, edited by P. K. Manning and J. Van Maanen. Santa Monica, CA: Goodyear.

Webster's study did not include data on patrol tasks about which the dispatcher was not informed, nor about how police officers used their general free patrol time (Cordner, 1979), but many of Webster's activities are downtime activities (activities not conducted in response to a citizen call for service; e.g. all listed administration activities with the exception of taking reports, and all self-initiated activities). Webster found that 50 percent of patrol time was consumed by administrative activities, almost 14 percent of officers' time was spent on social services dispatches, and nine percent of patrol time was spent on each of the categories of traffic and self-initiated activities. The Baywood officer took initiative in mobilizing himself for six different types of events: 1. Autostatis: rolling stop, check of vehicle registration against statewide file of stolen and suspicious vehicles; 2. Car stop: includes parked vehicles both occupied and unattended as well as moving; 3. On-view: violations patrolman observes; 4. Security check: commercial establishment; 5. Warrant check: involves stopping vehicles in hope of apprehending individuals with outstanding warrants, and 6. Walk stop: stopping and questioning of individuals on foot.

Cordner (1979) estimated the portion of patrol time not accounted for by the study using the manpower figures presented in Webster's (1970) article. He concluded that "a very conservative estimate is that 28% of total patrol time was not accounted for" (Cordner, 1979:55). From the information that Webster did provide, it can be inferred that at least 59 percent of the time reported was spent on downtime activities (50% administration + 9% self-initiated = 59%). However, this is an overestimate of the total time spent on these activities, and an underestimate of total downtime as Webster did not include free patrol time. Webster provides no specific information about how much time

officers spend on each of these downtime activities, and does not report the average time per shift on activities.

***Reiss, 1971.***

As part of a larger study of policing which also included extensive use of observers, Reiss (1971) used dispatch records from the Chicago Police Department for March 31 to April 27, 1966, to estimate the number of hours spent by beat cars on major types of patrol activity (see Table 2.2). Reiss reports that there were 1,121 beat cars assigned to routine patrol during the 28-day period. "Allowing routine lunch or rest breaks, we estimate a car to be in service on patrol duty 22 hours each day. For the 1,021 [*sic*] beat cars, this amounts to 22,462 hours in service each day or an estimated 628,391 car hours for the 28-day period" (Reis, 1971: 94). Two men were assigned to 384 of the beat cars thus the daily man hours on patrol amounted to an estimated 865,480 hours during the 28-day period.

The patrol division reported an average of 62 minutes in service to handle each criminal incident and 39 minutes for each non-criminal incident. Reiss estimated the man hours spent by patrol in handling dispatched and on-view encounters using these average times to be 14 percent of the time on dispatch and 86 percent of the time on routine preventive patrol, with less than one percent of the time on patrol spent handling on-view matters (Reiss, 1971). Like Webster, Reiss does not report the average time per shift on these activities. As well, Reiss did not present any details concerning what officers did during routine patrol time, a substantial omission in light of the amount of time officers spend engaged in routine preventive patrol.

Table 2.2: Estimated Hours Spent by Beat Cars on Major Types of Patrol Activity in the Chicago Police Department, March 31 to April 27, 1966

Allocation of Beat Car by Activity	Total Car Hours	% by Activity	% of In-Service	% of Preventive Patrol
Dispatched subtotal	(87,957)	(14)	(94)	--
Noncriminal incident	69,849	11	75	--
Criminal incident	18,108	3	19	--
On-view subtotal	(5,334)	(1)	(6)	1
Noncriminal incident	4,335	0.7	5	0.8
Criminal incident	999	0.1	1	0.2
In-Service subtotal	(93,291)	(15)	100	--
Routine Patrol	535,100	85	--	99
Preventive subtotal	(540,434)	(86)	--	100
Total Activity	628,391	100	--	--

*Note.* Adapted from *The police and the public* (p.95), by A. J. Reiss, 1971, New Haven, CT: Yale University Press.

Dashes indicate percentages were not provided.

***Boydston, Sherry and Moelter, 1977.***

Boydston, Sherry, and Moelter, (1977) examined patrol management issues (unit performance, unit efficiency, officer safety and officer attitudes) by comparing groups of one- and two-officer units operating in similar areas under similar conditions in San Diego. Using a stratified sampling design, 44 patrol units were selected. Half of the selected units were assigned as one-officer study units, and the other half as two-officer study units. Using 12 seven-day sample periods of dispatch data, Boydston and colleagues compiled a master data base which included complete dispatch records for 13,119 call-for-service incidents. From this data base researchers identified 10,839 incidents in which a study unit was given the primary assignment (1977:24). Table 2.3 illustrates their summary findings for unit efficiency.

To determine the average out-of-service time per watch for one- and two-officer units, Boydston multiplied the average call for service assignments per watch by the average time (in minutes) per assignment. Out-of-service time encompasses the length of time between the time the unit is assigned to a call and the unit becomes available for reassignment (Boydston et al. 1977:50). They report that one-officer units spent (on average) 63 percent of their shift answering calls for service, and two-officer units 52 percent, which left 37 percent of time (almost 3 hours) unassigned for one-officer units, and 48 percent of time (almost 4 hours) unassigned for two-officer units. The average two-officer unit had almost one hour (54.7 minutes) more unassigned time per watch, or about two hours more officer time, available for officer-initiated activities than did the average one-officer unit.

Table 2.3: Comparative Analysis of Unit Efficiency by Type of Unit, San Diego, 1975

Study Units	Call-for-Service Assignments/Watch		Out-of-Service Time/Assignment		Out-of-Service Time/Watch		Unassigned Time/Watch	
	(X)		(X <sup>a</sup> )		(X <sup>a</sup> )	(%)	(X <sup>a</sup> )	(%)
One-Officer Units	6.28	x	48.4	=	303.9	63.3	176.1	36.7
Two-Officer Units	6.68	x	37.3	=	249.2	51.9	230.8	48.1

*Note.* Adapted from *Patrol staffing in San Diego one-or two-officer units* (p.53), by J. E. Boydston et al., 1977, Washington, DC: Police Foundation.

<sup>a</sup> Mean minutes

They note that their analysis “treats all officer-initiated activities as occurring during time not spent on calls-for-service” even though “some of these activities are performed during unit time allocated to servicing calls-for-service, but the exact proportions are unknown. Also some of the available time is consumed in nonpatrol

functions such as meals. Again the exact proportions are unknown and are assumed to be equivalent for both types of units” (Boydston et al. 1977:53).

It is difficult to compare the results of Boydston et al. (1977) with those of Webster (1970) because Boydston and colleagues report time spent on calls for service (out of service time), and unassigned time, while Webster reports time spent on dispatches. However, Boydston’s findings for unassigned time (and officer-initiated activities) in San Diego (37 percent and 48 percent per watch for one- and two-officer cars respectively), are much lower than Reiss’s (1971) overall findings for Chicago (87 percent of time spent on routine patrol and on-view [self-initiated] tasks).<sup>14</sup> The present study uses essentially the same framework as Boydston et al. (1977), but expands the analyses beyond the amount of unassigned time available, focusing on the activities conducted during this time.

*Tien, Simon and Larson, 1977.*

The Wilmington Split-Force Experiment was formally conducted for one year (December 1, 1975 – November 30, 1976) to test the efficacy of the split-force patrol concept. “Split-force patrol is an approach in patrol specialization, based on the separation of the call-for-service (CFS) response and crime prevention functions of a police patrol force” (Tien, Simon & Larson, 1977:iii). The Wilmington Bureau of Police patrol division which served a resident population of 80,386 (1970), was split into the two function oriented forces—the response-oriented, “basic” patrol force and the prevention-oriented, “structured” patrol force. Seventy sworn officers were assigned to basic, while 27 officers were assigned to structured.

Call-for-Service (CFS) cards were used to calculate the basic workload related statistics. At that time a CFS card was completed by both the complaint-taker and the dispatcher for every primary and assist call-for-service. The time statistics were punched on the cards by a time clock (and thus were considered to be a reliable data source). The analysis was limited to only those provided by the basic patrol units, which handled 71.6 percent and 73.7 percent of all calls for service in the before and during periods of the experiment, respectively (Tien et al. 1977).

Table 2.4: Inter-City Comparison of Patrol Unit Utilization

Source	Year	City	“Basic” <sup>a</sup> Unit Utilization Factor <sup>b</sup>	% Unassigned Time <sup>c</sup>
Tien et al.	1976	Wilmington, Delaware	0.364	64
Tien et al. <sup>d</sup>	1975	Worcester MA	0.280	72
Internal Report	1974	St.Louis MI	0.200	80
Kelling et al. <sup>e</sup>	1973	Kansas City MO	0.185	81
Internal Report	1974	Arlington MA	0.150	85

*Note.* Adapted from *The Wilmington split-force experiment* (p.4-19), by J. M. Tien et al., 1977, Washington, DC: U.S. Government Printing Office.

<sup>a</sup> The term “Basic” is used in a generic sense to designate those patrol units whose primary function is to respond to calls for service.

<sup>b</sup> Based on Available information—the specific references are indicated.

<sup>c</sup> Percent (%) Unassigned Time computed for comparison purposes. Calculated by subtracting (Basic Unit Utilization Factor x 100) from 100 percent.

<sup>d</sup> Tien, J. M. et al. (September, 1975). *An evaluation report of the Worcester crime impact program, Vols. I and II*,. Cambridge, MA: Public Systems Evaluation, Inc., (as cited in Tien, Simon & Larson, 1977).

<sup>e</sup> Kelling, G. L. et al. (October, 1974). *The Kansas City preventive patrol experiment, A technical report*. Washington, D.C.: Police Foundation, (as cited in Tien, Simon & Larson, 1977).

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<sup>14</sup> Assuming that the 87 percent of total time reported by Reiss (1971) also translates into 87 percent per shift. Comparative calculations using data from the present study indicate this to be a safe assumption.

Tien and colleagues reported the patrol unit utilization factor (defined as the ratio of call-for-service workload to number of available unit hours or, equivalently, the fraction of time the patrol unit is committed to responding to calls for service during its tour of duty [usually eight hours]). They compare the results for Wilmington to four other cities/studies (see Table 2.4).

Tien and colleagues found that Wilmington patrol officers spent an average of 36 percent of their shift (almost 3 hours) responding to calls for service. This is higher than the results they reported for the other four cities, (Worcester, 28 percent; St. Louis, 20 percent; Kansas City, 18 percent<sup>15</sup>; and Arlington, 15 percent), but still leaves officers with five hours of downtime per shift. Comparison of the computed unassigned time for Wilmington and the other four cities with Reiss's (1971) routine patrol, and Boydston et al.'s (1977) unassigned time, places Wilmington, Worcester, St. Louis, Kansas City, and Arlington (respectively) in increasing order between San Diego (37 percent and 48 percent for one- and two-officer units; Boydston et al, 1977) and Chicago (85 percent; Reiss, 1971).

***Greene and Klockars, 1991.***

As part of a second (later) study of resource allocation conducted in the Wilmington Police Department (Klockars, Greene & Wissmann, 1988, as cited in Greene & Klockars, 1991), Greene and Klockars (1991) studied police workload. The data reported here are from June 1, 1985 - May 31, 1986. In addition to information on citizen mobilizations of police, information about officer self-initiated activity was also

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<sup>15</sup> Tien et al. (1978) do not specify the type of data used (e.g. dispatch records, observation, patrol officer logs) to arrive at this figure. The Kansas City Preventive patrol experiment (Kelling et al. 1974) used both dispatch data and observation data, and is discussed under *Studies Using Observation Data* in this paper.

collected, but it is not independently reported, thus Greene & Klockars' activity categories include both proactive and reactive activities.

The raw unit activity files contained 205 classifications of activity, which were subsequently grouped into 29 categories, and then into eight more general categories: 1. Free Patrol: clear, park and walk; 2. Criminal: alarm, assist other police, crime in progress, investigate-not in progress, officer in trouble, serve warrant/subpoena, suspicious person/vehicle; 3. Administrative: at corrections institution or other police agency, at headquarters, court-related, firearms training, meal break, police vehicle maintenance, report writing; 4. Traffic: fire emergency, motor vehicle driving problems, parking problems, traffic accident investigation, traffic control; 5. Order Maintenance: animal complaint, noise complaint, order maintenance-in progress (in progress disorderly crowd, disorderly conduct, domestic or family complaints, inside fights and street fights); 6. Unavailable; 7. Service; and 8. Medical: at local hospital, medical emergency (see Table 2.5).

Greene and Klockars (1991) found that free patrol accounted for the largest portion – 29 percent (2 hours, 39 minutes), of police workload, followed by criminal activities – 26 percent, (of which 15 percent were investigating situations where the crime is not currently in progress) and then administrative activities – 12 percent, (of which 6 percent were taking meal breaks). It is probably safe to assume that the activities in the free patrol and administrative categories are all downtime activities. Greene and Klockars' finding for free patrol in Wilmington, (29 percent of total workload), is substantially less than that found by Reiss (1971) for routine preventive patrol in Chicago (85 percent). However Reiss only reported the estimated hours spent by beat cars by

three activity types: dispatched incidents, on-view incidents, and routine patrol. The free patrol finding for Wilmington is also less than that found in San Diego for unassigned time (37 percent and 48 percent for one- and two-officer cars respectively; Boydston et al. 1977). Greene and Klockars' results more closely match Cordner's (1979) estimate of patrol time unaccounted for in Webster's (1970) study in Baywood (28 percent).

For time spent on administrative activities, (12 percent of total workload) Greene and Klockars' findings are substantially less than that found by Webster (1970) who reported that 50 percent of officers' time was spent on dispatched administrative assignments. Both Greene and Klockars, and Webster included court time, meals, and report writing in the administrative category. However Webster also included in administration: serving warrants (which Greene and Klockars classify under criminal activities), and community relations (which Greene and Klockars did not measure independently). At the same time, Greene and Klockars included firearms training and police vehicle maintenance under administrative activities, which Webster did not specifically report under any category.

Classification of activities by different categories, and the inclusion of both reactive and proactive activities in categories makes comparison difficult. However, a conservative estimate of downtime from the data presented is 41 percent of total time (29% free patrol + 12% administrative = 41%).

Table 2.5: Collapsed Categories of Police Workload in the Wilmington Police Department, June 1, 1985 to May 31, 1986

Activity	Description of Activity	% of Total	% of Total (Excluding) <sup>a</sup>
Free Patrol 20,731 hours	clear park and walk	29.449	
Criminal 18,605 hours	alarm, assist other police crime in progress investigate-not in progress officer in trouble serve warrant/subpoena suspicious person/vehicle	26.429	49.909
Administrative 8773 hours	at corrections inst./other police agency, at headquarters court-related firearms training meal break police vehicle maintenance report writing	12.462	
Traffic 7958 hours	fire emergency mv driving problems parking problems traffic accident investigation traffic control	11.305	21.348
Order Maintenance 6145 hours	animal complaint noise complaint order maintenance-in progress (in progress disorderly crowd, disorderly conduct, domestic or family complaints, inside fights and street fights)	8.729	16.484
Unavailable 3614 hours		5.134	
Service 2977 hours	service-related	4.229	7.986
Medical 1649 hours	medical emergency at local hospital	2.342	4.424
Total		100.0	100.0

*Note.* Adapted from “What police do” (p. 281), by J. R. Greene and C. Klockars, 1991. In *Thinking about police* 2<sup>nd</sup> ed., edited by C. Klockars, and S. D. Mastrofski. New York: McGraw-Hill.

<sup>a</sup> Percent of total excluding unavailable, free patrol, and administrative time.

### *Summary of Dispatch Data Studies*

The five studies that were reviewed varied both in their purpose and in their results. Only three of the studies were actual patrol workload studies (Greene & Klockars, 1991; Reiss, 1971; Webster, 1970). The study done by Boydston et al. (1977) was to evaluate the use of one-or two-officer patrol units, while the study conducted by Tien et al. (1978) was to evaluate the split-force patrol approach. Nonetheless, the amount of downtime varied significantly among the studies for which it was calculated, the averages ranged between 37 percent and 85 percent of an eight-hour shift – or 178 minutes (roughly 3 hours) and 408 minutes (almost 7 hours) per eight-hour shift.

The limitations of these studies in providing information about what officers do during downtime is evident, only Webster (1970) and Reiss (1971) independently reported any type of officer self-initiated activity (see Table 2.6), and Webster's self-initiated activities (9 percent) include only those about which the dispatcher was informed. Greene and Klockars (1991) include self-initiated activities in their computations of time spent on tasks inhibiting separate analysis of proactive and reactive work. Boydston et al. (1977) and Tien et al. (1978) do not report time spent on activities.

Table 2.6: Summary of Findings from Dispatch Data Studies

Source	Year	City	Percent of Eight-Hour Shift			
			Self-Initiated	Patrol	Admin	Downtime
Webster	1970	“Baywood”	9	--	50 <sup>a</sup>	--
Reiss	1971	Chicago	1 <sup>b</sup>	85 <sup>c</sup>	--	--
Boydstun et al.	1977	San Diego one-officer	--	--	--	37 <sup>d</sup>
		Two-officer	--	--	--	48 <sup>d</sup>
Tien et al.	1978	Wilmington	--	--	--	64
		Worcester	--	--	--	72
		St. Louis	--	--	--	80
		Kansas City	--	--	--	81
		Arlington	--	--	--	85
Greene & Klockars	1991	Wilmington	--	29 <sup>e</sup>	12 <sup>a</sup>	--

*Note.* Dashes indicate percentages were not provided.

<sup>a</sup> Includes personal, <sup>b</sup> On-view, <sup>c</sup> Routine Patrol, <sup>d</sup> Unassigned Time, <sup>e</sup> Free Patrol.

### ***Studies Using Field Observation Data***

#### ***Kelling, Pate, Dieckman and Brown, 1974.***

The Kansas City Preventive Patrol Experiment was a year long experiment (October 1, 1972 through September 30, 1973) conducted in the Kansas City, Missouri Police Department, which intended to determine the value of visible police patrol. Since routine preventive patrol is conducted during “noncommitted” time, an observer survey was developed to measure how officers typically spend their noncommitted time and to assess the effects of experimental conditions upon officer allocation of noncommitted time (Kelling, Pate, Dieckman & Brown, 1974).

Table 2.7: Average Patrol Officer Time Expenditures in Kansas City Over a Ten-Week Period

Noncommitted Time Activity	Description of Activity	Percent of Noncommitted Time	Percent of Total Time
Stationary & Contact Personnel - Police Related	discussing cases, policies exchanging information about crime suspects report writing surveillance traffic ordinance enforcement waiting for tows	26.01	15.69
Non-Police Related	driving to relieve boredom eating girl watching personal errands, phone calls reading, resting, rest calls sleeping visits watching movies or sporting events	25.47	15.36
Residual	traveling to and from court, garage, headquarters, repair station	24.98	15.06
Mobile Police Related	looking for suspicious cars, people stolen autos training new patrol officers traffic violations watching buildings and residences	23.54	14.20
Total		100	60.31

*Note.* Adapted from *The Kansas City preventive patrol experiment summary report* (p.42), by G. Kelling et al. 1974, Washington, DC: Police Foundation.

"Over a ten-week period (1,230 hours of observation), some 60 percent of the observed time was found to be noncommitted. This finding varied little from one experimental area to another" (Kelling et al. 1974:40). Seven general kinds of noncommitted time activity were noted and classified by the participant observers: 1.

Stationary police related: report writing, surveillance, traffic ordinance enforcement, waiting for tows etc.; 2. Stationary non-police related: eating, girl watching, phone calls, reading, rest calls, resting, sleeping, visits, watching movies or sporting events etc.; 3. Mobile police related: looking for suspicious cars, people, stolen autos, traffic violations, training new patrol officers, watching buildings and residences, etc.; 4. Mobile non-police related: driving to relieve boredom, girl watching, personal errands etc.; 5. Contacting personnel in the field—police related: discussing cases, policies, exchanging information about crime suspects etc.; 6. Contacting personnel in the field—non-police related: general talk about cars, hunting, jokes, sex, vacations, etc.; 7. Residual: traveling to and from court, garage, headquarters, repair, station etc. (see Table 2.7).

Kelling and colleagues found that four categories 1. Stationary & Contact Personnel—Police Related activities (combined); 2. Non-Police Related (combined); 3. Residual; and 4. Mobile Police Related, each accounted for approximately 25 percent of noncommitted time, or 15 percent of total officer time. As one of the objectives of the Kansas City Preventive Patrol Experiment was specifically, to measure how officers typically spend their noncommitted time, these findings are much more informative than those of the previous (dispatch record) studies, but are not easily comparable to those studies. For example, Greene and Klockars (1991) and Webster (1970) included report writing and meals under “administrative” activities, while Kelling and colleagues included report writing under “stationary and contact personnel police related” activities, and meals (eating) under “non-police related.” Whitaker (1982:215) reports that in Kansas City, an average of 75 minutes per eight-hour shift (16 percent) were spent on

“report writing and other administrative tasks,” and 73 minutes per shift (15 percent) were spent on “personal breaks and errands.”

Kelling’s finding that 60 percent of observed patrol officer time in Kansas City was found to be noncommitted, is again, much less than Reis’s (1971) finding for routine preventive patrol in Chicago (85 percent), but higher than both Greene and Klockars’s (1991) finding for free patrol in Wilmington (29 percent), and Cordner’s (1979) estimate of the amount of patrol time unaccounted for in Webster’s (1970) study of Baywood (28 percent). The limitation of the results presented for the Kansas City study is the unnecessary collapsing of activities into broader categories that masks the time officer’s spend on each individual activity, and prevents examining the results in a different frame of reference (e.g. time spent on proactive activities).

***Whitaker, 1982.***

Whitaker (1982), reviewed some of the most detailed studies of patrol work and contrasted their findings with the data from the Police Services Study (PSS) (Ostrom, Parks, & Whitaker, 1977). The Police Services Study conducted field observations of officers in 60 residential neighborhoods served by 24 police departments in Rochester, New York; St.Louis, Missouri; and the Tampa-St.Petersburg, Florida metropolitan areas, during the summer of 1977. Observations were made for 15 shifts at the same time of day and day of the week in each neighborhood (120 hours of observation in each neighborhood). Whitaker reports the average of officer time expenditures in the PSS by: 1. Unassigned time, 2. Assigned time, 3. Answering calls and field initiated encounters, and 4. Encounters (assigned and self-initiated; see Table 2.8).

Table 2.8: Average Officer Time Expenditures from the Police Services Study, Summer 1977

Activity	Min <sup>a</sup>	Max <sup>b</sup>	Avg Min / 8 hr shift <sup>c</sup>	% of 8 hr shift
Unassigned Time Total (conducting general surveillance, initiating encounters in the field, meals and other personal activities, parking tickets, patrolling, security checks)	202	398	313	(65)
Meals & Personal Activities	19	109	65	14
Patrol	120	300	214	45
Assigned Time Total (calls for service and administrative activities)	--	--	167	(35)
Administrative Activities (report writing & assignments other than calls for service)	34	153	68	14
Calls for Service			100	21
Answering Calls and Field Initiated Encounters	--	--	128	27
Encounters				
Assigned	--	--	96	20
Self-Initiated	--	--	29	6
Total (assigned and self-initiated)	53	217	--	

*Note.* Dashes indicate information was not provided.

<sup>a</sup> Minimum average time calculated for a neighborhood. <sup>b</sup> Maximum average time calculated for a neighborhood. <sup>c</sup> Average time spent in minutes calculated from observations in all 60 neighborhoods served by 24 Police Departments.

Whitaker found that on average, 65 percent of an officer's shift (5 hours, 12 minutes) was unassigned time. The least unassigned time for the 60 neighborhoods was an average of 202 minutes (42 percent) per eight-hour shift. The most unassigned time for the 60 neighborhoods was an average of 398 minutes (83 percent) per eight-hour shift. The major part of unassigned time was spent patrolling (on average 45 percent), though in some neighborhoods as few as two hours per eight-hour shift were spent

patrolling (25 percent), and in one neighborhood an average of more than five hours in eight were spent this way (63 percent).

On average, 14 percent of unassigned time was spent on meals and other personal activities. In three neighborhoods, officers averaged more than 100 minutes per eight-hour shift (21 percent) on meals and personal activities, while in two other neighborhoods officers averaged less than 30 minutes per shift (6 percent) on these activities.

About ten percent of unassigned time was spent on officer-initiated encounters with citizens in the 60 neighborhoods observed. Whitaker notes that most encounters which officers initiated were traffic stops. Overall the PSS found an average of one traffic stop per shift. Officers in the 60 neighborhoods were less likely to stop people for reasons other than traffic or vehicle violations, but on average the PSS recorded non-traffic stops during two out of three shifts. Officers provided unassigned assistance to fellow officers an average of about once every five shifts. Much less unassigned time was used by officers in response to requests they received directly from citizens-- an average of only five minutes per eight-hour shift (about one percent). Whitaker states that “[i]n general, about one encounter in six is initiated by an officer or citizen (on the street). Five in six are dispatched” (1982:216). Making security checks and issuing parking tickets are two other activities that officers may perform during unassigned time. Officers conducted security checks of commercial buildings in all of the 60 PSS neighborhoods but at substantially different rates (Whitaker, 1982). In three neighborhoods, officers averaged one security check per hour. In 15 neighborhoods, officers averaged fewer than one check in every ten hours of unassigned time.

Residential security checks were conducted much less frequently than commercial. In ten of the 60 neighborhoods, no residential security checks were observed.

On average, assigned time (time officers spend answering assigned dispatches and time spend on reporting and other administrative duties) constituted the other 35 percent of an officer's shift, with 14 percent of assigned time consumed with administrative activities. In all neighborhoods less than half of officers' time was devoted to assigned calls and field-initiated encounters, the average was 27 percent of an eight-hour shift (on average six encounters per shift).

The average of 65 percent unassigned time found in the PSS study is higher than the 60 percent noncommitted time found by Kelling et al. (1974) for Kansas City. The average of 65 minutes per eight-hour shift (14 percent of time) spent on meals and other personal activities in the PSS, is about eight minutes less per shift than Kelling et al. (1974) found for Kansas City. Summing the average unassigned time per shift (313 minutes) and the average time spent on administrative activities per shift (68 minutes), yields the amount of downtime as measured in the present study (381 minutes) or on average 79 percent of an officer's shift.

***Cordner, 1978 in Cordner, 1979***

The focus of Cordner's 1978 study (Master's thesis) was the police use of free patrol time, in an anonymous medium sized Midwestern city. Cordner used both observation and survey methods of data collection. He found that approximately 55 percent of patrol time (almost 4½ hours) was "uncommitted" and categorized uncommitted time by: 1. Patrolling, 2. Breaks, 3. Self-initiated tasks and Meeting other officers (see Table 2.9).

Table 2.9: Patrol Officer Expenditures of Uncommitted Time in an Anonymous Midwest City

Uncommitted Time Activity	Percent of Uncommitted Time	Percent of Total Time
Patrolling	39	21
Breaks	39	21
Self-initiated tasks & Meeting other Officers	22	13
Total	100	55

Cordner (1979) states that “[t]he patrolling time was primarily spent driving at medium speed on main streets in business areas, and secondarily at low speed on side streets in residential areas” (57). The use of free patrol time varied by the time of day. More time was spent patrolling during the day shift, more time handling self-initiated tasks during the evening shift, and more time taking breaks during the night shift. Task emphasis also varied by time of day.

During the day shift, the most emphasized task was checking and enforcing traffic, followed by checking residential areas and talking to the general public. The first priorities of the evening shift were checking businesses and residential areas. During the night shift the activities of checking businesses and suspicious people predominated, with checking residential areas a distant third priority (Cordner, 1979: 57)

Cordner’s finding that approximately 55 percent of total patrol time was uncommitted is substantially lower than the 65 percent unassigned time found in the PSS study (Whitaker, 1982), and the 60 percent noncommitted time in Kansas City (Kelling et al. 1974). His finding for patrol (21 percent) is also lower than that found in the PSS (45 percent), but both Cordner and the PSS are higher than Kelling et al.’s Kansas City finding for mobile police related time (14 percent). However Cordner found that more

time was spent on breaks (21 percent), than either the PSS (meals and personal- 14 percent), or Kansas City (non police related—15 percent).

***Frank, Brandl and Watkins, 1997.***

Frank, Brandl, and Watkins (1997), examined how the work of neighborhood police officers differs from the work of traditional police officers in terms of activities and how time is spent. Frank and colleagues used observation data collected in Cincinnati, Ohio as part of a larger evaluation of community policing efforts in Cincinnati.

The Cincinnati Police Division serves a city of approximately 364,000 residents. Field observations of officers were conducted in 32 of 52 neighborhoods. Sixteen neighborhood officers were observed during 59 shifts (432.20 hours) conducted from January 18, 1995 to March 31, 1995 and from June 30, 1995 to August 3 1995. Fourteen patrol officers were observed during 20 shifts (171.48 hours) between March 31, 1995 and July 14, 1995. (Only the findings for the traditional [beat] officers are reported here).

Frank et al. (1997) collapsed 35 original activity categories into eight general categories to facilitate comparisons with prior studies (Cordner, 1979; Greene & Klockars, 1991), and included two categories that did not appear in previous studies: community based service and problem solving. The categories include: 1. Uncommitted: foot patrol, vehicle patrol; 2. Respond to non crime calls: handling non crime calls; 3. Crime related: arrest, conducting investigations, issuing of subpoenas, prepare criminal reports, tickets/citations; 4. Administrative: car maintenance, court time, driving (police meeting), general discussion-officers, prepare administrative reports, shift preparation; 5. Non-tasks: doing nothing, meals, personal; 6. Service: assist citizen-general, assist

motorist, general discussion with citizen/business, phone discussion-general, security checks; 7. Problem solving: contact service agencies, problem solving discussed with citizens, problem solving discussion with other officers, problem solving on phone; 8. Community based service: attend community program, attend meeting, drive to and from meeting, prepare reports/community based, project development, provide citizens with crime information, school visits, set up community meeting (see Table 2.10).

Frank and colleagues report that an average of 33 percent of beat officers' time was uncommitted (2 hours, 38 minutes), followed by responding to non-crime calls (approximately 20 percent), crime related activities (18 percent), administrative tasks (13 percent) and non police related tasks (9 percent). They found that beat officers spent no time on community based service activities, and very little time on problem solving.

Table 2.10: Cincinnati Beat Officer Workload, 1995

Activity	Percent of Eight-Hour Shift	
	Total	Sub-Category Total
Uncommitted		32.97
foot patrol	0	
vehicle patrol	32.97	
Respond to Non-Crime Calls	19.75	19.75
Crime Related		17.67
arrest	6.48	
conducting investigations	0.64	
issuing of subpoenas	0.74	
prepare criminal reports	4.98	
tickets/citations	4.82	
Administrative		13.24
car maintenance	1.16	
court time	0	
driving (police meeting)	1.75	
general discussion-officers	2.81	
prepare administrative reports	1.81	
shift preparation	5.71	
Non-Tasks		9.10
doing nothing	1.12	
meals	5.99	
personal	1.99	
Service		4.22
assist citizen-general	1.47	
assist motorist	1.56	
citizen/business discussion-general	0.39	
phone discussion-general	0.09	
security checks	0.71	
Problem Solving		2.81
contact service agencies	0.31	
problem solving discussion - citizens	2.27	
problem solving discussion - other officers	0.13	
problem solving on phone	0.09	
Other	0.25	0.25
Community-based Service		0
attend community meeting	0	
attend community program	0	
drive to and from meeting	0	0
school visits	0	
set up community meeting	0	
prepare community based reports	0	
project development	0	
provide citizens with crime info	0	
Total	99.99	100.01

*Note.* Adapted from "The content of community policing: A comparison of the daily activities of community and 'beat' officers," by J. Frank et al. 1997, *Policing: An International Journal of Police Strategies and Management* 20(4), p. 724.

As the category used by Frank (et al.) for uncommitted time included only foot and vehicle patrol, the finding cannot be directly compared with Kelling et al.'s (1974) noncommitted time, the PSS (1977; in Whitaker, 1982) unassigned time, or Cordner's (1979) uncommitted time. Frank and colleagues' finding for vehicle patrol time (33 percent) is higher than both Cordner's results for patrol (21 percent), and Kelling et al.'s Kansas City results for mobile police related time (14 percent), but lower than that found for patrol in the PSS (45 percent). Time spent on administrative tasks (13 percent) was comparable to the PSS (14 percent), but time spent on non police related tasks (9 percent), was lower than the PSS (14 percent), Kansas City (15 percent), and Cordner's Midwest City (21 percent). Unlike prior studies, Frank et al. (1997) do report the time spent on specific activities, but do not distinguish between proactive and reactive activities.

***Parks, Mastrofski, DeJong and Gray, 1999.***

Parks, Mastrofski, DeJong, and Gray (1999) used data from field observation of police patrol officers in two cities, St. Petersburg, Florida and Indianapolis, Indiana (as part of the Project on Policing Neighborhoods [POPNI]) to explore the similarities and differences between the tasks undertaken by generalist patrol officers and community policing specialists. Fieldwork was conducted in Indianapolis in 1996, and in St. Petersburg in 1997 (Parks et al. 1999).

The Indianapolis Police Department serves a population of 377,723 residents, while the St. Petersburg Police Department serves a population of 240,318 residents. Field observations of officers were conducted in 24 neighborhoods that were matched across the two cities (12 neighborhoods in each city). More than 5,700 hours of

observations were conducted -- 30 rides per study area, totaling 360 rides for each site. Eighty percent of the rides were conducted with patrol generalists or beat/911 officers. Only the findings for the generalist patrol officers are reported here.

Parks and colleagues report officers' average allocation of time among seven categories: 1. Encounters, which includes "all face-to-face contacts with citizens that included verbal exchange or physical contact" (Parks et al. 1999:497), and six remaining categories consisting of activities conducted when officers were not in the direct presence of citizens or when citizens were present but no verbal exchange or contact between officers and citizens occurred: 2. General patrol: auto, bicycle or foot; 3. En route: to specific destination; 4. Personal: meals, personal errands, relaxation, restroom breaks, snacks; 5. Problem directed: attending problem focused meetings, back up, checking road/equipment conditions, checking suspicious circumstances, escort, protecting crime scene, searching crime scene, search or/pursuit of citizen, surveillance, traffic/crowd regulation, traffic/ordinance enforcement, waiting; 6. Administrative: conducting research, court appearance, equipment maintenance, meetings with court officials, processing evidence, report production; and 7. Information gathering: face-to face meetings with other police regarding police business, review of records, roll call, telephone/electronic communications with other police regarding police business. Parks et al. found that Indianapolis beat officers spent an average of 26 percent of their shift (just over 2 hours) engaged in general patrol, 15 percent en route, 13 percent on personal activities, ten percent on problem directed activities, and six percent on administrative activities (see Table 2.11).

Table 2.11: Indianapolis Beat Officer Workload, 1996

Activity	Description of Activity	Avg Min / 8 hr Shift	% of Shift
General patrol	auto, bicycle or foot	126	26.25
Encounters		116	24.17
En Route	to specific destination	70	14.58
Personal	meals, snacks personal errands relaxation restroom breaks	65	13.54
Problem Directed	attending problem focused meetings back up checking road/equipment conditions checking suspicious circumstances escort protecting crime scene searching crime scene search for/pursuit of citizen surveillance traffic/ordinance enforcement traffic/crowd regulation waiting	51	10.63
Administrative	conducting research court appearance equipment maintenance meetings with court officials processing evidence report production	29	6.04
Information Gathering	face-to face meetings with other police regarding police business review of records roll call telephone/electronic communications with other police regarding police business	22	4.58
Total		479	99.79

*Note.* Adapted from "How officers spend their time with the community," by R. B. Parks et al. 1999, *Justice Quarterly* 16(3).

The time Indianapolis beat officers spent on general patrol (26 percent) is only lower than that found in Cincinnati (33 percent; Frank et al. 1997), and the PSS (45 percent; 1977 in Whitaker, 1982). Time spent on personal activities is comparable to the PSS (14 percent) and Kansas City (15 percent; Kelling et al. 1974), but higher than Cincinnati (9 percent; Frank et al. 1997) and lower than Cordner's Midwest City (1979; 21 percent). Indianapolis beat officers spent substantially more time on problem directed activities (10 percent) than Cincinnati beat officers spent on problem solving activities (approximately 3 percent; Frank et al. 1997), but the activities included under these categories vary greatly. Parks et al.'s finding for time spent on administrative tasks (6 percent), is substantially lower than all the previously reported observation and dispatch studies (13-16 percent).

For St. Petersburg, Parks et al. (1999) found that beat officers spent an average of 18 percent of their shift (1 hour, 27 minutes) engaged in general patrol, 16 percent on administrative activities, 11 percent on personal activities and ten percent on problem directed activities (see Table 2.12). Compared to their findings for Indianapolis, St. Petersburg beat officers spend less time on general patrol, about the same amount of time on personal and problem directed activities and much more time (10 percent) on administrative tasks.

Table 2.12: St. Petersburg Beat Officer Workload, 1997

Activity	Description of Activity	Avg Min /8 hr Shift	% of Shift
General patrol	auto, bicycle or foot	87	18.13
Encounters		120	25.00
En Route	to specific destination	68	14.17
Personal	meals, snacks personal errands relaxation restroom breaks	55	11.46
Problem Directed	attending problem focused meetings back up checking road/equipment conditions checking suspicious circumstances escort protecting crime scene searching crime scene search for/pursuit of citizen surveillance traffic/ordinance enforcement traffic/crowd regulation waiting	48	10.00
Administrative	conducting research court appearance equipment maintenance meetings with court officials processing evidence report production	78	16.25
Information Gathering	face-to face meetings with other police regarding police business review of records roll call telephone/electronic communications with other police regarding police business	25	5.21
Total		481	100.22

*Note.* Adapted from "How officers spend their time with the community," by R. B. Parks et al. 1999, *Justice Quarterly* 16(3).

Though Parks et al. included auto, bicycle and foot patrol under general patrol, their findings for time spent on patrol are lower for both Indianapolis (26 percent) and St. Petersburg (18 percent), than Frank et al.'s (1997) results for general patrol in Cincinnati (auto and foot; 33 percent). Time spent on administrative tasks in St. Petersburg (16 percent) was much more comparable to prior studies – Cincinnati (13 percent; Frank et al. 1997), PSS (14 percent; Whitaker, 1982)—than to Indianapolis (6 percent). Average time spent on personal activities in St. Petersburg (11 percent) was close to Cincinnati (9 percent; Frank et al. 1997), the PSS (14 percent; Whitaker, 1982), and Kansas City (15 percent; Kelling et al. 1974), but like all of these studies, much lower than Cordner's Midwest City (1979; 21 percent). It is likely that for both the Indianapolis and St. Petersburg studies, most of the activities in all categories except encounters, are downtime activities. As the time spent on encounters in both cities is approximately 25 percent of a shift, this yields an (high) estimate of 75 percent downtime.

***Smith, Novak and Frank, 2001.***

In a second Cincinnati study, Smith, Novak, and Frank (2001) used data from field observations of both traditional beat officers and community policing specialists to document the activities of both types of officers. “[C]ommunity policing was set up in Cincinnati as a specialized unit within the department, rather than as a department-wide philosophy involving all officers” (Smith et al. 2001:24).

Field observations were conducted over a 13-month period between April 1997 and April 1998. The study observed officers in similar contexts during similar times of the day and on similar days of the week. Observations were conducted with 131 different beat officers (236 observations for a total of approximately 1,188 hours observed) and 31

different community-oriented police officers (206 observations for a total of approximately 1,648 hours observed). A total of 442 shifts were observed, or approximately 3,356 hours (Smith et al. 2001). Only the findings for the traditional beat officers are reported here.

Smith and colleagues classified 71 tasks into 23 different activity categories, and encounters were classified into 102 different types. They then recoded all activities and encounters into 16 mutually exclusive categories for purposes of analysis, the 16 categories represent all observed officer time. 1. Motor patrol: time spent patrolling in vehicle; 2. Administrative: report writing, roll call, vehicle maintenance; 3. Crime incidents: activities involving a response to a violation of criminal law, e.g. responding to crime calls, searching property, serving warrants; 4. En route/waiting: time spent en route to locations or waiting for the arrival of other officers or citizens; 5. Traffic enforcement: activities involving vehicles or the roadways, e.g. accidents, road block, traffic enforcement, traffic or road problems; 6. Personal: breaks, meals, personal business; 7. Investigative: activities involving an unknown problem, e.g. alarm response, checking out suspicious circumstances, interrogation; 8. Administrative (crime related): administrative duties directly related to a criminal case, e.g. attending court proceedings, meeting with judges or prosecutors, processing evidence; 9. Order maintenance: time spent on activities intended to maintain or restore order, e.g. arguments, disorderly, drunk, noise disturbance; 10. Service: assisting a citizen locked out of a building, assisting motorists, giving directions, giving information, providing medical assistance, returning lost property; 11. Information gathering: gathering information for community meetings or for individual citizens, particularly related to crime prevention; 12.

Ordinance enforcement: building codes, curfew violation parking; 13. Foot patrol: time spent patrolling on foot; 14. Community based service: providing service or assistance to a community or neighborhood, e.g. addressing police-community relations, attending meetings, dealing with nuisance property; 15. Problem-focused: conducting research on a problem; 16. Meetings with nonpolice service providers: meetings with private sector agencies or social service agencies (see Table 2.13).

Smith et al. (2001) found that Cincinnati beat officers spent an average of 29 percent (2 hours, 19 minutes) of their shift engaged in motor patrol, 16 percent on administrative activities, 11 percent en route, and seven percent on personal activities. As compared to the earlier Cincinnati study (Frank et al. 1997), Smith and colleagues found that officers spent less time on patrol, more time on administrative activities, and less time on personal activities.

Table 2.13: Cincinnati Beat Officer Workload, April 1997 - April 1998

Activity	Description of Activity	Avg Min /8 hr Shift	% of shift
Motor Patrol	patrolling in vehicle	139	29
Administrative	report writing, roll call, vehicle maintenance	77	16
Crime incidents	searching property, serving warrants responding to crime calls	58	12
En Route/Waiting		53	11
Traffic Enforcement	accidents, road block, traffic enforcement traffic or road problems	38	8
Personal	breaks, meals, personal business	34	7
Investigative	alarm response, interrogation suspicious circumstances	24	5
Administrative (crime related)	attending court proceedings, meeting with judges or prosecutors, processing evidence	14	3
Order Maintenance	arguments, disorderly, drunk, noise disturbance	14	3
Service	assisting citizens, motorists, giving directions, information, medical assistance, returning lost property	14	3
Information Gathering	information for community meetings or individual citizens	10	2
Ordinance Enforcement	building codes, curfew violation, parking	5	1
Foot Patrol	patrolling on foot	1	0
Community Based Service	addressing police-community relations, attending meetings, dealing with nuisance property	1	0
Problem-Focused	conducting research	2	0
Meetings with Nonpolice Service Providers	private sector agencies, social service agencies	1	0

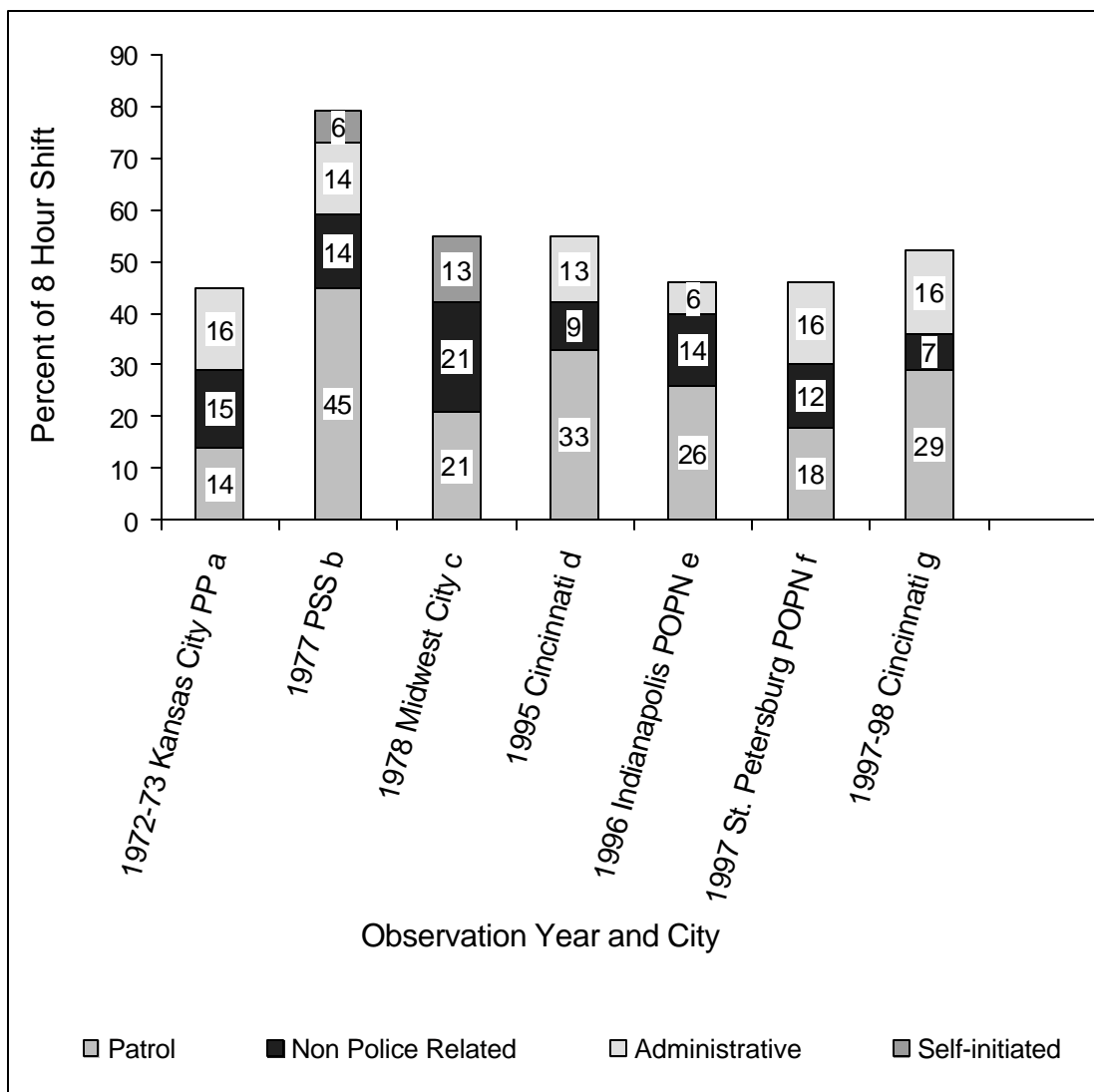
*Note.* Adapted from "Community policing and the work routines of street-level officers," by B. Smith et al. 2001, *Criminal Justice Review*, 26(1), p. 26.

### *Summary of Observation Data Studies*

The five observation studies reviewed examined patrol workload in five different cities and during two different years in Cincinnati. Only Cordner (1979), Kelling et al. (1974), and Whitaker (1982) reported totals for downtime (uncommitted time, 55 percent; noncommitted time, 60 percent; and unassigned time, 65 percent, respectively), but downtime is not measured consistent with the present study. However, all the studies provided independent measures of time spent on patrol, time spent on non police related tasks, and with the exception of Cordner (1979), time spent on administrative activities, which collectively approximate downtime as measured in this study. Thus, for comparative purposes, Figure 2.1 illustrates the variation found across the studies for the average beat officer time per eight-hour shift spent on patrol, non police tasks, administration, and self-initiated activities (downtime activities).

The first column in Figure 2.1 illustrates the percent of time spent on patrol, non-police related tasks and administrative activities in Kansas City. The cumulative total, 45 percent, is less than the total for noncommitted time, 60 percent (Kelling et al. 1974), because the time spent on residual activities (15 percent) is excluded. The second column illustrates the percent of time spent on patrol, non-police related tasks, administrative tasks, and self-initiated encounters for the PSS. The cumulative total, 79 percent, is greater than the total for unassigned time, 65 percent (Whitaker, 1982) because Whitaker did not include time spent on administrative activities (14 percent) in his calculation for unassigned time.

Figure 2.1: Summary of Findings from Observation Data Studies



*Note.* The years cited are the years the data were collected rather than the year of the study publication.

a. Kelling et al. (1974), patrol - “mobile police related”; b. Whitaker (1982), self-initiated includes only encounters; c. Cordner (1979), did not report percent of shift spent on administrative tasks, self-initiated includes meeting with other officers; d. Frank et al. (1997); e. Parks et al. (1999); f. Parks et al. (1999); g. Smith et al. (2001).

In the observation studies reviewed, the average time beat officers spent on patrol ranged from 14 percent in Kansas City (Kelling et al. 1974) to 45 percent in the PSS (Whitaker, 1982). The Kansas City finding may be low because time spent on patrol was not measured, but instead mobile police related activities. In turn, the PSS finding may be high because of outliers, the 45 percent finding is the average of 60 neighborhoods, with one neighborhood having a maximum average of 62 percent of officers' time spent on patrol. The mean of the seven studies equals 27 percent.

The average time spent on non police related tasks ranged from seven percent in Cincinnati (Smith et al. 2001) to 21 percent in Midwest City (Cordner, 1979). The mean time spent on non police related tasks for the seven studies reviewed equals 11 percent.

Three of the six studies found averages of 16 percent of officers' time spent on administrative activities: Cincinnati (Frank et al. 1997); Kansas City (Kelling et al. 1974); and St. Petersburg (Parks et al. 1999), this was also the highest finding. The lowest finding was for Indianapolis, where Parks et al. (1999) found that on average officers spent only 6 percent of their time on administrative activities.

Finally, only two studies reported time spent on self-initiated tasks. The PSS – six percent on self-initiated encounters (Whitaker, 1982), and Midwest City – 13 percent on self-initiated activities and meeting other officers (Cordner, 1979).

### *Comparison of Dispatch and Observation Studies*

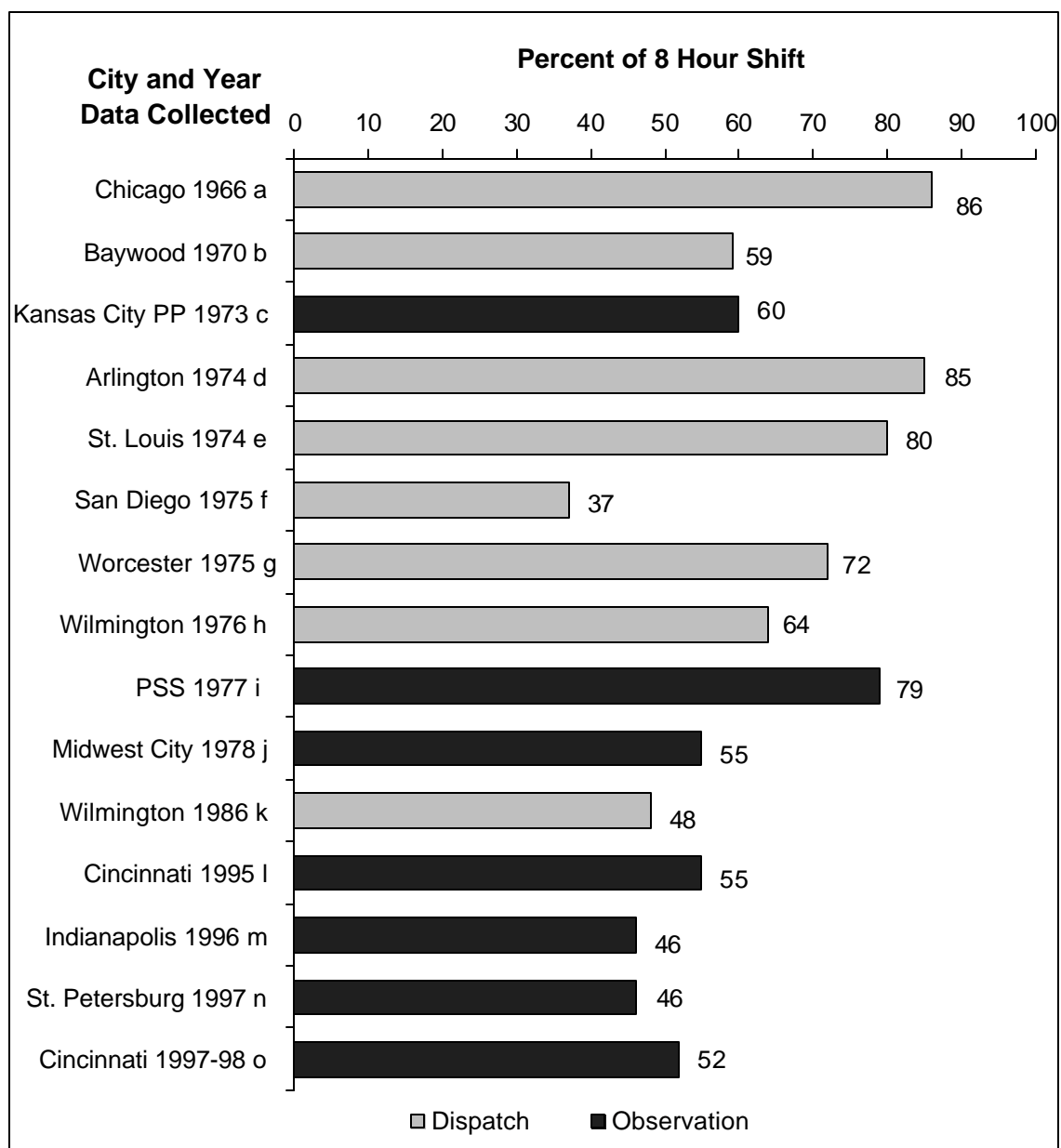
The five studies which used dispatch records to examine patrol workload, and the six studies which used observation data, reported results for the PSS and twelve different cities (two different years in Cincinnati and Wilmington). As Cordner (1979) noted, in general the observation studies did provide more detailed descriptions of police use of free patrol time than the dispatch studies, with the exception of Webster's (1970) dispatch study of Baywood. The earlier studies tended to report time spent responding to calls for service and all other time, the later studies reported time spent by activity type, which though more detailed, does not facilitate computing time spent responding to citizen calls versus downtime (all other time).

Figure 2.2 illustrates the findings for average beat officer downtime across all of the studies by type of data used (dispatch or observation). Though efforts were made to standardize downtime, caution must be exercised in comparing the results as categories (e.g. noncommitted, unassigned time, uncommitted time, administrative) were differentially reported. In general, the trend is that the dispatch studies found officers had more downtime than the observation studies. This is most likely due to how the data were reported rather than actual differences in time, but alternative explanations are explored in Chapter Three.

Only four studies included measures of time spent on self-initiated activities: 1. Reiss (1971), on-view activities in Chicago; 2. Webster (1970), self-initiated activities in Baywood; 3. Whitaker (1982), self-initiated encounters in the PSS cities (included in unassigned time total); and Cordner (1979), self-initiated activities and meeting other officers in Midwest City (included in uncommitted time). These studies provided the

basis of what is known about the use of patrol officer downtime and self-initiated activities. To date, there are no studies which examine directed activities during downtime. Clearly there is a need for additional, and more current research in this area. Chapter Three outlines how the present study will improve upon the weaknesses of these extant studies, and address questions that have arisen from the existing literature.

Figure 2.2: Summary of Average Beat Officer Downtime Per Eight-Hour Shift by Data Type



<sup>a</sup> Reiss, 1971. Routine Patrol and On-View; <sup>b</sup> Webster, 1970. Administration and Self-Initiated; <sup>c</sup> Kelling et al. 1974. Noncommitted Time; <sup>d</sup> Internal Report in Tien et al. 1978. Unassigned time; <sup>e</sup> Internal Report in Tien et al. 1978. Unassigned time; <sup>f</sup> Boydston et al. 1977. One-Officer Unit Unassigned Time; <sup>g</sup> Tien et al. 1975, in Tien et al. 1978. Unassigned time; <sup>h</sup> Tien et al. 1978. Unassigned time; <sup>i</sup> Whitaker, 1982. Unassigned Time Total and Administrative; <sup>j</sup> Cordner, 1979. Uncommitted Time; <sup>k</sup> Greene and Klockars, 1991. Free Patrol, Administrative, and Unavailable; <sup>l</sup> Frank et al. 1997. Uncommitted, Administrative, and Non-Tasks; <sup>m</sup> Parks et al. 1999. General patrol, Personal, and Administrative; <sup>n</sup> Parks et al. 1999. General Patrol, Personal, and Administrative; <sup>o</sup> Smith et al. 2001. Motor Patrol, Administrative, and Personal.

## CHAPTER THREE DATA AND METHODS

The purpose of this study is to address two issues inherent to proactive policing strategies within the confines of the Baltimore Police Department. First, whether patrol officers who are required to respond to citizen calls for service have time to engage in proactive policing activities. Second, whether proactive policing strategies from the numerous movements in police reform and crime prevention over the last 40 years have made it past administrative implementation to the front lines of policing. This study examines three major research questions to address these issues:

1. How much downtime (time not responding to calls for service) do patrol officers have and what activities are they conducting during downtime?
2. To what extent are the downtime activities self-initiated or discretionary, as opposed to directed by superiors, other officers, and citizens?
3. What factors help to explain variation in self-initiated versus directed activities engaged in during downtime?

These research questions are further examined in the following sections: Downtime, Self-Initiated versus Directed Activities, and Activity Analysis.

### *Downtime*

Most previous studies of patrol officer workload have classified police activities as crime- or noncrime-related. Cordner (1979) suggests that this classification obscures the ambiguous quality of most of what patrol officers actually spend their time doing, and suggests that characterizing police work as reactive or proactive may provide a more accurate picture. He notes that *reactive* work is ambiguous because the problems and situations that officers are asked to handle are not clearly crime- or non-crime related, but *proactive* work is ambiguous not only because the activities undertaken are not strictly crime- or noncrime-related, but because the conduct and effect of preventive patrol are

not clear. Indeed, there is little research examining proactive police work, or if in fact the activities that officers engage in when not “reacting” (responding to *requests* to handle problems and situations) can be considered “proactive” (i.e. are patrol officers still spending downtime engaged in random patrol, or are they self-initiating security checks, traffic enforcement etc.)

- ***To explore the nature of the proactive component of police work, this study focuses on downtime, defined as: all time not responding to dispatched calls for service.***

Numerous studies have been conducted using different types of data (dispatch, field observation, surveys, etc.) to examine how much downtime patrol officers have. The dispatch data and field observation data studies reviewed in Chapter Two reveal wide variation both within and between data types in the average amount of downtime available to officers. Studies using dispatch data generally find that officers have more downtime than studies using observation data (see Figure 2.2), as previously noted, this may be due to how the data are reported rather than actual differences in time, but there may be other possible explanations.

The most obvious explanation is that the studies were conducted in different cities in different years. However, it is also notable that studies using dispatch data were generally conducted earlier (1966-1976) than studies using observation data (1977-1998). Thus it is possible that the more recent observation studies reflect the impact of the implementation of 911 systems, and in fact the complaints by officers are justified, they are spending more time responding to calls for service and thus have less downtime than in previous years.

Greene and Klockars (1991), note that among other factors, the level and kind of data used to measure workload, contribute to our definition of police work. Examining the variation within studies using the same data type suggests this possibility. With the exception of one study, the observation studies reveal much less variation in the average amount of downtime found (between 46 and 60 percent of an eight-hour shift), than the dispatch studies (between 37 and 86 percent of an eight-hour shift). This information suggests that the study results may be influenced by the method of data collection (or the type of data examined). Further, Cordner (1979) suggests that one of the advantages of observation data is that “the observer...can account for every minute of the tour of duty” (51), whereas one of the disadvantages of dispatch data is that it is self-reported by patrol officers, and therefore may be suspect (e.g. when officers report to the dispatcher that an encounter is ended, it indicates that the officer is free for reassignment, thus an incentive exists for officers to delay such reports; Whitaker, 1982).

- *To explore whether study results may be influenced by the type of data used, this study uses two data sources to examine the amount of downtime available to patrol officers, computer aided dispatch data (CAD) and field observation data for the same study site and time period.*

This may be a significant methodological contribution, as it will provide future research efforts with a useful proxy technique for using CAD data as a cheap substitute for expensive observational data.

Few studies have examined patrol officer activities in general, or the activities engaged in during downtime (see Cordner, 1979; Kelling et al. 1974; Whitaker, 1982). Those that have, collapse many original activity categories into fewer general categories limiting what is known about the amount of time officers spend on specific activities.

- *To better understand the activities that officers engage in during downtime, time expenditures for original activity categories are reported.*

### *Self-Initiated versus Directed Activities*

There is a lack of research on directed patrol officer activities and limited research on self-initiated activities. Further, examination of self-initiated patrol work has, for the most part, been limited to self-initiated or on-view encounters with citizens. Extant patrol workload studies that have examined the reason for officer mobilization for tasks have generally restricted the analysis to include dispatch directed activities (911) and self-initiated activities.

Police researchers have noted that “[m]uch of what police do and how they do it remains unexplored. The more visible and dramatic dispositions of encounters remain the focus of attention, but little is known of the processes by which events came to those ends” (Mastrofski & Parks, 1990). Concerns about officer reactivity in observation research have been addressed by encouraging observer passivity so that officers do not feel they are being judged by observers and subsequently alter their activities, however observer passivity restricts the scope of what can be learned – *why* police do what they do cannot be explained (Mastrofski & Parks, 1990).

- *To expand the research on what police do and why they do it, this study focuses on activities rather than encounters, and examines the reason/s for officer mobilization. For all acts except those pertaining to personal activities, and administration, observers were to question the officer about the reasons for engaging in the specific behavior.*

Early research (Webster, 1970) suggests that police are mobilized more often by the action of private citizens and police headquarters than by patrol initiative. However, recent research (Mastrofski et al. 1998) suggests that on average, 74 percent of a beat

officer's shift is self-directed time, during which officers are engaged in self-directed tasks.

- *This study explores these findings by examining more detailed categories of reasons for officer mobilization for activities, including dispatch directed (911/311) and self-initiated, but more specifically: self-initiated while viewing a situation, self-initiated while on unassigned time, self-initiated based on information acquired from a citizen, self-initiated based on general directions from a supervisor, and activities done in response to a specific directive from a supervisor, and/or in response to general instructions from a supervisor.*
- *Further, to expand upon what little is known about directed officer activities, specifically "who" provides patrol directives is examined (e.g. the officers own lieutenant or sergeant, another lieutenant or sergeant, another officer, a citizen etc.)*

Proactive policing strategies advocate that officers initiate crime prevention and deterrence activities during their downtime, and supervisors provide directives for these activities during downtime. A common complaint from officers is that they don't have the time to engage in these activities because they are constantly responding to dispatched calls for service. Some research has suggested that officers may be self-initiating this overwork, by choosing to backup other officers for calls that they themselves were not dispatched to (Kessler, 1993).

- *To explore the possibility that officers do not have time to engage in proactive activities because they are self-initiating overwork, the reasons for officer mobilization to backup other officers are examined.*

### *Activity Analysis*

Most of the research to date has focused on officer *encounters* with citizens rather than officer *activities* (but see Smith, 1999), specifically officer decision making in encounters, and the correlates of these decisions (Ricksheim and Chermack, 1993). Little is known about factors which may influence officers' decisions about how downtime is used (Mastrofski, 1990).

- *To better understand the self-initiated and directed activities that officers engage in during downtime, situational variables of activities are explored (information specific to the situation in which the activity occurred).*

## **Data Sources**

### ***Computer Aided Dispatch Data***

Baltimore Police Department Computer Aided Dispatch (CAD) data were collected for the larger project for the period October 1, 1994 through December 31, 1999. The three CAD databases obtained included an incident based file, a geographic based file and a unit based file. The incident based file provided all citizen calls for service and on-view calls entering the CAD system, and had sufficient data to track 911 and 311 calls by district, sector, post, reporting area, house number and street, etc. These data were copied to IBM 3480 tapes and converted to a Foxpro database.

For the purposes of the present study, the CAD data for the period June 14, 1999 through June 27, 1999 (the time period coinciding with the field observations of officers) were converted from the Foxpro database to an SPSS database for analysis.

### ***Field Observation Data***

The decision to conduct field observations for the larger project was based on the desire to explore street-level policing under a fully implemented 311 system. The observations of patrol officers sought to capture information pertaining to the nexus between officer behavior and the 911 and 311 systems.

Field observations were conducted during a two-week period in June, 1999 (June 14 through June 27). This time period was selected for two reasons. First, the larger project provided limited resources for the observational study and a two-week time period was within budget constraints. Second, as with other observational studies (see

Mastrofski et al. 1998), students were selected to conduct the observations and were available for this type of research during the summer months.

Data for the present study are coded from 1,720 hours of field observation by trained observers, who accompanied patrol officers on 215 (eight-hour) shifts. Patrol officers were assigned to one of 16 posts, across three sectors, within three different Baltimore police districts. Observers took brief notes on officers' activities and behaviors; after each observation session they transformed their field notes into detailed coded data. The coded data were then entered into an SPSS database by two University of Cincinnati students.

### *Selection of Sample Patrol Areas*

The Baltimore Police Department serves a population of 716,446 residents (1996),<sup>16</sup> over a jurisdiction of 86 square miles.<sup>17</sup> As previously noted, the department is organized into nine separate districts, with each district divided into three or four sectors (29 sectors in the city), and each sector divided into a number of posts (beats). Observations of patrol officers were conducted in three districts, within one sector of each district (Central District Sector 4, Southeast District Sector 2, and Southern District Sector 3).

Districts and sectors were selected by interviewing district commanders and sector managers (lieutenants) concerning their perceptions of the non-emergency call system's impact on policing in their district, both organizationally and at the street-level. The selection of districts and sectors was biased intentionally toward sectors in which commanders and lieutenants perceived 311 to have reduced the number of non-

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<sup>16</sup> 1997. Sourcebook of Criminal Justice Statistics.

emergency calls dispatched to patrol officers, giving them *more time to direct officers' activities*. Thus for the present study, the amount of downtime and the number of directed activities that officers engage in during downtime may not be representative (may be *greater*) than for sectors which were not observed.

Second, the distribution of calls for service throughout Baltimore was examined. Sectors with a higher average number of calls for service were selected to observe higher levels of police activity than the average in the city, and to maximize the probability of observing patrol response to a 311 call. This is not contrary to the prior consideration, in that, sectors with higher average numbers of calls for service were selected, but the commanders of these sectors perceived that the implementation of 311 had reduced the number of calls for service from the levels prior to 311 implementation. Thus, for the present study, it is also possible that the amount of downtime may not be representative because it may be *less* than for sectors which were not observed (sectors with lower average calls for service).

Third, the primary land use of sectors was considered (e.g. housing, commercial, entertainment). Sectors with different land use were selected to explore 311 use by residential communities, business communities, and transient/commuter/tourism areas). Patrol area selection biases such as these are consistent with previous observation studies (Parks et al, 1999; Police Services Study, 1977; Reiss, 1971), but render the findings unrepresentative of events in all parts of the city and the activity of all patrol officers (Parks et al. 1999).

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<sup>17</sup> Baltimore City Police Department. 1998.  
(<http://cw.ci.baltimore.md.us/government/police/history.html>)

### *Sampling Patrol Rides and Officers.*

Baltimore patrol officers in eight of the nine districts (including the Southern District and Southeast District) work one of three eight hour shifts: first shift, 11:00 p.m. – 7:00 a.m.; second shift, 7:00 a.m. – 3:00 p.m.; or third shift, 3:00 p.m. – 11:00 p.m. In the Central District (business district) the first shift is 10:30 p.m. – 6:30 a.m.; second, 6:30 a.m. – 2:30 p.m.; and third, 2:30 p.m. – 10:30 p.m. Observations were conducted only during the second and third shifts (days and evenings) in an effort to maximize the observation of a police response to a 311 call.

Resource allocation and deployment decisions in Baltimore are based on both call volume (as opposed to equal shift staffing) and proportional need coverage (as opposed to equal geographic coverage). This minimizes the probability that there is a significant difference by shift in the amount of downtime available to officers to conduct proactive activities, or that the exclusion of the first shift will greatly impact the results of the present study.<sup>18</sup>

A stratified random sample of 50 percent of “posts” was drawn from the population of posts in the three sectors (for the second and third shifts, for the fourteen-day study period). A random sample of 251 observation periods was derived using a

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<sup>18</sup> Results from the larger study indicate that during the period from October 2, 1996 through October 1, 1998, patrol units had an average of 2.7 downtime slots (30 or more consecutive minutes of downtime) of about 112 minutes in duration (on average about 5 hours of downtime per shift). When examined by shift, the blocks of downtime for the first shift (excluded from observations) averaged 120 minutes during weekday nights (5.4 hours) and 102 minutes during weekend nights (4.6 hours). For the second shift the average block of downtime was 112 minutes for both weekdays and weekends (5 hours). For the third shift the average block of downtime was 104 minutes on weekdays (4.7 hours) and 97 minutes on weekends (4.4 hours) (See Mazerolle et al., 2002). As field observations were conducted for two weeks in June, 1999, (8 months later) these results should not be interpreted as applicable to the time period under study. However, they do illustrate that the factors considered in patrol deployment decisions do serve to equalize downtime across shifts.

computer generated random sampling procedure. This represented 50 percent of all possible observation periods during the scheduled study period, where an observation period represented the assignment of a patrol car to each of the posts in the three selected sectors. This produced an observation schedule for 67 observations in the Central District, 101 observations in the Southeast District, and 83 observations in the Southern District. The assignments covered approximately 20 posts per day generating about 280 rides over the 14 day study period (about 2,240 hours of observation).

Of the 251 scheduled observation periods, 27 were scheduled with community officers (nine in each study sector) while the remaining observations (224) were to be conducted with patrol officers. For the present study, only the observations of patrol officers are examined as the community officers were exempt from responding to calls for service. A total of 58 observations were to be conducted with patrol officers across the four posts that comprise Sector 4 of the Central District, 92 observations across the seven posts in Sector 2 in the Southeast District, and 74 observations across the five posts in Sector 3 in the Southern District (see Table 3.1).

Table 3.1: Number of Post Officer Observations by District

District and Sector	Scheduled			Completed			Percent Completed
	Day Post	Evening Post	Total	Day Post	Evening Post	Total	
Central 4	32	26	58	31	24	55	94.8
Southeast 2	45	47	92	42	46	88	95.7
Southern 3	37	37	74	36	36	72	97.3
Total	114	110	224	109	106	215	96.0

In total, 96 percent (N=215) of the scheduled post officer observations were completed in accordance with the ride schedule (55 of the 58 observations in Central District, 88 of 92 observations in the Southeast District and 72 of 74 observations in the Southern District). Three of the observations were not completed because of the failure of the scheduled officer to appear for work due to personal reasons, while two additional rides did not occur because the police department did not have an available post car to cover the selected post during the shift. The remaining four scheduled observations were not completed due to research error (e.g. failure of rider to turn-up to the scheduled posting, miscommunication regarding who was assigned to particular rides). The present study uses the 215 completed observations with patrol officers.

Observers were assigned to the randomly selected posts and were instructed to conduct their eight hour observations only in the selected project posts. To facilitate the assignment of observers to the proper posts, each participating sector lieutenant and sector sergeant was provided a copy of the schedule for their district. If the officer in the assigned post was engaged in an assignment that had no direct bearing on service to the assigned area (e.g. court, training) that was to last for more than two hours, (or if the officer left work more than two hours early) the observer continued the shift with the replacement officer for that post. If the originally assigned officer later returned to duty in the study area during the same shift, the observer switched back to the original officer. If the officer in the assigned post left work less than two hours before the scheduled end of shift, the observer also ended the observation. Table 3.2 shows the number of observed shifts that ended early and the recorded reasons.

Table 3.2: Reason Observed Shift Ended Early

Recorded Reason	Frequency	Percent
Not Applicable (shift did not end early)	195	90.7
Officer had permission for personal business	5	2.4
Officer left for reasons unknown	2	.9
Other	8	3.7
Missing data	5	2.3
Total	215	100.0

The units of analysis for the larger study were activities, thus it was not necessary to limit the number of observations with individual officers, or to otherwise sample patrol officers. Observations were conducted with 73 different (identified) patrol officers, and four officers that were not identified by observers (i.e. the badge number was not recorded). Table 3.3 reports the number of officers observed by the number of times they were accompanied by an observer.

Table 3.3: Number of Officers by Number of Times Accompanied by an Observer

	Number of Officers	Number of Times Accompanied by Observer	Total
Identified	18	1	18
	16	2	32
	20	3	60
	8	4	32
	7	5	35
	2	6	12
	2	7	14
	1	8	8
Subtotal	73		
Unknown	4	1	4
Total	78		215

Table 3.3 indicates that 18 different identified officers were accompanied by an observer for one shift during the two-week study period, 20 different officers were accompanied by an observer for three shifts etc. The maximum number of times an identified officer was accompanied by an observer was eight shifts.

### *Conducting Field Observations*

The methodology used in the field was systematic social observations (Mastrofski et al. 1988). Observers were told to report to roll call which began 21 minutes prior to the official start of the shift, and to accompany the officer assigned to the randomly selected post during all activities during the shift, except for those activities where the officer instructed the observer not to do so (because of danger, or because it would impede police business). Observers were instructed not to participate in police work (except in emergencies) and not to express opinions about police work in general or the officer's actions.

During the shift observers took brief notes of instructions given during roll call and activities conducted during the shift in small booklets to aid them in later completing structured coding instruments. They were instructed to permit only the officer they accompanied to examine these notes upon request. The research team promised confidentiality to the individual officers observed and the police department as required by Federal law.<sup>19</sup> Thus data and activities are reported in this study so they cannot be attributed to a single identifiable officer.

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<sup>19</sup> When conducting research funded by the National Institute of Justice, researchers are required to maintain confidentiality; they enjoy only a limited protection from legal process under Federal Statute 42 USCS 3789g.

### ***Coding Instruments***

For the larger project, observations of post officers sought to quantify and understand primarily, the amount of time officers spend responding to 911 and 311 calls, the amount of time consumed by these calls in relation to other police activities, and the contextual characteristics of both types of calls for service. Data were also collected regarding whether officers receive directives from other police personnel and whether they follow these directives. Coding instruments that were used in two prior NIJ studies (see Frank 1996, 1998) were adapted to capture this information and systematically structured observations. The present study uses data from both the ride and the activity instruments.

#### ***Ride Instrument.***

For each observed shift, observers were to complete one “ride instrument” (see Appendix I). The ride coding instrument was designed to collect demographic data relative to the observed officer, information about circumstances that may affect the officer’s behavior or activity level during the shift (e.g. did shift begin late or end early, weather conditions, officer’s attitude about having an observer present), and information about directives the officer may have received concerning activities to be undertaken during the shift.

#### ***Activity Instrument.***

The activity coding instrument was designed to record the daily activities of officers and collect data on each distinct activity (from responding to calls and doing random patrol, to eating lunch or conducting personal business) undertaken by the officer. Observers were to complete one activity instrument for each activity the officer

engaged in (see Appendix II). Information recorded on the activity instrument includes: a start time and end time for the activity; a description of the activity; the catalyst for officer mobilization (e.g. self-initiated, 911/311 dispatch, in response to a directive or instructions etc.); the location of the activity; and whether the officer received instructions from supervisors regarding the activity either before, during or after the activity. For all activities except administrative and personal activities observers were to question the officer about the reasons for engaging in the specific behavior.

Observers were instructed to complete all coding instruments for an observed shift before observing another shift. Members of the research team reviewed the coded instruments as they were turned in to ensure that they were being completed correctly. At the completion of the study period the data collected on the instruments was then entered into an SPSS database by two University of Cincinnati students. The numeric data that resulted are the basis of the statistical analysis conducted for this study.

### *Selection of Observers*

Faculty members from universities in the Baltimore area (University of Maryland, Johns Hopkins, University of Baltimore, University of Maryland at Baltimore County and Towson State) were contacted and asked to recommend students for participation in the project. Recommended individuals were contacted by members of the research team and asked to attend an introductory meeting one week prior to their potential participation in the project. At this meeting the observers were screened for suitability as participant observers and provided a packet of information on the history of the project, a National Institute of Justice publication on conducting systematic social observations, and a copy of the confidentiality agreement that all potential observers were asked to sign.

Approximately one week later, 34 observers selected to participate in the study were required to attend a compulsory five hour training session. Information was provided concerning the organizational arrangement of the Baltimore Police Department. Observers were trained in how to observe and record officers' actions, how to debrief officers, appropriate conduct and dress while conducting observations, and the logistics of completing the data coding instruments.

### ***Limitations of Field Observation Data***

The advantages and disadvantages of field observation data in general have been addressed in Chapter Two: Data Collection Methods. This section will address the limitations of the current data.

### ***Validity***

#### ***Reactivity.***

All observation studies must be concerned with reactivity, or the possibility that an observed event might not have occurred but for the presence of the observer, as it compromises the validity of the research being conducted. The occupational subculture of police has been described as "leery of outsiders" (Skolnick, 1966), thus officers may engage only in behaviors they perceive as being acceptable while in the presence of an observer, or they may choose to reduce the vigor with which they do their work for fear of compromising the observer's safety. This may underestimate the frequency with which certain activities occur. Conversely, officers may want to "show the observer a good time" or demonstrate police -related activities, such as running record checks on the computer or making arrests. This may result in researchers over estimating the prevalence of these phenomenon (Mastrofksi & Parks, 1990).

Numerous steps were taken to minimize reactivity. First, as previously noted, the research team promised confidentiality to the observed officers and the police department, and required all observers to sign a confidentiality agreement. Second, officers were informed of the purpose of the study and the role of observers. As the focus of the larger study was on technology, and the impact of 311 on the daily routines of police officers, (specifically the origin of dispatched calls for service), it is less likely that officers would alter their behavior than if for example, officer work routines were the focus of the study. Further, observers were instructed not to participate in police work (except in emergencies) and not to express opinions about police work in general or the officer's actions. Third, following the suggestions made by Mastrofski et al. (1998) that officers may feel less threatened, judged, or evaluated by students, students from area universities were selected and trained as observers. Finally, observers were questioned on every coding instrument whether they perceived that officers reacted to their presence, or altered their behavior due to their presence. Observers reported reactivity in 1.3 percent (N=41) of activities that officers engaged in.

### ***Reliability***

#### ***Observers.***

The larger project provided limited resources for the field observation study. This affected not only the duration of the study but the selection and training of observers. Observers had to be hired and trained on site (Baltimore) though most of the research team resided in Cincinnati. Consequently, a several week training course for observers was reduced to one day. Much less time was spent reviewing and discussing the data coding instruments to increase inter-coder reliability than in previous observation studies.

Though members of the research team reviewed the coded instruments as they were turned in to ensure that they were being completed correctly, observers did not have the benefit of discussing coding dilemmas as a group to increase reliability.

### ***Generalizability***

The generalizability of the field observation data is limited as the data is collected from only research site (Baltimore), and further, from only three of 29 sectors in the city. As previously mentioned, the selection of sectors, favoring those in which commanders and lieutenants perceived there to be time to direct officer's activities, may bias the results of the directed activity analysis. Although sectors with different land use were selected (residential, business, and transient/commuter), the activities conducted by officers in these sectors may not be representative of the activities of all patrol officers. Though the following analyses are based on numerous observations (215 patrol officer shifts), all observations were conducted in a 14 day period and thus the study cannot control for seasonal fluctuations in police officer activity levels or crime trends.

### **Measures**

The objective of the present study is to present a descriptive analysis of the nature of patrol officer downtime through examining how much downtime officers have, what activities officers are engaged in during downtime, and to what extent these activities are self-initiated and directed. Factors which may help to explain variation in activities are also examined. The following section examines the measures used from the activity and ride instruments (see Appendices I and II).

### *Activity Instrument*

#### *Activity*

For each activity that officers conducted, observers provided a brief description of the activity on an activity instrument and coded the activity using one of 360 assigned activity/problem codes.

#### *Self-Initiated versus Directed Activities*

For all activities except those pertaining to administration and personal activities,<sup>20</sup> observers were to question officers about why they engaged in the activity (what was the catalyst for officer mobilization?). This variable is examined to measure how “proactive” officers are during downtime (i.e. are they self-initiating activities), and to tap officer decision making regarding how downtime is spent (i.e. are officers making the decision to self-initiate activities or are they being directed to engage in activities?).

#### *Catalyst for officer mobilization*

Catalyst for officer mobilization is a nominal variable coded as: 1 = Response to a 911 or 311 call; 2 = Self-initiated while viewing a situation; 3 = Self-initiated during free time; 4 = Based on citizen information; 5 = Specific directive from a supervisor; 6 = General instructions from a supervisor; 7 = General instructions and the initiative of the officer.

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<sup>20</sup> For the following activities observers did not ask the officer about the catalyst for mobilization: Meetings with other police-official business: roll call; electronic communications with other police; Administrative: report writing; automobile maintenance, refueling, washing; transport other police; transport prisoner, witness, evidence, other materials; calibrate equipment; process evidence, property; meet with prosecutor; meet with judge; appear in court; conduct research/inquiry on a problem; Personal business: meals, snacks, restroom breaks; personal errands, relaxation; meetings with other police-not business related.

### *Directive Variables*

To provide information about the nature of directives given to officers the following variables derived from the activity instrument are examined (see Table 3.1).

#### *Source of directive*

Observers were to note who (if applicable) gave the directive to engage in the activity. Source of directive is a nominal variable coded in the following manner: 0 = No other authority appeared to give instructions; 1 = Dispatcher; 2 = Officer's own Lieutenant; 3 = Another Lieutenant; 4 = Officer's own Sergeant; 5 = Another Sector Sergeant; 6 = Community Outreach Unit Sergeant; 7 = Neighborhood Officers Unit Sergeant; 8 = Neighborhood Services Center Sergeant; 9 = District Commander; 10 = Another officer; 11 = Citizen; 12 = local politician; 13 = Other. Directives may have been given: during roll call about a place to receive attention during the shift, or regarding how officers should spend their discretionary time; or during the shift prior to the activity.

#### *Directed to location*

Directed to location is a dummy variable where: 0 = No, and 1 = Yes. It is derived from the question "Was the officer directed to carry out the activity at a specific location or locations?"

#### *Directed location nature*

If the officer was directed to carry out the activity at a specific location, this nominal variable describes the nature of the location: 1 = Residence address; 2 = Street corner or street block; 3 = Privately owned business; 4 = Public space.

Table 3.4: Description of Directive Variables

Variable	Description	Measurement
Source of directive	Who provided the directive for the activity conducted.	0 = No other authority appeared to give instructions 1 = Dispatcher 2 = Officer's own Lieutenant 3 = Another Lieutenant 4 = Officer's own Sergeant 5 = Another sector Sergeant 6 = Community Outreach Sergeant 7 = Neighborhood Officers Unit Sergeant 8 = Neighborhood Services Center Sergeant 9 = District Commander 10 = Another officer 11 = Citizen 12 = local politician 13 = Other
Directed to location	Officer directed to carry out activity at specific location	0 = No 1 = Yes
Directed location Nature	Nature of location	1 = Residence address 2 = Street corner, street block 3 = Privately owned business 4 = Public space 5 = Other
Directed when	Directive specified when to engage in activity	0 = No 1 = Yes, specific time frame (certain hours) 2 = Yes, general time frame (sometime today)
Directed what	Directive specified what officer was to do	0 = No 1 = Yes, specific activities 2 = Yes, general instructions

*Directed when*

Directed when is also a nominal variable which measures if the directive specified when to engage in the activity, it is coded: 0 = No; 1 = Yes, specific time frame (certain hours); 2 = Yes, general time frame (sometime today).

*Directed what*

This nominal variable measures if the directive specified what the officer was to do: 0 = No; 1 = Yes, specific activities; 2 = Yes, general instructions.

*Situational Variables*

Again, for all activities except those pertaining to personal activities and administration, observers were to record information specific to the situation in which the activity occurred. Responses were recorded on the activity instrument. These variables are examined to describe the activities officers engage in during downtime (see Table 3.5).

*Initial location*

Initial location is the nature of the initial location where the activity took place. It is a nominal variable coded as: 1 = public property, outdoors; 2 = public property, indoors; 3 = police facility, outdoors; 4 = police facility, indoors; 5 = private property, outdoors; 6 = private property, indoors.

*Prior Knowledge*

Prior knowledge is a nominal variable derived from the question “At any time during this ride did the police indicate that they had prior knowledge of this location?” It is coded as: 0 = No; 1 = Yes, received information at roll call; 2 = Yes, heard about it from department or other officers; 3 = Yes, direct knowledge from prior visits; 4 = Yes,

officer showed prior knowledge, basis not clear. This variable is important because during interviews with sector lieutenants and sergeants to select the sectors in which to conduct field observations, the supervisors were questioned by members of the research team as to whether they provided directives to their patrol officers. Some supervisors responded that they did not because their officers “know where the problem areas are” in their posts.

#### *Encounter*

Encounter measures whether the activity involved a face to face interaction with a citizen. It is a dummy variable where: 0 = No; 1 = Yes. Prior research has noted the discretion exercised by officers in performing self-initiated activities in that officer’s can choose the activities to initiate and choose to make contact with citizens.

#### *Larger problem*

Larger problem is a dummy variable where: 0 = No; 1 = Yes. It is derived from the question “Did the police indicate that the problem in this encounter is part of a larger problem than just the circumstances of this event?” This variable taps possible problem solving efforts that officers (the department) may be engaged in, as a positive response indicates that specific incidents are examined within a larger context, and problems are being identified.

Table 3.5: Description of Situational Variables

Variable	Description	Measurement
Initial location	Nature of initial location of activity	1 = public property, outdoors 2 = public property, indoors 3 = police facility, outdoors 4 = police facility, indoors 5 = private property, outdoors 6 = private property, indoors
Prior knowledge	Officer indicated prior knowledge of location	0 = No 1 = Yes, received information at roll call 2 = Yes, heard about it from department or other officers 3 = Yes, direct knowledge from prior visits 4 = Yes, officer showed prior knowledge, basis not clear
Encounter	Activity involved a face to face interaction with citizen	0 = No 1 = Yes
Larger problem	Police indicated problem is part of a larger problem	0 = No 1 = Yes
Long-term initiative	Activity part of a long term initiative to deal with problem	0 = No 1 = Yes, initiative focused on specific people or location 2 = Yes, initiative focused on this kind of problem in general 3 = Yes, unable to determine nature of long term initiative
Created initiative	Long term initiative created by	1 = Observed officer only or officer with other officers 2 = Other officers only 3 = Officer's own lieutenant 4 = Another lieutenant 5 = Officer's sergeant 6 = Another sergeant 7 = District Commander/Major 8 = Local politician 9 = Other

### *Long term initiative*

Long-term initiative is a nominal variable derived from the question “Was this activity part of a long-term initiative to deal with this problem?” It is coded in the following manner: 0 = No; 1 = Yes, initiative focused on specific people or location; 2 = Yes, initiative focused on this kind of problem in general; 3 = Yes, unable to determine nature of long term initiative. This variable also taps possible problem solving efforts, as a positive response indicates that problems have been identified, and efforts are being made to address these problems.

### *Created initiative*

Created initiative is a nominal variable recorded only if long term initiative = 1, 2 or 3, indicating that the specific activity was part of a long term initiative to deal with a problem. It measures who created the long term initiative that the activity was a part of: 1 = Observed officer only or officer with other officers; 2 = Other officers only; 3 = Officer’s own lieutenant; 4 = Another lieutenant; 5 = Officer’s sergeant; 6 = Another sergeant; 7 = District Commander/Major; 8 = Local politician; 9 = Other.

### ***Ride Instrument***

Two variables are used that describe the context of the observations, district and shift (see Table 3.6). They are examined for variation because they could possibly have an effect on the number and or types of activities in which officers engage during a shift. In addition, four officer variables are examined: gender, race, education and age. These variables are examined to explore whether officers who are issued directives by supervisors differ from officers who are not directed.

Table 3.6: Description of Ride Context Variables

Variable	Description	Measurement
District	District of the observed shift	1 = Central 2 = Southeast 9 = Southern
Shift	Time of the observed shift	B = Second shift (day) C = Third shift (evening)
Gender	Officer gender	1 = Male 2 = Female
Race	Officer race	1 = White 2 = Black 3 = Hispanic 4 = Asian 5 = Other or mixed
Education	Officer education	1 = Less than high school 2 = High school graduate or GED 3 = Some college or trade school 4 = Associates degree 5 = College graduate 6 = Some post graduate education 7 = Advanced degree
Age	Officer age	Number

## **Methods**

The following section explains the order and rationale for the analyses conducted.

The results of the analyses are presented in Chapter Four.

### ***Downtime***

First, the average amount of downtime available to patrol officers per shift and the average amount of time responding to calls for service per shift are calculated using both the CAD data and field observation activity data to explore whether patrol workload study results may be influenced by the type of data used. The results are compared and discussed. Using the observation data, a description of downtime is provided, including the total number of activities conducted during downtime, frequencies for categories of downtime activities (directed, self-initiated, other, and backup), and the average number of activities and time spent on activities per shift. The remainder of the analyses use the findings for the average amount of downtime obtained from the observation data.

Second, the distribution of all patrol officer activities (including those activities conducted within the context of responding to calls for service) are calculated by average time expenditures in percent of eight hour shift and percent of downtime per shift, and presented in tabular form. Efforts are made to present as many original activity categories as possible (without collapsing activities into general categories such as service, administrative etc.) to provide more detailed descriptions of time expenditures on activities than previous studies. This overcomes the limitation of prior studies by distinguishing activities that are conducted within the response to a dispatched call for service (reactive activities) from proactive activities. The remainder of the analyses proceed with only the activities engaged in during downtime.

### *Self-Initiated versus Directed Activities*

Third, individual downtime activities are examined by *catalyst for mobilization*. This information provides a first step in exploring officer decisions about how downtime is used (i.e. are officers choosing to self-initiate activities or are they being directed to engage in activities). Additionally, this provides some insight into: how “proactive” officers are during downtime (i.e. how many activities are officers self-initiating and how many activities are officer directed to engage in?), as well as what types of activities officers are choosing to conduct and being directed to conduct (i.e. are officers choosing to conduct security checks or general patrol?). This information is also used to address questions that have arisen from the existing literature:

Are officers mobilized more often by private citizens and police headquarters (as claimed by Webster, 1970), or by patrol initiative (as claimed by Mastrofski et al. 1988)?

Are officers self-initiating overwork by choosing to backup other officers for calls that they themselves were not dispatched to (as suggested by Kessler, 1993)?

Fourth, individual downtime activities are examined by *source of directive*. The original categories for *source of directive* are retained because it is important to determine not only who is providing officers with directives, but also who is not. This addresses the void in the current literature on directed patrol activities by exploring who directs patrol officers, how frequently, and what types of activities officers are directed to do.

Fifth, the nature of directives and instructions for the individual downtime activities are examined, to explore how officers are being directed. Are they being directed to locations, to conduct certain activities at certain times etc., as suggested to be important to proactive policing strategies.

Sixth, because of the exploratory nature of this research (in light of the absence of previous research on directives and direction) directed activities are examined by district, supervisor, shift, and officer to tap whether there are any significant factors which influence the issuing of directives.

### ***Activity Analysis***

Seventh, the number and percentage distribution of downtime activities are crosstabulated by values of the situational variables (see Table 3.5) and collapsed categories of *catalyst for officer mobilization* (self-initiated versus directed). Nonparametric tests of significance (chi-square) are used when possible to explore whether there are any significant patterns or trends that help to explain variation in self-initiated versus directed activities engaged in during proactive time.

### **Summary**

This study examines the amount and use of officer downtime. In this chapter the research questions under examination were explained, and the data sources and measures were described. The methods section outlined the order and rationale for the analyses to be conducted in the next chapter.

## CHAPTER FOUR ANALYSIS

The objective of this study is to present a descriptive analysis of the nature of patrol officer downtime by examining: the amount of downtime available to officers (to engage in proactive policing activities); the types of activities officers are conducting during downtime; the extent to which these activities are self-initiated and directed; and if directed, by whom. The logical first step is to determine how much downtime officers have per shift.

Chapter Two revealed that previous studies examining the amount of downtime available to officers have produced varying results depending on the study site (city) and the year of the study, but also based on the type of data used; studies using dispatch data generally find that officers have more downtime than studies using field observation data. The present research analyzes both types of data, dispatch and field observations of officers, for the same study site and time period to first explore whether the average amount of officer downtime per shift varies by data type.

### **Downtime**

#### ***Computing Downtime***

As previously noted, the Computer Aided Dispatch (CAD) data were obtained from the Baltimore Police Department for the period June 14, 1999 through June 27, 1999 – the two-week period corresponding with the field observations of officers. The CAD system records all citizen calls for service dispatched to a patrol unit, and all officer-initiated activities for which the officer takes the patrol unit out of service (the officer notifies the dispatcher that he or she is occupied with an activity and temporarily unable to accept another assignment). Among other variables, the CAD system tracks:

the date and time the call is received from the citizen; the call type, which is coded by the call taker based on information obtained from the citizen (e.g. disorderly, alarm, etc.); the number of the patrol unit to which the call is dispatched; the time the call is dispatched to a unit or units, or the time at which the officer takes the unit out of service for an activity or on-view situation; the time the first unit responds to the call for service; the time at which the call or activity is cleared (completed); and the disposition of the call.

During the field observations of officers, observers took brief notes on the officers' activities and behaviors including (for each activity): the time at which the activity began and ended; the problem type, which describes the nature of the problem the activity was addressing (e.g. disorderly, alarm, transport person not in custody; assist motorist); and the catalyst for officer mobilization for the activity (e.g. the activity was initiated in response to: a citizen call for service; a directive from a supervisor, another officer or citizen; or the activity was self-initiated by the officer on viewing a situation, or during downtime). The information for each activity was coded on a separate activity instrument and later entered into a database.

### ***Matching the CAD Data to the Observation Data***

Comparing the average amount of uptime (responding to calls for service) and downtime (all other time) between the CAD data and observation data, required matching each CAD record to the corresponding observation activity. This entailed a number of steps.

First, the number of observations of patrol officers were reduced from the 215 completed observations to 203 observations. Twelve observations were excluded because the data were determined to be unreliable. Seven of these observations were

completed by the same observer and were excluded because the observer displayed difficulties in completing the data coding instruments. Three observations were excluded because the data coding instruments contained too many missing fields. An additional two observations were excluded because the observed officers were flex officers (members of a special unit) who were not regularly scheduled as patrol officers.

Second, all CAD records for the (203) observed patrol units (cars) were selected from the CAD data and saved into a new database. Third, each CAD entry was individually matched to the corresponding observation activity using multiple data fields contained in the two databases (see Table 4.1). For example the patrol unit number and date of the dispatch or officer initiated activity from the CAD record, was matched to the district, sector, post and shift of the observation, and the date of the observation. The CAD system records the patrol car to which calls are dispatched by a unit number. Unit numbers reflect the district, shift, sector and post that the car is *usually* assigned to, e.g. unit 1B42 is *usually* assigned to district 1, shift B (day), sector 4, post 2. Observers were assigned to randomly selected districts, sectors, posts, and shifts, not units (cars). Police Lieutenants were instructed to have the observer ride with the officer (unit) that would be responsible for handling the calls for service in that post. Thus, the observation data contains the district, sector, post and shift that the observer rode in, but not the unit number. CAD entries and activities were also matched by the time the first unit arrived (from the CAD record), to the time the activity began (from the observation data); and the call type (from the CAD record) to the problem type (from the observation data).

Table 4.1: Data Fields Used to Match CAD Entries to Observation Activities

CAD Record	Observation Activity Instrument
Patrol unit number (1B42)	District, sector, post and shift of observation (1,4,2, B)
Date	Date
Time first unit arrived	Time activity began
Call type	Problem type

Fourth, complete observations (shifts) were deleted if more than three CAD entries per unit could not be matched to an activity in the observation data set. Conversely, complete shifts were also deleted if the observed activities per unit included more than three activities that were recorded to have been conducted in response to a dispatch and did not appear in the CAD records for that unit. This process was necessary to ensure that the records for the CAD units were in fact the same units that were observed. As noted, it was assumed that an observer assigned to district 1, sector 4, post 2, shift B would be riding in unit number 1B42 because unit 142 is *usually* assigned to district 1, sector 4, post 2 on B shift. However, due to unforeseen logistics (e.g. vehicle shortages), on occasion units were assigned to different posts, e.g. for one shift unit 1B42 was reassigned to district 1, sector 4, post 4 during B shift. The observer was riding in the alternate unit assigned to district 1, sector 4, post 2, but because observers did not record the unit number, there is no record of what that unit number is, consequently the data for that observation does not match the CAD data for unit 1B42. This resulted in the sample being reduced from 203 observed units to 163 observed units (76 percent of the original sample).

Table 4.2 displays the reduced sample distribution of observations by district and shift. A total of 23 observations during the day shift were excluded ( $109 - 86 = 23$ ), and 29 observations during the evening shift ( $106 - 77 = 29$ ). By district, the observations in Central were reduced from 55 to 44, (-11) ; in Southeast from 88 to 65, (-23), and the observations in Southern were reduced from 72 to 54 (-18).

Table 4.2: Number of Post Officer Observations by District

District	Completed Observations			Reduced Sample		
	Day	Evening	Total	Day	Evening	Total
Central	31	24	55	25	19	44
Southeast	42	46	88	32	33	65
Southern	36	36	72	29	25	54
Total	109	106	215	86	77	163

As each CAD entry was individually matched to the corresponding observation activity using multiple data fields, and each shift for the 163 units in the CAD data was compared to the corresponding shift in the observation data to ensure that the times and types of dispatches, and the order of the dispatches for each shift were consistent in both data sources, there is confidence that the 163 units/shifts are correctly matched. Nonetheless, for these 163 matched units, there are still a number of entries in the CAD data that could not be matched to an observation activity.

Table 4.3 displays the number of CAD entries that were, and were not matched to the observation activities for the 163 observed units. In total 142 CAD entries (16 percent) could not be matched to an observation activity for the corresponding unit.

Table 4.3: Number of CAD Entries Matched and Not Matched to Observation Activities

CAD Entry	Total	Matched	Not Matched
Dispatched in Response to 911 or 311	758	644	114
On View	76	63	13
Unit not available for dispatch	47	32	15
Total	881	739	142

The first row in Table 4.3 illustrates that there were 758 dispatches to citizen calls for service entered into CAD, but only 644 of those dispatches could be matched to an observation activity. This means that 114 dispatches to patrol units were not documented by observers on their coding instruments. Many of these unmatched dispatches were for call types that the observer could conceivably, not recognize as a call for service because the officer may not have left the patrol car. For example, 14 of the unmatched 911/311 dispatches were coded only as ‘other’ by the call taker; 11 dispatches were for ‘silent alarms’; nine dispatches were for ‘no voice call’; five dispatches were entered as ‘drug free zone’; two each were for ‘loud noise’ and ‘suspicious person’. For these calls, it is possible that the officer may have driven past the reported location for the activity and observed from the patrol car that there appeared to be no basis for the call. The observer may have interpreted this as simply part of ‘patrol,’ and coded the activity as such.

Table 4.4 illustrates the dispositions (entered into the CAD system by the dispatcher when the officer reports the call cleared) for all 142 CAD entries that could not be matched to an observation activity.

Table 4.4: CAD Dispositions for Entries Not Matched to Observation Activities

CAD Disposition	N	Percent
Complaint abated	29	20.4
No police service necessary	27	19.0
Unfounded	23	16.2
Gone on arrival	20	14.1
Report written	16	11.3
Unable to locate complainant	7	4.9
Missing	20	14.1
Total	142	100.0

In fact, the information provided in Table 4.4 does lend support to the prior hypothesis that for many of the unmatched CAD entries, observers may not have realized that the officer was engaged in an activity other than patrol. For 19 percent of the unmatched CAD entries, officers reported that there was no police service necessary; for 16 percent of the dispatches, the dispatch was unfounded; for 14 percent the officer reported that the complainant was gone on arrival; and for five percent of the dispatches the officer was unable to locate a complainant. On only 16 occasions (11 percent), was a report written, which the observer should definitely have recorded as a separate activity.

There were also 98 activities in the observation data base that observers coded as being conducted in response to a 911 or 311 dispatch that could not be matched to a specific CAD entry (not shown in table). Some of these activities may in fact be one of the 142 unmatched CAD entries, but the observer descriptions of the problem type did not match the call type code assigned by the dispatcher, so to err on the conservative side these activities were not considered to be matches even if the other fields were consistent.

In the next sections the average amount of uptime (responding to calls for service) and downtime (all other time) is calculated, first using the CAD data and then the observation data. This is done in order to explore whether the average amount of officer downtime per shift varies by data type.

#### *CAD Data*

There are 881 CAD entries for the 163 observed patrol units (see Table 4.5). The CAD data indicate officers responded to a total of 758 calls for service and initiated 76 activities during the 163 observed shifts. Officers also took their unit out of service or received a dispatch directly from the district on 47 occasions.

Table 4.5: Number and Type of CAD Entries

CAD Entries	N
Dispatched in Response to 911 or 311	758
On View	76
Unit not available for dispatch / dispatch from district	47
Total	881

Table 4.6 examines only the 758 dispatches in response to a 911 or 311 call in more detail. On average, officers respond to five calls for service per shift, though the number of calls ranges from no calls on one shift to 14 calls. The average time spent on each call is 28 minutes, and the total average time spent responding to calls for service per shift (uptime) is 133 minutes. This leaves an average of 347 minutes of downtime per shift (480 minutes per shift - 133 minutes = 347 minutes).

Table 4.6: Description of 911/311 Dispatches (From CAD data)

	Mean	Std. Deviation	Min	Max	N
Number of dispatches per shift	4.68	2.34	1	14	162 <sup>a</sup>
Time (in minutes) per dispatch	28.37	40.08	.03	301.17	757 <sup>b</sup>
Time (in minutes) per shift responding to 911/ 311 dispatches	132.55	91.75	3.72	428.65	162 <sup>a</sup>

<sup>a</sup> One unit received no dispatches in response to a 911 or 311 call, only a dispatch directly from the district. <sup>b</sup> One outlier (1416 minutes) was removed. As this call was recorded to consume 23 hours, it is likely the officer forgot to close out the call.

### ***Observation Data***

The observation data indicate officers responded to a total of 742 calls for service (as either the primary or dispatched backup unit) and initiated 63 activities (that were recorded into the CAD system) during the 163 observed shifts (see Table 4.7). Officers also took their unit out of service or received a dispatch directly from the district on 22 occasions. It is also important to note that officers responded as backup to 287 calls to which they were not dispatched.

Table 4.7: Number and Type of Selected Observation Activities

Activity Type	N
Dispatched in Response to 911 or 311 Primary	729
Dispatched in Response to 911 or 311 Backup	13
On View	63
Unit not available for dispatch / dispatch from district	22
Backup (Response to call not dispatched)	287
Total	1114

Table 4.8 examines the 742 primary and backup dispatches in response to a 911/311 call and the 287 non dispatched backup calls in more detail. Excluding the non dispatched backup calls, on average officers respond to five calls for service per shift, though the number of calls ranges from no calls on one shift to 15 calls. The average time spent on each call is 22 minutes, and the total average time spent responding to calls for service per shift (uptime) is 99 minutes. This leaves an average of 381 minutes of downtime per shift (480 minutes per shift - 99 minutes = 381 minutes).

As well, during 127 of the observed shifts, units spent an average of 42 minutes per shift responding to calls to which they were not dispatched. As the decisions to respond to these calls were (presumably) made by the officer, these calls are considered downtime activities and were not included in calculating the average number of calls per shift, or time in minutes per call / per shift responding to dispatches. These calls will be discussed further in the following section.

Table 4.8: Description of 911/311 Dispatches and Backup Responses (From Observation Data)

	Mean	Std. Deviation	Min	Max	N
Number of dispatches per shift	4.58	2.43	1	15	162 <sup>a</sup>
Time (in minutes) per dispatch	21.60	31.17	1	360	742
Time (in minutes) per shift responding to 911/311 dispatches	99.34	68.49	10	465	162 <sup>a</sup>
Time (in minutes) per shift responding as non dispatched backup	41.76	38.11	3	240	127

<sup>a</sup> One unit received no dispatches in response to a 911 or 311 call, only a dispatch directly from the district.

### ***Comparison of Time Spent on Calls for Service for CAD Data and Observation Data***

Although both the CAD and observation data indicate that on average, officers respond to five dispatched calls for service per shift, the CAD data yield a significantly greater average time per shift on calls for service (133 minutes versus 99 minutes in the observation data)<sup>22</sup> and a greater average time per call (28 minutes versus 22 minutes in the observation data). A close examination of the CAD data and the observation data reveals two possible reasons for this.

First, some officers are not clearing their calls until they receive another dispatch. That is, the CAD data indicate that the officer's entire shift is spent responding to calls for service. For example, an officer receives the first dispatch for a call for service at 7:30 a.m., and the second dispatch for a call for service at 8:30 a.m. The first call is not cleared until 8:30 a.m., which is the same time that the second dispatch is received. When the same shift is examined in the observation data, the activities indicate that the officer did receive the first dispatch at 7:30 a.m., but the call only consumed 20 minutes and was completed at 7:50 a.m. From 7:50 a.m. until the next dispatch was received at 8:30 a.m., the observation data indicate that the officer was engaged in random patrol.

The second (and related) reason for the inflated average time per call is that for those officers who do clear their calls, many are not doing so immediately upon return to the patrol unit or immediately upon completion. Many officers are apparently waiting until they have finished writing the report for the incident before clearing the call, or waiting until they have been patrolling for (on average) 11 minutes before clearing the

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<sup>22</sup>( $t = 18.461$ ,  $df = 161$ ,  $p = 0.0001$ ).

call. It is also not uncommon for officers to go to lunch or take personal time after completing a call for service but before clearing the call with the dispatcher.

In addition to providing more accurate accounts on the exact time spent on calls for service, the observation data also provides information that helps to clarify and describe downtime in more detail. The next section provides a general description of how downtime is spent.

### *Description of Downtime*

Analysis of the observation data indicated that officers have an average of 381 minutes of downtime per shift, or on average, 79 percent of a shift is downtime. Downtime can be further divided into directed time and self-initiated time by examining the catalyst for officer mobilization for the activities conducted during downtime. As previously mentioned, observers were to question the officers as to the reason the officer engaged in each activity during the shift with the exception of personal and administrative activities.<sup>23</sup> Specifically, observers were to record whether the activity was directed (i.e. the activity was initiated in response to specific or general instructions from a supervisor, in response to general instructions and officer initiative, or in response to information from a citizen on the street); or self-initiated (i.e. the officer self-initiated the activity during downtime or free time, or initiated the activity upon viewing a situation).

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<sup>23</sup> For the following activities observers did not ask the officer about the catalyst for mobilization: Meetings with other police-official business: roll call; electronic communications with other police; Administrative: report writing; automobile maintenance, refueling, washing; transport other police; transport prisoner, witness, evidence, other materials; calibrate equipment; process evidence, property; meet with prosecutor; meet with judge; appear in court; conduct research/inquiry on a problem; Personal business: meals, snacks, restroom breaks; personal errands, relaxation; meetings with other police-not business related.

Table 4.9 reports the descriptives for downtime activities using the broad categories of directed, self-initiated, other (catalyst for mobilization not asked), and backup (response to calls not dispatched, but catalyst unknown). The 287 calls that officers responded to as backup are reported here as downtime activities because they could not be matched to a CAD entry – thus they were not officially dispatched to a unit. These activities were originally coded by observers as a problem-focused activity conducted in response to a dispatch. As there are no official records of these dispatches in the CAD data, they were recoded as backups after consideration of two possible explanations for the original coding decision.

First, there is the possibility that not all calls are dispatched through the CAD system. This explanation seems unlikely as one of the functions of CAD systems is to track officers' time and location for safety purposes. The second (more likely) explanation is that observers erred in their perception that the call was being dispatched to the observed patrol unit. For example, the officer (and observer) heard a dispatch over the police radio. The officer responded to the dispatch, thus the observer concluded that the dispatch was intended for the observed patrol unit, when in fact, the officer upon hearing the dispatch over the radio chose (self-initiated) to “backup” the call. There is further support for this explanation upon examination of the observation data. For all 287 activities displayed in the table as backup, observers reported that more than one officer conducted the activity. As Baltimore employs single officer patrol units, this suggests that the activity was conducted as a backup.

Table 4.9 illustrates that 2302 activities were conducted during downtime: 146 directed activities comprise six percent of downtime activities; 1058 self-initiated

activities comprise 46 percent of downtime activities; 811 other activities (activities for which the officer was not asked about the catalyst for mobilization) constitute 35 percent of downtime activities, and 287 backup activities comprise the remaining 12 percent of activities.

In Table 4.9, the N column indicates the denominator for the mean calculations, (i.e. number of shifts, number of activities) while the last column, average across all shifts, uses as the denominator the total number of observed shifts (N=163). For example, the first row in Table 4.9 illustrates that officers spend on average 54 minutes per shift engaged in directed activities, however, the N column indicates that officers engaged in directed activities during only 76 shifts, for the other 87 shifts officers did not conduct any directed activities (thus, for those 76 shifts during which directed activities were conducted, the average time spent was 54 minutes). When the average time spent on self-initiated activities per shift is calculated using all observed shifts (dividing the sum/total minutes [not shown] engaged in directed activities by the total number of observed shifts N=163) the average time spent on directed activities per shift across all shifts, is 25 minutes. The second row illustrates that during those 76 shifts on which directed activities were conducted, on average officers engaged in two directed activities per shift, the third row illustrates that each directed activity consumed an average of 28 minutes.

Table 4.9: Description of Downtime (From Observation Data)

Downtime Activities (N = 2302)	Mean	Std. Dev.	Min	Max	N <sup>a</sup>	Average Across All Shifts <sup>b</sup>
<b>Directed Activities (146)</b>						
Time (in minutes) per shift engaged in directed activities	53.72	70.67	1	380	76	25.04
Number of directed activities per shift	1.92	1.25	1	6	76	.90
Time (in minutes) per directed activity	27.97	30.84	1	180	146	
<b>Self-Initiated Activities (1058)</b>						
Time (in minutes) per shift engaged in self-initiated activities	193.13	94.68	9	438	157	186.02
Number of self-initiated activities per shift	6.74	3.97	1	22	157	6.49
Time (in minutes) per self-initiated activity	28.66	29.08	1	255	1058	
<b>Other Activities (811)</b>						
Time (in minutes) per shift engaged in other activities	137.87	83.98	3	455	159	134.48
Number of other activities per shift	5.10	3.09	1	15	159	4.98
Time (in minutes) per other activity	27.03	28.30	1	285	811	
<b>Backup (287)</b>						
Time (in minutes) per shift engaged in backups	41.76	38.12	3	240	127	32.54
Number of backup activities per shift	2.26	1.63	1	8	127	.78
Time (in minutes) per backup activity	18.48	15.98	2	115	287	

<sup>a</sup> Denominator for mean calculation. <sup>b</sup> Sum of minutes (not shown) / (N = 163); or sum of activities (not shown) / (N=163).

In contrast officers spent an average of 193 minutes per shift engaged in self-initiated activities (approximately 3.5 hours per shift). Observed officers conducted an average of seven self-initiated activities per shift, with each activity consuming an average of 29 minutes. An independent samples t-test indicates that the average time in minutes per activity by type of activity (directed [27.97 minutes] versus self-initiated [28.66 minutes]), does not differ significantly ( $F = 0.901$ ,  $df = 1202$ ,  $p = 0.789$ ).

When the average time spent per shift on types of activities is examined across all shifts (N=163) the findings suggest that Baltimore officers spend most of their downtime (186 minutes, or 50 percent), engaged in self-initiated activities, followed by other activities (35 percent), backups (9 percent) and directed activities (7 percent). When the average number of types of activities per shift is examined across all observed shifts, it is important to note that officers conduct very few directed activities (0.90) per shift. Officers engaged in one or more directed activities during less than half of the observed shifts (N=76, or 47 percent of observed shifts).

### *Summary*

Regardless of the type of data examined, the results suggest that officers do have time to engage in proactive policing strategies. The CAD data indicate that officers spend on average, 28 percent (2 hours, 13 minutes) of their shift responding to calls for service, leaving 72 percent downtime. The observation data indicate that, on average, officers spend 21 percent (1 hour, 39 minutes) of their shift responding to calls for service, leaving 79 percent downtime. Further, analyses of downtime using the observation data indicate that overall, the majority of the activities conducted by officers are self-initiated (46 percent) rather than directed (6 percent). In fact, only 146 officer

activities were directed in some manner during the two-week observation period. Most of officers' downtime is spent engaged in self-initiated activities (50 percent) as opposed to directed activities (7 percent).

The next section uses the field observation data to explore the types of activities officers conduct during downtime (e.g. vehicle patrol, problem-focused activities, personal activities, report writing etc.), and the amount of time spent on each type of activity. Specifically, how much of officers' downtime is consumed by patrol, problem-focused activities etc.

### *Time Spent on Activities*

Previous studies of patrol officer workload have reported the distribution of patrol officer activities as a proportion of an eight hour shift (e.g. administrative activities, service activities, traffic activities etc.) The limitation of this method is that it does not distinguish between activities conducted within a response to a call for service and activities that are conducted during downtime. For example, officers may respond to a call for service regarding a traffic accident, or they may monitor traffic during downtime, traditionally both have been coded as traffic enforcement activities. To overcome this limitation, Table 4.10 provides the distribution of all patrol officer activities, by average minutes per shift (as conventionally reported), but also by average downtime minutes per shift.

Table 4.10: Average Time Spent on Activities

Activity Type	Average Minutes per Shift	Average Downtime minutes per shift	Percent of Downtime per Shift
Vehicle patrol	158	158	42
Problem-focused activity	67	13	3
Back up other police (dispatched and not dispatched)	43	42	11
Meal, snack, restroom break	37	37	10
Roll call, prepare for shift; Driving – not patrol; Automobile maintenance, refueling, washing; Calibrating equipment	27	27	7
Report writing	23	23	6
Administrative (paper work – not report writing, lobby detail, booking suspects, pick up/drop off paperwork/other)	20	15	4
Traffic enforcement (moving violations, vehicle violations, routine checks, traffic control, disabled vehicles)	12	11	3
Residential or Commercial security check; Alarm response	8	1	0
Personal business, errands, relaxation	8	8	2
Transport prisoner, witness, evidence, other materials	6	3	1
Information gathering, police records	6	4	1
Process evidence, property	5	2	1
Meetings with other police - not business related	5	5	1
Attempt to locate suspect, witness, informant	5	1	0
Meetings with other police - official police business	5	4	1
Meet with prosecutor about a case; Appear in court	4	4	1

Activity Type	Average Minutes per Shift	Average Downtime minutes per shift	Percent of Downtime per Shift
Foot patrol	4	4	1
Medical, Health	4	1	0
Waiting	4	4	1
Check out suspicious circumstances	4	2	0
Service, escort, transport person, check on victim	4	1	0
Conduct research, inquiry on a problem	3	3	1
Warrant, subpoena service	3	2	1
Surveillance of particular person or address	3	1	0
Search/guard crime scene	3	1	0
No voice call / 911 hang-up	2	0	0
Check out situation, gone on arrival	2	0	0
Parking	2	1	0
Take report/statement from citizen	2	0	0
Transport other police	1	1	0
Conversation with public	1	1	0
Other Activities*	Less than 1 minute	Less than 1 minute	0
Total	480	380	100

\*Other Activities which each consumed an average of less than 1 minute per shift include: Pursuit of fleeing suspect, Meetings with other non-police service providers, Search property, Electronic communication with other police.

To calculate the time spent on activities by average minutes per shift, all activities were used regardless of the catalyst for officer mobilization (activities conducted in response to a 911 or 311 dispatch, self-initiated activities, and activities conducted in response to directives from supervisors or citizens). The distribution of activities by average downtime minutes per shift were calculated by excluding all activities that were conducted in response to a 911 or 311 dispatch (uptime activities). For example, the first row illustrates that officers spend an average of 158 minutes per shift on patrol, and that these 158 minutes are all downtime minutes. This indicates that all time spent on patrol is downtime (not in response to a 911 or 311 call). Similarly, all time spent on meals, snacks and restroom breaks (on average, 37 minutes per shift); all time spent on report writing (on average 23 minutes per shift); and all time spent on personal business (8 minutes per shift) is downtime, as these activities are not conducted within the response to a call for service.

Most of the time spent backing up other officers is also downtime. Officers spend an average of 43 minutes per shift on backup, and 42 of these minutes are downtime – on average only one minute per shift is spent on backups that are dispatched. Most of the time spent on traffic enforcement (11 of 12 minutes) is during downtime as well. This indicates that most traffic enforcement activities are not conducted in response to a dispatch.

In contrast, officers spend an average of 67 minutes per shift on problem focused activities, but only 13 of those minutes are downtime. This indicates that on average, officers are only spending 13 minutes per shift on problem focused activities that are not conducted within a response to a dispatch (911/311 call). These problem focused

activities conducted during downtime include primarily drug and alcohol related violations, traffic accidents, loitering, disorderly, or minor disturbances. Although an average of eight minutes per shift is spent conducting residential or commercial security checks or responding to alarms, officers are spending only one downtime minute per shift engaged in these activities – the other seven minutes that officers spend on these activities are in response to a dispatch. Similarly, officers spend an average of four minutes per shift on both medical or health related activities and service activities, but only one of these minutes is during downtime. Most of the time that is spent on these types of activities is in response to a dispatch or a citizen call for service.

### *Summary*

On average, Baltimore officers spend very little of their downtime (which constitutes on average 79 percent of their shift or 381 minutes) specifically engaged in proactive activities such as residential or commercial security checks, checking out suspicious circumstances, surveying particular people or addresses, or in conversations with the public. In fact, three activities account for more than 60 percent of downtime: patrol (42 percent), backing up other police (11 percent), and meal/restroom breaks (10 percent).

The next section expands upon these findings and prior research by examining why officers are engaging in certain downtime activities. For the three percent of downtime that is spent on problem-focused activities, how many of these activities are self-initiated and how many activities are conducted in response to information from citizens, or specific directives or information from supervisors? For those activities that are directed, the source and nature of the directive is examined.

### **Self-Initiated versus Directed Activities**

As previously noted, for all activities except administrative and personal activities, observers were to question officers about why they were conducting the activity (what was the catalyst for officer mobilization?). Table 4.11 crosstabulates the number of downtime activities for the 163 shifts by the catalyst for officer mobilization. Activity categories containing fewer than five incidents are not reported.<sup>24</sup> There were too few cases in most of the categories of catalyst for officer mobilization to report the percentage distribution of downtime activities per shift.

Table 4.11 illustrates that the majority of activities that officers engage in during downtime are self-initiated (N=792), but a closer examination reveals that vehicle patrol accounts for 86 percent of the total number of activities. However, officers rarely choose to leave their vehicle and patrol on foot (N=7), or initiate conversations with the public (N=6). Baltimore officers infrequently initiate proactive activities such as security checks (N=3), or surveillance of particular people or addresses (N=4) during downtime.

Though it appears that Baltimore officers spend a large portion of their downtime in their patrol car, they do respond to situations that present themselves, or on-view situations (self-initiated while viewing; N= 257). Forty percent of the on-view situations in which officers choose to intervene involve traffic enforcement (N=103), followed by problem focused activities (N=42) and providing backup to other officers (N=46). Officers infrequently intervene in service or medically related situations, but it may be that these types of situations do not often present themselves. Officers also act in response to citizen information, which usually requires engaging in some form of

problem-focused activity (N=17). Rarely do citizens provide officers with information regarding some sort of suspicious activity (N=5) that warrants the officer taking action. This is also not surprising in light of how infrequently patrol officers initiate conversations with the public.

Table 4.11 also indicates that only 41 activities conducted over the 163 observed shifts were initiated in response to a specific directive from a supervisor. On 13 occasions supervisors directed officers to serve a warrant or subpoena; on ten occasions directives were given to back up another officer; and on seven occasions a specific directive was given to engage in a problem focused activity. Although officers spend the largest portion of their downtime on patrol, supervisors do not issue any *specific* directives regarding vehicle patrol or foot patrol activities. However, observers reported that on 40 occasions officers engaged in vehicle patrol in response to a combination of general instructions and their own (officer) initiative.

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<sup>24</sup> A total of 15 activities are not reported from the following categories: search/guard crime scene; medical; check out situation, gone on arrival; pursuit of fleeing suspect; take report from citizen; unobserved activity.

Table 4.11: Catalysts for Officer Mobilization for Downtime Activities

Downtime Activity Type	Self-initiated while viewing a situation	Self-initiated on free time	In response to information from citizen on the street	Specific directive from supervisor	General instructions from supervisor	General instructions and officer initiative	Response to dispatch, no CAD record	Total
Vehicle patrol	5	681	0	0	3	40	0	729
Back up other police	46	34	1	10	0	4	287	382
Traffic enforcement	103	12	1	3	0	1	0	120
Problem-focused activity	42	25	17	7	0	2	0	93
Information gathering, police records	8	9	4	3	0	1	0	25
Warrant, subpoena service	2	0	0	13	0	6	0	21
Check out suspicious circumstances	10	2	5	0	1	0	0	18
Foot patrol	9	7	0	0	0	1	0	17
Service, escort, transport person, check on victim	6	4	2	0	1	0	0	13
Surveillance of particular person or address	6	4	0	1	1	0	0	12
Waiting	7	2	0	2	0	0	0	11
Residential, Commercial security check; alarm	6	3	0	0	0	1	0	10
Attempt to locate suspect, witness, informant	2	0	3	1	1	2	0	9
Parking	3	3	1	1	0	0	0	8
Conversation with public	2	6	0	0	0	0	0	8
Total	257	792	34	41	7	58	287	1476

### *Summary*

Roughly ten percent (N=140) of the reported downtime activities (activities for which the observer inquired about the catalyst for officer mobilization) are directed in some manner (conducted in response to citizen information, specific directives from a supervisor, general instructions from a supervisor, or both general instructions and officer initiative). This equals six percent of all downtime activities (including those activities for which the observer did not inquire about the catalyst for officer mobilization). The next sections will examine the source of these directives in more detail (e.g. which supervisor provided the directive or instructions, Lieutenant or Sergeant?), as well as the nature of the directives. This will address the void in the current literature on directed patrol activities by exploring who directs patrol officers, how frequently, and what officers are directed to do with reference to certain activities.

### *Source of Directives and Instructions*

As previously stated, observers were to question officers about why they were conducting each activity engaged in during the shift for all activities except those pertaining to administration and personal activities. If the activity was being conducted in response to a directive or instructions from a supervisor, observers were to record which supervisor gave the directive (the officer's own sector lieutenant, another sector lieutenant, the officer's own sector sergeant etc.)

Table 4.12 crosstabulates downtime activities by the source of directive and instructions for the activity. For the majority of activities (71 percent), observers reported that no authority appeared to give instructions or direct the officer to engage in the activity. For downtime activities that were mobilized in response to directives or

instructions from supervisors, it was most frequently the officer's own Sector Manager/Lieutenant that provided the directive (N=22), followed by the officer's own Sector Sergeant (N=12). The directives or instructions that Sector Lieutenants provided were most frequently pertaining to patrol (N=13), while directives or instructions issued by Sector Sergeants were most often in regard to serving a warrant or subpoena (N=6). Only six directives provided by supervisors (lieutenants and sergeants) were in regard to problem focused activities. Observers recorded no instances of directives being provided by supervisors of other units (Community Outreach Unit Sergeants, Neighborhood Officers Unit Sergeants, Neighborhood Service Center Sergeants), District Commanders, or local politicians (not shown in table), and few requests for assistance were made by other officers (N=18). Dispatchers directed 292 activities but the majority of these (N=276) were those backup calls that were recoded as downtime activities because there was no official CAD record.

In total, Table 4.12 indicates that 87 of the 1476 reported downtime activities (6 percent) were directed by either the officer's own sector lieutenant or sector sergeant, another sector lieutenant, another officer's request, or a citizen. Only 34 of these reported downtime activities (2 percent) were directed by the officer's own sector lieutenant or sergeant (keeping in mind that this means 1.5 percent of *all* downtime activities [N=2302] are directed by a supervisor).

Table 4.12: Source of Directive/Instructions for Downtime Activities

Downtime Activity Type	No other authority appeared to give instructions	Dispatcher	Officer's Own Sector Lieutenant	Another Sector Lieutenant	Officer's Own Sector Sergeant	Another Officer Requested	Citizen	Other	Missing	Total
Patrol	686	0	13	1	0	0	0	0	29	729
Back up other police	91	276	0	0	0	10	1	1	3	382
Traffic enforcement	115	3	1	0	0	0	1	0	0	120
Problem-focused activity	63	4	3	0	3	4	13	1	2	93
Information gathering, police records	17	1	1	0	0	1	4	0	1	25
Warrant, subpoena service	2	4	2	0	6	0	0	1	6	21
Foot patrol	16	0	0	0	0	0	0	0	1	17
Check out suspicious circumstances	11	1	0	0	1	0	5	0	0	18
Service, escort, transport person, check on victim	9	2	0	0	0	0	2	0	0	13
Surveillance of particular person or address	10	0	1	0	0	1	0	0	0	12
Waiting	9	0	1	0	1	0	0	0	0	11
Residential, Commercial security check; alarm response	9	0	0	0	0	0	0	0	1	10
Attempt to locate suspect, witness, informant	1	1	0	0	0	2	3	1	1	10
Parking	6	0	0	0	1	0	1	0	0	8
Conversation with public	8	0	0	0	0	0	0	0	0	8
<b>Total</b>	<b>1053</b>	<b>292</b>	<b>22</b>	<b>1</b>	<b>12</b>	<b>18</b>	<b>30</b>	<b>4</b>	<b>44</b>	<b>1476</b>

### *Summary*

Few of the activities that the observed officers conducted during the two-week study period were directed. Examining the source of the directives and instructions that were provided reveals that only 1.5 percent of all downtime activities are directed by a supervisor (primarily the officer's own Sector Lieutenant but also the Sector Sergeant).

The next section examines the nature of the directives and instructions that were provided, not just by supervisors but by all sources that issued directives (dispatchers, officers, and citizens). This will expand upon the prior analyses by exploring not just what types of activities officers were directed to do (patrol, traffic enforcement etc.), but in what manner they were directed to conduct these activities, for example, were officers simply directed to patrol a certain location, or were they directed to patrol a location during a certain time frame, or to conduct certain activities on patrol?

### *Nature of Directives and Instructions*

For those activities conducted in response to a directive or instructions, observers were to record the nature of the directive, specifically: if the officer was directed to a location and the nature of the location (residence address, street corner or block etc.); if the directive specified when to conduct the activity (i.e. within a specific time frame, or generally sometime during the day) and if the directive specified what to do while conducting the activity (i.e. certain specific activities or general instructions).

Table 4.13 reports the nature of the directives and instructions for downtime activities provided by supervisors (the officer's own sector lieutenant, and sergeant or another sector lieutenant), dispatchers, other officers and citizens. For example, the first row illustrates that officers were directed to patrol a location on 28 occasions. (However, a closer examination of these activities in the observation data revealed that a specific street address was provided for only four of these directives, 24 directives listed the post that the unit was assigned to as the directed address [not shown in table]). Officers were not directed to patrol a location during any specific times or to conduct any specific activities while patrolling (this is consistent with the results displayed in Table 4.10 which indicate that officers were not mobilized for patrol in response to specific directives from supervisors, but only mobilized in response to general instructions and officer initiative). In sum, officers received instructions to patrol a location (usually their post) and /or to engage in patrol at "sometime during the day," for only 31 of the 729 patrol activities (4 percent) conducted during the two-week period.

Table 4.13: Nature of Directives and Instructions for Downtime Activities

Activity	Directed to Location	Directed When To Conduct Activity		Directed What To Do While Conducting Activity		Minimum of One Directive Provided for Activity
		Specific Time Frame	Generally, Sometime Today	Certain Specific Activities	General Instructions	
Patrol	28	0	28	0	1	31
Back up other police	32	17	0	0	5	34
Traffic enforcement	5	4	0	3	1	5
Problem-focused activity	26	15	1	6	6	27
Information gathering, police records	7	3	0	2	1	7
Warrant, subpoena service	19	2	5	6	4	19
Foot patrol	1	0	1	0	0	1
Check out suspicious circumstances	6	2	0	0	1	6
Service, escort, transport person, check on victim	3	2	0	1	0	3
Waiting	2	1	0	0	0	2
Surveillance of particular person or address	2	1	1	1	0	2
Residential, Commercial security check; alarm response	0	0	0	1	0	1
Attempt to locate suspect, witness, informant	6	5	0	1	3	6
Parking	2	0	0	1	0	2
Total	139	52	36	22	22	146

Officers received directives regarding where to conduct traffic enforcement on five occasions. However on only four occasions were officers also directed to conduct the activity at a specific time, and on three occasions officers were directed to do certain specific activities in the course of traffic enforcement (in the first activity the officer received specific directions from a dispatcher regarding a road block, in the second activity the officer received specific directions from the dispatcher to help another officer with traffic control, and in the third activity the officer received specific instructions from a citizen regarding a moving violation).

Officers were directed in conducting problem-focused activities on 27 occasions. For 26 of these activities officers were directed to the location, for 15 of the activities they were also directed to conduct the activity within a specific time frame, and for six of these problem-focused activities officers were also provided with specific instructions regarding what to do while conducting the activity. Most of these directives came from citizens (N=17; recall Table 4.11), and were essentially on-view situations, where officers were expected to conduct the activity “right now.” Officers received directives from their own Sector Lieutenant for three problem-focused activities (recall Table 4.12), however the nature of these directives was specified for only two of the activities, (i.e. for the first activity the officers was directed to engage in specific activities, during a specific time frame, at a specific location regarding an investigation. For the second activity the officer received general instructions to “check up on the probation office”).

In total, officers received some sort of directive or instructions from a supervisor, a dispatcher, another officer, or a citizen for roughly ten percent (N=146) of the reported downtime activities (N=1476). Most of these directives (95 percent) specified a location

where the activity was to be conducted, but overall, few specific directives regarding specifically what to do while conducting an activity (N=22), were provided.

### *Summary*

Many proactive policing strategies advocate that supervisors provide directives regarding crime prevention and deterrence activities to be conducted during downtime. The present findings indicate that supervisors are providing few directives, and that the directives are not focused on identified problems, crime prevention or deterrence. To further explore the nature of directives, the next section examines directed activities by district, and the few directives that were provided by supervisors are examined by district, shift, and officer.

### *Directed Activities*

#### *Directed Activities and District*

As previously noted, the primary land use of the sectors selected for each district vary. The Central district is primarily a business community, the sector selected in the Southeast district is a commuter/tourism area, and the sector selected in the Southern district is primarily residential. Table 4.14 examines the number of reported downtime activities which were directed (i.e. conducted in response to information from a citizen, a specific or general instructions from a supervisor, or conducted in response to general instructions and officer initiative).

Table 4.14 illustrates that 140 activities were directed.<sup>25</sup> For the 41 activities that were conducted in response to a specific directive from a supervisor, 22 (or 54 percent) of these activities were conducted in the Southern district, 14 (34 percent) were conducted

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<sup>25</sup> Recall Table 4.9 reports 146 activities are directed. The discrepancy between Table 4.9 and Table 4.14 is due to an unknown catalyst for officer mobilization for 6 activities.

in the Southeast district, and the remaining five (12 percent) were conducted in the Central district.

Officers in the Southern district also conducted more activities in response to citizen information (N=17) than officers in either the Southeast (N=13) or Central (N=4) districts. Of the activities conducted in response to general instructions and officer initiative, 43 percent (N=25) were conducted in the Southeast district.

Table 4.14: Number of Directed Activities

Catalyst for Officer Mobilization	District			Total N=140
	Central	Southeast	Southern	
Specific directive from officer's supervisor	5 (12%)	14 (34%)	22 (54%)	41 (100%)
General directive from officer's supervisor	0	5 (71%)	2 (29%)	7 (100%)
General instructions and officer initiative	14 (24%)	25 (43%)	19 (33%)	58 (100%)
In response to citizen information	4 (12%)	13 (38%)	17 (50%)	34 (100%)

Table 4.15 examine these 140 directed activities as a percent of the reported downtime activities conducted within each district, to take into account that an equal number of observations (and thus activities), were not conducted in each district (44 observations were conducted in the Central district, 65 in Southeast, and 54 in Southern; recall Table 4.2. Table 4.15 illustrates the five activities in Central district that were conducted in response to a specific directive from a supervisor, constitute one percent of the downtime activities conducted in the Central district. In the Southeast district, the 14 activities directed by a supervisor comprise three percent of downtime activities, and the 22 activities in the Southern district constitute four percent of downtime activities. Inferences that supervisors in the Southern district provide more directives than

supervisors in the Southeast and Central districts, cannot yet be made from this information as it is unknown who these supervisors are, (i.e. Lieutenants, Sergeants etc.) and whether the directives were provided by the officer's own supervisor (e.g. supervisors of the Southern district provided directives to officers in Southern district), or whether the directives to Southern officers were provided by supervisors of other districts.

Table 4.15: Percent of Downtime Activities Directed Per District (Number in parentheses)

Catalyst for Officer Mobilization	District		
	Central N=386	Southeast N=549	Southern N=556
Specific directive from officer's supervisor <sup>a</sup>	1.30 (5)	2.55 (14)	3.96 (22)
General directive from officer's supervisor <sup>b</sup>	0	0.91 (5)	0.36 (2)
General instructions and officer initiative <sup>c</sup>	3.63 (14)	4.55 (25)	3.42 (19)
In response to citizen information <sup>d</sup>	1.04 (4)	2.37 (13)	3.06 (17)
Total <sup>e</sup>	5.96 (23)	10.38 (57)	10.79 (60)

<sup>a</sup> $F = 1.786$ ,  $df = 2$ ,  $p = 0.168$ . <sup>b</sup> $F = 2.149$ ,  $df = 2$ ,  $p = 0.117$ . <sup>c</sup> $F = 1.101$ ,  $df = 2$ ,  $p = 0.332$ .

<sup>d</sup> $F = 0.857$ ,  $df = 2$ ,  $p = 0.425$ . <sup>e</sup> $F = 0.616$ ,  $df = 2$ ,  $p = 0.540$ .

The difference between the 14 activities in the Central district and the 25 activities in the Southeast district which were conducted in response to general instructions and officer initiative – is less than one percent when examined as a percent of the total number of reported downtime activities. Overall, Table 4.15 illustrates that the differences by district in the number of directed activities conducted are not significant. Eleven (11) percent of activities conducted by officers in the Southern district and ten percent of activities conducted in the Southeast district were directed. Only six percent of activities were directed in the Central district.

### *Directed Activities and Supervisor*

Previous analyses indicate that 34 activities were directed by the officer's own sector lieutenant or sector sergeant (recall Table 4.12). These directed activities are examined by district to explore whether supervisory style may be a factor in providing directives.

Table 4.16 illustrates that the Southern district Lieutenant provided most of the directives, 50 percent (N=11), and the Central district Sergeant provided no directives regarding activities conducted by the observed officers during the two-week period. Over half of the directives provided by supervisors (53 percent; N=18) were from supervisors in the Southern district.

Table 4.16: Number of Activities Directed by Supervisors

Source of Directive/ Instructions	District			Total N=34
	Central	Southeast	Southern	
Officer's own Sector Manager/Lieutenant	4 (18%)	7 (32%)	11 (50%)	22 (100%)
Officer's own Sector Sergeant	0	5 (42%)	7 (58%)	12 (100%)

However, when these directives regarding activities are examined as a percent of the downtime activities conducted within each district, there are no significant differences. Table 4.17 illustrates that the four activities in Central district which were conducted in response to a directive from the officer's Lieutenant, constitute one percent of downtime activities conducted in the Central district. Similarly, directives were issued by the Southeast Lieutenant for approximately one percent of the downtime activities. In the Southern district 11 activities were conducted in response to a directive from the

Lieutenant, these 11 activities constitute two percent of downtime activities conducted in the Southern district.

Table 4.17: Percent of Downtime Activities Directed by Supervisors Per District  
(Number in parentheses)

Source of Directive/ Instructions	District		
	Central N=386	Southeast N=549	Southern N=556
Officer's own Sector Manager/Lieutenant <sup>a</sup>	1.04 (4)	1.27 (7)	1.98 (11)
Officer's own Sector Sergeant <sup>b</sup>	0	0.91 (5)	1.26 (7)
Total <sup>c</sup>	1.04 (4)	2.19 (12)	3.24 (18)

<sup>a</sup> $F = 0.389$ ,  $df = 2$ ,  $p = 0.678$ . <sup>b</sup> $F = 2.309$ ,  $df = 2$ ,  $p = 0.100$ . <sup>c</sup> $F = 1.435$ ,  $df = 2$ ,  $p = 0.238$ .

These 34 supervisor directed activities were also examined by shift to explore whether supervisors are more likely to direct officers during the day or evening shift. Table 4.18 illustrates that officers working the day shift were more likely to receive directives regarding activities (N=21), than officers working the evening shift (N=13), but a binomial test indicates that these differences are not significant.

Table 4.18: Supervisor Directed Activities by Shift

Shift	Directed Activities	Percent
B (day)	21	61.8
C (evening)	13	38.2
Total	34	100.0

$p = 0.229$

Table 4.19 examines the number of officers who conducted activities directed by supervisors (lieutenants and sergeants) by district, to assess whether supervisors are providing directives to all officers or only to certain officers. In Central district there were four directives provided by supervisors to two officers. “Officer 10” conducted three of the directed activities during one shift, while “Officer 38” conducted one of the directed activities. In the Southeast district, the 12 directives regarding activities were issued to seven of the 30 observed officers (25 percent of observed officers in the Southeast district conducted a directed activity). Similarly, the 18 directives provided by supervisors in the Southern district were issued to seven different officers (32 percent of the observed officers in the Southern district). In total the 34 directives provided by supervisors over the two-week period were issued to 16 different officers, thus 24 percent of all observed officers (N= 68) conducted a directed activity during the study period.

Table 4.19: Number of Officers which Conducted Activities Directed by Sector Lieutenants and Sector Sergeants

Officer	Number of Directed Activities Conducted	Number of Shifts over Which Directed Activities were Conducted	Number and Percent of Observed Officers
Central			N = 18
10	3	1	
38	1	1	
Subtotal	4	2	2 (11%)
Southeast			N = 28
9	2	1	
11	1	1	
21	1	1	
29	1	1	
42	3	1	
53	3	3	
63	1	1	
Subtotal	12	8	7 (25%)
Southern			N = 22
4	1	1	
8	2	1	
22	7	2	
32	2	2	
34	2	1	
49	1	1	
68	3	1	
Subtotal	18	8	7 (32%)
Total	34	-	16 (24%)

To examine whether supervisors are directing certain officers based on the officers' characteristics, the descriptive characteristics for officers who received directives from supervisors and those who did not are compared in Table 4.20 (data for officer characteristics were collected using the ride instrument, see Appendix II).

Table 4.20: Descriptive Characteristics of Directed versus Not Directed Patrol Officers

Variable	Values	Received Directive/s from a Supervisor			
		No		Yes	
		N	%	N	%
Gender	Male	41	77.4	13	81.3
	Female	9	17.0	2	12.5
	Missing	3	5.7	1	6.3
	Total	53	100	16	100
Race	White	31	58.5	11	68.8
	Black	17	32.1	4	25.0
	Hispanic	2	3.8	-	-
	Missing	3	5.7	1	6.3
	Total	53	100	16	100
Education	High school graduate or GED	10	18.9	3	18.8
	Some college or trade school	21	39.6	7	43.8
	Associates degree	7	13.2	3	18.8
	College graduate	10	18.9	1	6.3
	Some post graduate education	1	1.9	1	6.3
	Missing	4	7.6	1	6.3
	Total	53	100	16	100
Age <sup>a</sup>	Mean	31.20		29.93	
	Std. Deviation	6.73		5.35	

<sup>a</sup>  $t = 0.667$ ,  $df = 63$ ,  $p = 0.507$ .

Table 4.20 illustrates that 13 of the officers that received a directive from a supervisor are male, and two are female. For those officers that did not receive a directive from a supervisor, 41 are male and nine are female. Reflective of the total number of officers observed, the majority of the officers that received a directive are white (N=11). There appears to be no trend in whether officers were or were not

directed by their level of education, and the average age of officers who were directed does not significantly differ from the average age of officers who were not directed.

### *Summary*

Examining directed activities by district illustrates that officers in the Central district conduct just over half as many directed activities as officers in the other two districts. However, these differences cannot be completely attributed to differences in supervisors provision of directives. Supervisors in the Central, Southeast and Southern districts provided directives for one, two, and three percent (respectively) of the downtimes activities conducted in their districts. However, overall, in the Central district six percent of downtime activities were directed, in the Southeast district, ten percent of downtime activities were directed, and in the Southern district, 11 percent of downtime activities were directed. The provision of directives by supervisors does not differ significantly by shift, and does not appear to differ by officer characteristics. The next section will compare self-initiated and directed downtime activities on situational variables to explore whether there are any patterns or trends that may help to explain variation in self-initiated versus directed activities engaged in during downtime.

### **Activity Analysis**

For the following analyses, the previously reported downtime activities are grouped by collapsed categories of catalyst for officer mobilization. Activities are either self-initiated (which includes self-initiated while viewing and self-initiated during free/downtime) or directed. The backup activities conducted in response to a dispatch for which there is no CAD record are excluded.

Table 4.21 presents a description of six situational variables for activities by the catalyst for officer mobilization (whether the activity was self-initiated or directed). When the nature of the initial location of the activity is collapsed into two categories (public property [indoors and outdoors] and private property [indoors and outdoors]; excluding activities conducted at police facilities) directed activities are significantly more likely than self-initiated activities to take place on private property (36 percent of directed activities occur on private property versus five percent of self-initiated activities). This is expected, as many of the directed activities are either backing up other police on calls, or serving warrants and subpoenas, while the majority of self-initiated activities are patrol. Directed activities are also significantly more likely than self-initiated activities to involve a face to face interaction with a citizen, however this is due in part to the fact that citizens are included as a source of directives.

Officers' prior knowledge of locations for activities does not differ significantly for self-initiated and directed activities. For almost 60 percent of both self-initiated and directed activities, officers did not indicate that they had prior knowledge of the location. Officers did not indicate that directed activities are significantly more likely than self-initiated activities to be part of a (defined) larger problem, nor did they indicate that directed activities are significantly more likely than self-initiated activities to be part of a long term initiative to deal with a problem. In fact only six percent of directed activities (N=9), and four percent of self-initiated activities (N=43) were indicated to pertain to a larger problem. Of these activities, five of the nine directed activities (56 percent), and 17 of the 43 self-initiated activities (40 percent) pertain to illicit drug violations (not shown in table), but no other "problem" accounted for more than 2 activities (self-

initiated and directed activities combined). Five percent of directed activities (N=8) and four percent of self-initiated activities (N=43) were part of a long-term initiative to deal with a problem (two of the eight directed activities were part of a long term initiative to deal with drug violations; 12 of the 43 self-initiated activities (28 percent) were part of a long term initiative to deal with drug violations, no other long-term initiatives had more than 2 activities). For the few activities that were conducted as part of a long term initiative to deal with a problem, there is no pattern regarding who created the long term initiative for directed activities, but for the self-initiated activities, the observed officer (alone or with other officers) is most likely to have created the initiative.

Table 4.21: Frequencies of Situational Variables for Self-Initiated versus Directed Activities

Variable	Values	Self-initiated		Directed		
		N	%	N	%	
Nature of initial location of activity**	1 = Public property, outdoors	911	87.3	75	51.4	
	2 = Public property, indoors	7	0.7	1	0.7	
	3 = Police facility, outdoors	1	0.1	1	0.7	
	4 = Police facility, indoors	4	0.4	2	1.4	
	5 = Private property, outdoors	23	2.2	12	8.2	
	6 = Private property, indoors	20	1.9	30	20.5	
	9 = Other	25	2.4	26	17.8	
	99 = Missing	52	5.0	-	-	
	Total	1043	100	146	100	
		0= Public	918	95.5	76	64.4
	1= Private	43	4.5	42	35.6	
	Total <sup>a</sup> **	961	100	118	100	
Officer indicated prior knowledge of location	0 = No	595	57.0	86	58.9	
	1 = Yes, received information at roll call	6	.06	1	0.7	
	2 = Yes, heard about it from department or other officers	0	0.0	1	0.7	
	3 = Yes, direct knowledge from prior visits	357	34.2	54	37.0	
	4 = Yes, officer showed prior knowledge, basis not clear	34	3.3	4	2.7	
	99 = Missing	51	4.9	-	-	
	Total	1043	100	146	100	
		0 = No	595	60	86	58.9
		1 = Yes	397	40	60	41
		Total <sup>b</sup>	992	100	146	100

<sup>a</sup>  $X^2 = 140.238$ ,  $df = 1$ ,  $p < 0.0001$ . <sup>b</sup>  $X^2 = .061$ ,  $df = 1$ ,  $p = 0.804$ .

Table 4.21: Frequencies of Situational Variables for Self-Initiated versus Directed Activities (cont).

Variable	Values	Self-initiated		Directed	
		N	%	N	%
Activity involved a face to face interaction with citizen**	0 = No	648	62.1	68	46.6
	1 = Yes	335	32.1	78	53.4
	99 = Missing	60	5.8	-	-
	Total <sup>c</sup> **	1043	100	146	100
Police indicated problem is part of a larger problem	0 = No	942	90.3	136	93.2
	1 = Yes	43	4.1	9	6.2
	99 = Missing	58	5.6	1	0.7
	Total <sup>d</sup>	1043	100	146	100
Activity part of a long term initiative to deal with problem	0 = No	944	90.5	138	94.5
	1 = Yes, initiative focused on specific people or location	15	1.4	6	4.1
	2 = Yes, initiative focused on this kind of problem in general	22	2.1	2	1.4
	3 = Yes, unable to determine nature of long term initiative	6	0.6	0	0
	99 = Missing	56	5.4	-	-
	Total	1043	100	146	100
	0 = No	944	95.64	138	94.52
	1 = Yes	43	4.36	8	5.48
	Total <sup>e</sup>	987	100	146	100

<sup>c</sup> $X^2 = 20.506$ ,  $df = 1$ ,  $p < 0.0001$ . <sup>d</sup> $X^2 = .976$ ,  $df = 1$ ,  $p = 0.323$ .

<sup>e</sup> $X^2 = 0.373$ ,  $df = 1$ ,  $p = 0.541$ .

Table 4.21: Frequencies of Situational Variables for Self-Initiated versus Directed Activities (cont).

Variable	Values	Self-initiated		Directed	
		N	%	N	%
Long term initiative created by	1 = Observed officer only or officer with other officers	25	2.4	1	0.7
	2 = Other officers only	0	0.0	1	0.7
	3 = Officer's own lieutenant	2	0.2	1	0.7
	4 = Another lieutenant	0	0.0	0	0.0
	5 = Officer's sergeant	2	0.2	1	0.7
	6 = Another sergeant	0	0	0	0
	7 = District Commander/Major	1	0.1	2	1.4
	8 = Local politician	2	0.2	0	0.0
	9 = Other	1	0.1	0	0.0
	13 = Unable to determine	21	2.0	4	2.7
	99 = Missing	989	94.8	136	93.2
	Total		1043	100	146

\*\*  $p < 0.0001$

Considering how few activities are directed by supervisors (recall Table 4.14) and the nature of the directives and instructions provided (recall Table 4.13 which depicts few specific directives regarding when to conduct activities or what to do while conducting an activity), these results are not surprising. It appears that the few activities that were directed, were not directed in the theoretical sense of crime analysis and problem solving prevalent in the policing literature, in that, the directives provided do not appear to be a means of operationalizing problem oriented or community oriented policing theory or proactive policing strategies. These activities are probably more correctly conceptualized as activities that are not self-initiated (in other words, activities that result due to instructions, information or requests of officers, supervisors and citizens).

A logistic regression equation model was estimated to examine the characteristics associated with activities that are not self-initiated (they will be referred to as directed activities for ease of understanding). This permits a determination of whether the variables which differed significantly for self-initiated and directed activities in the chi-square analyses retain their significance and direction while controlling for the influence of the other variables. Logistic regression has been used frequently in police research to predict the relative odds of arrest in interpersonal encounters (Fyfe, Klinger, and Flavin, 1997; Klinger, 1995; Smith 1987, Worden and Shepard, 1996). It is an appropriate technique for this analysis because the dependent variable, catalyst for officer mobilization<sup>26</sup>, is dichotomous (0= self initiated and 1 = directed), and most cases have a 0 value (self initiated, N=927; directed, N=108). A multivariate analysis examining the relationship between catalyst for officer mobilization and nine independent variables was

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<sup>26</sup> For this analysis the dependent variable, catalyst for officer mobilization, excludes activities conducted in response to citizen calls for service, personal and administrative activities.

performed (district; officer gender [1 = Male, 2 = Female]; officer race [1= White, 2 = Other], officer age, officer education; nature of location for activity [1 = Public; 2 = Private] officer has prior knowledge of location; activity is part of a larger problem; and activity is part of a long term initiative to deal with a problem).

Prior to estimating the logistic regression model, several diagnostic procedures were performed to test for collinearity. Logistic regression procedures do not allow for the calculation of tolerance statistics and variance inflation factors (VIF). Menard (1995) recommends running the identical model in linear regression for the purpose of detecting collinearity. The collinearity diagnostics revealed tolerance statistics ranging from .51 to .99, all within acceptable limits. The VIF are also below limits that would indicate problems with collinearity. For instance, Stine (1995) and Chatterjee and Price (1991), suggest that VIF values of 10 or larger indicate a problem. The VIF for this model are all below 2.0.

An analysis of standardized residuals did reveal a non-normal distribution, this does not necessarily cause concern about the validity of the statistical inferences (Menard, 1995). A more important application of the residuals is the identification of cases where the model is a poor fit. Menard (1995) recommends removing cases where the standardized residual is over 2 in absolute value. Once removed, the model was re-estimated. Findings from this model were consistent with the model that included all cases so all cases were returned for the present analysis. Further analyses indicated leverage values lower than .10 for all cases. Finally,  $dfbeta$  values were all less than .26 indicating that no case has a particularly strong influence on the estimation of model parameters.

Table 4.22 presents the results of the logistic regression analyses. Particularly important is the effect of the location of the activity. Activities conducted at a private location are substantively and significantly more likely to be directed (higher values for the Wald statistic indicate greater significance of  $B$ ). District is also statistically significant, fewer directed activities are conducted in the Central district as compared to the Southeast and Southern districts. Female and minority officers, and officers with higher education are less likely to conduct directed activities but the differences are not significant.

Table 4.22: Logistic Regression Analysis

Variable	$B$	SE	Wald	Exp ( $B$ )
District (1, Central)	-.671	.298	5.086*	.511
District (2, Southeast)	-.490	.329	2.218	.612
Gender	-.574	.359	2.563	.563
Race	-.407	.284	2.051	.665
Age	.015	.021	.491	1.015
Education	-.197	.104	3.559	.821
Nature of location	2.149	.265	65.569**	8.575
Prior knowledge of location	.204	.228	.800	1.266
Activity/problem is part of a larger problem	.487	.507	.921	1.627
Activity is part of a long term initiative to deal with a problem	.047	.552	.007	1.048
Constant	-1.804	.933	3.743	.165

\*  $p < .05$ , \*\*  $p < .0001$

The findings of the logistic regression analysis confirm those of the previous analyses. The nature of the location of the activity (public versus private) and the district are significant predictors of directed activities. District may be a proxy for supervisor style and /or possibly land use. The data do not afford the opportunity to explore these relationships in more detail, however interviews with district supervisors (for the larger

project) indicated differences across districts in daily operations. The following chapter will summarize the findings of the analyses conducted, and discuss the limitations and implications for future research.

## CHAPTER FIVE CONCLUSIONS

The purpose of this study was to examine two issues inherent to proactive policing strategies, first, whether patrol officers who are required to respond to citizen calls for service have time to engage in proactive policing activities. Second, whether there is evidence that proactive policing strategies from the numerous movements in police reform and crime prevention have made it past administrative implementation to the front lines of policing. Three major research questions were formulated to address these issues:

1. How much downtime do patrol officers have, and what activities are officers conducting during downtime?
2. To what extent are the downtime activities self-initiated as opposed to directed?
3. What factors help to explain variation in self-initiated versus directed activities engaged in during downtime?

Attention was specifically focused on exploring the use of directives for two reasons. First, many police departments claim to have implemented proactive policing strategies that emphasize crime analysis and problem identification. At the time of the study, the Baltimore police department employed the Crimestac process which suggests that supervisors should be providing direction to patrol officers to structure downtime activities. In fact, the selection of districts and sectors for field observations was biased intentionally toward sectors in which commanders and lieutenants perceived the non-emergency call system (311) to have reduced the number of calls dispatched to patrol officers, giving the supervisors more time to direct officers' activities. Second, the

absence of research on use of directives and the limited research on activities conducted during downtime in general suggested a need for research in this area.

Both computer aided dispatch data (CAD) and field observations of patrol officers were used to address the research questions. The Baltimore Police Department provided the CAD data for the period June 14, 1999 through June 27, 1999 (the time period coinciding with the field observations of officers). During the field observation period, trained observers collected information regarding officers' activities for 215 shifts, data from 163 of these observed shifts were used for the analyses. The following sections summarize and discuss the findings, provide possible explanations for the results, and identify questions for future research.

## **Summary and Discussion of Findings**

### ***Computing Downtime***

A review of previous studies which examined officer downtime in different cities and years (Chapter Two) revealed wide variation in the amount of downtime available to officers. It was suggested that this variation may be explained by the fact that the studies were conducted in different cities and in different years, or perhaps the study results were influenced by the type of data examined; studies which used dispatch data generally found that officers had more downtime than studies which used observation data. One of the objectives of the present research was to explore whether there is in fact a trend or pattern where the amount of downtime is influenced by the type of data used, through examining both dispatch and field observation data for the *same* study site and time period (something that, to date, has not been done).

The analyses conducted indicate that the average amount of officer downtime per shift does vary depending on the type of data used. Calculating officer downtime using CAD data results in significantly *less* available downtime per shift (on average, 34 minutes) than if downtime is calculated using field observation data, thus these results are not consistent with the overall findings of prior research (when considered as a group, the prior studies generally find that officers have *more downtime* when dispatch data is used than when observation data is used). It appears that the wide variation in available downtime found in previous studies is not solely a result of the type of data examined, (or data source) but may reflect differences in activity categorization, or real differences by study site and time period.

Prior research has suggested that one of the disadvantages of dispatch data is that it is self-reported by patrol officers and therefore may be suspect (Whitaker, 1982). Whitaker's observation that an incentive exists for officers to delay clearing calls, because this indicates to the dispatcher that the officer is free for reassignment, may be supported by the current study. Indeed, comparing CAD data to field observation data for the same study site and time period reveals that some officers do not clear calls in a timely fashion. While officers are certainly entitled to meal and restroom breaks during their shift, when they do not distinguish the time spent on these activities from time spent responding to calls for service (e.g. clearing the call for service, then taking the unit out of service for a restroom break), the data available from the CAD system for resource allocation decisions are not optimum. More time spent responding to calls for service may result in a perceived necessity to schedule more officers per shift.

### *Description of Downtime*

Regardless of the type of data used, officers do have time to engage in proactive activities. The field observation data reveals that on average, over three quarters of an officer's shift is downtime (79 percent). Compared to the results for prior observation studies, the Police Services Study (PSS) also found that 79 percent of officer's time was downtime (Whitaker, 1982). The amount of downtime found in other observation studies was much lower, ranging from 46 - 60 percent of an officer's shift (but this is probably due in part to method of reporting; recall Figure 2.2).

The majority of activities conducted during downtime are self-initiated (46 percent) as opposed to directed (6 percent). As well, officers spend more time engaged in self-initiated activities (an average of 186 minutes per shift) than directed activities (25 minutes per shift). The average time spent on a self-initiated versus directed activity does not significantly differ. If the average time spent on all activities except responding to calls for service and directed activities is classified as self-directed time, the present study confirms Mastrofski et al.'s (1998) finding that 74 percent of a beat officers' shift is self-directed time.

### *Time Spent on Activities*

Three activities – patrol, personal (meals, breaks, errands relaxation), and backing up other officers consume 60 percent of officers' downtime (42 percent, 12 percent and 11 percent respectively) and 50 percent of total shift time (33 percent, 9 percent and 9 percent, respectively). Baltimore officers spend little downtime specifically conducting proactive activities such as security checks, checking out suspicious circumstances, surveying people or addresses, or in conversations with the public. As Sherman (1986)

noted, the police, for the most part, will not get out of their cars to talk to citizens. In comparison to prior studies, Whitaker (1982) found that on average PSS officers spent 34 minutes of downtime (unassigned time) per shift conducting general surveillance, initiating encounters in the field, issuing parking tickets and conducting security checks. In contrast, Baltimore officers spend an average of 4 minutes downtime per shift on surveillance of a particular person or address, in conversation with the public, issuing parking tickets, and conducting residential or commercial security checks.

Baltimore officers spend the same amount of time on patrol as Frank et al., (1997) found for Cincinnati officers (on average 158 minutes per shift, or 33 percent of total shift time;), which is more time than Smith et al., (2001) found for Cincinnati officers four years later (29 percent, Smith et al., 2001). This is also more time than that found for Indianapolis officers (26 percent; Parks et al., 1999); and St. Petersburg officers (18 percent; Parks et al., 1999). However on average, Baltimore officers spend less time on meals and personal activities than observed officers in the Police Services Study (14 percent; Whitaker, 1982); Midwestern city officers (21 percent; Cordner 1979); Indianapolis officers (14 percent; Parks et al., 1999); and St. Petersburg officers (11 percent; Parks et al., 1999).

### *Self-Initiated versus Directed Activities*

Excluding the number of times officers backed up other officers on calls for service, of the 1476 downtime activities reported, only 140 were *not* self-initiated by an officer (recall Table 4.11). For all downtime activities except serving warrants and subpoenas, and attempts to locate suspects, witnesses or informants, officers are mobilized more often by patrol initiative than citizens and headquarters combined.

However, Webster (1970) suggests that *overall* (uptime and downtime), police are mobilized more often by the action of private citizens and police headquarters than by patrol initiative. If the number of times officers initiated vehicle patrol or backed up other officers for calls are excluded, officers only self-initiated 220 other downtime activities during the two-week period (recall Table 4.11), compared to responding to 764 dispatches (911/ 311 calls for service and dispatches directly from the district; recall Table 4.7). Thus, if counting the absolute number of mobilizations for activities, the current study supports Webster's (1970) findings. Succinctly, it appears that patrol officers are mobilized most frequently by calls for service, both dispatched and self-initiated backups.

This research also provides support for Kessler's (1993) observation that officers may be self-initiating overwork by choosing to backup other officers on calls to which they were not officially dispatched. Table 4.11 illustrates that officers are self-initiating backups of other units (N=46 while viewing; N=34 on free time), and that supervisors rarely provide directives to backup other officers (N=10 specific directives). However, for the majority of backups (N=287) the catalyst for officer mobilization is reported as a response to a dispatch for which there is no CAD record. As explained in Chapter Four, it is likely that these backup activities are self-initiated decisions to backup other units.

Examining the average amount of downtime spent on different activities revealed that officers spend the largest portion of their downtime (42 percent) on patrol (recall Table 4.10). It is now evident that officers are spending this time on patrol because that is what they *choose* to do with their downtime. Supervisors are not providing specific

directives that officers are to engage in vehicle patrol when they are not responding to calls for service. In fact, supervisors rarely provide specific directives to engage in any activities during downtime.

### *Source of Directions and Instructions*

For the infrequent occasions when supervisors do provide directives or instructions (two percent of downtime activities) it is usually the officer's own Sector Lieutenant (N=22) or the officer's own Sector Sergeant (N=12). Further, only six of these 34 directives provided by supervisors pertained to problem focused activities. Thirteen of the directives pertained to patrol, and eight to serving warrants or subpoenas. During the observation period, one directive was issued by a supervisor of another sector, no directives were issued by supervisors of other units, district commanders, or politicians.

In light of the sector management approach employed in Baltimore (and the presumption that sector lieutenants will develop crime control/prevention strategies for their designated area); the use of Crimestac (which provides data to sector managers regarding crime patterns and trends in order to structure unit operations); and the intentional selection of districts and sectors for field observations biased toward sectors in which commanders and lieutenants perceived there to be time to direct officers' activities, patrol supervisors provide few directives to patrol officers. Citizens provide almost the same number of directives as supervisors combined, and officers provide the fewest directives or requests for assistance.

### *Nature of Directions and Instructions*

Examining the nature of directives provided by all sources (supervisors, citizens, other officers and dispatchers) reveals that directives most frequently pertain to a location. Few directives specify when to conduct an activity or specifically what to do while conducting an activity.

Although officers spend 42 percent of their downtime engaged in vehicle patrol, they are not directed to patrol specific locations during specific times, or to conduct any specific activities while patrolling. In fact, with the exception of four directives which specified a street (name) to patrol, the location was only described as the officer's post. This suggests that supervisors are not using directed patrol, saturation patrol or crackdown strategies (proactive strategies aimed at increasing both apprehension and prevention) during downtime. Moore (1992) notes that many problem solving efforts essentially begin as directed patrol operations designed to identify patterns of offending or known offenders in order to deploy police to catch the offenders. Patrol aside, Baltimore officers are not often directed to engage in other types of activities which could be considered to further crime prevention and deterrence, such as surveillance of particular persons or addresses (N=2), or security checks for residences or businesses (N=0). It appears that the few directives which are provided by supervisors are not efforts to structure and use preventive patrol time in order to accomplish specific patrol objectives.

### *Directed Activities*

In light of the absence of previous research on the use of directives, directed activities were examined by district, supervisor, shift, and officer to tap whether there are

any significant factors to explain the use of directives. When the percent of downtime activities (directed by all sources) per district are examined (recall Table 4.15), overall, officers in the Central district receive specific or general directives and instructions from supervisors, or are mobilized in response to citizen information, at half the frequency of officers in the Southeast and Southern districts.

When the percent of downtime activities that are directed by a supervisor are examined by district (recall Table 4.17), it is evident that the supervisors in all three observed districts provided very few directives to officers during the two-week observation period. Supervisors in the Southern district provided the most directives for the reported downtime activities, directing only three percent of activities, supervisors in the Central district directed only one percent of downtime activities, but again, the differences are not significant. The number of directives issued by supervisors did not differ significantly by shift (day or evening), but the directives which were provided were issued to a limited number of officers. Approximately one quarter of the observed officers were responsible for conducting all of the directed activities. The officers who received the directives do not appear to differ from the officers who were not directed on the characteristics gender, race, education or age.

### *Activity Analysis*

Comparing self-initiated activities and directed on situational variables reveals two significant differences. Directed activities are significantly more likely to take place on private property, and to involve a face to face interaction with a citizen. However as previously mentioned, these findings are not surprising when the types of activities that are directed are considered (backing up other officers on calls for service, and serving

warrants and subpoenas) and the measurement of the variable source of directives is considered (citizens are considered as a source of directives).

Directed activities are not significantly more likely than self-initiated activities to pertain to a larger problem, although ten percent of all reported activities (N=52, self-initiated and directed combined) did pertain to a larger problem. Forty-two percent of these activities (self-initiated and directed combined) pertained to the problem of illicit drug violations. Nine percent of self-initiated and directed activities combined (four percent of self-initiated; five percent of directed) were part of a long-term initiative to deal with a problem, (for 27 percent of these combined activities the long term initiative was directed at illicit drug violations). Thus, although ten percent of downtime activities were problem directed, activities were primarily directed at one problem. As the other problem-directed activities were in regard to a variety of other problems, but no other problem comprised more than two activities, this suggests that either these other problems are not uniformly recognized by all officers as problems (that they have not been officially defined or identified as problems), or that serious efforts are not being expended to address these problems. As the long-term initiative for self-initiated activities was most frequently created by the observed officer (when indicated; however for 95 percent of self-initiated activities there is no response for who created the initiative, and there is no pattern evident in directed activities), it is possible that the first explanation is accurate, although the data do not support any conclusions.

A multivariate analysis examining the characteristics associated with activities that are not self-initiated confirmed the results of previous analyses. Variables which differed significantly for self-initiated and directed activities in the chi-square analysis

retained their significance and direction while controlling for the influence of the other variables. The nature of the location of the activity, and the district are significant predictors of directed activities. Activities conducted at a private location are significantly more likely to be directed, while significantly fewer directed activities are conducted in the Central district as compared to the other districts.

### *The Big Picture*

When considered in concert, the results of this research support the following answers to the research questions:

1. How much downtime do patrol officers have, and what activities are they conducting during downtime?

On average, over three quarters of a Baltimore patrol officers' shift is downtime. During this time they primarily engage in routine patrol, or back up other officers on calls to which they were not dispatched.

2. To what extent are the downtime activities self-initiated as opposed to directed by superiors, other officers, and citizens?

Only six percent of downtime activities are directed by superiors, other officers or citizens. Two percent of these activities are directed by supervisors. The majority of activities conducted during downtime (patrol and backing up other officers on calls for service) are self-initiated by officers. The only activities that are more likely to be directed than self-initiated are serving warrants and subpoenas, and attempts to locate suspects, witnesses or informants.

3. What factors help to explain variation in self-initiated versus directed activities engaged in during downtime?

Directed activities are significantly more likely to occur on private property and the use of directives is influenced by district.

It appears that patrol officers who are required to respond to citizen calls for service have time to engage in proactive policing activities, but there is little evidence that proactive policing strategies from the numerous movements in police reform and crime prevention have made it past administrative implementation to the front lines of policing. In spite of the numerous proactive policing strategies that have emerged, downtime is still primarily spent engaged in random patrol or backing up other officers on calls for service, indeed, officers are most often mobilized by calls for service. The fact that officers are spending more than 40 percent of downtime in the car patrolling, cannot be ignored. There are limits on how proactive an officer can be from inside a vehicle. Officers spend little downtime on problem-focused activities, proactive (prevention oriented) activities, or in conversation with citizens, and few activities are initiated in response to citizen information or requests. In fact, in a discussion of patrol workload using the Police Services Study data, Whitaker (1982), found more time spent per shift on proactive activities (25 years ago) than the current study.

Although officers indicate that ten percent of the downtime activities conducted are regarding a larger problem, and nine percent of downtime activities are part of a long-term initiative to deal with a problem, with the exception of illicit drug violations, no more than two activities conducted pertain to the same problem. This does not suggest that a concerted effort is being focused on addressing these other problems. In turn, there is little evidence that there are defined or organized strategies in place to address problems. Supervisors provide few directives to patrol officers, and they are not specific

in nature. It appears that supervisors are not using downtime to their advantage. There is no evidence of directed patrol, saturation patrol or crackdown strategies to justify the amount of time spent on vehicle patrol as proactive. As supervisors are not providing directives, officers are *choosing* to remain in their cars, randomly patrolling, waiting for calls for service. The findings suggest that Whitaker (1982) is correct in asserting that patrol activities “are not usually directed either by supervisory personnel or by conscious planning of the patrol officers themselves” (217). However two other explanations should be considered.

### ***Generalizability***

Only 68 patrol officers of the 1549 officers<sup>27</sup> employed by the Baltimore Police Department were observed (4 percent). Further, observations were conducted in only three of nine districts, and three of 29 total sectors (10 percent). Thus, the findings may not be representative of all officers, districts or sectors in the Baltimore Police Department. It is possible that officers are self-initiating more proactive activities, or are being directed to conduct more activities by supervisors in other districts and sectors.

In turn, although 163 shifts were observed, all observations were conducted within a two-week period. The few directives issued during this time period do not appear to be a means of operationalizing problem-oriented or community oriented policing strategies but this is a short time frame to measure “long-term” initiatives to deal with a problem. More observations over a longer period may yield a greater proportion of activities directed at specific problems. However, as Moore (1992) notes, to make problem oriented policing and community oriented policing work, it is not enough “to

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<sup>27</sup> This total includes patrol officers, community officers, and all other officers of special units e.g. flex, (a breakdown by unit type was not available).

have the general idea translated into operational realities on an intermittent basis. The organizations must be structured and operated to produce that result day in and day out” (127).

### ***Measurement Error***

A second explanation for the few directives issued by supervisors is measurement error. It is possible that supervisors are issuing directives but they are getting lost between administration and the street, or that officers are not identifying the activities they conduct as being in response to a directive from a supervisor. As well, this may be a conservative estimate of directed activities if observers did not debrief officers about each specific activity.

However, another possibility is that supervisors are issuing directives, but not to patrol officers. The Baltimore Police Department also uses community officers which are exempt from responding to calls for service, and in some sectors, flex officers (or a flex unit) which Sector managers may deploy where necessary. An analysis of the 26 observed shifts conducted with community officers revealed a distribution of self-initiated and directed activities similar to patrol officers, only ten percent of community officers’ activities were directed in some manner. However, during interviews conducted with Sector managers for the larger project, many indicated that they use their flex unit for special initiatives in their sector, as well as to cover patrol posts when needed. In terms of explaining the use and nature of directives, the measurement error may be that the wrong officers were observed.

If this is in fact the case, the Baltimore Police Department is similar to many other police departments in that a special unit has been created to conduct the proactive

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policing activities that were initially proposed to make better use of patrol downtime. This seems to be the current trend among police departments, and not an unlikely conclusion.

### **Future Research and Policy Implications**

It appears that if the decisions about what to do during downtime are left to individual patrol officers, the activities of choice are patrol and backing up other officers on calls for service. This fact alone prompts a number of questions. First, is this finding generalizable? More studies of patrol officer downtime need to be undertaken. Problem oriented and community oriented policing stress identification of problems and more of a focus on proactive rather than reactive police work. By definition, responding to calls for service is reactive work. Workload studies that do not identify the activities conducted in the context of proactive and reactive time do not permit analysis of the tasks performed by officers during available time, and whether they are in fact identifying problems and expending effort toward solutions.

If these findings are not generalizable, in that departments are identified where patrol officers consistently integrate proactive activities into their daily routine, what types of activities are most common and have any significant outputs or outcomes been identified? For example, do increased numbers of positive officer-citizen contacts result in more problems identified or more favorable citizen evaluations of police?

If the findings of the current study are generalizable as is suspected, (as Baltimore is similar to many large, diverse, crime plagued cities), research then needs to address supervisor decisions. If supervisors are relying on officers to make constructive use of downtime, yet this is not occurring, why are the decisions still left up to officers? Why

don't supervisors make greater use of directives with patrol officers? During interviews with the sector managers for the larger project, a common statement was made, "officers know where the problem areas are in their posts." While this is likely true, do officers know how to address these problem areas?

Perhaps the solution lies in making officers more accountable for their downtime. Officers are allowed discretion in handling calls for service, but are still held accountable for their decisions through reports and the possibility that citizens will file complaints if poor decisions are made. Many departments expect officers to engage in proactive activities during patrol time, but do not routinely measure the frequency with which officers self-initiate activities. In most departments patrol logs are the primary instrument to track officers' daily outputs. Officers are required to record each activity conducted, the time it was commenced and completed, the location and the result (a code indicating report taken, arrest made, unfounded call etc.). Reviewing Baltimore patrol officer logs for the observation period reveals that calls for service are documented in detail with a specific street address and result. The detailed list of calls for service is sporadically interrupted with the single word "patrol," the location is listed as "post" or "sector", and there is no result. Therein lies the problem – there is no result. Number of positive citizen contacts initiated? Unknown. Number of field interrogations conducted? Unknown. Number of security checks conducted? Unknown, -- but the findings of observation studies consistently indicate the numbers are few.

The patrol unit of a police department accounts for the majority of officers and consumes the greatest amount of resources, yet little research addresses what patrol officers do for at least 50 percent of their shift, and how to make constructive use of this

time. Proactive policing strategies emphasize giving line officers more decision making authority, encouraging officers to define problems and devise solutions, and broadening the outcome measures for effective policing beyond crime rates and apprehension rates. If proactive policing strategies are going to be successful, supervisors need to emphasize that the number of calls to which officers respond and number of arrests made are not the only important outputs for officers, but also to hold them accountable for these other types of outputs.

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