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THE IMPACT OF CAMPUS PUBLIC SAFETY OPERATIONS AND CRIME PREVENTION PROGRAM IMPLEMENTATION UPON SERIOUS CRIMINALITY AT U.S. COLLEGES AND UNIVERSITIES : AN APPLICATION OF THE SITUATIONAL PERSPECTIVE

By

Donald C. Hummer, II

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ABSTRACT

THE IMPACT OF CAMPUS PUBLIC SAFETY OPERATIONS AND CRIME PREVENTION PROGRAM IMPLEMENTATION UPON SERIOUS CRIMINALITY AT U.S. COLLEGES AND UNIVERSITIES : AN APPLICATION OF THE SITUATIONAL PERSPECTIVE

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The study which follows was an attempt to apply the emerging criminological perspective of Situational Crime Prevention to incidences of serious violent and property crime at larger colleges and universities in the United States. The Situational perspective is an integrated theoretical approach which, in contrast to most Positive criminological thought, assumes potential offenders to be a part of society and thus emphasizes strategies to deter these offenders from carrying out certain acts of criminality. As rates of serious crime increased on campus throughout the 1980s and early 1990s, university administrators deliberated on and implemented a variety of crime prevention strategies to offset this rising trend. Also entering into the mix is the U.S. Congress' passage of the Student-Right-To-Know and Campus Security Act of 1990 which mandates the gathering and publication of crime figures and crime prevention policies for campuses receiving Federal monies. These factors have led to an emphasis on prevention and law enforcement in the collegiate environment. As such, campus public safety departments have begun to mirror state and municipal law enforcement agencies in selectivity of new officers, organization, and duties and functions.

This dissertation utilizes data collected by the Bureau of Justice Statistics' (BJS) Law Enforcement and Management and Administrative Statistics (LEMAS) program, which administered a questionnaire to larger (enrollment > 2500 students) colleges and universities throughout the United States. The primary focus of the original BJS study was to ascertain the structure and functions of campus public safety departments, however data were also collected on a number of variables indicative of the tenants of Situational Crime Prevention, as well as data on serious (Part I) offending at these schools during the calendar year 1994.

Using the data from the LEMAS questionnaire, this dissertation examines whether crime prevention initiatives derived from the Situational perspective are successful in ameliorating serious offending in the campus environment. The data were analyzed in a multivariate format utilizing ordinary least squares regression, and a host of factors ranging from specific crime prevention programs to campus public safety department operations and institutional demographic characteristics were examined as to their impact upon crime statistics at the 680 schools surveyed.

Results from the analyses are discussed, as are possible alternative explanations for the findings. Recommendations are put forth regarding administrative procedures and policies which could be implemented to ensure student safety. Directions for future research into this topic are also discussed.

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CHAPTER I

INTRODUCTION

The Context of Campus Crime

Concerns about the safety of campus constituents and preventing criminal activity at institutions of higher learning have become hot topics both in the academic press, as well as among university administrators throughout the country. As violent criminal victimization rates increased nationally throughout the 1980's and early 90's, the campus environment has not enjoyed the traditional immunity that it had in the past (e.g. Lunden, 1983; Roark, 1987; Sloan, 1992a; Fisher, 1993; Lederman, 1993; Palmer, 1993; Nichols, 1995; Sloan & Fisher, 1995; Richards, 1996). In fact, an examination of crime rates at America's institutions of higher learning reveals them to be microcosms of the larger society from which they draw their students; no longer are they peaceful enclaves into which one may escape the harsh realities of everyday life (Stormer & Senarath, 1992; Sloan, 1994; Fisher, 1995).

The reasons why college and university campuses in the United States have been slow to come to grips with crime and violence are varied, but most observers agree that to some extent, administrators, parents, employees, and students simply did not want to acknowledge that problems existed in places that should perhaps be resistant to such social malaise. Even though it has been documented that post-secondary institutions have

had instances of crime and deviance throughout the centuries (e.g. Sloan, 1992b; Smith and Fossey, 1995), some schools have seen crime rates become a serious and sizable problem within only the past decade or so (Smith and Fossey, 1995). In many cases, today's reality of collegiate violence, larceny, rebellion, and criminal mischief and its antecedents in the campus uprisings of the late 1960's. Smith and Fossey (1995:8) sum up the radical changes of thirty years ago, which have perhaps irreversibly altered the American post-secondary institution:

> "The decade of the 1960's was a watershed in American history; the cultures at both ends of that lively period were dramatically different. The crime and violence that were becoming common fare in the parent society were evident on campus as well. In addition, the phenomenon of crime in that period served as a catalyst for other sorts of profound changes in campus life and administration...[A]s beleaguered administrators sought to retain control of their campuses, ...[t]he concept of the campus as sanctuary, unfettered in governing its own affairs and unsullied by the world, was challenged on many fronts during the 1960's and 1970's."

Even though current rates of violent and property crime remain, on average, lower than the towns and cities which surround university campuses (Lizotte & Fernandez, 1993; Bromley, 1995a), these on-campus rates have grown steadily in proportion with national crime rates, and the opportunities for violent offending are virtually limitless given the nature of the collegiate environment (Roark, 1993). In his recent text, Felson (1998:75) discusses criminality at the post-secondary level in rather simple, yet very logical terms:

> "A college campus is a giant delivery system. It funnels students, faculty, staff, and various products into one general location and moves them from building to building to deliver education. It also delivers crime opportunities. Students and their property may play several roles in crime. University employees fit the same bill. The university itself owns many items worth stealing and provides

> many corners where illegal action can occur.
>
> By studying crime on college campuses, we can see how locality and crime interact. We have low-rise and high-rise campuses. Some are compact and some are spread out. They range from colleges with fewer than 1,000 students to large universities with more than 30,000 students. Some are in urban settings,...some are far more rural.
>
> This great variety of colleges and universities differ in crime vulnerability because of how they structure life. All crime is local--every offender goes from some local area to another. The minimal elements of crime converge locally. The physical and social processes generating crime therefore are intricately related."

While campus crime figures at present are not reported proportionate to their populations as are national statistics in the Uniform Crime Reports (UCR), when some researchers have converted campus statistics to rates, they have found no significant differences in crime rates between schools and the parent society (e.g. Smith and Fossey, 1995), while others report substantially higher rates off-campus as opposed to on-campus (Bromley, 1995a). Similarly, while some scholars (e.g. Fernandez and Lizotte, 1993; Fernandez and Lizotte, 1995) see the overall rates of campus crime decreasing, it is undeniable that the gross number of crimes is growing, as are the numbers of students attending and residing at the nation's institutions of post-secondary learning, thus increasing the likelihood of convergence in time and space of potential offenders and victims.

The Campus Crime and Security Act of 1990

Although the rise in crime to parallel the larger society had been evident to campus administrators and law enforcement personnel for several decades (see Smith and

Fossey, 1995), the general public was not privy to such information until the federal statute known as "The Student Right-to-Know and Campus Security Act of 1990" (also the Crime Awareness and Campus Security Act of 1990, the Campus Crime and Security Act of 1990) mandated colleges and universities which receive federal funds, or as a condition of participating in Federal student aid programs, to annually compile and publish instances of violent and property crime occurring within their borders (Bromley, 1992; Seng & Koehler, 1993; Sigler and Koehler, 1993; Seng, 1995; Reaves and Goldberg, 1996; Sloan, Fisher, & Cullen, 1997). Further, although the tenants of the Campus Crime and Security Act of 1990 do not require them to do so, many colleges and universities voluntarily report crime statistics to the FBI for inclusion in the Uniform Crime Reports (Seng, 1995). In sum, those interested parties wishing to utilize such information have been able to obtain it since the Campus Crime and Security Act of 1990 became effective in 1992 (Fisher and Sloan, 1993). Supporters thought the legislation would uncover the "dark secret" of violent crime at America's colleges and universities, and would provide students and parents with a useful piece of information to ponder when deciding which school to attend (Sloan et al., 1997). Although the underlying purpose of the Campus Crime and Security Act of 1990 was to forewarn present and future students and their parents about instances of violence at particular institutions, the breadth and scope of the legislation was much broader. As Sloan et al. (1997:150-151) explain:

> "A key provision of this unfunded mandate is the requirement that all post-secondary educational institutions receiving federal funds prepare, publish, and distribute annual reports of on-campus crime statistics and campus security policies. additionally, the legislation mandates that the reports contain counts of on-campus arrests for

> alcohol, drug, and weapons violations. The legislation calls for definitions for all offenses to be consistent with the Federal Bureau of Investigation's Uniform Crime Reports."

The Student Right-to-Know and Campus Crime and Security Act of 1990 is important for the present discussion of campus crime prevention because, in addition to providing information on the numbers of crimes committed on a particular campus, a document must be drafted which informs students and employees about campus security features and crime prevention policies (McEvoy, 1992). Specifically:

> "The annual security report should contain information about procedures for students and others to report crimes, security and access to campus residence, and the nature of the campus security personnel including their relationship with state and local police (McEvoy, 1992:147)."

The legislation "lays bare" the school's security plan for the campus and, most importantly, highlights potential weak points in emergency response and the prevention of crime (Fisher and Sloan, 1993; Sloan et al., 1997). At the time Congress passed the Campus Crime and Security Act in 1990, many smaller schools, as well as larger institutions in less criminogenic locations did not have such plans and procedures, did not staff a professional public safety department, nor did they know how to develop prevention strategies appropriate for their particular size, location, nature of facilities, etc. This uncertainty remains a problem in 1998, and has recently been the fuel for lawsuits against universities whose safety measures or responses to criminal activity in the past have been less than adequate in the court's eye (McEvoy, 1992).

Interpreting the tenants of the legislation has also been a source of dissension and

confusion within higher education. Some states, such as Connecticut and Pennsylvania, have stricter regulations regarding campus crime reporting, while others simply require post-secondary institutions to compile crime data (e.g. Griffaton, 1995). At face value it would seem that opposition to a piece of legislation which was drafted to help educate and ensure the safety of campus constituents would be scant to non-existent. However, some institutions, such as those situated in urban or "high crime" areas, felt that the Campus Crime and Security Act of 1990 would artificially inflate their crime figures because incidents which technically occur on-campus but do not involve constituents of the school would be counted as campus crimes. Also, these same institutions contend that suburban and rural schools tend to displace crime to the surrounding community, and thus crimes committed by and against campus constituents in these surrounding communities do not appear in the reported statistics (Bromley and Territo, 1990; Seng, 1995). These controversies have led to allegations of misrepresentation and underreporting of crime statistics by colleges and universities (e.g. Haworth, 1996; Gearey, 1997; Lively, 1997), as well as calls for even more stringent legislation which would permit public access to campus police incident reports, perhaps leading to the public disclosure of students who committed or were victims of certain offenses, including misdemeanors (e.g. Kirtley, 1997)

The Impact of, and Response to, Campus Crime

This groundbreaking legislation, coupled with steadily increasing campus crime rates, has led to vast expansions of existing crime prevention programs as well as the

implementation of new and innovative responses to incidences of violence by both campus public safety departments and administrators at U.S. colleges and universities. For example, Michigan State University instituted a Community Policing program in the late 1980's in an effort to reduce increasing rates of property and interpersonal crimes (Benson, 1993), and the University of Illinois at Chicago in 1991 developed a cooperative initiative with the Chicago Police Department's 12th Precinct to reduce auto-theft rates for parts of the city surrounding the UIC campus (Frost, 1993). The University of Maryland took a more direct approach in the early 1980's in response to increases in violent crime. The campus increased its number of sworn, armed officers 40 percent, it implemented "checkpoints" at campus entrances during evening hours, and fortified the dormitories with heavy-duty security devices (such as stronger locks and shatterproof door glass) (Middleton, 1981). These examples lead one to believe that the range and scope of university efforts to address criminal issues are virtually limitless. Indeed, every school has its own unique crime problems which it must address, and the demands placed upon campus police departments and administrators can be extreme (Sloan, 1992a; Fisher & Sloan, 1993; Palmer, 1993). Thus, an examination of specific programs and how they are implemented by a given school could conceivably tell us a great deal about how successful these crime prevention programs will be toward achieving their stated goals; whether those goals be a lowering of crime rates, a reduction in student fear, or a reversal of a national reputation as a "crime-infested" campus.

In efforts to ensure the safety of their constituents and spare themselves the potential liability for lax responses to campus criminality, most larger colleges and

universities have adopted aggressive, proactive strategies to prevent crimes from ever occurring (e.g. Dodge, 1991; Fisher & Sloan, 1993; Utz, 1993). According to Kessler (1993), the issues of potential liability and civil litigation are main reasons for the proliferation of new innovations in campus security. Further, colleges and universities now have the responsibility to alert students about potential risks of on-campus criminality, as well as to provide adequate protection services as advertised (McEvoy, 1992; Griffaton, 1993; Kessler, 1993). If the school does not live up to its end of this bargain, courts have had no problems assessing monetary penalties against these schools on behalf of crime victims and their families (Smith, 1992).

Many of these programs or policies are adaptations of strategies which are used by municipal departments, such as community- or problem oriented- policing (see Trojanowicz, Benson, and Trojanowicz, 1988; Jackson, 1992; Benson, 1993; Phillips, 1993; Riesling, 1993; Johnson, 1994; Pagon, 1995; Powers, 1996). Others are innovations first utilized by private and industrial security contractors, that focus on environment and physical design to reduce the opportunity for offenders to successfully commit an offense (Mayhew, 1991). While many of these crime prevention techniques are easily adapted to any given campus, each school must assess and respond to its most pressing security needs. Without doubt, a cooperative, as opposed to adversarial, relationship between the campus law enforcement body and the constituents of the school must be in place before any program is initiated. A significant part of any needs assessment policy-making must include follow-up evaluation of program effectiveness and feasibility (Fisher & Sloan, 1993). A noted evaluator of crime prevention programs,

Dennis P. Rosenbaum (1986), has written that the "success" of any such program is the fundamental question that must be asked to both the law enforcement side of the equation as well as the constituents whom the program or policy was designed to protect. Invariably, what constitutes success is a function of context and perspective; there are bound to be differing opinions among and within parties having a vested interest in campus crime rates. Thus, it is imperative that before any crime prevention initiative which seems promising is implemented, all involved parties come to a consensus regarding what outcomes will be deemed successes and which failures.

The reality is that campus crime affects the bottom line for many colleges and universities. Prospective students and parents of those students, now have easier access to campus crime statistics since the passage of the Campus Crime and Security Act of 1990. Decisions about which school the student chooses to attend are based, at least partially, upon whether a significant risk of victimization on campus or in the surrounding community exists. Higher than average crime figures and/or a prevailing climate of fear among the constituents of a campus could have grave implications for the recruiting process (e.g. Beeler, Bellandese, and Wiggins, 1991; Fisher and Nasar, 1992; Newman, 1996). At a time when the competition for top students is particularly high, an institution certainly does not want a non-academic factor such as disproportionately high crime rates to possibly influence the student's decision to matriculate. Further, post-secondary institutions must remain cognizant of the successful civil suits initiated by students and parents against universities for crimes that could have conceivably been prevented, or for which the campus response to a given crime was ineffective or insufficient (Smith, 1988;

Smith, 1992).

The Perpetrators and Victims of Crime on Campus

Earlier reports of campus crime (e.g. Middleton, 1981) indicated that many law enforcement officers at large universities believed criminal activity, especially crimes of violence, to be the work of persons not associated with the institutions. However, more current research into the area of on-campus violence and victimization indicates that those individuals committing violent crimes tend to be legitimate members of the campus environment, and usually are fellow students (McEvoy, 1992). These crimes of violence on campus which involve students as constituents and victims are often impulsive in nature, the result of an argument or disagreement, and most often occur at night or on weekends, when resident students are not in classes, but in or near campus housing units (Palmer, 1993). Such instances of interpersonal violence also frequently involve the use of alcohol by either the perpetrator, victim, or both (Pollard and Whitaker, 1991; Palmer, 1993; Lederman, 1994). As summarized by Siegel & Raymond (1992:24):

> "We suggest that campus violence and crime are related to campus ecology and that factors within college life promote, stimulate, or in some way allow violent behavior. We propose that the violent act is a function of the person and the environment. The person in the equation includes all the habits, attitudes and expectations of campus life, and prior experience with freedom and responsibility. The campus climate includes all the changing local, national and international conditions as well as all the people who are present on campus, and includes the physical and social environment. It appears possible that the typical campus crime perpetrator would not be likely to commit a crime in a non-college environment."

The implication is that something about the collegiate experience and/or the campus environment is providing license for otherwise law-abiding young people to

commit acts of deviance that they would not otherwise perpetrate, and indeed would perhaps frown upon in a larger societal context. This presents a dual problem for campus administrators who are faced with rising instances of interpersonal violence at their institutions, and the knowledge that their own constituents are perhaps the source of this upswing. Given this information it is not difficult to understand why campus leaders are somewhat reluctant to divulge campus crime information to prospective students and other interested parties (McEvoy, 1992), and why proponents of the Campus Crime and Security Act had little objection from law-makers in getting the legislation passed and signed by former President Bush (Sloan et al., 1997).

There are a plethora of feasible responses or strategies that could be utilized by a school to reduce crime rates and lower the potential risk of violent victimization of students and other constituents. However, a truly significant step must take place between the administration building and the larger realm of the campus itself before crime can be affected. The implementation and scope of proactive strategies are all too often the weak links in any college or university crime prevention program. As is illustrated in an article by Paul Lang (1993) regarding the implementation of community-based policing on college campuses, simply adopting such a design is only the first basic step. The author puts forth issues pertaining to hiring, training, and public relations that may sometimes escape discussion during meetings of campus planners. An extremely pressing issue is that of adapting the program to fit the needs of the campus and to convince campus law enforcement personnel and constituents that such a strategy will be beneficial to the community as a whole (Lang, 1993).

Purpose of the Present Research

While the trend within the field of campus public safety over the past decade or so has been for a conversion from the 'watchman' style to the proactive method of law enforcement, yet to be evaluated is the overall effectiveness of campus public safety after such transformations have been implemented. Therefore, an important aspect of this work is its status as the first, nationwide systematic analysis of the structure and functions of campus public safety departments in the law enforcement-era. Secondly, this dissertation also represents the initial application of an integrated Situational Crime Prevention theory as a framework for addressing the problem of serious, on-campus criminality. Lastly, as an exploratory study, the present research serves as a reference point for future empirical work focusing on serious campus crime. More detailed investigations into this issue are needed, optimally using a longitudinal research design, and campus crime scholars may use these results as a benchmark in devising and conceptualizing further evaluations.

The specific focus of this dissertation is to assess the present state of campus public safety in the United States, post-Campus Crime and Security Act of 1990, as well as the scope and breadth of crime prevention and security programming at colleges and universities nationwide. Ultimately, assessments of the collective impact upon the school's crime rates of variables pertaining to public safety and crime prevention initiatives will be made. Analyses will evaluate the relative successes of various public safety departmental operations, crime prevention, and security programs, controlling for institutional characteristics such as number of students and employees on campus, and

resident population.

CHAPTER II

THEORETICAL FRAMEWORK

All too often, empirical research into the areas of private security and law enforcement efforts at crime prevention commence on an atheoretical note. This is quite unfortunate given the promise of several interrelated theoretical frameworks which have been examined and tested in different contexts over the past three decades. Recently, an applied theoretical perspective which falls under the umbrella heading of "Situational" crime prevention has been oft utilized in scholarly research dealing with formulations for and evaluations of crime prevention policies (see Clarke and Mayhew, 1980; Clarke 1992). This theoretical perspective differs markedly from most socio-cultural perspectives in that Situational crime prevention assumes potential offenders to be a constant in our society, thus the focus is not upon what motivates the criminal from committing a given unlawful act, but rather examines what conditions or variables would persuade an otherwise motivated offender to not commit an act against a certain target or victim (Hindelang, Gottfredson, & Garofalo, 1978; Cohen & Felson, 1979; Clarke, 1980; Adler, Mueller, and Laufer, 1995).

The Situational perspective, as applied theoretically to crime prevention contains three specific features. First, explanation is focused more directly on the criminal event (Clarke, 1980), not primarily on the offender. Secondly, the need to develop explanations for separate categories of crime is made explicit (Clarke, 1980). In other words,

preventive techniques must be adapted specifically to the type of offending one wishes to thwart, and not toward specifically deterring the offender. Third, the individual's current circumstances and the immediate features of the setting are given considerably more explanatory significance than in positivistic theories (Clarke, 1980). Sociologically speaking, the perspective is by definition micro-level, whereas most positivist theories stress macro-level variables. Suggestions for actual crime prevention techniques arising out of the Situational model center on increasing the chances for an offender to be caught and reducing the physical opportunities for offending (Clarke, 1980).

According to Clarke (1992:5), there are five stages to any application of Situational prevention to a research problem:

1. Collection of data about the nature and dimensions of the specific crime problem.
2. Analysis of the situational conditions that permit or facilitate the commission of a specific, troublesome form of crime.
3. Systematic study of possible means of blocking opportunities for these particular crimes, including analysis of costs.
4. Implementation of the most promising and practicable measures in a way that will permit evaluation.
5. Dissemination of the results.

Given these components, the key aspect of the Situational approach is that it encourages the inclusion of contextual variables that have been traditionally neglected in prior work examining crime prevention techniques (Clarke, 1988). To do so, the Situational perspective draws upon several related areas of criminological theory : environmental

criminology, opportunity theory (specifically the routine activities approach), and the rational choice perspective (Clarke, 1988). Other scholars have chosen to include a discussion of Oscar Newman's (1972) idea of 'defensible space' as well, although the aforementioned theoretical strains assume many of his earlier ideas. Increasingly, these strains of theory have come to be used somewhat interchangeably (Garofalo, 1987; Maxfield, 1987), however, the rationale behind each is explained below for purposes of clarity.

Environmental Criminology

A number of contemporary criminologists do not have a great deal of confidence in theoretical explanations of the prevention of deviant behavior which rely upon physical or environmental measures which may reduce the opportunity for an offender to commit a criminal act (Clarke, 1980). Perhaps rightly so, many scholars in the field choose to focus on the "inception" of criminal deviance, not the set of responses to deal with those individuals who, for one reason or another, are motivated to offend. However, as debates about what "causes" delinquency rage on, with few clear answers in sight, communities, institutions, and individuals are increasingly concentrating on how to prevent criminal victimization, assuming that inevitably criminals are "somewhere out there" waiting for the right opportunity to put into action their deviant plans. Coupled with an overwhelming atmosphere of apprehension toward becoming the victim of a crime, which is all too often fed and perpetrated by the popular media, a distinct focus on the prevention of crime and reduction of deviant opportunities has emerged in the

criminological literature. As Clarke (1980:139) has stated:

> "Some practical options for prevention do arise...from the greater emphasis upon situational features, especially from the direct and immediate relationship between these and criminal behavior. By studying the spatial and temporal distribution of specific offenses and relating these to measurable aspects of the situation, criminologists have recently begun to concern themselves much more closely with the possibilities of manipulating criminogenic situations in the interests of prevention."

Environmental Criminology draws heavily upon the "defensible space" idea proposed by Newman (1972). His basic premise was that the overall risks associated with committing a certain act may be increased significantly through environmental design (Lab, 1992). Out of this idea has emerged a practical method of operation which in private security circles is known as Crime Prevention Through Environmental Design (CPTED) (see Wallis & Ford, 1980). Primarily, CPTED is conceptualized as a warning system and primary deterrent to would-be offenders, utilizing architectural designs that enhance territoriality and surveillance, target hardening, and the recognition of legitimate users of an area (Lab, 1992). Initially, CPTED was a component of urban planning (see Jacobs, 1961), where such designers provided for personal safety by orienting public and private space such that "guardianship" was easily accomplished (i.e. building entrances clearly visible, sidewalks designed so that they would be heavily traveled) (Miller, 1990).

The "modern" strain of CPTED is attributed to the work of C. Ray Jeffery (1971) and Newman (1972). Jeffrey (1971) believed firmly in the notion of the rational offender (to be discussed below). If, when contemplating a potential criminal opportunity, the individual perceives the "benefits" outweigh the "costs" of the action and guardianship is

at a minimum, then the would-be offender naturally proceeds. Ultimately, Jeffrey (1971) believed that while environmental design was one part of effective crime prevention, the human element of guardianship and making oneself a less attractive target need also be employed to reduce criminal opportunity. Newman (1972) incorporated this need for the human element described by Jeffrey in his defensible space concept. As he describes in his opening chapter:

> "'Defensible Space' is a surrogate term for the range of mechanisms... that combine to bring an environment under the control of its residents. A defensible space is a living residential environment which can be employed by inhabitants for the enhancement of their lives, while providing security for their families, neighbors and friends."

Although the defensible space concept was geared toward urban geographers and planners, with its emphasis on 'Territoriality', 'Surveillance', 'Image', and 'Environment', certain elements appealed to criminologists (such as Cohen, Clarke, and Felson) who were developing a theoretical explanation for crime which was based on the everyday movements and activities of people within and outside their homes, places of work, etc.

Presently, Crime Prevention Through Environmental Design has become synonymous with the practical techniques used by security professionals and designers to thwart a potential offender's idea about committing a crime (i.e. placement of doors, use of video surveillance cameras). However the Defensible Space idea which gave rise to CPTED is grounded in the same philosophic ideas about human nature that underlie the Deterrence Perspective and Rational Choice. It assumes man to be a logical thinker who

acts in his/her best interest while in the pursuit of self-gratification. Therefore, while critics may argue CPTED is essentially atheoretical, the actual crime prevention techniques are a response to distinct social scientific ideas about the human mind, and what drives individuals to certain behaviors.

A large part of reducing and preventing criminal opportunities through environmental planning rests on knowing the geographic locations where a majority of serious crimes take place (Lunden, 1962; Rengert, 1988; Brantingham & Brantingham, 1991). To be sure, prevention techniques may only be successful if they are implemented in a location for which a serious need has arisen. These areas that endure frequent and severe criminality have come to be known as 'hot spots', and thus receive a disproportionate amount of attention by crime control strategists (Brantingham & Brantingham, 1984; Clarke, 1988; Sherman, Gartin, and Buerger, 1989). According to environmental criminologists, criminal activity and potential victimization are best understood as occurring in the context of normal everyday movements and activities (Brantingham & Brantingham, 1991). Also, while people's movement patterns are the impetus for criminal activity, those who are so inclined to perpetrate criminal acts choose from among many such movements which place offender and potential victim in the same time and space. While this decision-making process does indeed included elements of rational-choice (i.e. a cost/benefit analysis on the part of the offender) (Cornish & Clarke, 1986) and routine activities (Cohen and Felson, 1979), there are also numerous environmental cues "that separate good criminal opportunities from bad criminal risks" (Brantingham & Brantingham, 1991:3). Thus, when these environmental cues are

examined collectively, those agencies specializing in crime prevention have a clearer picture of needs assessment, and subsequently can more effectively employ resources in accordance with calculated need and potential risk.

Opportunity Theory or The Routine Activities Approach

For at least two decades, criminologists have examined the relationship between environmental or contextual variables and subsequent rates of criminal victimization in a given area. Perhaps Hindelang et al. (1978) were the first to link theoretically "lifestyle" variables and exposure to risk that may or may not result in personal victimization (Maxfield, 1987). Some of the most notable work to come out of this exercise has been the "Routine Activities" explanation for differing crime rates. In a seminal piece written almost twenty years ago, Lawrence E. Cohen and Marcus Felson (1979) illustrated the variables or circumstances that must come together in space and time for the criminal act to successfully take place.

Specifically, for a deviant act to be successful, a convergence in space and time of likely or motivated offenders, a suitable target or targets, and an absence of capable guardians to prohibit victimization, is necessary (Cohen & Felson, 1979; Bennett, 1991). Related to environmental criminology, the routine activities approach incorporates previously underutilized contextual variables such as location, type and quantity of illegal acts, and community organization as predictors of level and probability of criminal victimization (Cohen & Felson, 1979). Much of the literature advocating the routine activity explanation of criminal victimization has stated that today's more mobile

lifestyles, and the prosperity they produce, have facilitated and eased this convergence in time of the factors necessary for victimization (Felson & Cohen, 1981; Felson, 1987). Michael Maxfield (1987:275) states the issue quite simply:

> "What people do, how they behave, places them at more or less risk of criminal victimization. Stated so directly this seems like little more than common sense. In much the same way, routine behavior 'explains' how people avoid or suffer many other misfortunes. Careful drivers are at less risk of auto accidents, careless smokers stand a greater chance of setting fire to the house, coal miners suffer disproportionately from pulmonary disease, and mariners are more likely to drown than, say, mountain climbers."

The three key elements of the routine activities approach are further specified in Bennett's (1991) work. While a convergence of the three is necessary for a crime to occur, if one or more is not present, or is lacking to some degree, the opportunity for the crime to occur is negated. Thus, according to Cohen (1981:141), "[T]he concentration of patterned or routine activities...varies inversely with the rates of criminal victimization."

Originally conceived, the routine activities approach was a theoretical framework for explaining or predicting the risk probability of an individual becoming a victim of interpersonal violent crime given several "lifestyle characteristics" (e.g. Cohen and Felson, 1979; Felson and Cohen, 1980). But the utility of the perspective for both theorists and practitioners has been expanded to be predictive of the risk of other types of crime, such as property or white collar, as well (e.g. Cohen and Cantor, 1981; Felson, 1987; Roncek and Maier, 1991; Felson, 1994). For example, Felson (1997) has argued that technological innovations and an increase in the flow of capital have both contributed to an increase in opportunities for offenders to commit certain acts, given more suitable

targets (i.e., lighter and smaller electronic equipment) and a lack of guardians as goods and cash flow more heavily, in larger geographic spaces. As Roncek and Maier (1991:727) sum this phenomenon :

> "The importance of movement and activities for crime is among the original themes of routine activities theory, and both are used to explain part of the varying levels of victimization of people with different lifestyles. Facilities or nonresidential land use provide some of the reasons why people go to different places within the city to carry out their lifestyles."

The above application of routine activities theory to nonviolent victimization has been adopted by writers who examine trends and correlates of campus crime (e.g. Sloan 1992a; Bromley 1995b; Smith and Fossey, 1995). A common theme is that the university campus provides the motivated offender with a multitude and variety of possible targets, given that most students and faculty possess items of value, over which they are not particularly vigilant guardians. Any campus public safety administrator will describe instances where unlocked rooms were entered and expensive electronic equipment stolen, unlocked offices were burgled for computer equipment or purses and wallets, and unattended bookbags stolen from libraries and the foyers of classroom buildings so the thief could sell back textbooks for cash. In all of these cases, the movement of goods with some monetary or cash value occurs frequently and the somewhat transient lifestyle of the owner does not result in "capable guardianship."

In sum, at the individual level, persons may take cautions which will minimize the likelihood that they become "suitable targets". Systemically, police departments, facilities planners, and in the present case, campus administrators do what they can to ensure that

"capable guardianship" is maximized, as the university environment is one where, typically, students and other constituents of the institution do not concern themselves with lessening their target suitability (Middleton, 1981). This is not to say that a college or university cannot aid its constituents in becoming less suitable targets, or even in trying to "unmotivate" offenders, rather guardianship is one area of the routine activities equation over which the school has some modicum of control and is within its' sphere of influence. Indeed, Fox and Hellman (1985) point out that several variables related to the physical structure and location of facilities on the university campus correlate significantly with the schools' level of crime.

The Rational Choice Perspective

Coinciding with the arrival of complex quantitative methods in criminological research came an economically-derived theoretical position at the heart of which assumed that any given offender, being a rational individual with the free will to make his or her own life decisions, will choose to commit or not commit a criminal offense based on the ratio of possible benefits of the act weighed against the inherent costs or risk associated with that act (Cornish & Clarke, 1986; Akers, 1990). Underlying the rational choice perspective are tenants from the classical criminological thought of Cesare Beccaria, Jeremy Bentham, and Cesare Lombrosso; all of whom had similar ideas on the nature of human (specifically criminal) behavior. Within the early classical theories of crime, humans are seen as independent, free-thinking, and logical decision-makers, who can control their own destiny by defining their self-interests (Einstadter and Henry, 1995:47). The classical perspective defined those who commit crimes as hedonistic or pleasure

seeking, motivated only to maximize their personal gain (Einstadter and Henry, 1995). The rational choice model:

> "[D]oes not see decision-making as always being fully rational or even properly considered; instead the model employs notions of 'limited rationality' in which economic explanations of crime are modified by taking cognizance of other motivational and cognitive factors (Clarke and Cornish, 1983:50)".

The idea that potential offenders consciously weigh the 'pros and cons' of any given criminal offense is an offshoot of the larger theory of deterrence, which essentially states that persons will be discouraged from committing a criminal act if the costs or penalties are raised such that they outweigh any potential benefits or gains of the act under consideration (for an intriguing discussion of the state of deterrence as a viable criminological theory, see Paternoster, 1989). Specific to "costs", the severity, certainty, and swiftness of punitive sanctions are most oft examined (see Klepper and Nagin, 1989; Yu and Liska, 1993), however a multitude of factors may be processed (e.g., Nagin and Paternoster, 1993). The range and scope of variables that the 'rational' offender ponders is illustrated by Akers (1990:655):

> "It [Deterrence] encompasses a full range of behavioral inhibitors and facilitators : rewards/costs; past, present, and anticipated reinforcers and punishers; formal and informal sanctions; legal and extra-legal penalties; direct and indirect punishment; and positive and negative reinforcement...Some of the rational choice models of crime in the literature have been expanded beyond the basic expected utility proposition to include family and peer influences, moral judgments, and other variables."

Given this choice-structuring process, Akers (1991) has also posited that logical cost/benefit analysis may not be the prime factor in such choice-structuring, rather it is

the offender's perception of the benefits that is often the critical factor in choosing whether to carry out a given criminal act. Similarly, Cornish and Clarke (1987) believe that the aforementioned choice structuring is both offender and offense specific; that is, individual offenders contemplate different factors when deciding whether to commit a given type of offense. Thus, efforts aimed at preventing specific criminal acts, must consider a multitude of possible situational and contextual variables which may be taken into account as possible deterrents of criminality.

These contextual variables are what makes the theory attractive to advocates of the Situational approach, as Cornish and Clarke (1986) believe that choice-structuring is highly contingent on the potential offenders' perceptions of risk factors in the physical and social environment. According to Seigel (1989:113), "offense and offender characteristics are interactive. Each offense has its own properties, including risk and payoff; each offender has a unique set of needs and skills." The implication being that, since man is a rational individual who can assert his or her own free will, a deterministic approach to choice structuring may uncover behavioral patterns, but the end result of such structuring is influenced to varying degrees by a multitude of contextual variables. In Felson's (1998:24) words, "Offenders are tempted and controlled by tangible factors in immediate settings."

Most importantly, offenders respond to the payoff, effort, peer support, and other similar factors in deciding whether to commit a certain act (Cornish and Clarke, 1986; Lab 1992). Some advocates of the Situational approach assert that when a potential

offender is discouraged from committing one crime at a certain place or time, they see no alternative to the prevented crime, and thus mold their criminal opportunities around available choices (Lab, 1992). If this assumption indeed holds true, then crimes may be effectively prevented if the offenders' choice structuring is altered to such a degree that specific crimes become more effort than the perceived payoff is worth (Lab, 1997). Crime prevention techniques, then, in the embodiment of rational choice theory, become contextual variables that the logical criminal must necessarily consider in order to successfully take a crime to fruition.

Situational Crime Prevention as Integrated Theory

Ronald Clarke (1980) presents a compelling argument concerning the weaknesses of applying sociological-based theories of deviance to practical crime prevention situations. Many of these positivist theories focus on "dispositional" aspects of criminal behavior which develop at a young age in the offender and/or emerge over time. Techniques which could "prevent" the aspects from emerging are most certainly outside the sphere of influence of any criminal justice systemic body. The utility of trying to explain the root causes or contributors of deviant behavior, whether from a positivist or critical perspective, is indeed a laudable task, however application of the results of such research have not proven very beneficial to the practitioner.

The attractiveness of Situational crime prevention, particularly for practitioners and agencies who are responsible for ensuring a certain area is safe for those who venture into it, is rooted in the versatility of the approach. More specifically, by incorporating the

tenants of the above theories, a more sophisticated and effective strategy of crime prevention can be implemented. The aforementioned Crime Prevention Through Environmental Design idea, which at present is extremely popular and widely-utilized by crime prevention specialists, is essentially a hybrid of the three theoretical strains discussed above, and may be directly linked to the earlier idea of defensible space. Relating this concept directly to the college or university campus setting, the components of Situational crime prevention can be incorporated to work cooperatively in efforts to prevent victimization. The physical design of the campus may reduce the need for additional guardians, given that facilities planning can incorporate "natural" guardianship (see Rubenstein, Murray, Motoyama, and Rouse, 1980; Siegel and Harriss, 1992; Tucker and Starnes, 1993), which also raises the "costs" for potential offenders. Not to be overlooked is the idea that constituents themselves can do their part, in conjunction with campus law enforcement, to reduce their attractiveness as a potential crime target (Zahm and Perrin, 1992). Undoubtedly, any director of public safety in a collegiate environment will report that individuals leaving themselves vulnerable as "targets" is a serious hindrance to crime prevention.

An integrated Situational Crime Prevention Theory incorporates certain assumptions about the nature of man, his/her thought processes, cues which provoke behaviors, and factors which make criminal opportunity seem less attractive to the potential offender. Clarke (1980) reasons that the subjective state and thought processes which play a part in the decision to commit a crime will be most influenced by immediate situational variables, thus the perceived opportunity to offend may be as much of a trigger

in taking a criminal act through to fruition as any life circumstances or psychological variables which serve as the basis of much criminological thought. Felson (1988) argues that since security, or the protection of oneself, family, and possessions from predators, is one of mans' basic human needs, it is illogical to argue that crime prevention is abstracted from social scientific theory. He goes on to posit that the notion of security as "locks, bolts, and badges" is a relatively recent definition, and that security should look to its roots as a basic need for conceptualization purposes (Felson, 1988). If one also includes the ideas inherent in CPTED, this integrated approach outlines specific techniques and strategies for security specialists, architects, and planners to consider, thus moving Situational crime prevention from an esoteric theoretical idea to a concrete, plan of implementation for policy-makers.

Criticisms of the Situational Perspective and its Component Parts

Conceptualization Problems

Perhaps it is necessary at this time to make a few qualifying statements about the Situational approach as it is presently conceptualized. Many scholars have criticized this perspective because of the assumptions made by its proponents. For example, Felson (1987) states that, routine activities specifically, assumes that offenders are not well informed, foreword looking, or particularly unrelenting. As stated earlier, the Situational perspective and the theoretical strains from which it is derived assume an ample supply of motivated offenders to be within society at any given time. Some critics of the perspective see this assumption as a conceptual leap, in that it does not necessarily explain why motivated offenders are concentrated in a certain space and time, or why

certain societies tend to have greater concentrations of motivated offenders. In essence, because the Situational perspective does not address the genesis of criminal behavior, the perspective's utility is questioned. Metaphorically speaking, without trying to address the root or cause of the problem, the criminal justice will continually be plugging a leaking dike that gets weaker and more overwhelmed. Clarke (1980:136), in his piece which framed what is presently known as 'Situational' crime prevention, rebuked this criticism as follows:

> "Though it may be conceded that preventative measures (such as humps in the road to stop speeding) can sometimes be found without invoking sophisticated causal theory, 'physical' measures which reduce opportunities for crime are often thought to be of limited value. They are said merely to suppress the impulse to offend which will then manifest itself on some other occasion and perhaps in even more harmful form.. Much more effective are seen to be 'social' measures...since these attempt to remove the root motivational causes of offending. [I] argue that an alternative theoretical emphasis on choices and decisions made by the offender leads to a broader and perhaps more realistic approach to crime prevention."

Applicability Problems

A second major criticism has to do with the lack of explanation the Situational perspective has for particular types of criminal acts. In certain instances, say when a thief is trying apartment doors to see if any are unlocked, a simple deadbolt may be enough target hardening to deter the would-be offender. However, if the individual wanted to physically harm the person on the other side of the locked door, there may be no "capable guardian" short of police protection that would take away the offenders' motivation. Thus, one of the major shortcomings of crime prevention in general is applicable also to this theoretical perspective. Certain offenders' motivation is not easily deterred, and some

offenders' cost/benefit analysis (if indeed any exists) may be skewed so much so that no potential "cost" is great enough to offset the perceived benefit. Therefore, Situational crime prevention is not easily applied to circumstances (such as domestic disputes or revenge situations) for which an offenders' motivation is excessive, and the only capable guardianship would be to meet force with force. This difficulty in applying the perspective to particular circumstances is an inherent problem with any macrolevel theory. Proponents of the Situational Perspective (as well as proponents of other macro-theories) will argue that the perspective is intended to explain broad patterns of deviant behavior at the aggregate level, taking into account a variety of contextual and environmental variables. Because of human being's ability to determine their own destiny (i.e. free will), the perspective may very well explain the actions of one individual but not another. But again, as most sociologists will state, social science is most productive when interpreting behavioral patterns, not individual actions.

Crime Displacement

Much has been written about another major criticism of the Situational perspective; the idea of crime displacement. Critics who espouse this idea say, quite simply, that a crime which is prevented at one time or place, will be attempted by the offender elsewhere or at the same location but at a different time. Lab (1992:67) describes displacement, or "crime spillover", as:

> "The idea...that actions taken to reduce or prevent crime in one set of circumstances simply result in the crime 'spilling over' to another locale or potential target. The assumption is that many crime prevention actions simply move the crime around instead of eliminating the overall amount of crime. For example, an increase in police

> presence in one neighborhood may engender a reduced crime rate in that area. A contiguous neighborhood, however, may experience a corresponding increase in its crime rate. The net result is no or a very small decrease in the overall crime rate."

This viewpoint assumes that crime cannot actually be prevented, rather the impetus of crime carries on until the offending behavior can be successfully completed. Not surprisingly, proponents of positive theory are often quickest to denounce Situational crime prevention on these grounds, stating that the only true way to prevent crime is to keep offenders from becoming motivated to commit crimes, and this best occurs by improving the social conditions that are thought to breed criminogenic influences. Advocates of the Situational perspective argue that crime displacement is not a necessary result of crime prevention. Whether a potential offender whose efforts at committing an act were encumbered in one instance will try again at a different time or location, depends on the nature of the crime, the offender's strength of motivation, knowledge of alternatives, willingness to entertain them, etc. (e.g. Clarke, 1980; Clarke and Cornish, 1985).

Further, in an qualitative study conducted by Reppetto (1976) over twenty years ago, the widespread opinion that crime prevention measures inherently lead to displacement were refuted through interviews with offenders who had previously committed the opportunity crimes of robbery and burglary. Reppetto (1976:177) concluded that the displacement hypothesis commonly attributed to crime prevention techniques or policies was flawed for two major reasons. First, some crimes are so opportunity-driven that merely preventing their occurrence in one instance is sufficient enough to remove the motivation of the offender. Unless another as-attractive opportunity

immediately presents itself, most offenders will not seek out an alternative target. Secondly, even if offenders are blocked in one sphere and wish to move on to another area, there are real limits or costs to their doing so, and these limitations and costs will lessen their frequency of operation, and perhaps increase the likelihood of their being arrested while committing a criminal act.

In placing this argument in the context of a college or university campus, Clarke (1980) posits that for opportunistic crimes, ones that are elicited by their ease of accomplishment (such as theft and vandalism), the probability of offending could be drastically reduced by making it more difficult to commit these types of offenses. To be sure, most campus public safety directors would undoubtedly report that these opportunistic types of crime are, while not necessarily capturing a great deal of media attention, the most problematic for the departments. The research of Bromley (1995, 1997), Sloan (1994), and Sloan et al. (1997) report that larceny/theft is the most prevalent crime reported to law enforcement agencies on university campuses. If one applies the prevailing idea that theft is one of the most underreported of all crimes (Territo, Halsted, and Bromley, 1995), then one may correctly infer that the problem of larceny offenses on American campuses goes much deeper than official statistics can gauge. But if opportunity crimes such as vandalism and larceny/theft are the major crime problems on campus, and most offenders are students who would not normally commit such offenses in another setting (Siegel & Raymond, 1992), then the application and subsequent evaluation of Situational prevention techniques, including CPTED, most definitely seems warranted.

The Situational Perspective and Campus Crime

The nature of most Part I index crime on college and university campuses facilitates the application of Situational Crime Prevention as a theoretical framework for examinations of serious criminality. Post-secondary institutions have become increasingly concerned with deterring would-be offenders and eliminating the infinite opportunities for criminal behavior available to the potential offender. However, because the development of the perspective and the empirical research into campus crime are in their infancy, the Situational perspective has not, as an integrated theory, been applied to any systematic analyses of serious on-campus crime. Scholars who have previously done research into campus crime highlight its opportunistic nature and state their belief that those individuals who engage in such acts can effectively be dissuaded. Because Situational Crime Prevention focuses on the factors conducive to offending, it is logical to apply the perspective to campus crime as a method of explaining and eradicating the behavior.

Several studies have been undertaken which apply certain aspects of the Situational perspective, but consequently ignore other key components. Much of this prior research indicates that elements of the perspective are significantly correlated with on-campus offending and/or have previously been successful in preventing opportunity crimes (McPheters, 1978; Fox and Hellman, 1985). This earlier work is discussed below, as is prior research that has focused on public safety as a component of crime prevention.

Literature Pertaining to the Nature and Scope of Campus Crime

A significant amount of empirical research has been published in the past two decades in response to increasing numbers of criminal victimizations at the nation's post-secondary institutions. While the raw number of crimes reported to campus police officials is certainly reason enough for investigation of this perplexing issue, the ascending level of violence associated with these reported crimes perhaps more than anything has resulted in this scholarly output. Also worth noting is the wide variety of offenses that are characteristic of the campus environment; a fact that has resulted in studies comparing deviance on school grounds to crimes occurring in society at large. As Smith and Fossey (1995:10) explain:

> "The reality of campus crime is an...anomaly. The campus has been set aside as the place for intellectual pursuits, discourse, and reflection; yet today it is the scene of the same sorts of violence, larceny, and criminal mischief as the parent society. The higher education press regularly reports such things as professors shot in their classrooms, arson in campus buildings, rapes in dormitories, thefts of everything from rare books to lunchroom tickets, fraud in grants and student loan programs, sexual extortion of students by faculty members, forgery of transcripts and diplomas, and run-of-the-mill vandalism. Some campuses suffer a great deal of crime, some far less. But in many places the myth of the safe campus endures while the campus community inures itself to the undiscussed threat."

As the frequency and severity of campus criminality increases, more explanatory assessments are being made about this emerging and complex issue. The present decade has seen a significant increase in empirical studies assessing the nature of crime at American post-secondary institutions, and more recently, evaluations of existing programs and policy directives are published in a diverse group of academic journals and

popular presses. With regard to the later, the focus tends to be on the occurrence of violent crimes which plague schools large and small, urban and rural (e.g. Stormer, 1989; Pollard and Whitaker, 1991; Smith and Fossey, 1995). The concerns within social science about campus crime tend to center upon the effects of increasing crime rates upon constituent fear, and policy alternatives available to administrators and campus law enforcement personnel (e.g. Bordner and Petersen, 1983; Bromley and Territo, 1990; Fisher and Nasar, 1992). A vast majority of this prior literature focusing on the nature of crime on college campuses has reported increases in the levels of criminality and the overall seriousness of the offenses committed.

Because this rising trend had been evident for some time prior to the attention paid to the problem in the academic journals, two decades ago Fox (1977) wondered why scholars were largely ignoring the issue, especially since the rise in gross crime rates was greater than in the overall population. Although crime data from colleges and universities was sporadic and often less than reliable, the rising trend was clear quantitatively, and qualitatively as well, since media reports of large-scale campus unrest were prevalent throughout the late 1960's and early 1970's. But those researching campus crime did not have a clear picture about the scope and severity of the problem until the mid to late 1970's. Projects such as those undertaken by Fox (1977) and Lee McPheters (1978) provided a clearer understanding about crime occurring on campus, and generally found that the problem was worse than had been feared initially.

Additionally, McPheters (1978) was perhaps the first scholar to employ tenants of Situational crime prevention (although this perspective was not yet developed to the

formulation we know today) to campus criminality and crime prevention. He believed campus crime rates to primarily be a function of opportunities for would-be offenders offset only by the level of security activity at the particular campus. McPheters (1978) thus employed a cost/benefit equation to estimate the amount of preventable crime, given various characteristics of the universities and the aforementioned level of campus security. His results indicated that two key independent variables were most highly correlated with crime rates; a higher proportion of students living in dormitories, and a close proximity to urban areas with high unemployment rates (McPheters, 1978; Smith and Fossey, 1995).

This second key variable is a bit surprising, given that prevailing thought supports the notion that much campus crime is attributable to constituents preying on other constituents and on- and off-campus crime rates are not significantly correlated (e.g. Bromley, 1995). McPheter's (1978) results suggested that crime rates may be attributable, to some degree, to nonstudents. Many scholars feel that the campus environment has changed significantly in the twenty years since McPheters (1978) performed his research, and most crimes are being committed by persons with legitimate ties to the schools (e.g. McEvoy, 1992). Regardless of the background of the perpetrator, McPheter's (1978) and proponents of his work argue that Situational crime prevention techniques would be equally effective in "target hardening" campus constituents, making them less vulnerable to either "insiders" or "outsiders" (Smith and Fossey, 1995:14).

Because of the multifaceted context of the physical structure of college campuses, the diversity of constituents, and the criminogenic influence of surrounding areas,

explanations about why certain crimes are common, or what factors influence the prevalence of violence are similarly variant. Some writers have pointed to the dual problems of alcohol abuse and the carrying of firearms as a way of explaining the increase in "impulse violence" on campus (Lederman, 1994; Nichols, 1995). Fox and Hellman (1985) found crime rates to be primarily correlated with the size and scholastic quality of the institution, and reported the size of the community in which the campus was located to not be a significant correlate of crime; an assertion which was not supported by Sloan's (1992a) research. Quite obviously, there are as many explanations for why crime occurs on campus as there are campuses in existence, making institutional responses all the more difficult, for even if distinct correlates can be ascertained, it is highly probable that they will not remain static for very long, thus requiring campus security to make frequent adjustments in their policy decisions.

Sloan's (1992a) more recent work also examines the role of environmental factors in predicting campus crime rates. He found that the setting, the selectivity, and the cost to attend the school were all significantly correlated with the campus crime rate (Sloan, 1992a). His results, while demonstrating an overall rise in the gross number of all types of crimes reported to campus law enforcement, indicate that theft/larceny is still the prevailing offense committing on campus, and therefore the fear of violent victimization may be unfounded. Also, since this national data set was able to take into account the contextual differences specified above, Sloan (1992a) concluded that a Situational approach to controlling or preventing certain types of offenses would certainly be plausible, since several significant correlates could be identified as influencing the

numbers of crimes reported.

Literature Pertaining to the Role and Function of Campus Public Safety

Any scientific enquiry into campus crime prevention necessarily requires a discussion of the agency or body responsible for developing and implementing such strategies. At most colleges and universities, a campus public safety department, structurally and philosophically similar to municipal police agencies, is responsible for patrolling school property and responding to calls for assistance. However not all institutions of higher learning employ sworn law enforcement officers. Indeed, many smaller colleges and universities, especially those in rural and suburban "low-crime" zones, have resisted the trend of their larger brethren toward becoming institutions with fully sworn and equipped police forces (Onishi, 1995; Hummer, Austin, and Bumphus, Forthcoming). Some campuses have stalled on the progression described by Sloan (1992b), which has seen campus law enforcement emerge from its early days as a "watch" system to a fully self-contained policing agency, with full arrest powers and capable of tactical response. Sewell (1993) states that college and university security plans are as diverse as the schools themselves. In some instances there are hybrid systems of both full-time security watchmen and fully-sworn officers; in other cases fully sworn officers are employed, but their powers are limited by the school's administration (e.g. Hummer et al., Forthcoming). The worst case scenario are the schools, most often small in size and not in "crime prone" areas, which have either consciously or unconsciously chosen to altogether ignore the issues of campus safety and security (Sewell, 1993).

Sloan (1992b) documents the progression and modernization of the campus police

over a one hundred year period. The first "campus police officers" were city of New Haven policemen who were hired by Yale University in 1894 to patrol university grounds during evening and overnight hours (Powell, 1994a; Powell, 1994b; Peak, 1995). Sloan (1992b) states that early campus security (approximately the first half of the twentieth century) can best be characterized as a "watchman" system, where schools hired retired men to serve in a custodial capacity. They had no formal law enforcement training or policing powers, rather they protected campus property from fire, water, or other damage, and reported suspicious activity to local authorities (Espositio and Stormer, 1989; Sloan, 1992b). Campus public safety as we know it today did not emerge until the 1950's. Sloan (1992b:86) elaborates:

> "This decade saw many colleges and universities begin a period of unprecedented growth in student enrollment and in physical size. With this boom, campus administrators soon realized there was a need for a 'police presence' on campus. As a result, colleges began hiring retired municipal police officers to serve as 'directors of campus security.' The first thing these directors did was to reshape campus security into an agency similar to urban police departments. To do this, they created campus 'security officers' and campus 'security departments'. They also tried to severe the ties of campus security to the physical plant department, where security had traditionally been housed. In doing this, they sought to make campus security more autonomous."

Even though these campus security departments had begun to resemble municipal police departments, their role and function remained similar to that of their predecessors (Bordner and Petersen, 1983; Sloan, 1992b). The seeds of professionalization were not planted until the turbulence of the 1960's and early 1970's, when campus unrest became a major problem for college administrators. As Bordner and Petersen explain (1983: xi):

> "The transition from the silent generation of the fifties to the active generation of the sixties and early seventies left many colleges and universities totally unprepared to cope with the new threats to the tranquillity of the campus. With the advent of the era of student dissent, campus protest demonstrations, disruptive student activities, violence and increases in reported crime and fear of crime, an increasing number of educational institutions began replacing their line security officers with more educated and better trained police officers with police powers of arrest and duties to enforce state statutes on campus...It was also recognized that if the university did not govern itself it would be governed by others who might be less responsive to the campus community. Thus, professional police departments began to emerge on college campuses during the 1960s and early 1970s, and law enforcement activities became part of the ever expanding role of the university officer."

For many larger schools the dual factors of internal unrest and rising crime rates in surrounding communities necessitated the above mentioned changes in policy and role for campus security. The militaristic model of the police, outlined by Klockars (1985), which had become the norm for municipal and state police agencies, began permeating the collegiate environment. Campus police, now instead of just protecting persons and property, were now given license to "fight crime", and with this new role, campus police began to structurally resemble municipal police departments (e.g. in terms of training requirements, organization, etc.) (Peak, 1989; Smith, 1989; Peak 1995) and physically mirror their local sworn counterparts in dress and in the hardware (firearms, handcuffs, etc.) that they carried (Sloan, 1992b).

A review of earlier empirical research pertaining to law enforcement in the university environment shows that schools were primarily concerned with constituent safety and building security (see Etheridge, 1958; Nielsen, 1970; and Gelber, 1972). Some writers in the policing arena, while not academics concentrating in the area of

campus safety, saw law enforcement on the college campus as a relatively easy task, given the homogenous, mostly law-abiding individuals who comprised the student population in earlier years. It was thought that simply the threat of harsher punishment would "scare straight" those "naive, starry-eyed undergraduates" who take advantage of the campus environment and "prevent our colleges from functioning effectively" (Gardner, 1970:119). Such writings reflect the uncertainty of the times with regard to campus unrest and rising crime in communities at large. It also reflects the beginning point of the diversification of the collegiate environment.

However, just as the overall turbulence and social unrest of the 1960's changed the face of policing an urban setting, the college campus was also not immune from these changing social forces, and the social environment at America's universities is much different, of course, than in years past. Over a quarter century ago, Sims (1971) published an edited monograph that contained several articles calling for the professionalization of campus security forces in response to increasing rates of violent and property crimes. Although the need for a professionalized force was apparent to law enforcement professionals, Gelber (1972) recognized a reluctance on the part of the academic community, especially students, to accept their campus police force as a legitimate law enforcement agency. Later empirical assessments of constituent satisfaction with campus police services echoed Gelber's (1972) findings, and further clouded the legitimacy of law enforcement in the collegiate environment (Cordner, Marenin, and Murphy, 1985; Miller and Pan, 1987; Peak, 1988; Hummer and Bumphus, 1996). Also, Sloan, Fisher, and Wilkins (1993b) found that a number of wide-ranging variables may contribute to

negative constituent attitudes toward the campus police. Some focus on specific police activities (i.e. crime prevention policies or patrol strategies), others are more concerned with the more general environment of fear or satisfaction with police service provision on campus (i.e. overall performance or keeping crime rates low).

This lack of acceptance was somewhat confusing to researchers in this area, as Scott's (1976) national study of college and university law enforcement reported that campus police departments, as a whole, provided the same services and performed the same duties as municipal agencies. Further, Scott's (1976) conclusion was that campus law enforcement was emerging as an important local producer of police services, not just to the schools themselves, but also to the surrounding communities. Even though the progression from the "watch" system to the militaristic and/or community-oriented approach to police work (see Peak, 1989; Benson, 1993; Lang, 1995; Lanier, 1995) is clearly delineated by Sloan (1992b), Bordner and Petersen (1983) point out that not every campus in America has chosen to replace their approach to campus security. They see a tremendous amount of diversity in the role and function of campus security or law enforcement departments. Some schools have seen no need, despite the passage of the Student Right-to-Know and Campus Security Act of 1990, to change from a watch system to a crime-fighting system. More common are the schools with security systems which are a hybrid of security and peace officers. Bordner and Petersen (1983: xii) describe them as:

> "...[M]odern security forces in which the watchman function has been extended to include pseudo-police functions and are generally involved to some degree with regulation of student conduct."

In some instances, these hybrid systems are comprised of sworn police officers who do not possess all of the powers granted municipal police officers (see Hummer et al., Forthcoming), but more commonly they are comparable to contract security agencies, who are granted certain powers (such as detaining suspects), but are not sworn peace officers.

Regardless of the form or function of campus law enforcement, the agency responsible for overseeing the safety and security of the schools' constituents faces an inherent dilemma in trying to balance freedom of movement and thought (a keystone of the concept of the "campus") with the notion of preventing deviant acts from taking place; knowing that a good deal of such prevention activities could possibly impede upon the individual rights of certain parties (Folven, 1995; Sloan and Fisher, 1995). Roark (1993:5) elaborates on the problem of crime prevention for campus officials as being threefold. First, the campus is a relatively open and free place, academically and physically. It can rarely be closed to the public (ostensibly because most are publicly funded), and doing so would challenge the founding principles of these institutions. Second, the campus is not only open, but transient as well. Students, faculty, staff, etc. are usually only in residence a few years before moving on. Also, these individuals are of differing backgrounds and cultures which may pose problems with regard to target attractiveness or offending. Third, the lifestyle and routine activities of those constituents on campus (i.e. movement at late hours, a high density of residents in campus dormitories) creates almost limitless criminal opportunity (Roark, 1993).

Literature Pertaining to the Prevention of Campus Crime

As previously discussed, there are a number of viable crime prevention techniques at the disposal of campus law enforcement administrators, which can be implemented taking into account the context or characteristics of their particular institution. Certainly, these measures have been proposed in global terms in accordance with the macrolevel perspective of Situational prevention. It should not be inferred that all of these strategies could effectively be implemented on all campuses. Sloan (1992a:39), has broken potential responses down into four distinct categories: (1) those that involve the entire campus, (2) "target hardening" buildings, dormitories, and other locations, (3) increasing the visibility of campus officers and implementing service-oriented patrols, and (4) developing other strategies to prevent crime (such as the use of volunteers and student "mule patrols"). Prior research outlining crime prevention strategies from these four areas is discussed below.

Crime Prevention Policies Involving the Entire Campus Community

A daunting task for any college or university is to facilitate an atmosphere where constituents of a school, especially students, take crime prevention and safety seriously, especially when crime does not appear to be a problem or fear of crime is not a pertinent issue. Undoubtedly this is the largest obstacle to overcome in putting together a crime prevention strategy. Campus officials can only do so much to try and ensure peoples safety while they are using campus facilities, and they can only make recommendations and instruct people about how to reduce their chances of being victimized. The problem is that certain behaviors associated with college life mean that these warnings are ignored

in the pursuit of daily activities (such as late night partying, walking alone to classes, the library, or study sessions, the propensity to leave doors unlocked for easy access, etc.) (e.g., Fisher, Sloan, Cullen, and Lu, 1997). For some of the most promising crime prevention tactics to be successful, more participation from constituents is necessary, and by extension a radical change in behavioral dynamics may be required for significantly positive results to become manifest.

This is not to say that certain advances can be made regarding crime prevention programs that require some constituent cooperation. Bromley (1994) sees promise in public education initiatives that would focus specifically on women's safety and dormitory security. Additionally, students could be organized to watch out for each other in small groups (similar to a neighborhood watch program), and, along with maintenance and service personnel, could report suspicious activities in and around campus residential areas to the campus or local police (Bromley and Territo, 1990; Bromley, 1994). Further, other offices of the college and university may take a role in crime prevention/personal safety besides the police department. In addition to law enforcement presentations about how to protect oneself, information can be dispensed from counselors, the office of student affairs, and health care officials to name but a few (Nichols, 1995).

Most schools begin designing, or re-vamping their existing, crime prevention plans with a task force that evaluates the crime problem as it presently exists and what tools they have at their disposal with which to respond. As Richards (1996:49-51) states:

> "The initiation, analysis, and implementation of a security survey should be considered the first step in a progressive campus crime prevention program... Ideally, a campus security survey should be designed to investigate the levels of existing security at the site, assess vulernability to

> criminal opportunity, and to make appropriate recommendations upon analysis of the findings."

All too often, this step of assessing the needs of the institution are not taken into account by all involved in administering security on campus. Policy initiatives are frequently put in place by overzealous university administrators and campus law enforcement professionals who overgeneralize positive findings from other universities, without taking into account aforementioned contextual variables, thus resulting in less than stellar outcomes.

'Target Hardening'

Referencing the above discussion, many scholars believe the Situational approach holds great promise in preventing crime on campus, and have thus called for prevention measures which utilize CPTED. Of course, the purpose of such strategies is to reduce the perceived or real physical opportunities for offending or to increase the chances of an offender being caught (Clarke, 1980). Bromley (1994) asserts that the first step in preventing crime through target hardening is to design buildings and facilities in such as way as to make targets less attractive to would-be offenders, utilizing the principals developed by Jeffrey (1971) and Newman (1972). Campus buildings, pathways, and common areas can be constructed in such a way as to ensure they are well traveled and clearly visible to passersby, thus providing some measure of guardianship. Fisher and Sloan (1993:75) provide examples of these designs, which include blocking off hiding spots or cutting down overgrown shrubbery to reduce physical opportunity, and implementing foot patrols in potential "hot spots" to increase the chances of catching an

offender during the commission of a criminal act.

Additionally, CPTED techniques which are specific to deterring criminal events include, but are not limited to, internal and external lighting systems, locking devices on external building doors and resident rooms, alarmed and/or electronic access to dormitories, staffing of front desks and registration of all guests in dormitories, and emergency communication systems in strategic locations around campus that are wired directly to campus police headquarters (Bromley and Territo, 1990; McEvoy, 1992; Sloan, 1992a; Fisher and Sloan, 1993; Bromley, 1994).

Increasing the Visibility of Campus Police Officers & Implementation of Community Policing

Perhaps the most obvious tool of colleges and universities to deal with campus crime is the professionalization of campus law enforcement described above. Indeed, Fernandez and Lizotte (1993) give this as a primary reason for their argument that schools are safer today than in decades past. Without doubt, law enforcement training has greatly benefited departments that are responsible for large campuses or those in crime prone areas. The knowledge gained by the officers who undergo academy training has proliferated down so that university policy is based on the latest crime prevention techniques currently utilized by municipal police departments and private security contractors. Thus, safety advances which may have bypassed the college environment in the past are now implemented in an environment that is arguably more controlled and conducive to these techniques.

Whether the administration of safety on a college campus is entrusted to peace

officers or non-sworn personnel, lines of communication between the department, constituents, administration, and local police are critical (Nichols, 1995). Bromley and Territo (1990:19) explain:

> "The role chosen by the institution's leadership for its campus law enforcement department should be clearly defined for both the campus community and the city or town in which the campus is located. Regardless of the specific duties of campus law enforcement personnel, there should be a close working relationship between the campus law enforcement agency and the local police department which services the surrounding community. A clear understanding of which department is responsible for which kinds of activities on campus is very important. Many campuses and local police departments have clearly defined 'mutual aid agreements' which help to ensure good cooperation in critical situations. Communication between the two departments should be frequent at both the formal and informal level."

Because crime prevention strategies are most often developed and certainly implemented by the campus public safety agency, it is vital that those whose well-being depends upon these policies be informed about their role in ensuring a safe environment. Therefore, in addition to keeping the lines of communication open between policing agencies, those with a vested interest in campus safety should be included in policy analysis and program implementation. These lines of communication, of course, flow in both directions, as some of the prevention programs initiated by the campus police depend upon administrative approval and funding in order to come to fruition. As an example, Sloan's (1992a) recent piece found a correlation between crime rates and the officer to student ratio on campus. The more full-time public safety officers in relation to students, the lower the amount of overall campus crime (Sloan, 1992a). Of course, this finding implies that the lowering of this ratio, all things being equal, should produce a reduction in crime.

Since decreasing the number of students enrolled at the institution is typically not an option, the hiring of more officers appears to be the appropriate response in this instance. Such hiring, in turn, can only be accomplished with administrative approval and funding.

Campus crime experts see great promise in adapting community policing principles to the collegiate environment (e.g. Trojanowicz et al., 1988; Jackson, 1992; Lanier, 1995). Considering that a major 'hot spot' for criminal activity on campus is on or near student dormitories (e.g. McPheters 1978), the assignment of campus police officers to a particular residence hall or complex may be beneficial. Benson (1993) reports that Michigan State University has seen a reduction in crime since such a policy was implemented in late 1987. Bromley (1994:43) states the positives of such a policy :

> "The officers assigned to the dorm areas would become well known to students and provide protection as well as psychological reassurance. This step would reflect the concept of community-oriented policing now being practiced by many municipal police agencies and in a few university settings. Even if officers could not be assigned to the dorm areas one hundred percent of the time, they could be required to make routine checks in and around the student dorms."

Further, results from larger universities indicate at least moderate support or promise for a variety of programs created and implemented by community policing officers. Bromley (1997) identified a number of correlates regarding auto theft at the University of South Florida in Tampa, and made recommendations which could be put into action by an officer assigned to this problem, such as coordinating a Lot Watch program or placing signs in lots reminding people to lock their vehicles and keep valuables out of sight. At Michigan State University, community police officers coordinate various prevention initiatives such as campus watch programs in residence

halls, mountain bike patrols, and office watch programs designed to reduce theft in university buildings (Benson, 1993). Jacksonville State University in Alabama instituted a preventive patrol strategy in 1992 to reduce violence and "nuisance crimes", which the school identified as precursors to violent victimizations, both on and off campus (Nichols, 1995). At the University of California, Los Angeles, campus police oversee an escort and transportation service that had previously been staffed by seven volunteers, but now employs two hundred student workers (McEvoy, 1992) Lastly, campus police officers at the University of Alabama at Birmingham coordinate volunteer watch groups which are "eyes and ears" that report suspicious activities on campus grounds and in buildings (Sloan, 1992a).

Volunteer-Driven Strategies

With any volunteer-driven initiative, the most difficult logistical concerns center on procuring and retaining participants, and with establishing leadership to coordinate activities. On a college campus, the available pool of volunteers is usually within the student body population. For such programs to take shape, those overseeing them must, initially, have a sufficient number of interested persons who are willing to participate in and be committed to a crime prevention program (e.g. Huff, 1990). Therefore, a plan of action should be in place prior to recruiting volunteer participants, so that those who want to be involved can see how the policy is designed and how it will take place.

A second concern, once enough volunteers are committed to the project, is reducing mortality of participants and/or recruiting other volunteers to replace those who withdraw from the program. Since a college student's time is of the essence, and

volunteer work is perhaps low on their priority list beneath classes and paid employment, if time constraints become a problem and activities are to be cut from their schedule, it is logical that volunteer work is first eliminated. Further, if the program is one large in scope, or requires a great deal of people to work at varied hours, then there will most likely never be a sufficient number of participants for the program coordinator.

Liability problems could also be a significant impediment to getting volunteer crime prevention programs up and running. Since there is no guarantee that volunteers will not come into contact with an offender, or be in danger while performing their duties, there is always the possibility of litigation against the institution or program coordinator if a volunteer is injured. Programs such as Lot Watches, Campus Escort Services, and Safety Coordinators in residence halls, put their participants in potentially dangerous situations by the very nature of the work. Even though volunteers often sign a waiver that excludes the institution from civil liability, there are instances where such waivers do not hold up in court, especially if the school is found negligent in some manner. The specter of susceptibility to litigation then must also be taken into account, ideally in cost/benefit terms. The decision has to be made if the program's potential good is outweighed by the detrimental effects of lawsuits should an unfortunate and unlikely situation occur where a volunteer is harmed while participating in the program.

The Present Study

To summarize, earlier research has laid the foundation for an application of the Situational perspective to the problem of campus crime, however the lack of utilization of the full framework remains a glaring omission to the literature on serious campus

offending. Little is known presently about how much serious crime is occurring on larger college and university campuses nationally, and even less regarding the effectiveness of the many crime prevention initiatives implemented by schools as a result of increasing crime rates on their campuses or due to positive findings from research conducted at other institutions. A great deal of information about the nature of campus crime comes from research conducted at one institution or from a small sample of institutions in a given geographic region. None of the studies presented above utilized a nationwide sample as large as that used in this dissertation, nor have any of these studies collected data on as many variables or facets of the campus environment and public safety as has the present research. Much like the UCR is a measuring rod for criminality nationwide over the course of a calendar year, this dissertation may be seen as a barometer of serious campus crime at larger post-secondary institutions, and therefore fills a large void in the empirical research pertaining to collegiate criminality.

Specifically, this dissertation will assess the operations and professionalism of campus public safety departments, as well as the scope and breadth of crime prevention and security programs at colleges and universities nationwide, and evaluate their collective impact upon the school's crime rates respective to their implementation. Relative successes of various crime prevention and security programs will be evaluated, controlling for institutional characteristics such as the number of constituents affiliated with the campus, geographic location and resident population. Ultimately, the results of prior research into this topic and the work of scholars who have written conceptual and practical pieces about the campus crime problem and potential responses to it, have been

used to develop a set of research questions to be examined.

Research Questions

The primary objective of this dissertation is to interpret the relationship between campus public safety department operations, the various crime prevention strategies implemented by institutions and the overall amount of criminal activity as reported by the schools in compliance with the Campus Crime and Security Act of 1990. Therefore, the initial research question, which is derived from the theoretical tenants of Situational crime prevention, is:

> 1. Do institutions of higher learning who have incorporated crime prevention techniques espoused by scholars who adhere to the Situational perspective, have lower overall rates of offending than those institutions with fewer, or without, such measures in place?

Secondly, as discussed above in the review of literature pertaining to campus police, the movement toward employing professional safety officers to patrol college and university campuses is well documented. This is particularly applicable to larger, urban schools, although smaller suburban and rural schools have also begun to embrace this trend. Additionally, an examination of institutional procedure with regards to screening, hiring, and training campus law enforcement personnel is possible. A key reason why administrators have given the go-ahead to switch from a security-oriented to peace officer- oriented system of social control is the argument that highly trained police officers are more "professional" and therefore better able to handle safety needs as well as emergency response (e.g. Gelber, 1972). There is a widely held assumption that sworn police officers, who are often more educated and trained, will be able to implement crime

prevention policies into the specific campus environment. In order to determine the nature of the relationship between professionalism and overall campus criminality, other questions to be examined are:

> 2. Do institutions of higher learning, irrespective of student enrollment or resident population, have less criminality when serviced by their own campus public safety officers, as opposed to institutions which contract out for protective services?
>
> 3. Do institutions of higher learning, irrespective of student enrollment or resident population, have lower overall criminality when professionalism in terms of the duties performed by campus public safety officers is accounted for?
>
> 4. Does the selection and training of campus public safety personnel, irrespective of institution size or crime prevention strategy, influence overall criminality at the institutions served?

Finally, to examine the nature of crime in general on college and university campuses, the dissertation will examine the relationship between crime rates and institutional characteristics including, but not limited to, size of the constituency, location of the campus, resident population, acreage of the campus, and the number of buildings on campus. Therefore, the last research question to be addressed will be:

> 5. What impact to institutional characteristics have upon crime rates and/or the number of crimes reported to the university or college police?

CHAPTER III

METHODS

Research Design and Data Collection

The data utilized in this dissertation were obtained from the United States Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (BJS) Data Archives (Bureau of Justice Statistics, 1997). To ascertain the nature and scope of protective services at larger U.S. colleges and universities, BJS surveyed 4-year institutions of higher education with 2,500 or more students during 1995 (Reaves and Goldberg, 1996). The co-coordinators of the initial study describe the scope of the project:

> "This information comes from the 1995 Survey of Campus Law Enforcement Agencies, the largest study of police and security services at institutions of higher education ever conducted. The eight-page, mail survey asked about a wide-range of topics including agency functions, hiring practices, employee characteristics, types of equipment used, computers and information systems, expenditures, salaries, policies, and special programs" (Reaves and Goldberg, 1996: iii).

The survey was administered under the auspices of the BJS Law Enforcement Management and Administrative Statistics (LEMAS) program, which had gathered similar information on state and local law enforcement agencies in previous years (Reaves and Goldberg, 1996). The questionnaire was distributed to campus public safety agencies due the lack of representation of such agencies in the sample of municipal police

departments surveyed by the BJS LEMAS program. Further, as described above, in the years since LEMAS had been conducting surveys of state and local police departments, campus public safety has shifted from a security focus to a more proactive law enforcement focus, thus necessitating an independent evaluation model.

Public safety departments at 680 college and university campuses were included in the study population. Eighty-five percent, or 581, schools returned the questionnaire with all or most questions answered, including 91 percent of the agencies at public institutions and 76 percent of those at private institutions (Reaves and Goldberg, 1996). Almost all safety departments responded at least in part. About three-fourths of these agencies employed sworn police officers with arrest powers equivalent to municipal policing agencies, while the other quarter relied primarily on nonsworn security personnel (Reaves and Goldberg, 1996). In this dissertation, for reasons of convenience, the term "campus public safety" has been utilized to describe both groups, irrespective of whether the officers are sworn peace officers or non-sworn security personnel.

Selection of Variables

Dependent Variables

The measurable outcomes of the LEMAS questionnaire are crime statistics, similar to the Uniform Crime Report, collected by campus public safety agencies and subsequently kept on file at the schools for public inspection upon request. In the present study, gross numbers of Part I Index crimes (felony offenses which include

murder/manslaughter, forcible sex offenses, robbery, aggravated assault, burglary, larceny/theft, motor vehicle theft, and arson) occurring on campus were reported for 1994, the latest year for which complete data were available when the questionnaire was administered in late 1995 by the Bureau of Justice Statistics.

Most researchers realize that gross numbers of crimes occurring in a particular jurisdiction are contingent upon a number of factors. Most obviously, the population of the campus (or in the present case, the size of the constituency or resident population) directly impacts the actual number of offenses reported to campus public safety. When presenting the overall numbers of crimes for comparative purposes, the FBI standardizes gross index crime statistics utilizing U.S. Census Bureau population data. The total population is divided by 100,000, and the gross number of crimes is standardized using the resultant denominator.

In partial model regression analyses to follow, crime rates will be standardized using both total constituency and resident population as denominators. This is done so that size of the campus population is taken into account, so as not to produce spurious results when examining only certain independent variables. Two population figures are used due to an ongoing debate among those conducting research in the area of campus crime. One school of thought is that all students enrolled and all employees of the institution should be used as a population parameter, because all such individuals come together in time and space on the campus, and all are potential offenders and victims. Another argument is that since crime rates in the larger society are standardized using permanent residents as a base, rates on campus should be calculated similarly for

comparative purposes. Therefore, in an effort to show possible differences when using the two denominators, both will be presented in the partial analyses. The six outcomes thus become: total Part I index crimes/ # of constituents, total Part I index crimes/ resident population, Part I violent offenses/ # of constituents, Part I violent crimes/ resident population, Part I property crimes/ # of constituents, and Part I property crimes/ resident population.

Crime figures are left unstandardized in one partial model analysis as well as in the complete model, and population figures (total constituents and resident population) are included as controls. In these analyses, three dependent variables will be examined as outcomes: gross numbers of overall Part I index Crimes, gross numbers of Part I violent crimes, and gross numbers of Part I property crimes. Collectively, these are referred to as "The Extent of Serious Criminality on Campus."

Independent Variables

The key independent variables in the following analysis are the same as the variables that scholars examining the overall effectiveness and organizational structure of state and municipal law enforcement agencies, given that the survey instrument is identical to those utilized in research on police departments and their crime prevention initiatives. Therefore, comparisons may be made between campus law enforcement agencies and those agencies that serve the population at large, in terms of personnel and crime prevention initiatives. While most of these indicators are self-explanatory and common knowledge to those who study criminal justice and/or law enforcement, a

discussion of the most pertinent correlates of campus crime in the present study follows.

Because the LEMAS questionnaire contains of multitude of variables, only some of which apply to the research questions being investigated in this dissertation, it is necessary to discuss those variables to be later utilized in explanatory analyses. The independent variables which are to be included in subsequent linear regression analyses can be subdivided under three distinct sub-headings: Characteristics of the Institutions surveyed, Crime Prevention Strategies, and Campus Safety Department Characteristics and Functions (see Appendices A and B for a full descriptions of dependent and independent variables, coding, scales, and abbreviations used in subsequent analyses).

As stated in the theoretical framework, environmental criminologists hold that factors associated with the physical structure of a location or facility are key to preventing, or encouraging, criminal acts to take place. Newman (1972) held that an area may only be truly "defensible" if the opportunities for a potential offender to commit a deviant act are identified and eliminated by design. Of course, putting the necessary components into place to achieve "defensible space" becomes a more difficult endeavor when the space to be defended is large in terms of physical area. Further, the task is made even more complex when the types and number of facilities on campus is great. For example, a campus with a large area in acreage or with a large number of buildings presents a challenge for the director of campus safety in planning and implementing strategies to make such space "defensible". Because the difficulty inherent in reducing criminal opportunities over a vast territory, it is expected that campuses with large numbers of and widespread facilities (in the present study, operationalized by the

LEMAS questionnaire as number of buildings, land area in acres, and miles of campus roadways) will have crime rates which are correspondingly large, and may perhaps respond to these rates with more detailed crime prevention programming.

In addition to the variables collected by BJS using the Law Enforcement Management and Administrative Statistics questionnaire administered to college and university public safety agencies, additional data were collected on the nature of the campus environment as well as the state of criminal justice programming at schools in the sample. The latter of the two was collected for exploratory purposes, as the relationship between the development of a criminal justice curriculum and crime prevention programs at the institutions will be examined. Information on the campus environment was collected because of the differing nature of crime in, and the policing of, urban, suburban, and rural environments (e.g., Sims, 1988; Crank, 1990; Monkkonen, 1992; Weisheit, Wells, and Falcone, 1994). Lunden (1983) attributes the rise in campus crime, at least in part, to the rapid growth of metropolitan areas, and the associated increases in population turnover and decreases in informal social control in the areas surrounding post-secondary institutions. From the definitions of campus environments provided below, it is fairly clear that an assumption is being made with regard to levels of community atmosphere at the different types of campuses. In fact, one may view "informal controls" and "community ties" on a continuum, where both decrease as campuses are more urbanized.

Information on this variable was gathered from the College Entrance Examination Board's (1997) The College Handbook, 1998. This source was chosen because it provides information on the nature of the campus environment, and does not simply characterize a

campus solely based on the size of the community in which it is located. Following are the College Entrance Examination Board's (1997:46) definitions of urban, suburban, and rural campuses:

> "Urban Campuses : Can be as different as the cities in which they are located. They include some of the nation's oldest colleges, with historic buildings and parklike quadrangles, as well as colleges located in a single high-rise building with no traditional campus at all. What most urban campuses share is ready access to the extended cultural life of the city itself- museums, theaters, professional sports, concerts, and so on."
>
> "Suburban Campuses: Can be quite varied, ranging from converted shopping malls to traditional, ivy-covered buildings. Suburban campuses are by definition located near cities; students who have transportation into the city can take advantage of a diversity of cultural events."
>
> "Rural Campuses: Generally some distance from metropolitan areas, and students must rely almost entirely on the social and cultural events offered on campus. The 'sense of community' may be increased because the college is more self-contained than in larger communities."

These definitions of nature of the campus environment are preferred because they take into account the individual physical characteristics of the campus and do not simply rely solely upon the latest census statistics for classification. Therefore, a campus which is technically within the boarders of a major city may still be classified as suburban if the campus has defined boundaries, or is primarily residential in nature. Conversely, a campus may be classified as urban according to the definition above, even if the community in which it is located is classified as a minor metropolitan area, or even a large town. It is thought that the nature of the school's environment may be correlated with the extent of crime prevention policies, and subsequently, with the reported crime

rate at the institution.

The College Entrance Examination Board's (1997) The College Handbook, 1998 was also used to collect data regarding the nature of the criminal justice program at each of the 680 institutions. Specifically, this guidebook was used to determine if a school had a separate baccalaureate program in criminal justice. Those colleges and universities who had no criminal justice program, or who offered a criminal justice concentration in another discipline were coded as not offering a bachelors' degree in criminal justice, while those who specifically reported having an undergraduate major in criminal justice were so coded. For information regarding graduate programs in criminal justice, Peterson's (1998) Graduate Programs in the Humanities, Arts, and Social Sciences was utilized. This guidebook contained information on whether an institution offered a masters' or doctoral program in criminal justice, or if the university offered a concentration in criminal justice or criminology within another graduate curriculum.

Although it may not be viewed as a direct correlate affecting campus crime, the possibility exists that the presence of a separate criminal justice curriculum at a college or university, and thus by necessity a group of criminologists in residence, may impact the development and implementation of crime prevention strategies on campus which can directly influence rates of violence and property crime. More often that not, criminologists and criminal justicians consult on projects for criminal justice agencies in the region surrounding the campus at which they hold faculty positions. Issues of crime and safety on campus, because of the publicity and immediate proximity of the "problem", are naturally of some interest to criminal justice faculty. These faculty

members can work with the campus safety department to develop strategies aimed at crime prevention, victim assistance, and institutional response to criminal incidents.

An institution which offers the criminal justice baccalaureate degree has within it a pool of majors who could benefit campus safety departments as volunteers, interns, and student employee help. While students of any academic major can (and do) participate in such activities for campus safety departments, the hope is that students majoring in criminal justice who participate are more committed to the work, and posses an underlying knowledge of the criminal justice field that aids them in their tasks. For these reasons, the presence of a separate criminal justice curriculum is seen as an institutional characteristic which may potentially correlate with the development of specific campus safety and crime prevention strategies. As such, the nature of the criminal justice program at the schools under study will be utilized as an independent variable in the linear multiple regression analysis.

Also included in this subsection of independent variables are the demographic characteristics of total constituency and resident population which have been discussed previously. Again, these two variables serve as standardization figures for crime rates, and thus may be seen as control variables in the multivariate analyses.

The LEMAS questionnaire contained a number of items which enabled an analysis of the relationship between crime statistics and crime prevention initiatives presently in place at the institutions included in the sample. A few of the items which fall under this heading have been so designated with some degree of subjectivity. For example, the item pertaining to the arming of campus public safety officers may not

strike some as a crime prevention technique. However if one views the arming of officers as aiding "guardianship" as in routine activities theory, or as upping the potential "costs" inherent in a given criminal act as in rational choice, then providing sidearms to officers may be viewed as another, perhaps logical, preventative strategy employed by post-secondary institutions to ensure constituent safety.

Other items, such as the presence of an emergency blue light system, an emergency 911 system, and the various programs offered by institutions and administered by the public safety department clearly fall under the heading of crime prevention. This subset of independent variables is representative of the routine activities segment of Situational crime prevention, as discussed in the preceding chapter, and show that colleges and universities are best able to impact the "guardianship" element of routine activities theory. However, some of these crime prevention program strategies, such as date rape prevention and self-defense training, also help constituents reduce their "target suitability". Thus, the two elements of routine activities over which institutions have some sphere of influence are indicated by this subset of independent variables.

The professionalization of campus public safety departments in the United States has been well-documented (Gelber, 1972; Sloan, 1992b; Bromley, 1995b; Lanier, 1995). Indeed, the data set utilized for this dissertation was borne out of the idea that, since many schools are choosing to employ sworn law enforcement officers in place of traditional private security guards to protect their campuses and many of these departments are separate entities recognized by municipal departments near the institutions, there should be a comprehensive analysis of the characteristics and structure of these departments.

Thus, the LEMAS questionnaire was distributed by BJS for the purpose of gathering summary data on larger campus public safety departments nationwide. Because the survey instrument was nearly identical to that given to municipal law enforcement departments, items pertaining to structure, function, and role of these campus departments model those of other policing agencies. For the following analyses, certain variables were selected as indicators of the theoretical tenants of the Situational perspective and as gauges of proactive order-maintenance activity at the participating institutions.

One variable which is unique to campus public safety departments is that of outsourcing. Some schools, especially those smaller institutions and/or those in areas with lower crime rates, will contract out to either local or state law enforcement agencies or to contract security companies to provide routine patrol for campus property. Most often this practice is seen a savings in revenue, and may informally help enhance school-community relations by supplying revenue to the local municipality. In this dissertation, possible differences in violent and property crime rates will be examined between those schools outsourcing campus protective services and those with such services in-house. Similarly, criminality at institutions whose campus safety departments (either in-house or outsourced) possess arrest powers within their respective jurisdictions will be compared with those institutions whose departments are without such powers. This variable "arrest power" is a demarcation between those institutions utilizing sworn officers (either in-house or contracted) and those using private security contractors, for private security officers normally possess only the same arrest powers as the average citizen.

An area that has become a central focus for colleges and universities is that of

dealing with the flow of illicit narcotics on campus. As is the case in larger society, the underground economy of the drug trade flourishes in an environment where individuals are receptive to the idea of experimenting with controlled substances and have the resources to support such experimentation. The post-secondary institution certainly typifies this description, and thus the personal use and distribution of narcotics on campus is a major concern for both public safety chiefs and administrators alike. Many schools with fully sworn officers are responsible for the enforcement of narcotics laws on campus, and some participate in multi-agency drug task forces on campus and in the surrounding communities. These two items will be included in later analyses to see if the enforcement of drug laws is significantly related to overall crime rates on campus.

For descriptive purposes, several other characteristics of campus public safety departments are presented in the following chapter (such as patrol types, number of department employees, etc.) to demonstrate the growth and evolution of campus public safety as described by Sloan (1992a). However these variables are not included in the explanatory analyses to follow for one or more of several reasons. First, the distribution of some of these variables is such that there is little variance within the item. For example, virtually all departments employ one-officer motorized patrols, and almost none employ two-officer bicycle patrol. thus, because of homogeneity within the item, it is seen as ineffectual within a larger model. Second, some variables, such as number of non-sworn public safety department employees have no theoretical purpose within a Situational framework to be included in explanatory analyses. Because those variables previously discussed at some length in this section are deemed more germane to the

research questions being examined, these later descriptive items are not included in later multivariate analyses, but are rather presented points of reference.

Limitations of the Data

The possible dilemmas associated with utilizing existing data are well documented in the literature on research methodology in the social sciences in general, and in criminal justice specifically (e.g. Babbie, 1992; Monette, Sullivan, and DeJong, 1994; Taylor, 1994; Maxfield and Babbie, 1998). Most such problems arise when agency data is utilized in a scientific context, for which the original data collection procedure was not intended. Monette et al. (1994:191) explain:

> "When using available statistical data, remember that most such data were not collected for research purposes--or at least not for the specific research questions for which you now intend to use them. They were collected to meet the needs of whatever agency, organization, or researcher originally collected them, and you are limited by the form in which the data were collected."

This problem is especially acute in evaluation studies or studies of agencies/organizations who compile data for descriptive or record-keeping purposes only, and without the intention of such material being analyzed scientifically. In the present research, because the data set was obtained from an agency within the United States Department of Justice specializing in empirical research, the assumption is made that the data will lend itself easily to advanced statistical analysis.

Missing Data

A problem that is somewhat related to using data compiled by non-researchers is that of missing data, or an "unclean" data set resulting from poor record-keeping, improper coding, or human error in data processing. Indeed, many research projects have fallen victim to the aforementioned issues by producing spurious results because an unclean data set was employed. Even seemingly trivial errors within data sets may become magnified when the data is re-analyzed or used for a purpose other than initially intended (Kiecolt and Nathan, 1985). Some studies have been salvaged through efforts to fill in missing data as completely as possible or by checking data codes to insure correctness, but often a poor data set requires a re-assessment of the entire project at hand. It is rather easy to understand why a poor data set would lead to inaccurate results by face value alone, but even marginal data sets may not provide needed results, as most advanced statistical applications assume complete, error-free data, thus producing results which are not indicative of the research hypotheses at hand, rather they are reflective of poor data management.

Again, because of the nature of the agency which first collected the data, it is safe to assume that, since experienced researchers produced and complied the data being used in this dissertation, the amount of error within the data set has been held to a minimum. Indeed, while a few cases have missing data, the amount of missing responses is minimal, and as such should not affect subsequent analyses or the validity of conclusions drawn from these analyses.

However, there are instances where institutions did not respond to certain sections

of the LEMAS questionnaire if the items posed were not germane to the institution. For example, if a school outsourced for its protective services, the section of the LEMAS survey dealing with equipment provided for officers would not be relevant, and thus would be counted as non-response (see Reaves and Goldberg, 1996). The co-coordinators of the original BJS project differentiate between non-response and missing data, as the two forms of "incomplete response" differ qualitatively. It may be argued that missing data termed non-response because the items are not applicable to the respondent do not compound sampling error, as do missing responses for which no explanation is given. Therefore, in this dissertation, for multivariate analyses non-response vs. missing data is taken into account. The proportion of items simply left blank is significantly less than those responses left blank because they were not applicable to the respondent institution. The amount of data "missing" is not significant enough to affect the accuracy of results generated from the data set.

Although the possibility of human error is present in all such data collection and processing, data sets produced from research agencies are normally considered to be much more valid than data sets produced by non-researchers. Additionally, because the data being used in the present research has already been minimally analyzed (by generating summary statistics) with success, the potential problems inherent with using an unclean data set do not seem to apply to the present research.

Validity of Utilizing Existing Data

While the advantages to using existing data are thought by many researchers to outweigh the negative aspects, one of the more troubling aspects of secondary analysis is

the compatibility of the data set with research questions or hypotheses specified by the researcher. Kiecolt and Nathan (1985:14) provide an excellent summary of this dilemma:

> "Even [data from] surveys of high quality may have measurement problems. Invalidity is of concern to the extent that survey items are imprecise measures of the concepts a secondary analyst has in mind, or that the variables have been poorly operationalized... [S]econdary analysts must frequently make do with measures that are not precisely those desired. Often this results in criticism from peers for lacking hypothetically perfect indicators, or for proceeding atheoretically with research."

The debate over whether secondary data or official statistics may be applied to later research questions has been ongoing for many years in social science. In criminological research, reliance on such information bases has become commonplace, and as a result has fueled the fire concerning the validity of results generated from existing data sets. More commonly, some of these criticisms hold true for those projects employing available statistics for related, but dissimilar, research questions other than the original. Because a fair proportion of existing data are not collected for scientific purposes, many scientific research questions are immediately suspect in terms of their construct and external validity. An unfortunate, albeit frequent, pitfall for many secondary analysts occurs when the available data demand re-definition of key concepts or hypotheses in order to fit the data as it exists. Monette et al. (1994:195) state:

> "The more the definitions are changed, the more the validity of the measures is called into question. The operational definitions may be changed so drastically that they no longer measure the theoretical concepts they were intended to measure."

Perhaps the most cogent synopsis of validity issues with secondary data comes

from Monette et al. (1994: 194-195), where they state that, in utilizing other primary research methods, issues of possible validity problems may be addressed before or during the actual collection of the data, and modifications may be attempted to head off threats to validity. However, when available data are used, validity problems cannot be considered and resolved before the data are collected, and thus the problems become entrenched.

Criticisms of Law Enforcement Statistics as an Indicator of Overall Criminality

The shortcomings of official crime data, such as the Uniform Crime Reports, are well documented, and have been written about and debated for decades (e.g. Chambliss and Nagawasa, 1969; Skogan, 1974; Jackson, 1990). The most vocal criticism of the FBI's measuring rod for crime is that it is sorely lacking in content validity, especially when it is considered that, for less serious offenses, only the number of crimes solved or "cleared" is reported. By the most optimistic estimates, the UCR is indicative of only about half of less serious offenses (Part II index crimes) that are perpetrated in any given calendar year.

The picture for more serious crimes seems brighter. Gove, Hughes, and Geerken (1985) found that a majority of Part I offenses are reported to law enforcement agencies, and subsequently to the FBI, because the nature of these offenses often requires police intervention. Because police departments are required to submit to the FBI all reported Part I offenses, it appears that overall numbers of such offenses are a fairly valid indicator of the extent of serious crime occurring in any given jurisdiction. Specific to this

dissertation, because the LEMAS questionnaire sought information about only Part I offenses, the unreported or "dark side" of crime is not of central concern is it might be if data for less serious crime were the focus.

Another common criticism, especially in years past, regarding the UCR and other police department statistics is that of misinterpretation and inadvertently erroneous reporting of crime figures (e.g. Selke, 1977). When the UCR program was begun by the FBI, definitions of certain offenses were established. In those early years of reporting, police departments commonly defined some crimes differently than the FBI, thus leading to the production of inaccurate statistics. Over time, the standard definitions of offenses have become commonplace, and such errors are less common among state and municipal police departments. However, the Campus Crime and Security Act of 1990 has mandated the publication of crime statistics for interested consumers beginning in 1992, and these reporting errors may become manifest again with agencies/institutions that may be unfamiliar with criminal definitions put forth by the FBI. Because many institutions have not collected crime data consistent with the guidelines for the UCR, there exists the possibility that some crimes may be under- or over- reported as a function of misinterpretation of definitions. This problem does not seem to be as serious in this data set, as the definitions of the eight Part I offenses are, ostensibly, clear to anyone affiliated with public safety on a college campus. Misinterpretation cannot, however, be completely discounted as a potential source of measurement error.

A third problem associated with official crime statistics compiled by law enforcement agencies is that of intentional under-reporting of criminal activity occurring

within a particular jurisdiction. Although the Campus Crime and Security Act of 1990 was seen by most observers as a commonsense piece of legislation which would benefit college students, parents, and others affiliated with post-secondary institutions, there was vocal opposition from administrators at institutions in urban and/or high crime areas who asserted that a good portion of crime occurring on their grounds did not involve students either as victims or perpetrators, and thus the mandatory publication of gross crime figures could wrongly paint these institutions as patently unsafe to attend. Such a label might sway students to attend a different institution for safety reasons, thereby introducing a "non-academic" criterion into the student's decision as to which school to attend.

As a result, there have been allegations at institutions such as MIT and the University of Pennsylvania (schools which are highly prestigious and compete with other similar institutions for the best students, but which are located in rather crime prone areas) that the campus public safety departments have under-reported criminal activity on campus so as not to dissuade potential students and parents away from their institutions. Such intentional misrepresentation of crime statistics would be in violation of the Campus Crime and Security Act of 1990, and would perhaps be difficult to prove. But as is the case in any type of survey research, the possibility of respondent dishonesty as potential measurement error exists.

Units of Analysis

Sometimes even data sets which seem methodologically sound, have no problems with missing data, and appear to fit nicely with the researchers' hypotheses, still may not

lend themselves to utilization in a given project because of problems associated with units of analysis. This problem is especially acute when researchers wish to be more detailed in a study, and make assumptions about specific cases, when the data is actually measured at the group, or aggregate, level. Besides the obvious problems of committing the ecological fallacy (see Maxfield and Babbie, 1998), the results gleaned from such analyses are suspect to the same shortcomings as data which do not fit specific research questions. In this dissertation, the research questions pertain to institutions of higher learning in the aggregate, and the unit of analysis of the available data set is the same.

CHAPTER IV

ANALYSIS AND RESULTS

Descriptive Statistics

A fundamental element of any research project is to provide summary statistics of variables pertinent to subsequent explanatory analyses. As mentioned in the preceding chapter, the LEMAS questionnaire contains of multitude of variables, only some of which apply to the research questions being investigated in this dissertation. The variables that are to be utilized can were subdivided into four distinct sub-headings: extent of serious criminality at the schools, characteristics of the institutions surveyed, crime prevention strategies, and campus safety department characteristics and functions. Frequency distributions of these variable groupings are presented below, beginning with the dependent variables.

Extent of Serious Criminality

The LEMAS survey collects information on UCR Part I offenses occurring on and reported to campus public safety departments. As previously noted, prior research has indicated that relatively minor offenses such as alcohol violations and vandalism are the most prevalent offenses officers deal with on campus, and that campus crime rates are generally significantly lower than those in the surrounding community (e.g. Bromley,

1992; Bromley 1995a). But these studies acknowledge that the gross numbers and rates of more serious crimes seem to be increasing at a faster rate proportionate to the surrounding community, thus warranting an investigate of the factors influencing Part I offending nationwide at larger colleges and universities.

Table 1 presents the gross number of Part I crimes reported by the participating schools, the average (mean number of offenses per institution), the rate of the various Part I offenses using mean enrollment as a standard, and rate of Part I offenses using mean resident population of the campus as a standard. The mean number of students enrolled at the institutions surveyed is 10,783, and the average number of on campus residents is 2,538 (these statistics are presented below in Table 3). Using these figures, two different rates of serious criminality may be calculated for comparative purposes. The table below clearly indicates that the nation's colleges and universities were not battling an extraordinary amount of serious violent crime in 1994. Six hundred-seven responding institutions reported only 16 homicides during the calendar year, and only one institution had more than one homicide occur on campus (one institution reported 2 homicides). Further, when a murder rate is calculated using either student enrollment or resident population as a standard, this figure indicates almost zero risk of homicide while on campus, either as an enrolled student or resident of campus housing. The most prevalent type of serious violent offending reported to campus safety department is aggravated assault. Unfortunately, the UCR does not disaggregate domestic assaults, stranger-on-stranger-assaults, etc. from the more generally category, thus we are unable to determine, from this data, the context of these assaults. Regardless, schools in the study averaged

Table 1. -- Part I Offenses and Rates of Offending at Participating Institutions, 1994

Offense	# of crimes reported (mean # per campus)	# crimes enrollment (mean = 10,783)	# crimes res. pop. (mean = 2,538)
Murder/Manslaughter (N=607)	16 (.03)	.001	.006
Forcible Sex Offenses (N=608)	831 (1.37)	.077	.327
Robbery (N=606)	1213 (2.00)	.112	.478
Aggravated Assault (N=609)	2471 (4.06)	.229	.974
Burglary (N=611)	17,370 (28.43)	1.61	6.84
Larceny/Theft (N=563)	124,681 (221.46)	11.56	49.13
Motor Vehicle Theft (N=606)	5,017 (8.28)	.465	1.98
Arson (N=550)	784 (1.43)	.073	.309
All Violent Offenses	4531 (7.48)	.420	1.79
All Property Offenses	147,852 (268.82)	13.71	58.26
All Part I Offenses	152,383 (277.06)	14.13	60.04

only about four aggravated assaults on campus. This translates into rates of less than one assault per student enrolled or campus resident (.229 and .974 respectively).

As expected, the rates of Part I property offenses were correspondingly higher than those for violent crime on campus. Larceny/Theft continues to be the most oft-reported offense to campus safety departments. In 1994, a total of 124,681 such crimes were reported. Interestingly, only 563 schools reported the number of overall larcenies to BJS in the survey. This could perhaps reflect a reluctance on the part of campus police chiefs to divulge the true number of thefts their agency receives, as such information is required to be tabulated as stipulated by the Campus Crime and Security Act of 1990. Of course, another possible explanation is that the requested information was not readily available. Either way, it is somewhat surprising that the response rate for this particular offense was significantly lower than for the other seven Part I offenses (563 vs. 606-611).

The mean number of larceny offenses was slightly higher than 221, and the corresponding rates totaled just more than eleven per enrolled student and just over 49 per campus resident. Schools reported raw offense numbers for the other Part I property offenses (Burglary, Motor Vehicle Theft, and Arson) to be significantly lower than those for larceny, and in fact, the calculated rates for the remaining three property offenses seem to be comparable to the rates of serious violent criminality, although the rates of burglary and motor vehicle theft were slightly higher.

Taken together, the total number of violent offenses occurring on the participating campuses in 1994 was 4531, with a mean rate of about seven and one-half serious violent offenses per school. This translates to a rate of .420 violent offenses per enrolled student,

and 1.79 violent offenses per campus resident. The total number of serious property crimes occurring at the institutions in 1994 was 147, 852, approximately 32 times greater than the total number of serious violent crimes. Campuses averaged almost 269 serious property crimes in 1994; a rate of 13.71 per enrolled student and 58.26 per resident. In sum, the schools reported 152,383 total index crimes for 1994, an average of slightly more than 277 per campus.

These rates were calculated using the most conservative reporting figure for each of the four serious violent crimes. For example, 607 institutions reported the number of homicides occurring on campus. This was the lowest number of institutions reporting for either of the four violent crimes, thus this number was used as the divisor in calculating total violent crime rates. Similarly, the most conservative estimate was used to calculate property crime rates as well. Also, 550 institutions reported the gross number of arsons occurring within their borders, therefore this statistic was used as a standard for both Total Property Crimes as well as Total Part I offending . Of course, using the most conservative figure slightly inflates the overall crime rates, however, given the difference in the number of schools reporting figures for each crime, it is perhaps the most valid method of calculation.

Using data from Bromley's (1995a) study which compared college and university crime rates to crime rates in the community in which the school is located, enables a comparison of campus crime rates in 1991 and 1992 with crime figures gathered by BJS in the LEMAS questionnaire during 1994. Bromley (1995a) collected UCR data on Part I offenses occurring on campus grounds for the two or three largest schools in the

contiguous lower 48 states for 1991 and 1992. At that time, compliance with the Campus Crime and Security Act of 1990 was not yet mandatory, and, as is the case presently, not all institutions reported crime data to the federal government for inclusion in the UCR. Thus, data for certain institutions was not available. For other institutions, some reported their crime statistics for 1991 and not 1992, and vice versa. Therefore, Bromley (1995a) used data that was available for 1991, 1992, or averaged the two years crime figures (when available) to use in calculating the overall index crime rate, the violent crime rate, and property crime rate for each campus (see Bromley, 1995a: endnote 1).

Similarly, because the LEMAS survey administered by BJS was not a formal request for crime data in compliance with the Campus Crime and Security Act of 1990, some institutions in the present data set also failed to supply requested data, therefore direct comparisons for a handful of institutions was not feasible. What follows in Table 2 is a comparison of index crime, violent crime, and property crime rates for those institutions supplying complete data for both the BJS LEMAS questionnaire and to the FBI, which was subsequently used by Bromley (1995a). All rates are standardized by dividing the raw number of offenses per 1,000 enrolled students. Total index crime rates were rounded to the nearest whole number by Bromley (1995a), and for comparative purposes, the calculated total index crime rate for 1994 was also rounded in the same manner. Rates for violent index crimes and property index crimes remained as calculated to the hundredths decimal in both Bromley's (1995a) study and the present research. Although comparisons may be made between individual crime rates for each institution represented in Table 2 (see Bromley, 1995a:135-142), such a procedure was not used in

Table 2.-- Comparison in Crime Rates of the Largest Colleges/Universities between 1991- 1992 and 1994. (N=73)

Institution	Total Index		Violent Index		Property Index	
	'91-'92	'94	'91-'92	'94	'91-'92	'94
U. Alabama	29	26	1.01	.51	29.09	25.36
U. of Arizona	36	36	.45	.45	35.56	35.18
Arizona State U.	31	30	.45	1.28	30.32	29.16
U. Arkansas-Fayetteville	26	19	.35	.42	25.76	18.14
U. Arkansas-Little Rock	8	13	.19	.75	7.70	12.00
Boston U.	35	31	1.24	1.75	34.06	29.04
Brigham Young U.	17	16	.19	.16	16.50	15.39
U. California-Los Angeles	41	46	1.17	.44	40.12	45.69
California-Long Beach	15	10	.39	.22	14.77	9.79
Central Connecticut State	11	8	.14	.00	10.50	7.50
U. of Cincinnati	37	27	.74	.58	35.89	26.65
Clemson U.	34	34	.85	1.02	33.04	32.81
U. of Colorado	35	32	.47	.32	34.72	31.99
Colorado State U.	30	11	.96	.95	29.44	10.08
U. of Delaware	41	35	.74	.78	40.43	34.60
U. of Florida	42	39	.81	.96	41.04	38.02
U. of Georgia	27	21	.30	.52	26.96	20.17
Georgia State U.	18	23	.09	.47	18.30	22.79
U. of Illinois	25	23	.42	.93	24.60	21.72
U. of Indiana	32	30	.53	.79	31.77	28.72
Indiana U. of Pennsylvania	14	15	.90	.50	14.38	14.72
Iowa State U.	27	30	.83	.28	25.91	29.32
U. of Kansas	34	36	1.05	.46	32.64	35.56
Kansas State U.	26	18	.27	.15	25.32	18.10
Kean College (NJ)	19	18	.45	1.35	18.87	16.60
U. Nebraska-Kearney	14	17	.00	.00	13.64	17.03
U. of Kentucky	42	34	1.14	1.01	41.28	33.38
Louisiana State U.	29	32	.64	1.84	28.45	30.59
U. of Louisville	21	26	1.20	1.23	19.55	24.66
U. of Maine	35	28	.16	1.84	35.22	28.21
Marshall U. (WV)	12	12	.12	.08	11.71	12.19
U. of Michigan	67	54	1.57	1.33	65.73	52.73
Michigan State U.	47	33	1.17	.83	45.94	31.75
Middle Tennessee State U.	20	17	.39	.35	19.97	16.22
U. of Minnesota	26	27	.29	.39	25.44	26.72
Mississippi State U.	28	28	.19	.07	27.88	28.14
U. of Missouri	29	29	.56	.45	28.46	28.35
U. of New Hampshire	24	24	.95	.57	22.94	23.45

Table 2. (cont'd.)

U. of New Mexico	36	29	.66	1.01	34.80	27.71
New Mexico State U.	39	33	.55	.43	38.05	32.24
U. of North Carolina	34	34	1.43	.95	32.06	33.49
North Carolina State U.	34	32	.52	.32	32.88	29.99
U. of North Dakota	28	20	.38	.77	27.55	19.68
Northern Illinois U.	28	17	.57	.89	27.09	16.58
Northeast Louisiana State U.	24	25	.42	.60	23.70	24.37
Northeastern	17	16	.81	.60	16.17	15.06
U. of Nevada	31	27	3.14	.83	28.28	26.00
U. of Nevada-Las Vegas	19	23	.52	.32	18.31	22.23
Oklahoma State U.	16	13	.17	.37	15.39	12.64
Ohio State U.	38	32	.80	.71	36.68	31.39
Purdue U.	34	25	.72	1.59	32.99	23.24
Rutgers U.	27	23	.65	.48	26.50	22.97
U. South Alabama	4	16	.10	.24	4.02	15.58
U. of South Carolina	28	24	.96	.52	27.01	23.21
South Dakota State U.	18	18	.06	.52	18.05	17.33
U. of Southern Maine	10	11	.00	.10	10.96	10.50
SUNY-Albany	29	35	.97	.72	27.78	34.25
SUNY-Buffalo	27	30	.45	.70	26.96	29.30
Texas A&M	20	17	.20	.31	19.84	17.10
U. of Tennessee	36	23	.82	1.06	31.70	21.90
U. of Texas	20	17	.23	.08	19.92	16.46
U. of Utah	34	24	.53	.41	33.07	23.94
U. of Vermont	50	24	.54	.28	49.66	23.55
U. of Virginia	30	35	.34	.61	26.39	34.86
Virginia Commonwealth U.	37	37	.83	.55	36.53	36.79
Virginia Tech	23	16	.40	.69	22.71	15.25
U. of Washington	32	32	.33	.44	32.09	31.94
Washington U. (MO)	17	38	.17	1.54	17.09	36.07
Western Michigan U.	24	21	.72	.45	23.25	21.01
West Virginia U.	23	17	.05	.34	23.13	16.81
U. of Wisconsin	26	21	.22	.28	25.93	21.05
U. of Wisconsin-Milwaukee	18	20	.31	.25	17.57	19.78
U. of Wyoming	28	23	.30	.08	28.17	22.89
Mean	27.60	25.14	.607	.623	27.07	24.52
Standard Deviation	10.47	8.89	.481	.431	10.15	8.71
Test of Significance	F= 4.27	p=.000***	F= 1.30	p=.290	F= 1.84	p =.537

*** p< .01 ** p< .05 * p< .10

the present research. Because the factors which may be responsible for a difference in crime rates at individual institutions are beyond the scope of this dissertation and thus not included in any subsequent analyses, tests of statistical significance for the difference in crime rates between 1991-1992 and 1994 would only demonstrate if that difference was significant, not why it was significant. Therefore, if a measure of the difference in crime rate is desired, a percentage increase or decline can easily be computed by utilizing the algorithm [a + b/ a] x 100. For example, the calculated percentage difference between the total index crime rate, the violent index crime rate, and the property crime rate for the University of Alabama would be -10.3, -49.5, and -12.8 respectively.

A test of significance is possible, however, when examining the cumulative difference in crime rates at the 73 schools. Because the rates in both Bromley's (1995a) study and those from the LEMAS data in 1994 were both calculated using the same standardizing denominator (# crimes/ per 1,000 enrolled students), the difference in rates may be compared directly, similar to the comparison of overall mean scores. Because just two means are subsequently compared, the F statistic (Fraenkel & Wallen, 1993) is interpreted to show significant differences between means of each of the three crime rates. It is interesting to note that when examine the aggregate of overall index crime rates, there is a significant difference in serious on-campus crime between 1991-1992 and 1994. Table 2 shows that the mean number of serious offenses occurring at this sub-group of large institutions decreased by more than two offenses during this time span (27.60 vs. 25.14 serious offenses per campus; $F= 4.27$, $p=.000$). However, when the offenses are dichotomized into violent and property offenses, there does not appear to be an

appreciable change in the rates of Part I offending for either type of serious criminality.

Such results can be difficult to interpret. While overall crime rates appear to have decreased, it seems that neither the level of violence nor the amount of property offenses has decreased sufficiently enough, as subgroupings, to have registered as an overall significant decline within categories. Therefore the results from Table 2 must be read with caution, as it would most certainly be premature to suggest that the amount of serious crime at these colleges and universities is decreasing. As mentioned previously, the purpose of this dissertation is not to determine which factors correlate with levels of crime at individual institutions. The above table simply represents the second wave of mapping crime rate trends at the universities first examined by Bromley (1995a).

Furthermore, because it is normal for crime rates to fluctuate on a yearly basis, and in different directions depending on which indicator is chosen to measure criminality, it is very difficult to ascertain which factors (demographics, impact of crime prevention, policing tactics, etc.) are responsible for the rising and falling over crime rates over time (Cole, 1995). Lastly, a precipitous drop or increase in the levels of serious crime would not be expected given that the time lag in between measurements is a relatively scant two- to- three years. Even supposing a radical shift in institutional philosophy (i.e. proactive law enforcement, design initiatives to prevent criminality) regarding criminal activity on campus, the results of such initiatives would not likely be reflected in actual crime statistics over such a short period of time.

Institutional Characteristics

Table 3 outlines the demographic characteristics of the 680 schools selected by BJS for inclusion in the study in terms of student enrollment, size of the resident population, number of employees, and the nature of the criminal justice curriculums at each institution. Sloan's (1992a) earlier study of campus criminality found the variables student enrollment and on campus resident population to be significantly associated with gross campus crime statistics, thus such demographics are presented here and included in subsequent regression models, as either standards of crime statistics or control variables.

When the Bureau of Justice Statistics originally surveyed the institutions, only those schools with 2500 or more students enrolled (including full- and part-time) were selected. As the original authors state:

> "The 1995 Survey of Campus Law Enforcement Agencies was mailed to the campus law enforcement agency at each U.S. 4-year university or college that had 2,500 or more students. The U.S. military academies, graduate or professional schools, and schools operating on a for-profit basis were excluded." (Reaves & Goldberg, 1996).

It is worth noting that the re-grouping of the attributes of the variables utilized in this study was done for purposes of clarity in presenting information in tabular form. Although this re-grouping lowers the level of measurement to ordinal in the summary tables, data, where applicable, remained at the original ratio level in subsequent regression analyses. Referring to Table 1, of the campus safety directors who provided complete information, just under half (47%) reported that their school employed less than one thousand individuals. One-third of all respondents indicated that between 500 and 999 persons were on the college or university payroll.

Table 3. -- Demographic Characteristics of Institutions Included in the Study.

Enrollment (N=581)	%
2500 - 4999	31
5000 - 9999	30
10000 - 14999	17
15000 - 19999	8
20000 - 24999	5
25000 - 29999	5
30000 +	5
Resident Population (N=357)	
0 - 999	37
1000 - 2499	31
2500 - 4999	20
5000 +	13
Number of Employees (N=430)	
0 - 499	14
500 - 999	33
1000 - 1499	13
1500 - 1999	9
2000 - 2499	7
2500 - 2999	4
3000 - 3499	2
3500 - 3999	3
4000 - 4999	3
5000 +	12
Nature of Criminal Justice Program at the Institution (N=663)	
None	51
BS/BA in Criminal Justice Only	29
MA/MS in Other Discipline w/CJ concentration	6
MA/MS in Criminal Justice	12
PhD in Other Discipline w/CJ concentration	9
PhD in Criminal Justice	12

With respect to the size of the student body, few institutions could be characterized as large "mega-universities". Only fifteen percent of the schools in this data set enrolled more than twenty thousand students. More typical were smaller universities and larger colleges which enrolled between twenty-five hundred and ten thousand students (61% of the total). Less campus law enforcement directors responded to the question pertaining to the size of the resident population at their respective institutions. This seems to indicate that either the school had no resident population (i.e., was a "commuter" school), or the respondent did not know and/or was unable to locate the information requested. Of the three-hundred and fifty-seven responses, most schools report a resident population numbering less than 2500 (68% of the total), while one-third of the total have relatively large on-campus populations of 2500 residents or more.

A final variable included in Table 3 regarding the extent of a criminal justice curriculum at the schools was collected specifically for this dissertation using the secondary data sources outlined in the preceding chapter. Somewhat surprisingly, almost a full one-half of all schools included in the study were found to offer at least a bachelors' degree in criminal justice. This figure is all the more impressive when one considers that this figure does not include those schools which offer an undergraduate concentration in criminal justice within another academic major. In other words, only those schools listing criminal justice studies or criminology as an academic major were categorized as offering the 'BS/BA in Criminal Justice'. It is quite likely that a number of other institutions offer courses pertaining to criminal justice in other disciplines such as sociology, political science, public administration, or urban affairs to name a few. The relatively large

number of schools offering degree programs in criminal justice does, however, seem to reflect the growing trend of interest in crime and justice as an academic field; one that had previously been relegated to institutions of lesser quality and community/junior colleges (e.g., Sullivan, 1994).

Table 4 presents descriptive statistics pertaining to the physical/spatial characteristics of the campuses included in the BJS study. The variables presented here are those which correspond most directly with the theoretical tenants of environmental criminology and routine activities theories. Scholars who have published research on campus crime in the past twenty years or so have found correlations between campus crime rates and physical characteristics such as acreage and campus setting (e.g., Fox and Hellman, 1985; Sloan, 1992a).

According to the definitions provided by The College Handbook (1997), there is a fairly equitable split in the numbers of campuses which could be classified as rural, suburban, or urban in nature. It is worth repeating that the nature of the campus environment is determined solely by the definition provided by The College Board and is not necessarily a reflection of the size of the community in which the school is located. Therefore it is possible to have a rural campus that is technically within the boundaries of a large city, and conversely, an urban campus may exist within a suburban area or large town. The 'suburban' definition of the college campus is perhaps the most identifiable with the traditional vision of the college campus, that is a self-contained locale adjacent to or within a larger town or municipality. This could explain why almost half of the 666

Table 4.-- Physical Characteristics of Campuses Included in the Study.

Nature of the Campus Location (N=666)	%
Rural	21
Suburban	45
Urban	35
Size of the Campus in Acres (N=578)	
0 - 49	11
50 - 249	43
250 - 499	20
500 - 749	9
750 - 999	5
1000 - 1249	3
1250 - 1499	2
1500 +	7
Number of Buildings on Campus (N=563)	
0 - 24	19
25 - 49	31
50 - 74	19
75 - 99	8
100 +	23
Miles of Campus Roadways (N=435)	
0 - 9	73
10 - 19	17
20 - 29	4
30 +	6

on campus, this is also not necessarily the case institutions for which information was available through The College Handbook (1997) were classified in this manner.

It should be noted that the definition of campus location differs significantly from that utilized by Sloan (1992a), as in that study the campus location was synonymous with the size of the population of the area in which the school was situated. The other variables in Table 4 which describe the physical environments of the institutions included in the study are fairly self-explanatory. But it should be emphasized that the variables 'Number of Buildings' and 'Miles of Roads' are not necessarily correlated with the student enrollment at that particular school. One only need visualize the tightly compact, urban campus to verify this assertion. Furthermore, while it is expected that schools with more students, employees, etc. will also have a correspondingly high number of buildings given that some buildings can be larger and contain more facilities than others.

Crime Prevention Strategies

One provision of the Campus Crime and Security Act of 1990 is for colleges and universities to compile and provide information pertaining to crime prevention strategies in place at the institution. As such, there has been a growing number of crime control innovations put into action at schools around the nation. It is safe to say that, given the specialized populations served by campus public safety departments and the specter of civil liability which is always present, campus police departments are perhaps the most proactive and prevention-minded policing bodies in existence. Table 5 presents the range of crime prevention strategies which are in place at schools around the country and also

shows the rate of participation/implementation of such strategies at the responding institutions. Eighty-five percent of all institutions from which information was requested reported that their in-house campus public safety department performed routine patrol functions on school property. Furthermore, those institutions whose public safety departments provided patrol functions also more than likely provided this service on a 24-hour basis (83% of 581 institutions providing patrol services). While it is not possible to compare these figures with earlier reports, as this is the first time the LEMAS survey was distributed nationally to college and university departments of public safety, the statistics do indicate that a vast majority of institutions have placed a high priority on providing security and order-maintenance functions for their constituents.

Table 5 also presents information regarding the type of patrol strategies which have been adopted by the institutions in this study. Motorized patrols, usually with one officer only, continue to be the preferred method of patrolling campus grounds. However, a significant number of campus safety departments utilize foot patrols on campus as well, with 62 percent assigning at least one officer to such a function on weekdays. This may be reflective of the popularity and initial successes of community policing at many schools nationally (e.g. Trojanowicz et al., 1988; Benson, 1993; Powers, 1996). Or perhaps foot patrols are more suitable for certain campuses, such as those without many automotive thoroughfares or at those primarily urban in nature, where facilities are more densely packed, and areas of pedestrian traffic are not visible from roadways. The same argument could also be made for the almost 30 percent of schools reporting at least one

Table 5.– Crime Prevention Program Strategies and Implementation

Program Strategy/Policy	%
Campus Safety Departments Performing Routine Patrol (N=680)	
Yes	85
Campus Safety Departments Providing 24-Hour Patrol (N=581)	
Yes	82
Types of Patrol Implemented by Campus Safety Departments (N=578)	
Auto, 1 Officer, Weekday	87
Auto, 1 Officer, Weekend	86
Auto, 2 Officer, Weekday	17
Auto, 2 Officer, Weekend	16
Foot, 1 Officer, Weekday	62
Foot, 1 Officer, Weekend	59
Foot, 2 Officer, Weekday	11
Foot, 2 Officer, Weekend	11
Bicycle, 1 Officer, Weekday	28
Bicycle, 1 Officer, Weekend	22
Bicycle, 2 Officer, Weekday	1
Bicycle, 2 Officer, Weekend	1
Campus Officers Armed (N=680)	
Yes, Always	60
Yes, Sometimes	4
No	36
Emergency 911 System (N=581)	
911 Expanded/Basic	64
Emergency Blue Light System (N=581)	
Yes	77
Avg. # = 33.5 (SD = 50.66)	

Table 5. -- (cont'd)

Communications Equipment (N=581)	
Portable Radios	85
Mobile Vehicle Radios	68
Cellular Phones	52
Base Station Radios	78
Computer Usage/Access (N=578)	
Mainframe Computer	63
Mini-Computer	19
PC	90
Laptop	22
LAN System	33
Car-Mounted Digital Terminal	2
Hand-Held Digital Terminal	6
Other	2
Agencies Overseeing Specific Crime Prevention Initiatives (N=567)	
Victim Assistance	37
Crime Prevention Education	85
Bias-Related (Hate) Crimes	24
Student Security (Mule) Patrol	60
Date Rape Prevention	68
Stranger Rape Prevention	60
Self-Defense Training	40
Alcohol Education	53
Drug Education	50
Other	12

officer assigned to bicycle patrol, and thus campus safety departments seem to be open to methods of patrol other than traditional squad cars cruising the streets.

Somewhat surprisingly, the amount of patrol at the participating schools seems to diminish slightly on weekends; a time that, traditionally, sees the most criminal activity in towns and cities. While the differences are not necessarily substantial, it is a curious notion to consider. At many schools the amount of constituents on campus is not as great as during the week, since usually classes are not in session. Therefore, faculty, a majority of employees, commuter students, and some resident students are not on campus in numbers as great as one would see on a weekday when a full schedule of classes were taking place. This could very well explain the slight declines in weekend patrol. However, earlier investigations into campus violence and serious criminality have identified alcohol as a major contributing factor to such incidents (e.g. Pollard and Whitaker, 1991; Smith and Fossey, 1995), and because students undoubtedly tend to consume more alcohol over the weekend than during the week, it would be expected that overall incidents of violence would peak between Friday night and Sunday morning.

One variable included in Table 5 has perhaps been the most hotly contested campus security policy over the past several years, that is the arming of campus public safety officers (e.g., Tillinghast, 1996; Hummer et al., Forthcoming). While arming policies are fairly standard practice at larger universities and in urban areas, administrators at smaller schools and those in suburban or rural locales have resisted the adoption of general issue sidearms for officers. In the present study, sixty percent of the institutions surveyed reported that their officers are armed at all times while on duty. an

additional four percent report that officers are issued firearms in certain situations. Only slightly more than one-third of the institutions indicated that guns were not issued to campus safety officers at all.

Of the 581 institutions which provided complete information regarding the above items, nearly two-thirds reported having in place either an expanded or basic 911 emergency system. Similarly, over three-quarters of these schools maintained an emergency blue-light system on campus. Typically, such a system consists of a number of call-boxes placed at strategic (e.g. areas where criminal activity has been/may be prevalent) locations about the campus. These call-boxes are wired directly to the dispatcher at the department of public safety on campus. Most of these systems, which enable the caller to talk directly with the dispatcher, also have a tracking system whereby the dispatcher can trace the exact location the call is coming from, even if the caller is unable to speak or is unsure of their location on campus. Of those schools maintaining a blue light system, the mean number of call-boxes distributed around campus was about thirty-three, however the calculated standard deviation of 50.66 indicates a fairly substantial dispersion or range. That is, more than likely there are many schools with a fairly small number of blue phones and many schools with a large number.

Concerning technology utilization at the participating institutions, the above table indicates that 85 percent of reporting departments utilize portable radios, slightly more than two-thirds use mobile vehicle radios, 78 percent of the departments have base station radios, and just over half make use of cellular phones. Additionally, with respect to computer technology, ninety percent of the departments have at least one personal

computer in use, slightly less than two-thirds utilize a mainframe computer, and one-third are connected to local area law enforcement computer networks. Around twenty percent of reporting departments utilize laptop and mini-computers, and a small number of agencies have begun using hand-held and vehicle-mounted digital computer terminals. These devices allow the officer to access records and information directly, thus saving time because they are able to by-pass the dispatcher who would access information for them. In addition, with officers being able to access information directly, the amount of radio traffic is diminished, and dispatchers are able to focus specifically on incoming calls for service. Hand-held and vehicle-mounted terminals are commonplace in many municipal departments, but perhaps because of expenditure concerns, have not yet become widely used on campus.

The final portion of Table 5 deals with the percentage of agencies who participate in the various crime prevention initiatives specified in the LEMAS survey. Regarding specific programs, eight-five percent of schools providing information on crime prevention initiatives indicated that they oversee a general crime prevention education program. Sixty-eight percent sponsor a program aimed at preventing date or acquaintance rape, 60 percent supervise the student volunteer, or "mule", patrol and provide non-acquaintance rape prevention classes. About half of all reporting departments provide drug and alcohol awareness seminars, forty percent supervise self-defense training, just above one-third offer victim-assistance initiatives, 24 percent offer hate crime prevention programs, and twelve percent oversee a variety of other prevention initiatives for the campus community. Again, because there is not a standard with which to compare these

statistics, it is unclear as to whether this rate of participation is significantly higher or lower than in past years. However, given the possible ramifications of not providing adequate prevention strategies as they pertain to the Campus Crime and Security Act of 1990, it is probably safe to assume that the number of, and participation in, crime prevention programs is increasing rather than diminishing.

Campus Safety Department Characteristics

Most recent empirical work which has focused on campus policing reports growing professionalism among departments, a proactive strategy which often includes problem-oriented policing, and a general evolution of these departments such that they now tend to be duplicates of municipal departments in form and function (Bordner & Petersen, 1983; Trojanowicz et al., 1988; Sloan, 1992b; Johnson, 1994; Bromley, 1995b; Lang, 1995). Of course, the needs of institutions of higher education are quite diverse and the characteristics of the campus safety departments at larger colleges and universities reflect this divergence. Table 6 presents campus safety departmental characteristics. The selection criteria that are utilized by campus public safety departments appear to be very similar to those selection methods utilized by municipal and state law enforcement agencies. Over ninety percent of campus departments require interviewees to come in for an oral interview and conduct background and criminal records checks on prospective officers. Nearly seventy percent of the departments have prospective employees submit to a medical exam, fifty percent to a psychological examination, and just over forty percent of reporting institutions screen for narcotics usage. These statistics indicate that campus

public safety departments take careful measures in selecting the individuals who may one day be responsible for patrolling campus grounds and buildings. Undoubtedly, the selection process has become more advanced, perhaps because of the move from security guards or watchmen to sworn law enforcement officers.

The professionalization of campus public safety is also indicated by the amount of schools which, as part of their overall departmental policies and procedures, have written policy directives for different situations which may arise during the everyday activities of their campus officers. At least half of all reporting departments have written directives regarding the use of deadly force, handling citizen complaints, handling domestic disputes, motor vehicle pursuits, and officer codes of conduct and appearance. Also, at least fifty-two percent of all schools possess written directives on relations with on- and off-campus agencies such as residence life officials, victim assistance services, and law enforcement agencies from surrounding communities. It stands to reason that these policy directives may be a part of an institutions overall crime prevention/response plan stipulated by the Campus Crime and Security Act of 1990, as many schools have begun to utilize a multi-departmental response to disorder and violence on their campuses (Sigler and Koehler, 1993).

Although campus public safety departments are continuing to move from the "watch" system to a full law enforcement model (Sloan, 1992b), significant differences in terms of personnel remain. Increasingly, the educational requirement for entry into the law enforcement profession is shifting from a high school diploma to the two- and four-year college degree (Egan, 1991). However, as of 1994, over two-thirds of the institutions

Table 6.-- Characteristics of Campus Public Safety Departments.

Department Characteristic	
Average Number of Department Employees (N=678)	
Full time sworn	15.7 (SD = 17.0)
Part time sworn	.3 (SD = 6.5)
Full time nonsworn	3.9 (SD = 19.3)
Part time nonsworn	11.9 (SD = 21.6)
Officer Selection Criteria (N=576)	% Yes
Written aptitude test	39
Oral interview	94
Board interview	61
Background interview	95
Criminal record check	94
Physical agility test	36
Psychological screening	56
Medical exam	69
Polygraph exam	10
Drug screen	41
Other	4
Educational Requirements (N= 578)	
4 year college degree	2
2 year college degree	11
Some college required	16
High school diploma or equivalent	68
No educational requirement	2
Other educational requirement	0
Classroom Training (N=497)	
Yes	88
No	12
Avg. # of hours if yes = 326.6 (SD = 248.5)	

Table 6.-- (cont'd)

Field Training (N=497)	
Yes	91
No	9
Avg. # of hours if yes = 270.2 (SD = 311.8)	
Arrest Powers of Campus Public Safety Officers (N=678)	
Yes, state level	9
Yes, local level	66
Citizen arrest	1
Other	0
No arrest powers	23
Outsourcing of Campus Protective Services	
Yes	25
No	75
Avg. % outsourced if yes = 31.7 (SD = 36.98)	
Type of Outsourcing Contracted (N=167)	
Private security	70
Local police	22
Sheriff	4
State police	2
Other	2
Written Policy Directives for Special Circumstances (N=574)	% Yes
Use of Deadly Force	81
Handling juveniles	60
Handling the mentally ill	51
Handling the homeless	16
Handling domestic disturbances	58
Citizen complaints	70
Pursuit driving	69
Off-duty employment of officers	63
Code of conduct and appearance	94
Employee counseling assistance	50
Relationship with other law enforcement agencies	70
Relationship with student judicial officers	55
Relationship with residence life officials	56

Table 6.-- (cont'd)

Relationship with victim/counseling services	52

sampled required new recruits to posses only the high school diploma or its equivalent, while only thirteen percent required a two- or four-year college degree. These statistics may indicate that municipal departments and campus departments are drawing new recruits from different applicant pools, with the more educated recruit gravitating toward the municipal positions. Further, the educational requirements of campus safety officers may also be a function of organizational culture of the individual departments (e.g., security-oriented vs. sworn officers) or the size of the institution. In either case, it is still somewhat surprising that institutions of higher education would not have entrance requirements for their public safety departments equal to those of municipal or state police departments.

Irrespective of educational requirements for new recruits, campus safety departments, overall, seem to allocate a substantial amount of time to classroom and field training. Of course those departments employing fully sworn officers have the benefit of new recruits training with municipal police officers at an accredited police academy, and this may result in the rather large number of hours of new officer training reported by institutions. There also seems to be a rather wide range of training time for the schools represented in the present research, as indicated by the relatively large standard deviations for both classroom and field training (248.5 and 311.8 hours respectively).

Seventy-five percent of the institutions included in the present study indicated that

their officers retained either state or local arrest powers, while the remaining quarter held only the arrest powers of the average citizen. This figure could possibly correspond to the number of institutions which outsource their protective services to contract security versus those which do not. As Table 6 demonstrates, 75 percent of the colleges and universities supply their own campus security officers, while the other quarter contract out for such services. Of those 25 percent that contract out for services, an average of 31.7 percent of campus protective services is provided by outside vendors at these institutions. Private security firms are the most popular type of outsourcing used by the schools contracting out (70 % of those outsourcing use such firms), while sworn officers from local municipalities surrounding the campus, from nearby state police barracks, or from the county sheriffs department supply 28 percent of the outsourced services. The remaining two percent is supplied by other firms or agencies.

The final descriptive variable in Table 6 concerns the mean number of persons employed either full- or part-time by campus public safety departments, in both a sworn and non-sworn capacity. Ostensibly, these averages are significantly correlated with the size of the institution served. In the aggregate, the institutions in this data set employed an average of about 16 sworn officers on a full-time basis and about 1 sworn officer on a part-time basis. These schools also employed an average of 14 civilian employees full-time and about 12 civilians part-time. Again, because this data set represents the first administration of the LEMAS questionnaire to campus safety departments, there is no earlier information on department size with which to compare these figures. However, a working hypothesis could be, given prior research detailing the more serious nature of

campus criminality, and the stipulations placed on institutions by the Campus Crime and Security Act of 1990 to report gross numbers of crimes and prevention strategies, that campus safety departments are growing in terms of personnel rather than declining.

In addition, because most campus safety departments have the burden of protecting students, maintaining order, and fighting crime placed squarely upon them, additional personnel may be needed to meet these growing demands. The possibility of civil litigation for inappropriate responses to incidents on campus also forces campus departments to become aware of accountability issues which do not concern their municipal counterparts. Thus, the conclusion that campus police departments are subject to a large variety of pressures when performing routine services seems valid.

The accountability issue is but one of many concerns of the campus law enforcement director. As evidenced from Table 7 below, the public safety departments at the larger campuses included in the present study perform a variety of duties, many of which are very similar to those undertaken by municipal departments from surrounding communities. These varied duties are performed for a rather distinct constituent base, which very likely has conflicting perspectives regarding how laws, rules, and regulations should be enforced in the campus environment. Looking at the specific duties listed on the LEMAS survey, and presented below, it is clear that the evolution of campus public safety departments has progressed as described by Sloan (1992b), such that these departments have primary or exclusive responsibility for maintaining order, answering calls for service, and enforcing legal statutes on school property. Whereas a few decades ago, institutions reported emergencies or crimes to the police departments in the

municipality surrounding the institution, today campus public safety is the domain of the institution itself, and therefore this sovereignty is reflected in the percentage of schools which report primary responsibility for the duties which follow in Table 7. Primary responsibility for reporting crime data and information on crime prevention programs in place at the institutions rests with 95 percent of the schools included in the present research. Meaning that a vast majority of campus safety administrators are cognizant of the tenants of the Student Right-to-Know and Campus Security Act of 1990 as well as the obligation placed upon them by this legislation. This finding may be interpreted as a recognition by the institutions of the problems and possible ramifications of an insufficient crime prevention strategy or an ill-trained campus safety department should a serious crime (or crimes) occur which, in the eyes of the court, were preventable or whose effects could have been ameliorated.

The broad range of duties listed in the table above also demonstrate the range of responsibilities of campus public safety departments. These agencies are given primary handling tasks ranging from building lock-up to the security of nuclear facilities, all the while knowing that any breech or shortcomings in performing these duties leaves the institution liable for monetary damages. This wide range of duties, coupled with the ever-present possibility of litigation, places tremendous pressure on colleges and universities to be prepared for numerous situations. The argument could be made that given the context in which campus safety officers must perform their duties, and the specialized populations they must oversee, makes policing the collegiate campus one of the most challenging and diverse models of law enforcement in the United States.

Table 7.-- Duties and Responsibilities of Campus Public Safety Departments

Duty/Responsibilities	
Duties for Which Campus Public Safety Department has Primary Responsibility (N=581)	% Yes
Traffic law enforcement	84
Central alarm monitoring	80
Accident investigation	88
Training academy operation	9
Emergency fire services	19
Environmental health and safety	26
Fingerprint processing	50
Dispatching calls for service	90
Security for nuclear facility	7
Adherence to the Campus Crime and Security Act of 1990	95
Search & rescue	29
Key control	38
Stadium event security	70
Fire inspection	31
Parking enforcement	85
Building lockup/unlocking	85
Vice enforcement	56
Animal control	35
Parking administration	72
Campus switchboard operation	22
Arena/coliseum event security	67
Personal safety escorts	86
Hospital/medical center security	12
Fire prevention education	31
Traffic direction and control	89
Campus transportation system	25
Emergency medical services	36
Primary Enforcement of Drug Laws (N=580)	%
Yes	84
No	16

Table 7.–(cont'd)

Participation in a Multi-Agency Drug Task Force (N=579)	%
Yes	15
No	85
Departments Seizing, Eradicating, or Destroying Types of Narcotics in 1994 (N=572)	**% Yes**
Amphetamines	12
Barbituates	6
Cocaine (Crack)	24
Cocaine (Powder)	23
Hashish	10
Heroin	4
LSD	22
Marijuana	83
Methamphetamine	10
Methaqualone	1
Morphine	1
Opium	0
PCP	2
Synthetic/designer drugs	3
Other narcotics	5

The proliferation of narcotics in most every aspect of American society is also reflected in Table 7. While only fifteen percent of campus agencies participate in multi-agency drug task forces, 84 percent are given primary responsibility for enforcing narcotics laws. The final variable in the table shows that college campuses are not immune from the darker aspects of social life, as 83 percent of all departments had seized, eradicated or destroyed some type of is illicit narcotic during 1994. Not surprisingly, the most common form of illegal drug on campus marijuana, however other so-called "harder" drugs are finding their way on campus with relative frequency. Almost one-quarter of the participating departments report the seizure or eradication of cocaine (powder or crack) in 1994, and 22 percent report contact with the drug LSD. Other narcotics are less prevalent, however few known illegal substances are not represented, in any form, on campus police blotters.

Multivariate Analyses

Corresponding with the research questions outlined in Chapter 2, a number of multivariate analyses were performed in an effort to gauge which factors were significantly associated with levels of violent and property crime, as well as with serious criminality on campus overall. Because the independent variables utilized in this dissertation may be reclassified under three subheadings, separate analyses were performed for each of the three sub-groups, followed by a complete model in which all subgroups of variables were regressed upon gross crime figures for the responding campuses.

Before entering into a discussion of the modeling of independent variables, it is necessary to define the nature of the outcome, or dependent, variables that will be used in the following analyses. As most are aware, gross numbers of crimes occurring in a given jurisdiction are highly dependent upon the size of that areas population. Therefore, analysis of the factors contributing to crime or its suppression are virtually meaningless without a standardization of these figures based on population size.

As discussed in the preceding chapter, there exist some disagreement as to which indicator of overall population is most appropriate in standardizing rates of campus crime. Some researchers prefer using census-type figures such as the number of residents on campus, while others argue that many different constituents, not simply residents of university housing, converge in time and space daily on campus, therefore all constituents (namely all students and employees) should be the standardization base. In several analyses to follow, the dependent variable of "crime rate" will be operationalized using both denominators, thus alleviating the disagreement and allowing a comparison between the two outcomes attributable to the same independent variables. In later analyses, however, numbers of crimes remain unstandardized, and total number of constituents and resident population are introduced as independent variables, thus alleviating the need to standardize crime statistics by population size.

Factor Analysis and the Construction of Scales

The LEMAS questionnaire contains a number of variables which tap a similar social construct. For example, the section of the questionnaire which asks schools to

indicate which selection criteria they use in hiring new public safety officers are all predictors of the construct "selectivity in hiring", and are thus highly correlated with one another. To execute valid regression analyses and avert problems associated with multicollinearity of independent variables, factor analysis was performed and scales were constructed consisting of survey items tapping a similar theoretical construct. For two of the three subgroupings of independent variables, items which were thought to logically be indicative of the same prevailing idea, factor analyses to determine empirically the structuring of concepts were conducted. Results of these factor analyses are presented below in Tables 8 and 9.

Crime Prevention Strategies

A major part of the LEMAS questionnaire distributed to campus public safety departments was the section outlining crime prevention strategies in place at the institutions. Such information is of importance because the Campus Crime and Security Act of 1990 mandates a description of the overall crime prevention strategy in place on campus. Therefore the individual items from the questionnaire are all indicative of the relative sophistication of crime prevention tactics at the institutions. A factor analysis was performed on items thought to tap a similar dimension of crime prevention on a college and university campus. As Table 8 indicates, the items included in the analysis loaded on five separate factors, in a rather logical and consistent manner.

The four questionnaire items reflecting the use of communications equipment by campus public safety departments all loaded highly on component 2 of the factor

analysis, therefore these items were combined into a composite scale (COMMX, alpha= .49). As a rule of thumb, a factor loading of greater .50 defines an item as loading sufficiently high enough on a factor for inclusion in a composite measure. All of the items in the COMMX scale fit this criteria but one (Portable radios= .49) but because the loading was borderline, and there was a logical basis for the item to remain in the analysis, the decision was made to include the item in the scale. As a result, the overall reliability of the scale as measured by Cronbach's alpha is lowered somewhat by incorporating the item.

A second composite scale was constructed using many of the remaining items. This general crime prevention program scale (PREVENTX, alpha= .76) included all but two of the items which loaded higher than .50 on factor number one. Those two items, alcohol abuse education and drug abuse education also loaded fairly high on a separate factor (number 3), and because they are indicative of a unique type of prevention education (that of substance abuse), the decision was made to combine these two items into a separate measure (SUBABUSX, alpha= .89). Of the remaining two items from the factor analysis, whether or not the institution utilized a student security, or "mule", patrol loaded separately on factor 5. This item was included separately in subsequent analyses because it is indicative of the volunteer-driven strategies used by institutions to prevent crime, described in the theoretical framework. The item 'Other prevention program' was omitted from subsequent analyses due to the low number of institutions reporting other programs (12%, see Table 5) and because the exact nature of these programs is not discernible from the LEMAS data set.

Table 8. -- Factor Loadings for Crime Prevention Items from the LEMAS Questionnaire

	Components & Loading				
Questionnaire Item	1	2	3	4	5
Portable radios	.02	.49	.38	.20	-.40
Mobile vehicle radios	.31	.67	.19	-.11	.17
Cellular phones	.18	.53	-.30	-.07	.08
Base Station Radios	.19	.64	.13	-.22	-.21
Victim assistance program	.60	-.19	-.28	.05	-.33
General crime prevention program	.54	.09	-.23	.15	-.05
Hate crimes prevention program	.55	-.07	-.29	-.03	-.17
Student security patrol	.13	.29	-.32	.32	.69
Date rape prevention program	.79	-.11	-.06	.16	-.05
Stranger rape prevention	.78	-.06	-.06	.13	-.12
Self-defense training	.52	-.09	-.11	.13	-.04
Alcohol abuse education	.71	-.21	.46	-.18	.25
Drug abuse education	.71	-.20	.46	-.21	.26
Other prevention program	-.12	-.02	.38	.81	.01

Table 9. – Factor Loadings for New Officer Selection Techniques from the LEMAS Questionnaire

	Components & Loading		
Questionnaire Item	1	2	3
Written test	.54	-.21	-.09
Oral interview	.05	.03	.82
Board interview	.54	.06	-.47
Background investigation	.41	.61	-.03
Criminal records check	.44	.61	-.03
Physical agility test	.65	-.27	.15
Psychological screening	.74	-.13	.01
Medical exam	.71	-.02	-.07
Polygraph exam	.36	-.19	.26
Drug screening	.63	-.17	.06
Other selection criteria	.03	.53	.32

New Officer Selection Techniques

Within this subgrouping of independent variables, a number of items from the questionnaire are indicators of the different selection techniques used by institutions in the hiring of new officers. Thus, a factor analysis was performed to determine which items could be combined into scales for inclusion in later analyses. A majority of the items included in the analysis loaded highly (above .50) on factor 1, and were subsequently combined into a 6-item composite measure indicative of selection techniques (SELECTX, alpha= .74). Of the remaining four items, two loaded highly on factor 2. These items, "Background investigation' and 'Criminal records check' (BCKGRNDX, alpha= .49) were combined into an item indicative of the institution's efforts policies of inquiring about the personal histories of applicants. The item 'Polygraph examination' failed to load significantly on any factor and thus was eliminated, and the item 'Other selection criteria' was omitted for the same reasons given above in rejecting 'Other prevention program'.

Correlations Among Factors Influencing the Numbers of Crimes Occurring at Post-Secondary Institutions

A fairly common problem in linear regression analyses is that of multicollinearity among the factors influencing the outcome. In other words, two or more variables are essentially measuring the same theoretical construct. One method of alleviating this problem is through the creation of composite variables, or scales, as was done in the preceding section. After creating scales, correlation coefficients (Pearson's r) are

computed for the resultant composite scales, as well as for the remaining variables to be used in linear regression analyses. A table of correlation coefficients will indicate variables that are strongly associated and thus indicative of the same theoretical construct. Should such an instance occur, and the variables remained in the multiple regression analyses, invalid results would be obtained as the inclusion of all variables which are very highly correlated is equivalent to including a variable more than once. The correlation coefficients for the regression analyses to follow are presented below in Table 10.

Clearly, some of the variables used in this dissertation are correlated to some degree, and this is to be expected as, conceptually, all of the factors presented above are thought to be associated with campus crime as specified within the theoretical perspective of Situational crime prevention. However, none of the 23 independent variables are correlated highly enough to be indicative of the same construct (see Morash and Haarr, 1995). Thus, given that only weak to moderate correlations exist between the factors thought to influence campus crime, multicollinearity is not thought to be a confounded in the ensuing multivariate analyses.

OLS Regression Analyses - Partial Models

Ordinary Least Squares regression was used to determine the influence of demographic, crime prevention, and public safety department operations upon the number of crimes occurring on the campuses surveyed by the Bureau of Justice Statistics. Initially, analyses were performed for four subgroupings of factors thought to influence campus criminality. The last analyses incorporate all of the factors into a full model

Table 10.-- Correlations Among Factors Influencing the Number of Campus Crimes

Item	1	2	3	4	5	6	7	8	9	10
1. CJPROG		.29**	.12*	.12**	.06	.04	.04	-.01	.17**	.17**
2. CONSTITU			.68**	.24**	.59**	.38**	.44**	-.12*	.24**	.38**
3. RESPOP				-.01	.66**	.54**	.46**	-.16**	.22**	.32**
4. ENVIRONM					.00	-.14**	-.02	.03	-.03	.05
5. BUILDING						.61**	.45**	-.04	.17**	.24**
6. ACRES							.59**	-.07	.18**	.19**
7. ROADS								-.15**	.17**	.27**
8. EDUCATON									-.13**	-.11*
9. CTRAIN										.33**

	11	12	13	14	15	16	17	18	19	20
1. CJPROG	.19**	.07	.20**	.04	.08	.06	.09*	.06	.17**	-.05
2. CONSTITU	.42**	.14**	.35**	.16**	.31**	.33**	.16**	.08	.26**	.03
3. RESPOP	.23**	.11*	.24**	.20**	.22**	.30**	.19**	.18**	.22**	-.03
4. ENVIRONM	.02	-.02	.04	-.05	.12**	-.02	-.01	-.19**	.03	.19**
5. BUILDING	.19**	.09*	.23**	.19**	.15**	.26**	.12**	.06	.18**	-.03
6. ACRES	.23**	.08	.21**	.15**	.06	.22**	.10*	.14**	.14**	-.07
7. ROADS	.25**	.06	.22**	.07	.13**	.22**	.12*	.15**	.17**	-.05
8. EDUCATON	-.20**	-.11*	-.05	-.05	-.06	-.16**	-.08*	.00	-.05	.09*
9. CTRAIN	.54**	.24**	.42**	.12**	.15**	.32**	.11*	.16**	.24**	-.11*

	21	22	23
1. CJPROG	.18**	.12**	.07
2. CONSTITU	.30**	.19**	.16**
3. RESPOP	.22**	.17**	.27**
4. ENVIRONM	-.01	-.03	-.11*
5. BUILDING	.20**	.15**	.33**
6. ACRES	.14**	.15**	.29**
7. ROADS	.17**	.18**	.18**
8. EDUCATON	-.09*	-.09*	-.04
9. CTRAIN	.50**	.36**	.10*

Table 10. -- (cont'd)

	11	12	13	14	15	16	17	18	19	20
10. FTRAIN	.31**	.13**	.29**	.16**	.15**	.27**	.14**	.15**	.20**	.00
11. INTERVWX		.32**	.42**	.15**	.21**	.33**	.14**	.12**	.27**	-.03
12. BCKGRNDX			.26**	.14**	.10*	.18**	.05	.15**	.12**	-.07
13. ARMED				.12**	.07	.30**	.06	.09*	.10*	-.17**
14. 911SYS					.08	.13*	.09*	.10*	.14**	-.10*
15. BLUESYS						.21**	.08*	.12	.21**	-.01
16. COMMX							.16**	.10*	.19**	-.16**
17. MULES								.01	.10*	-.10*
18. SUBABUSX									.50**	-.01
19. PREVENTX										.01

	11	12	13	14	15	16	17	18	19
20. OUTSOURC									
21. ARREST	.51**	.34**	.67**	.11*	.10*	.32**	.10*	.16**	.15*
22. DRUGLAWS	.32**	.29**	.47**	.14**	.11**	.21**	.09*	.14**	.12**
23. DRUGTASK	.19**	.08	.19**	.09*	.03	.16**	.09*	.18**	.13**

	21	22	23
20. OUTSOURC	.15*	.12**	.13**
21. ARREST		.55**	.18**
22. DRUGLAWS			.14**
23. DRUGTASK			

regressed upon gross crime figures for the participating institutions.

As previously mentioned, index crime statistics were standardized by both the number of total constituents and by the resident population of the campuses (INDEXCON, INDEXRES). Also, index crimes were analyzed in their totality, by violent crimes only, and by property crimes only (VIOCON, VIORES; PROPCON, PROPRES). Table 11 presents results for the dependent variable standardized by total number of constituents, Table 12 presents results for the dependent variable standardized by resident population.

Diagnostics were obtained for each regression analysis to follow, and the Durbin-Watson statistic is presented in the tables for each run. This statistic is useful for evaluating the presence of autocorrelation (StatSoft, 1995:1675). A generally accepted cutoff point for the Durbin-Watson statistic is 1.8; a figure below this indicates unstable regression coefficients (StatSoft, 1995). In the following analyses, a handful of regression analyses produce Durbin-Watson statistics lower than 1.8, however other diagnostics such as variance inflation factors (VIF) as well as the correlation matrix of the independent variables are not indicative of multicollinearity. The matrix indicates only weak to moderate correlations among the independent variables and the VIF (not shown) are well below the generally accepted cutoff of 5.0 (range of VIF for subsequent analyses = 1.0 - 2.8) (for a discussion of variance inflation factors, see Hair, Anderson, Tatham, and Black, 1995). Therefore, the decision was made to include the runs producing low Durbin-Watson statistics, but the possibility of autocorrelation is present, thus the results from these analyses must be interpreted with caution.

Campus Public Safety Department Selection Techniques for New Officers

The first step in establishing, or implementing a renewed sense of, professionalism is to hire quality individuals as new officers. The following tables present the results of a multivariate regression analysis of departmental selection techniques/criteria upon standardized crime figures for the campuses responding to the LEMAS questionnaire administered by BJS.

Table 11 indicates a significant negative relationship between the educational requirements of new officers and total crime rates at the surveyed institutions, meaning that the more highly educated the new officers, the lower the total index crime rate and vice versa. This relationship holds true for property crimes as well, thus lending support for the idea that more highly educated campus public safety officers may have a positive effect on lowering crime rates. Conversely, Table 11 also indicates that the more selection criteria utilized by the schools to choose recruits out of the new officer applicant pool, the higher the crime rate. That is, the more selective the institution in hiring public safety officers, the more crime occurring on campus. It is very possible that, temporally, high crime rates were present on campus before selectivity in hiring new officers increased at these institutions, but such information cannot be gleaned from a cross-sectional data set such as the one used for this dissertation. Furthermore, because this data set is the first of its kind, it is not feasible to examine existing data to determine when selectivity in hiring increased or what crime rates at colleges and universities were prior to 1994.

Table 11.– OLS Regression Analysis of Campus Public Safety Department Selection Techniques upon Crime Figures Standardized by Total Number of Constituents.

	INDEXCON		VIOCON		PROPCON	
	beta	t	beta	t	beta	t
EDUCATON	-.106	-1.80**	.049	.86	-.108	-1.86*
CTRAIN	.035	.52	.030	.45	.035	.51
FTRAIN	-.006	-.094	-.048	-.82	-.001	-.02
INTERVWX	.141	2.00**	.083	1.23	.143	2.04**
BCKGRNDX	-.013	-.21	-.06	-1.00	-.006	-.10
F	2.71**		.78		2.86**	
DW	1.90		1.96		1.91	
R	.21		.11		.21	
Adj. R-squared	.03		-.01		.03	

*** p < .01 ** p < .05 * p < .10

None of the other selectivity-related factors were found to influence campus crime rates standardized by number of constituents, and neither of the significant relationships discovered for total index and property crimes were significant for violent campus crime, indicating that other factors are more closely associated with violent campus criminality than new officer selection criteria.

Interestingly, the significant relationships in Table 11 between educational requirements for new officers and serious criminality found when crime rates were standardized by number of campus constituents, were not found when crime figures were standardized by the resident population of the campus. As Table 12 shows, the positive relationship between the selectivity index and crime rates remains (indeed, appears stronger for index crimes overall; beta = .220, sig.=.00) and is found for violent crime and property crime, as well as all index crimes combined. In addition, a positive relationship is indicated between the number of classroom training hours and violent crime rate, perhaps reflecting the increased training new recruits must complete before assignment to a campus with a relatively large amount of violent crime.

Another indicator of selectivity, background checks of new recruits, was found to have a significant, negative relationship with crime rates standardized by resident population. That is, those institutions who perform both a background investigation in addition to a criminal records check of recruits tend to have lower violent crime rates when compared with institutions which do not perform such checks. Again, it is possible that by only selecting new recruits with clean backgrounds, the philosophy of

Table 12.-- OLS Regression Analysis of Campus Public Safety Department Selection Techniques upon Crime Figures Standardized by Resident Population.

	INDEXRES		VIORES		PROPRES	
	beta	t	beta	t	beta	t
EDUCATON	.005	.08	.026	.41	.088	.09
CTRAIN	.103	1.34	.132	1.81*	.100	1.29
FTRAIN	.025	.37	-.046	-.70	.029	.41
INTERVWX	.220	2.71***	.149	1.95*	.223	2.74***
BCKGRNDX	-.067	-.99	-.121	-1.91*	-.064	-.94
F	4.00***		2.90**		4.07***	
DW	1.57		1.91		1.57	
R	.29		.23		.29	
Adj. R-squared	.06		.03		.06	

*** p < .01 ** p < .05 * p < .10

professionalism within campus public safety is being upheld, and thus is reflected in overall crime rates.

Campus Public Safety Department Structure and Function

Another subgrouping of factors thought to influence campus crime rates deals with the structure and function of the departments themselves. An educated, well-trained public safety agency will be most successful when operating within a stable, well-organized departmental scheme. The four items included in this subgroup were chosen as indicators of campus public safety departments that are highly professional and mirror municipal and state law enforcement agencies in their performed duties. The item 'Officer arrest powers' is a proxy for sworn vs. non-sworn personnel. That is, campus public safety officers who have gone through a municipal or state training academy are distinguished from non-sworn personnel or contract security. The items pertaining to drug law enforcement are further indicators of a developed, professional department.

Tables 13 and 14 present the results of multivariate regression analyses of variables pertaining to departmental structure and function upon standardized crime figures. Again, the dependent variable is standardized in two forms, and serious criminality is categorized into total index crimes, violent index crimes, and property index crimes. Mixed results were obtained when examining these regression analyses for the different standardizations of the dependent variable crime rate. When looking at crimes by the number of constituents (Table 13), those campus public safety departments which are responsible for drug enforcement and are part of multi-agency drug task forces,

Table 13.-- OLS Regression Analysis of Campus Public Safety Department Structure and Function upon Crime Figures Standardized by Total Number of Constituents.

	INDEXCON		VIOCON		PROPCON	
	beta	t	beta	t	beta	t
OUTSOURC	.001	.02	.190	3.91***	-.013	-.27
ARREST	-.062	-1.02	.046	.79	-.065	-1.06
DRUGLAWS	.208	3.43***	.082	1.44	.206	3.39***
DRUGTASK	.113	2.21**	-.037	-.76	.119	2.33**
F	4.66***		4.80***		4.79***	
DW	1.84		1.97		1.81	
R	.22		.21		.22	
Adj. R-squared	.04		.04		.05	

*** p < .01 ** p < .05 * p < .10

Table 14.– OLS Regression Analysis of Campus Public Safety Department Structure and Function upon Crime Figures Standardized by Resident Population.

	INDEXRES		VIORES		PROPRES	
	beta	t	beta	t	beta	t
OUTSOURC	-.016	-.28	.145	2.66***	-.023	-.39
ARREST	.151	2.05**	.135	1.98**	.153	2.07**
DRUGLAWS	.036	.50	.016	.24	.034	.47
DRUGTASK	-.096	-1.62	-.062	-1.14	- .094	-1.60
F	2.57**		3.20**		2.60**	
DW	1.41		1.86		1.41	
R	.19		.19		.19	
Adj. R-squared	.02		.03		.04	

*** p < .01 ** p < .05 * p < .10

tend to patrol campuses with higher total index and property crime rates. The only significant finding for rates of violent crime is that those campuses which contract out for protective services tend to have greater rates of violent crime. such a finding would certainly support the argument that a proactive public safety department, housed on campus, could be effective in lessen or reducing the numbers of violent index crimes.

Table 14 presents somewhat different results. When crime rates are standardized by resident population, the variable 'Officer arrest powers' is significant for all three categorizations of the dependent variable, thus indicating that those campus safety departments who utilize sworn law enforcement officers also tend to have higher crime rates. Again, this finding could be the result of schools responding to increasing rates of all index criminality by instituting sworn law enforcement officers as agents of public safety on campus. The relationship between the two items 'Drug law enforcement' and 'Participation in a multi-agency drug task force' and crime rates, significant in Table 13, does not hold true for the other standardization of the dependent variables. However, as mentioned above, because of the low Durbin-Watson statistics in Table 14, this result is interpreted with caution.

Crime Prevention Programs and Strategies

A major component of this dissertation is to determine the relationship between crime prevention programming at larger colleges and universities in the United States and crime rates at these institutions. Following the rationale of Situational crime prevention, those institutions with a relatively well-developed strategy for deterring potential

criminal acts on campus should have, proportionately, less crime than those institutions without such proactive policies. Tables 15 and 16 present the results of the regression analyses evaluating this assertion.

Most notable in Table 15 is the differing significance of several independent variables across the different configurations of the dependent variable. For example, there is a positive relationship between the utilization of communications technologies by campus public safety departments (COMMX) and total index crime rates which is significant at the $p < .01$ level. However, this relationship disappears for violent index crime, then reappears for property index crime. A similar relationship exists between blue-light emergency telephone systems (BLUESYS) and crime rates. These findings suggest, again, that given the wording of the Campus Crime and Security Act of 1990, and the potential of civil litigation against institutions seen as negligent in providing student safety, that schools are responding to higher rates of crime by instating various proactive crime prevention schemes, such as utilizing better communications.

Looking at violent index crime only in Table 15, the connection between campus public safety officers carrying firearms and violent crime rates is also positive, meaning that officers are more likely to be armed on campuses with higher rates of violent crime. This also suggests a patterned response by institutions to implement an effectual crime prevention, or crime fighting strategy, to help ensure constituent safety. Furthermore, and contrary to what would be expected given the framework of the Situational perspective, overall crime prevention strategies do not seem to have the effect of ameliorating criminal activity on campus. Schools with more involved crime prevention programming

Table 15.-- OLS Regression Analysis of Campus Crime Prevention Programs and Strategies upon Crime Figures Standardized by Total Number of Constituents.

	INDEXCON		VIOCON		PROPCON	
	beta	t	beta	t	beta	t
ARMED	-.058	-1.12	.105	2.05**	-.065	-1.26
911SYS	-.008	-.16	-.110	-2.20**	.001	.02
BLUESYS	.137	2.60**	-.019	-.37	.143	2.72***
COMMX	.172	3.19***	-.035	-.67	.179	3.34***
MULES	.021	.41	-.053	-1.06	.025	.50
SUBABUSX	-.101	-1.72*	-.071	-1.23	-.100	-1.71*
PREVENTX	.102	1.68*	.077	1.31	.102	1.67*
F	4.32***		1.78*		4.69***	
DW	1.95		2.04		1.95	
R	.28		.17		.29	
Adj. R-squared	.06		.01		.06	

*** p < .01 ** p < .05 * p < .10

Table 16.-- OLS Regression Analysis of Campus Crime Prevention Programs and Strategies upon Crime Figures Standardized by Resident Population.

	INDEXRES		VIORES		PROPRES	
	beta	t	beta	t	beta	t
ARMED	.159	2.65***	.198	3.51***	.156	2.61**
911SYS	-.082	-1.42	-.094	-1.70*	-.078	-1.35
BLUESYS	.069	1.14	-.005	-.082	.069	1.15
COMMX	.045	.70	-.055	-.94	.050	.79
MULES	.067	1.15	-.006	-.11	.068	1.17
SUBABUSX	-.228	-3.36***	-.112	-1.74*	-.230	-3.40***
PREVENTX	.079	1.11	.077	1.16	.081	1.14
F	4.16***		2.59**		4.20***	
DW	1.54		1.94		1.55	
R	.31		.23		.31	
Adj. R-squared	.07		.03		.07	

*** p < .01 ** p < .05 * p < .10

(PREVENTX) tend to have correspondingly high rates of total index and property index crime.

One finding from Table 15 which is perhaps indicative of the Situational perspectives' effectiveness is the significant negative relationship between substance abuse programming (SUBABUSX) and rates of total index and property index crime. These findings suggest that schools which embark on an earnest campaign to curb drug and alcohol abuse experience less index and less property crime than those schools not offering substance abuse prevention. This idea is consistent with the ideas of campus crime scholars who posit a direct link between substance (specifically alcohol) abuse and acts of criminality on campus (e.g., Palmer, 1993:57). Because many schools wrestle with balancing students' want of a social atmosphere on campus with the problem of binge drinking, if such a finding were replicated in other empirical studies, there would perhaps be an in-depth call for re-examination of an institution's present approach to substance abuse education.

The results presented in Table 16 further support the above idea that substance abuse prevention is associated with lower rates of criminality. In addition, the relationship holds true for violent index crime as well, when crime figures are standardized by the resident population of the campus. Also of note is the significant positive relationship between armed campus public safety officers and crime rates. For all three categorizations of the dependent variable, those schools with armed officers patrolling their campus are also likely to have higher crime rates. The reasoning behind this finding is comparable to that given for the significant positive result in Table 15

between armed officers and high rates of violent index crime; schools with a real or perceived crime problem may issue firearms to officers as a preventative or safety issue.

Contradicting the logic of the Situational perspective, there exists no relationship whatsoever between crime prevention programming and index crime when the latter is standardized by resident population. Given that the nature of these preventative measures are educational in nature, it stands to reason that, as for all crime prevention activities in general, a sufficient time lag must exist between the implementation of the program and when results become manifest empirically. Thus, it would certainly be premature to say that crime prevention and suppression efforts, as outlined by the Situational perspective and operationalized within this data set, do not reduce the amount of serious criminality on college and university campuses.

Characteristics of the Institutions

To follow the reasoning of the environmental criminology element of the Situational perspective, it is necessary to examine the impact of campus demographics on campus crime. As most realize, the gross numbers of crimes occurring in any jurisdiction are highly associated with the number of persons in that jurisdiction at any particular point in time. Thus, for campus criminality, the gross number of crimes for any school is at least partially a function of the student enrollment, number of employees, and number of persons residing on campus. For the following partial analysis, gross crime figures for the 680 institutions included in the BJS study are left unstandardized, and the number of campus constituents and resident population of the campus are included in the partial

model as independent variables. The remaining demographic variables are then also included to ascertain whether they are significantly associated with campus crime when size of the institution is held constant.

Because gross crime figures are left in their raw form, only three (as opposed to six for the other three partial models) regression analyses were performed on total index crimes, violent index crimes, and property index crimes. Table 17 illustrates the findings from the regression analyses and, as expected, significant positive associations with crime figures are found between both the number of constituents and size of the resident population on campus. That is, the larger the school in terms of enrollment, number of employees, and on-campus residents, the more crimes occurring on that campus.

More interesting results are found when significant results for the other demographic variables are examined. In keeping with the rationale of Situational crime prevention, the item 'Miles of campus roadways' is positively associated with both total index crimes and property index crimes. Without doubt, a large network of campus throughways provides numerous situations for crimes of opportunity to occur, by both making targets more attractive and unguarded. Multiple roadways also provide easy and quick escape routes for those who commit criminal activities on campus. The variable 'Nature of criminal justice programming' was found to be negatively associated with criminality on campus, indicating that those institutions with more highly developed criminal justice curriculums had fewer serious crimes committed on campus. The initial logic behind including this item in the analyses was that an active criminal justice department could supply consultants and student labor/volunteers for campus public

safety departments. Further, the faculty from an active criminal justice department could help the public safety department develop a crime prevention strategy befitting the campus and its' particular crime problems. This is but one possible explanation for this significant finding, and because the inclusion of this variable in the partial model was done for exploratory purposes, it is not appropriate to make conclusions without any theoretical or logical backing.

From the results of the analysis above, it may be apropos to look at which findings are not significant, as well as those that are. Table 17 shows that two items indicative of the tenets of environmental criminology are not significantly related to crime figures on campus. However, it would be erroneous to conclude that the number of buildings and land area of colleges and universities could not be linked with serious criminality. The idea of constructing facilities with crime prevention in mind goes back at least as far as Newman's (1972) book on "defensible space." Post-secondary institutions in the United States are constantly undertaking new construction projects to upgrade and make additions to existing facilities. It seems plausible that crime prevention through environmental design (CPTED) is at least a small part of the planning stages of any new construction project.

Therefore, more attention being paid to prevention through design, coupled with crime prevention programming for students and awareness of potentially dangerous situations by campus public safety, may explain the lack of significant results between these environmental items and serious criminality. Thus, crime prevention strategies may already be paying dividends for those institutions who have heeded the advice of

Table 17.– OLS Regression Analyses of Campus Demographic Characteristics upon Gross Campus Crime Figures.

	TINDEX		VINDEX		PINDEX	
	beta	t	beta	t	beta	t
CJPROG	-.060	-2.01**	.076	1.35	-.064	-2.13**
CONSTITU	.687	15.13***	.306	3.59***	.696	15.26***
RESPOP	.273	6.64***	.433	5.60***	.261	6.31***
ENVIRONM	.039	1.28	.036	.64	.038	1.26
BUILDING	.003	.079	-.066	-.87	.006	.15
ACRES	-.022	-.61	-.028	-.42	-.023	-.63
ROADS	.071	2.16**	.034	.55	.070	2.12**
F	161.69***		23.45***		160.11***	
DW	2.33		1.98		2.34	
R	.92		.66		.92	
Adj. R-squared	.85		.42		.84	

*** p < .01 ** p < .05 * p < .10

environmental criminologists. Again, because of the cross-sectional nature of the data set, such effects of time are not discernible, and conclusions are speculative without replication.

Finally, contrary to popular belief, no association was found between serious criminality and nature of the campus environment. That is, urban campuses to not appear to be more 'crime-plagued' than their suburban and rural counterparts. It must be repeated that the LEMAS data used in the present study measures only crimes occurring on or within campus property. Thus, it is possible for a campus to be a relatively safe environment for study, even if the surrounding community has a high crime rate. It would seem that colleges and universities could benefit from a public relations standpoint if this finding were replicated, however it does little to diminish potential students' fear of victimization off campus. However, the notion that a community's crime problem necessarily permeates the college or university campus does not seem to hold true given Bromley's (1995) results, nor does it appear from the above finding that urban campuses are necessarily more dangerous than those in less populous environs.

OLS Regression Analyses - Full Model

In the section above, specific subgroupings of independent variables were examined as partial models of a larger test of the Situational perspective's predictive power concerning crime figures and rates at larger colleges and universities in the United States. The final analyses for this dissertation are full model regressions incorporating all four of the above partial models upon gross crime figures. Such a procedure will

highlight spurious, or false, significant relationships within the partial models as well as indicate those partial model relationships which hold true, and are thus more robust and valid. Full model results are presented below in Table 18. Not unexpectedly, several of the significant associations from the partial models are not significant in the full model, however some relationships remain, and thus are the focus of the discussion to follow. As anticipated, the association between size of the institutions, in terms of number of constants and number of on-campus residents, remains intact--the larger the school the more serious criminality. However, even with size of the institution taken into account, other factors are also found to be significantly associated with serious campus criminality. Most surprising perhaps is the fairly strong relationship between the nature of criminal justice programming and serious crime. The association from the partial model holds true above, as schools with undergraduate and graduate programs in criminal justice appear to have less overall on-campus criminality. Again, because of the lack of previous empirical work surrounding this issue, conclusions drawn from this result should be seen only as speculative in nature, however this result does support the idea that having a group of criminal justice scholars and students of the discipline in residence may have an ameliorating influence on serious campus criminality.

Another significant finding concerns the selection and recruiting of new campus public safety officers. Institutions that utilize a number of criteria to aid in choosing recruits from an applicant pool are more likely to have more total index and property index crimes. This result may also reflect the notion that schools with rising crime rates and/or more qualitatively serious crimes occurring in the recent past may implement new,

Table 18.– OLS Regression Analyses of the Full Model upon Gross Crime Figures.

	TINDEX		VINDEX		PINDEX	
	beta	t	beta	t	beta	t
Charact. of Institutions						
CJPROG	-.101	-.246**	.062	.79	-.104	-2.56**
CONSTITU	.674	11.03***	.277	2.36**	.681	11.17***
RESPOP	.265	4.05***	.369	2.97***	.251	3.86***
ENVIRONM	.052	1.20	.035	.42	.050	1.16
BUILDING	-.023	-.39	-.144	-1.27	-.016	-.27
ACRES	-.060	-1.28	-.028	-.32	-.061	-1.30
ROADS	.059	1.35	.010	.11	.059	1.34
Select. and Train. Criteria						
EDUCATON	-.018	-.48	.029	.40	-.021	-.56
CTRAIN	.002	.04	.106	1.11	.000	-.01
FTRAIN	-.017	-.38	.017	.21	-.016	-.36
INTERVWX	.091	1.79*	.030	.31	.093	1.82*
BCKGRNDX	.012	.31	-.077	-1.07	.014	.36
Structure and Functions						
OUTSOURC	.040	1.09	.125	1.74*	.035	.95
ARREST	-.090	-1.60	-.013	-.12	-.090	-1.60
DRUGLAWS	.027	.64	-.032	-.39	.024	.54
DRUGTASK	.054	1.42	.032	.44	.053	1.41

Table 18.– (cont'd.)

Crime Prevention						
ARMED	.035	.72	.086	.91	.033	.67
911SYS	-.012	-.32	-.061	-.82	-.013	-.33
BLUESYS	-.008	-.20	-.081	-1.07	-.004	-.10
COMMX	.056	1.32	.031	.38	.056	1.30
MULES	.031	.84	-.042	-.59	.034	.93
SUBABUSX	-.007	-.15	-.102	-1.22	-.005	-.11
PREVENTX	-.022	-.49	.144	1.69*	-.028	-.63
F	30.73***		3.63***		30.95***	
DW	2.38		2.16		2.38	
R	.92		.61		.92	
Adj. R-squared	.81		.27		.81	

*** p < .01 ** p < .05 * p < .10

innovative strategies to combat this problem. Professionalizing the campus public safety department through rigorous hiring standards is another method many institutions have adopted.

Proponents of professionalism will further be supported by the result which indicates that high numbers of violent index crimes are significantly associated with campuses which outsource for their protective services. In the full model presented above, the finding that schools which contract out to law enforcement and private security agencies are more likely to see higher rates of violent crime bolsters the position that only a professional, in-house public safety agency is familiar with the problems specific to the campus being served.

In order for the public safety department to be truly proactive and preventative in nature, they must be a part of the campus network in much the same way neighborhood community police officers are in tune with the goings-on in their beat. Although it is perhaps a generalization, outside contractors most likely do not have the personal stake in the well-being of the campus in a way that an in-house department would have, therefore, while both types of services could respond to calls for service, only the in-house department has the capacity to be proactive. Meaning that crime prevention and the implementation of strategies aimed at lessening the probability of victimization require significant expenditures of time and resources that contract providers may be unwilling or unable to supply.

CHAPTER V

DISCUSSION AND CONCLUSIONS

Summary of the Findings

Critics of Situational crime prevention are quick to point out the theoretical as well as empirical shortcomings of the perspective, and the results of this dissertation would seem to add fuel to the fire. The formulation of the perspective is denounced for being a reactionary, ex post facto framework regarding criminal behavior. Naysayers point out what they believe to be a gross indifference to the conditions and factors within the social framework that breed individuals who, for whatever reason, are inclined to commit acts of serious criminality. Further, it is said that if society continues to focus upon protecting the law-abiding from the law-breakers, those who do not perpetrate criminal acts are forced to cloister themselves behind protective barriers of whatever sort (either physical or psychological), worsening the social structural and environmental factors that are thought to influence serious criminality. In a sense, society would retreat behinds its crime prevention barriers leaving the "barbarians at the gate."

While, as was argued in Chapter 2, it is certainly true that the Situational perspective does little to explain or influence the genesis of criminality among groups or individuals, it is as necessary to have reactionary theoretical perspectives as it is necessary to have a criminal justice system designed to react to instances of wrong-doing.

This dissertation has described the needs and responses of one particular social institution, the college and university, in protecting its specific constituency from criminal acts committed by both constituents themselves and outsiders on campus property. To be sure, persons affiliated with post-secondary institutions would most certainly relish a revolutionary idea or ideas that would make prolific steps forward in eradicating unlawful behavior in American society, however, these institutions certainly do not have the luxury of waiting for such a remedy to be found. Furthermore, the Student Right to Know and Campus Security Act of 1990 has forced the hand of administrators at post-secondary institutions to look at the crime problems at their schools with prevention as the best alternative. In doing so, the Situational perspective is perhaps the most useful tool available to college and universities in terms of criminological theory.

The results presented in the previous chapter were not what was to be expected given the theoretical framework and the prior empirical work concerning campus criminality. Both the partial model and full model analyses indicate that the most predictive factor concerning crime rates is the physical size of the institution, and systemic responses, derived from the Situational perspective and other crime prevention literature, to these crimes seem to have little tangible effect. This is especially true for serious violent campus criminality, where even the explanatory value of institution size is somewhat limited, thus indicating that other factors not included in the above models are influencing these acts.

However, it would be erroneous, given the exploratory nature of the data, to make

overarching generalizations about campus crime or the success of responses to campus criminality at this point. The results from Chapter 4 may be more a function of gathering base line data (or, a starting point for longitudinal analyses), than any valid empirical evidence against the Situational perspective. To reiterate, given the changes campus safety departments have undergone due to the Campus Crime and Security Act of 1990, it is wholly possible, and perhaps probable, that the crime prevention programs presented in the above analyses are responses to crime rates, and have thus been implemented after rates of criminality had already peaked. Therefore, in order to ascertain the effectiveness of these programs at lowering crime rates, a sufficient amount of time must elapse between the point at which the programs were implemented, and a point at which the effectiveness of theses strategies can be measured. Unfortunately, the time lag for the data set used in this dissertation is probably not sufficient enough to see an appreciable effect.

Because the administration of the LEMAS questionnaire to campus public safety departments in 1994 represents the first systematic, nationwide empirical assessment of campus crime figures and institutional responses to criminality, there is of course no way of gauging the extent of criminality prior to 1994. Because of this, it is possible that crime prevention strategies and campus public safety policies aimed at lessening the probability of constituent victimization may have indeed reduced crime, both qualitatively and quantitatively, thus supporting the tenets of the Situational perspective. Of course, the only way to gauge this effect is through detailed replication and the use of alternative methodologies to examine the phenomenon of on-campus crime.

There does exist a small number of empirical studies that have focused on

criminality at individual institutions (e.g. Sloan, Fisher, and Wilkins, 1993a), however without any comparisons and with a shift in reporting practices and preventative responses due to the Campus Crime and Security Act of 1990, the face of the problem is dramatically different presently, five to six years after implementation of the legislation. Thus, whatever results are gleaned from this initial data set serve as a comparison for future replications, and are not to be construed as a conclusive discourse on criminality at American post-secondary institutions.

Limitations of the Study

The problem that every exploratory study encounters concerning a lack of existing empirical research to use as a comparison has already been addressed, and is perhaps the biggest impediment to making generalizations from the results obtained in this dissertation. Also, as discussed in Chapter 3, there are a host of possible dilemmas associated with the use of existing data, most of which were avoided in this dissertation. There are some other limitations to the study which deserve attention at this point. Although most are common, unavoidable limitations inherently associated with the choice of research methodology, certain precautions and modifications can be made up front, prior to actually undertaking the measurement phase of the project. Below is a discussion of some of these problems, along with recommendations for alleviating these entanglements in future replications of this study.

Utilization of the Survey Research Method

A rather complicated impediment to overcome in any survey research is the inherent problem of artificiality, especially that survey research which produces large data sets with a multitude of variables which are to be analyzed quantitatively. The variables selected for incorporation into the present study are indicators which serve as a "pencil and paper" test, and lose a good deal of meaning when abstracted from their real life context. As any undergraduate student who has completed a research methods course would know, a check-marked answer on a questionnaire says nothing about the depth of meaning inherent in that answer; in plain terms, a response becomes black and white, when, in reality, campus crime and violence is an extremely complex issue which is contextual in nature.

Specific to this dissertation is the problem of gauging implementation of crime prevention programs on college and university campuses. As any scholar investigating law enforcement practices can attest, there are frequently glaring differences between policies set forth on paper and how those initiatives subsequently materialize as a part of everyday procedure. No matter the quality of any data set, an analysis of implementation is simply not possible without some further investigation, optimally on sight, from a qualitative approach. Field observation of this sort would invariably provide insight as to the validity (or, more likely invalidity) of results generated quantitatively. Most policy analysts would say that the most arduous task of evaluation research is not methodological in nature, rather it is the dilemma of translating plans which hold a great deal of potential into successful operations. Try as one might, this dilemma cannot be

evaluated from afar with quantitative data, thus a future analysis of this issue utilizing a different methodology is indeed warranted in order to ascertain the validity of generated results.

Conceptualization and Operationalization

Tied to the problems associated with the survey method is the disagreement concerning how to best define concepts and operationalize variables as indicators of the concepts within a questionnaire. In larger data sets, many social scientists prefer to keep variables and their responses as simple as possible in order to better facilitate later coding of the responses into a computerized data set. By restricting the range of possible responses in this manner, one risks losing a good deal of content validity in that the check-marked response may not be fully indicative of the respondent's desired answer to a given item. Therefore, results gleaned from such restrictive questionnaire items may not be truthful representations of the concept as it exists in social reality.

Such problems with large data sets are difficult to overcome, and are perhaps best resolved through smaller scale replications of the original study with a smaller subset of the original sample. By lowering the sample size (keeping constant the use of probability sampling techniques), the social scientist is able to utilize survey items which focus on the depth of understanding into a particular set of concepts, thereby assuring a proportionate increase in validity by allowing more detailed replies to questionnaire items by respondents. Of course, more detailed responses are often difficult to code into quantitative data for computerized analyses, however the benefit of an increase in

information from respondents (in the present case, campus law enforcement administrators) could provide insight which would lead to modifications of future survey instruments such that they would be more indicative of the research questions under investigation.

As the results from this dissertation indicate, not all of the factors most closely associated with campus crime are included in the LEMAS questionnaire, thus a modification of that instrument is perhaps in order so that the issue of campus criminality and institutional response may be better gauged. As previously discussed, the LEMAS questionnaire is a tool used to systematically evaluate the characterization, structure, and function of municipal police departments and their responses to crime and deviance within their specific jurisdictions. Because the context of crime at post-secondary institutions and constituent make-up on campus differs qualitatively from the municipal department, it is perhaps unreasonable to expect truly valid results to be obtained from a survey instrument not entirely fitted for the context under examination. Thus, it may be appropriate to modify the LEMAS questionnaire specific to campus crime and public safety departments before it is used in any replication of the 1994 results.

Limitations of the Data Analysis

For the quantitative data analysis in this dissertation, the most common regression technique (ordinary least squares) was chosen, primarily because of the exploratory nature of the study and because working hypotheses/research questions were derived from a specific theoretical framework and not from the results of prior empirical work. As

such, factors thought to influence campus criminality are not weighted in terms of their explanatory power relative to crime figures. Thus, all independent variables are introduced into the full and partial models simultaneously, without regard for which factors may be more predictive. Entering variables into the models starting with the independent variable thought to have the most explanatory power is indicative of stepwise regression, but such a procedure may produce spurious results if independent variables are entered improperly (see Hair et al., 1995). In addition, some methodologists argue that stepwise procedures produce only marginally better results than ordinary-least squares models, for the latter, by definition, identify the factors with the most explanatory strength.

Another potential problem regarding the quantitative analysis has to do with the reliability and validity of the variables used in the models. A discussion regarding the validity of data from survey research has already been put forth as has the potential problems resultant from regression analyses with low Durbin-Watson statistics, however a more pressing concern deals with the reliability of the composite scales created with items tapping a similar construct. As a rule of thumb, a composite variable should have a reliability as measured by Cronbach's alpha of at least .70.

In the above analyses, two composite variables are used that have reliability's less than .70. The decision was made to include these composite items with low reliability's for several reasons. First, the factor analyses which identified the items tapping a similar dimension were consistent with the conceptual logic that placed these items together in sections on the LEMAS questionnaire. That is, the statistics generated by the factor

analysis confirmed the theoretical underpinnings of the social scientists who constructed the survey instrument. Since the individual items were indicative of a larger abstraction, both conceptually and statistically, they were included in the analyses despite their low overall reliability. Secondly, Cronbach's alpha often gives a more conservative (or lower) estimation of reliability when few items are included in the composite scale. Because the composite variables with low alphas in this case have two and four items, it may be that the estimate of reliability is correspondingly low. Third, if the individual items were not merged into composite variables, there would still be sound theoretical reason to include them in the regression analyses. However, those items would also correlate highly (in most cases above .70), thus multicollinearity could become a problem unless some items were not included in the analyses. For these reasons, the composite variables are included in the analyses, however any significant findings concerning the two scales with lower alphas should be viewed with caution.

Policy Implications

It is not sound public administration to base policy decisions on the basis of one exploratory study that has yet to be replicated and supported, however the findings from this dissertation suggest that certain actions could presently be taken by post-secondary institutions to help lessen the extent of serious criminality on campus property. The provisions derived from Situational crime prevention remain sound despite a lack of empirical support provided by this dissertation. The possible reasons for non-significant findings are presented above, and there is no empirical evidence contradicting the effectiveness of the programs and strategies, thus it is very possible that a number of such

prevention policies may prove successful on some campuses. Thus, one recommendation put forth would be for institutions of higher education to continue and expand their crime prevention initiatives for constituent protection and future empirical analysis.

Secondly, there seems to be evidence supporting more stringent hiring practices of new campus public safety officers. This attention paid to professionalism has benefited municipal police departments in terms of constituent service and has aided in the implementation of community- or problem-oriented policing, and would likely do the same for larger colleges and universities. A more professional public safety department would conceivably employ officers who are knowledgeable of crime prevention strategies, of dealing with the victims of serious crime, and able to solve non-criminal disputes before such conflicts become police matters. These officers would also be more inclined to be abreast of and support new strategies for dealing with or preventing criminality and be able to customize these tactics specifically for their campus and constituency. Indeed, the positive objectives of the Situational perspective are dependent upon a public safety department with the willingness and capability to put these ideals into practice, and subsequently evaluate the results respective to their jurisdiction.

Third, there does seem to be some, albeit tenuous, empirical evidence against the outsourcing of campus protective services, especially concerning levels of violence on campus. Following the logic of the Situational perspective, the implementation of its' ideas rests solely with the commitment the institution and public safety department has to preventing criminal activity on campus property. It stands to reason that schools which contract out their protective services to outside agencies or corporations will not receive

the same commitment to prevention as do institutions with public safety departments in-house. The problem-oriented model of police work posits that a thorough knowledge of specific problem areas and conflicts is necessary so that preventative policies can be most expeditiously dispensed. Such knowledge is accumulated over time, and by officers with a stake in the well-being of the jurisdiction being served. Because most outside suppliers of protective services do not view the campus as their sole province of responsibility (this is certainly the case for contracts with law enforcement agencies), in-depth involvement with and knowledge of the potential problem areas on campus is more than likely lesser than their in-house counterparts. This discussion is not meant to imply that outside agencies necessarily provide inadequate protective services, rather is highlighting the depth of involvement necessary for Situational tenants to be successful. Certainly it is possible for campuses which outsource to have proactive, involved protective services, but the empirical evidence presented in this dissertation indicates that, for the prevention of serious violent criminality, in-house public safety is more effective.

Fourth, because the possibility of crime displacement is always possible, there should be cooperative efforts between campus and municipal law enforcement agencies focusing on crime prevention, if such strategies presently do not exist. It is very common for students to live off-campus in rental housing throughout communities adjacent to the institution. Frequently, these temporary student residents have adversarial relationships with permanent residents and authorities alike in these communities. Cooperation in crime prevention, optimally utilizing community policing strategies, could have the added benefit of improving "town-gown" relations by bringing students and permanent

residents together for the common cause of preventing criminal behavior.

Fifth, on campus, administrators and campus public safety directors must assess their unique crime prevention needs. Not every campus needs domestic violence prevention, for example, and some campuses need to focus more on violent crime than others. A common mistake in the administration of criminal justice policy is to implement programs or strategies simply because they have been found somewhat successful in other locales. There are numerous instances of a policy being labeled a "failure" because it has not produced positive results found elsewhere. Most often, these poor outcomes are the result of an inappropriate implementation and not the failure of the strategy itself. A college or university can easily avoid this frustration and waste of resources by performing its own needs assessment or by having a professional security survey performed by a reputable security contractor.

Sixth, in keeping with Clarke's (1992) vision of the Situational perspective, the results of this and future analyses like it should be disseminated in a forum where all interested parties would have easy access. It may be inferred that Clarke (1992) believed that the academic press was a limiting option, and that a forum such as a trade publication or internet website would be better suited for publication of such results. Presently, there are several websites devoted specifically to campus public safety and law enforcement which may perhaps be interested in posting the results online, or a personal website would also be sufficient.

Aside from these specific policy recommendations, it is important for post-secondary institutions to not lose sight of the fact that even if incidents of criminality are

increasing and becoming qualitatively more serious, that the college campus remains a rather protected environment if specific precautions are followed to insure individual safety. As is evidenced from the results presented above, most serious criminality occurring at post-secondary institutions is a violation of property, and not interpersonal violence. Indeed, results from the analyses of total index crimes and property index crimes are very similar because a majority of serious (Part I) offending at colleges and universities is property-oriented. Thus, while the prevention and control of violent crime is paramount for many large institutions, because of constituent fear and the potential for civil liability, the empirical data supports the assertion that property offenses are the most common problem on-campus, and thus should not be forgotten in efforts to prevent violence. While interpersonal violent offenses will most likely always be the main concern of administrators and constituents alike, policies aimed at stemming the rise of serious property offenses could serve a dual purpose. First, such strategies would attack what is presently the most pressing crime problem, quantitatively, and second, a focus upon preventing serious property crimes could help stymie the climate of lawlessness that could potentially breed violence. From the rational choice perspective, a campus or jurisdiction seen as unyielding when it comes to property crime does not serve as an attractive environment for an offender to commit violent crimes. Of course, it is quite a stretch to say that violent offenders operate from a rational choice perspective, but it not a stretch to say that a crackdown on property offenses and even nuisance offenses could not help in lessen the amount of violent crime as well (e.g. Wilson and Kelling, 1982; Wilson and Herrnstein, 1985).

Recommendations for Future Research

Several recommendations for future empirical studies into the topic of campus crime prevention have already been alluded to in former sections of this dissertation, however it is appropriate to restate some of these recommendations more fully. First and most obviously, because the 1994 data collected by BJS and used here represents the first systemic analysis of criminality and prevention programs at a nationwide sample of larger colleges and universities after the implementation of the Student Right-to-Know and Campus Security Act of 1990, the next logical step is a full replication of the study at a later date to compare with these results. The Bureau of Justice statistics had planned a replication using the LEMAS questionnaire for 1997 crime figures, however, three years may not be a sufficient enough time lag for results of prevention strategies to become apparent. Most likely, a five or ten year interval would be fitting, and the appropriate modifications to the LEMAS instrument would perhaps improve the overall validity of the project. Such modifications may include more detailed response sets for items (above simple dichotomous 'yes/no' matrices), as well as information concerning the overall crime prevention plan at the institution and how long the strategy has been in place.

The extent of implementation of existing prevention systems could be measured using a traditional security survey (Richards, 1996), however implementation would probably best be evaluated by on-campus observation of the campus public safety department. It cannot be stressed enough that implementation is an oft-ignored missing link in crime prevention that is overlooked time and again, even by trained social scientists. Written policies concerning innovative policies for preventing on-campus

criminality are not necessarily indicative of a successful strategy. A thorough knowledge of specific problems and issues at the institution as well as a commitment by the campus administrators, director of public safety, and officers within the department are necessary for Situational crime prevention to even have a chance at success. Therefore, as much detailed knowledge as possible is required to evaluate the implementation of crime prevention strategies, and this is best done through on-site observation over an extended period of time.

Conceptualizing field observation, if permission were granted by the institutions themselves, would not be excessively difficult, given that a subsample of the original participating institutions could be developed since each institution is identified in the data set. The subsample could be drawn either by selecting individual institutions at random, or perhaps by selecting a particular state at random and then performing observations at all schools in that particular state. The logistics and feasibility of such a study in terms of personnel and resources would be the most problematic element. A great deal of time and money could be required for each sight visit, and thus such a project could probably not be undertaken without substantial outside funding. On a positive note, this type of research would probably be looked favorably upon by a number of funding institutions such as the National Institute of Justice, the Bureau of Justice Statistics, the Police Executive Research Forum, or even the institutions themselves, since they are have the greatest stake in preventing campus crime.

Future research also must elaborate upon those factors most associated with serious interpersonal violent crime on campus. As the results from this dissertation

indicate, those factors which influence violent crime on campus were not contained in the LEMAS questionnaire, thus an alternate approach to conceptualizing campus violence is needed. Much has been written in terms of the factors contributing to specific instances of violence, however campus public safety responses to violence overall must be better operationalized and evaluated so that campuses remain safe for study well into the twenty-first century.

APPENDIX A

Definitions and Coding of Variables Used in OLS Regression Analyses

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Definitions and Coding of Variables Used in OLS Regression Analyses

Dependent Variables

TINDEX = Total # of Index Crimes

VINDEX = Total # of Violent Index Crimes

PINDEX = Total # of Property Index Crimes

INDEXCON = Total # of Index Crimes / Total Number of Constituents (Enrolled Students and Employees) Affiliated with the Institution

VIOCON = Total # of Violent Index Crimes / Total Number of Constituents (Enrolled Students and Employees) Affiliated with the Institution

PROPCON = Total # of Property Index Crimes / Total Number of Constituents (Enrolled Students and Employees) Affiliated with the Institution

INDEXRES = Total # of Index Crimes / Total # of Individuals Residing in Campus-Owned Housing

VIORES = Total # of Violent Index Crimes / Total # of Individuals Residing in Campus-Owned Housing

PROPRES = Total # of Property Index Crimes / Total # of Individuals Residing in Campus- Owned Housing

Independent Variables

Characteristics of the Institutions

CONSTITU = # of Constituents Affiliated with the Institution

RESPOP = # of Residents Living in On-Campus Housing

BUILDING = # of Buildings on Campus

ACRES = Land Area of the Institution in Acres

ROADS = # of Miles of Campus Roadways

ENVIRONM = Nature of the Campus Environment/Location

1= Rural
2= Suburban
3= Urban

CJPROG = Nature of Criminal Justice Programming at the Institution

1= None
2= BS/BA in Criminal Justice Only
3= MA/MS in Other Discipline w/CJ concentration
4= MA/MS in Criminal Justice
5= PhD in Other Discipline w/CJ concentration
6= PhD in Criminal Justice

Crime Prevention Programs and Strategies

ARMED = Campus Public Safety Officers Armed While on Duty

1= No
2= Yes

911SYS = 911 Emergency Telephone System

1= No
2= Yes

BLUESYS = Emergency Blue Light Telephone System

1= No
2= Yes

MULES = Student Security Patrol

1= No
2= Yes

COMMX = Composite Scale Indicating Utilization of Communications Technology

SUBABUSX = Composite Scale Indicating Scope of Substance Abuse Education Programming

PREVENTX = Composite Scale Indicating Scope of General Crime Prevention Programming

Campus Public Safety Department Selection and Training Criteria

EDUCATON = Educational Requirement for New Officers

1= No Educational Requirement
2= High School Diploma or Equivalent
3= Some College Required
4= 2-Year Degree Required
5= 4-Year Degree Required

SELECTX = Composite Scale Indicating Scope of Selection Techniques Utilized by the Institution for the Hiring of New Officers

BCKGRNDX = Composite Scale Indicating Scope of Background Investigation Utilized by the Institution for the Hiring of New Officers

CTRAIN = # of Classroom Training Hours Required

FTRAIN = # of Field Training Hours Required

Campus Public Safety Department Structure and Functions

OUTSOURC = Department Outsourcing of Protective Services

1= No
2= Yes

ARREST = Public Safety Officers Patrolling Campus Granted Arrest Powers

1= No
2= Yes

DRUGLAWS = Public Safety Departments Responsible for Enforcing Narcotics Laws

1= No
2= Yes

DRUGTASK = Public Safety Departments Participating in Multi-Agency Drug Task Force

1= No
2= Yes

APPENDIX B

Items Comprising Scales Used in OLS Regression Analyses

APPENDIX B

Items Comprising Scales Used in OLS Regression Analyses

Crime Prevention

Communications Technology Utilization (COMMX) (alpha= .46)

1. Usage of Portable Radios — All Items Coded 1= No 2= Yes
2. Usage of Motor Vehicle Radios
3. Usage of Cellular Phones
4. Usage of Base Station Radios

Substance Abuse Prevention Programs (SUBABUSX) (alpha= .89)

1. Special Unit-- Alcohol Education — Both Items Coded 1= No 2= Yes
2. Special Unit-- Drug Education

General Crime Prevention Education Programs (PREVENTX) (alpha= .76)

1. Special Unit-- Victim Assistance — All Items Coded 1= No 2= Yes
2. Special Unit-- Crime Prevention
3. Special Unit-- Hate Crimes Prevention
4. Special Unit-- Date Rape Prevention
5. Special Unit-- Stranger Rape Prevention
6. Special Unit-- Self-Defense Training

Campus Public Safety Department Selection and Training Criteria

Selection Criteria for New Officers (SELECTX) (alpha= .74)

1. Selection Technique-- Written Test — All Items Coded 1= No 2= Yes
2. Selection Technique-- Board Interview
3. Selection Technique-- Physical Agility Test
4. Selection Technique-- Psychological Screening
5. Selection Technique-- Medical Examination

6. Selection Technique-- Drug Screening

Background Investigation of New Officers (BCKGRNDX) (alpha= .49)

1. Selection Technique-- Background Investigation Both Items Coded 1= No 2= Yes
2. Selection Technique-- Criminal Record Check

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