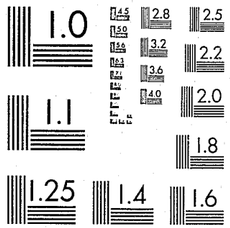

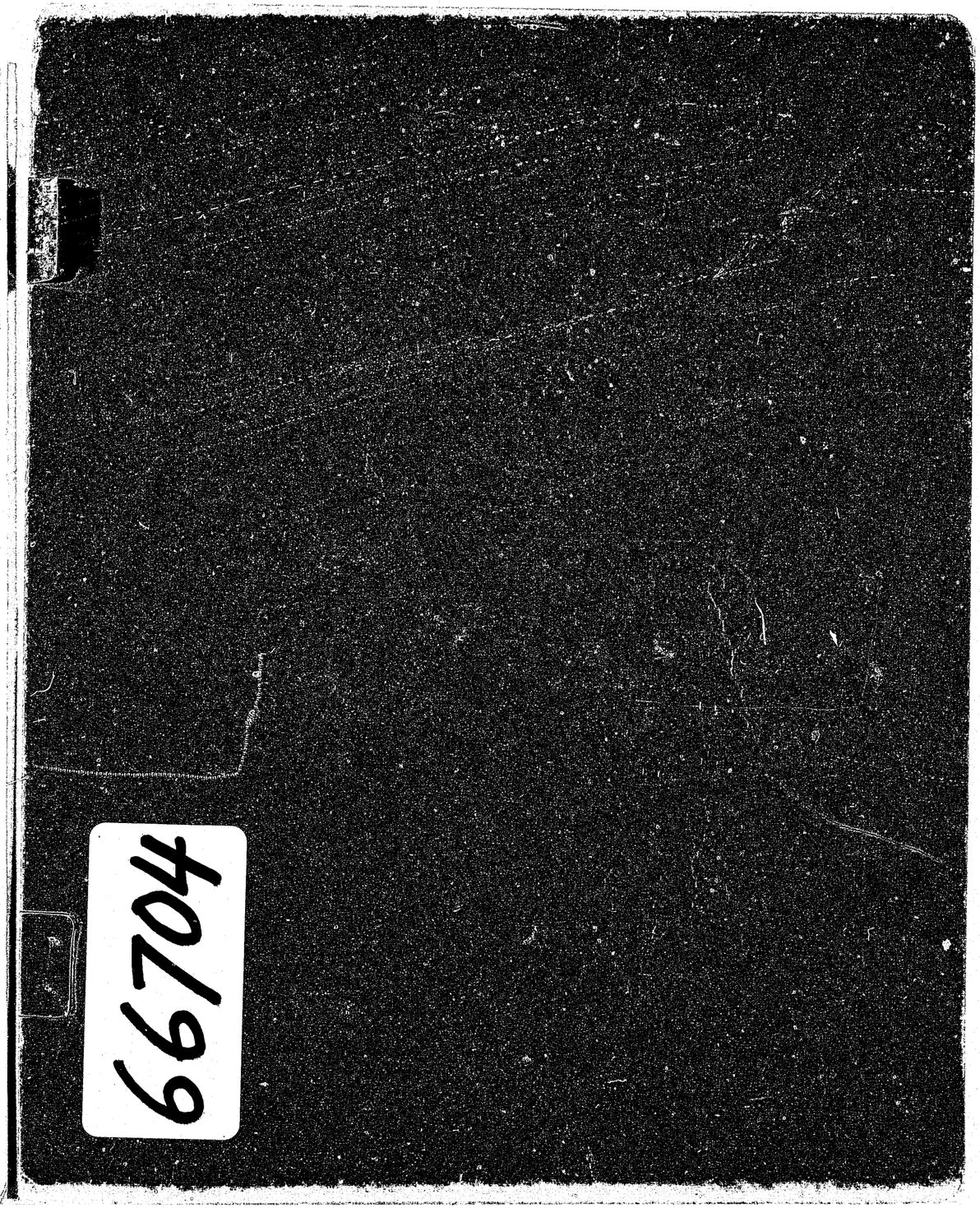

CRIME AND CONFLICT IN URBAN RECREATION AREAS: RESEARCH IN PROGRESS

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ABSTRACT. Anti-social behavior is an increasingly serious problem in recreation settings, particularly in urban areas. This paper reviews current work on questions of park crime and conflict, discusses problems with data collection and analysis, and reports progress to date in the development of a comprehensive approach to further study. *This research is supported by a grant from the U.S. Forest Service, Urban Forestry Project, North Central Forest Experiment Station in Chicago, Illinois.*

INTRODUCTION

Anti-social behavior in recreation settings is an increasingly pervasive and costly problem. The National Park Service, for example, estimates costs due to vandalism alone to have more than doubled between 1974 and 1978 (National Park Service [NPS] 1979). While even remote wilderness areas are experiencing increasing problems of this sort (Mertes et al. 1979), urban parks are especially hard hit. Recent concern over the quality and quantity of urban open space and recreation opportunities (Bureau of Outdoor Recreation [BOR] et al. 1977, p.vii), coupled with uncertainty about fuel supplies and inflation, has intensified the pressures on urban recreation facilities. As costs of maintenance and enforcement rise, programs and new facilities are often sacrificed, especially in the face of reduced operating budgets (BOR 1977, p. 21). Furthermore, social costs accrue in the form of decreased visitation due to fear of victimization (BOR 1977, p. 23), decreased satisfaction for both visitors and park personnel, and reinforcement of negative urban images.

Not only are criminal activities and other behavioral problems especially acute in urbanized areas (Gibbs 1979), but use patterns and people's perceptions of urban and suburban parks differ from those in more rural areas. Since, by definition, urban parks exist in population concentrations, there are more opportunities for visitors with different goals and values to come into contact and conflict with one another. Also, a large proportion of urban park users are likely to be local residents who may regard the park as an extension of their home territory and, as such, subject to different social norms and activities than rural parks. Criminal activities occurring in the larger urban context may overlap park boundaries. Some urban parks, for example, have been used

by criminals to exchange stolen goods or dispose of murder victims.

Equally important, people tend to regard urban parks as more dangerous than rural parks. Flickinger (1976), for example, reports that nearly thirty percent of Ohio state park visitors indicated they avoid urban parks because of concerns about personal safety. A 1972 study (Harld Lewis Malt Associates [HLMA] 1972, pp.44-78) also found fear of crime to be a significant factor influencing urban park use, especially during evening hours. These kinds of problems and perceptions not only decrease urban residents' use of and satisfaction with nearby recreation facilities but may, in some cases, threaten the further development or expansion of open space systems (Stockdale 1979).

The National Park Service has demonstrated sensitivity to the need for both high quality urban recreation resources and a system for monitoring park enforcement activities. The additions of Gateway National Recreation Area in New York (Gateway East), Golden Gate National Recreation Area in San Francisco, Cuyahoga Valley National Recreation Area near Cleveland, Ohio, and Indiana Dunes National Lakeshore, adjacent to Gary, Indiana, greatly expanded the National Park Service's role in preserving urban open space and providing recreation opportunities to urban residents. In 1973 a computerized uniform crime reporting system was instituted, which, while not entirely problem free, represents a significant step ahead in park law enforcement recording procedures.

The U.S. Forest Service has also demonstrated interest in alleviating some of the problems faced by urban recreation agencies. Researchers at the Pacific Northwest Forest Experiment Station, for example, have contributed several studies of depreciative behavior (Burgess et al. 1971, Clark et al. 1971 and 1972, Campbell et al. 1968, Christensen and Clark 1978, Muth and Clark 1978). Our study is part of a U.S. Forest Service Urban Forest Recreation Research Project based in the Chicago office of the North Central Forest Experiment Station. This office supports several diverse research projects in the Lower Great Lakes Region. The study described here is an exploratory project that will develop a comprehensive approach to investigating the complex set of problems stemming from anti-social behavior in urban recreation areas. Our primary goals are to: (1) define and describe the nature and extent of crime and conflict problems in urban recreation settings; (2) identify key variables in these situations; and (3) develop analytical techniques that will assist planners and decision-makers in providing safe, satisfying recreation environments. We are six months into a two year study, our major data collection effort will take place next spring and summer (1980) in six to eight urban and suburban parks in the Lower Great Lakes; Indiana Dunes National Lakeshore is one of the study sites.

We will examine the characteristics and impact of the following broad groupings of anti-social behavior:

1. Violent crimes -- homicide, rape, assault, and robbery
2. Non-violent crimes
   a. theft, burglary, breaking and entering
   b. illicit activities, such as gambling, prostitution, and drug traffic
   c. vandalism
   d. other depreciative behavior such as littering, offroad vehicle use, and other rule violations and misdemeanor crimes

3. Conflict (not necessarily involving criminal behavior)
   a. among users or user groups
   b. between users and park agencies
   c. between park users or agencies and local residents

As geographers, we have a special interest in the context of anti-social behavior and its spatial characteristics and impacts. The locational and environmental components of crime and conflict, and the interaction of individuals with the objective and perceived characteristics of the recreation environment are of particular concern. In other words, it is not how or why an individual decides to commit a criminal or disruptive act that is our primary focus so much as the decision of where and when to commit the act (Utano 1979, p. 15) and how this affects recreation participation patterns. Sociologists and psychologists are better qualified to tackle the larger problem of determining the basic societal or psychological pathologies that prompt people to damage public property and each other. Further, recreation agencies and personnel have little control over social inequities or individual psychoses. Landscape and facility design and maintenance, management and enforcement training and practices, and public relations programs are, however, within a recreation agency's purview. This is not to suggest that causation and motivation theories are not useful in examining deviant behavior in parks; assumptions about underlying motivations guide both research and management approaches.

CRIME IN PARKS

Personal Safety

A 1975 attitude survey revealed that eighty-four percent of respondents in thirteen U.S. cities believed that crime was increasing throughout the nation and forty-nine percent reported limiting or changing their activities because of fear of crime (Law Enforcement Assistance Administration [LEAA] 1979, pp.286, 293). Victimization rates for this period reveal that urban residents are eight percent more likely to experience a crime against themselves or their property (the urban victimization rate is 14,757 per 100,000 people) than suburban residents (13,615 per 100,000 people) and fifty percent more likely than rural residents (9825 per 100,000 people). However, victimization rates for *violent* crimes are thirty-eight percent higher in urban areas (4471 per 100,000) than in suburban locations (3244 per 100,000) and twice those in rural areas (2188 per 100,000). Theft victimization rates in urban and suburban locations are very similar (10,286 and 10,371 per 100,000 respectively) but are about one-third higher than thefts in rural areas (Gibbs 1979, pp. 18-23). Therefore, there appears to be justification for people feeling more vulnerable in urban areas.

The National Park Service reported 7697 felony crimes (homicide, rape, assault, robbery, burglary, larceny) and 238,849,000 user-days in 1975 for a crime rate of 3.2 per 100,000 user-days (NPS 1979). Of these, 1258 (16 percent) were violent crimes. By 1978 visitation had increased by 18.5 percent (to 283,090,000 user-days) and reported felonies increased 7.2 percent (to 8251) for a crime rate of 2.9 per 100,000 user-days. Again, violent crimes (858 reported) were only a small proportion (10 percent) of the total felonies and were 32 percent lower than in 1975 (NPS 1979). Even if national park visitors, like Ohio state park

visitors, only report 59 percent of the crimes they witness or are victims of (Flickinger 1976), increasing the number of 1978 national park felonies by 41 percent (to 13,985) only increases the victimization rate to 4.9 per 100,000 user-days, still very much below national victimization rates in 1975.

Closer examination of the 1978 NPS crime statistics reveals that 28 parks or recreation areas (9.4 percent of the park system) account for two-thirds of all recorded offenses, 95 percent of all arrests, 80 percent of all citations, and 71 percent of all assists. Further, in all categories, the National Capital Region in Washington, D.C. accounts for the largest single percentages (15 percent of the total offenses system-wide and 69 percent of all arrests). This is not surprising considering the number of visitors (over 12.5 million user-days in 1977) and the unique and highly urban character of the National Capital Region. It includes 46,000 acres in Washington, D.C. and adjacent Virginia and Maryland, encompassing a variety of cultural, recreational, and natural features (Alley 1973). Ranked two through nine in the number of felony (Part I) offenses are: Yosemite (989 felonies and 2.5 million 1977 user-days), Golden Gate National Recreation Area (468 felonies and 6.3 million 1977 user-days), Lake Mead (458 felonies and 6.5 million 1977 user-days), Yellowstone (360 felonies and 2.5 million 1977 user-days), Grand Canyon (252 felonies and 2.8 million 1977 user-days), Great Smokey Mountains (250 felonies and 11.6 million 1977 user-days), Olympic (243 felonies and 2.7 million 1977 user-days), and Gateway East (221 felonies and 9.2 million 1977 user-days).

This relationship between high use and relatively high numbers of criminal incidents is also apparent in NPS statistics on Part II or petty/misdemeanor crimes (excluding traffic violations) where the service-wide number reported in 1978 (72,494) is two and one-half times the 1975 level (28,911). Again, the National Capital Region in Washington, D.C. leads the list with 10,538 offenses (14.5 percent of the total), followed by Lake Mead (7072 offenses), Shenandoah (5882 offenses and 3 million 1977 user-days), Gateway East (3055 offenses), Great Smokey Mountains (2898 offenses), Sequoia-Kings Canyon (2775 offenses and 2 million 1977 user-days), Rocky Mountain (2571 offenses and 2.9 million 1977 user-days), and Golden Gate NRA, in eighth place, with 2174 offenses. The Division of Ranger Activities and Protection Report (NPS 1979) cautions that this summary is a preliminary report and does not represent every Part II violation that occurred within a National Park Service area in 1978.

What do these numbers mean? Crime data is notoriously difficult to evaluate. It has been suggested that crime rates should not be reported on a per capita basis but rather as a proportion of the potential opportunities (targets) for crime (Jeffrey 1977, Herbert 1972). The central business district in most cities, for example, offers many opportunities for criminal activities while supporting relatively few permanent residents, thus crime appears high in both absolute and per capita terms. However, if evaluated as a proportion of the potential opportunities for crime in the CBD it may not be so dramatic. Affluent residential areas, on the other hand, may show low crime rates on a per capita basis but have a relatively high index if evaluated on an opportunity or potential reward basis. Further, police records contain

only detected or reported crimes. Many crimes are not reported. For example, a recent study (McDermott 1979, p. 44, 52) suggests that only 53 percent of rape victims report the crime to the police (the percentage is even lower when the rapist is not a stranger to the victim). Other reports (LEAA 1976, pp. 13-14, 82-86) show that only 47 percent of assaults and 27 percent of personal larcenies are reported. Low income, working-class people appear to be over-represented in both court and arrest records, suggesting that, as a group, they may be more likely both to report crimes and to be arrested (Herbert 1972, p. 214). Clearly, the number of police officers on a force, their personal judgements and routes of patrol, will influence, to some degree, the type and number of crimes reported. Some sociologists suggest that variations in crime data are totally an artifact of enforcement and prosecution changes -- that the number of deviant individuals and acts is fairly constant over time and space (Davis 1975, pp. 86-88).

Problems of crime data representativeness are exacerbated in recreation settings. Here, perhaps even more than in the standard police force, the individual ranger or park police officer enjoys a wide range of alternatives in dealing with criminal activities, particularly minor offenses. Enforcement policies vary from park to park and officer to officer. Many recreation agency personnel, for example, give visitors the benefit of the doubt, preferring a friendly warning to issuing a citation. Often, an offender's age, appearance, and attitude strongly influence whether an incident will result in a warning, a citation, or an arrest.

The size and patrol capabilities of park police or rangers affects the number of crimes recorded. Obviously, larger numbers of enforcement personnel and patrol hours result in increased numbers of incidents that may, potentially, be observed and reported. Foot, horse, or ski patrols, in addition to regular car patrols, also increase the likelihood of crime reports and apprehensions. Report writing is very time consuming. Most police officers will admit, privately, that they avoid activities near the end of their daily shift that will necessitate writing reports (obviously, this does not include intervening in serious crimes). Report writing may be even more of a burden for park rangers since they often have administrative, maintenance, or interpretive responsibilities in addition to their law enforcement duties. As a result, reports may be delayed, abbreviated, or simply neglected for some incidents.

An additional problem affects enforcement statistics in some jurisdictions, although it should not be overstated or considered to be widespread. It is caused by some segments of cities and urban recreation areas acquiring such unsavory reputations that even enforcement personnel are reluctant to go there. Ocean Beach in Golden Gate National Recreation Area was, at one time, the least desirable weekend patrol assignment for NPS rangers and park police for this reason. A beach area adjacent to Indiana Dunes National Lakeshore is reportedly avoided after dark by City Police (who have jurisdiction) because of personal safety considerations. These situations may be transitory and atypical but do serve to illustrate how crimes, at some locations and times, may go undetected and unreported because criminals or other subcultural groups have successfully established "territories" where their own behavioral norms and values prevail.

There is no reason to believe that park users are any more likely to report offenses witnessed by or committed against them than are people in other settings. In fact, there is some evidence that they may be even less likely to do so (Connors 1976, Clark et al. 1971, Campbell et al. 1968). Connors (1976) suggests that park visitors often do not know to whom they should report crimes. Especially in the case of minor offenses, visitors may not know whether to look for park personnel or to contact local police. They may not be sure about how to do either one. An added problem is that enforcement jurisdictions frequently overlap in parks. This is particularly noticeable in urban national recreation areas. At Indiana Dunes National Lakeshore, for example, park rangers share enforcement responsibilities with nine other agencies. This means that some offenses occurring on Lakeshore lands are never recorded in NPS statistics and other offenses recorded by park rangers may not have actually taken place on federal property. Serious crimes that take place on park property, especially those requiring extensive investigation, are frequently handled by state or local police and may be recorded in NPS records only as "assists to other enforcement agencies." Furthermore, newly created urban recreation areas, such as Indiana Dunes National Lakeshore, have different boundaries from one year to the next as additional land is acquired and commonly contain residential areas that are still occupied by previous owners or their tenants under lease-back arrangements. The National Park Service, then, is responsible for enforcement in these non-recreation settings. These various situations probably contribute to the differences in crime statistics that occur from year to year and between urban and rural locations. Additionally, enforcement records may be distorted by inconsistent, incomplete, or late reporting in individual reporting units. Clearly, enforcement records must be interpreted with caution.

Even cautious interpretation is plagued by statistical problems, however. For example, comparison of Indiana Dunes National Lakeshore's 1978 criminal offense records with the 1977 data for the adjacent city of Gary, Indiana, reveals that while Gary had a violent crime rate of 598.5 per 100,000 people and a property crime rate of 4819.3 per 100,000 people, Indiana Dunes reported only 57 felonies (22 burglaries, 33 thefts, and two auto thefts) for the year. There were also 720 Part II offenses in the park consisting of 70 vandalism reports, 64 drug or alcohol offenses, 390 related to car operation or parking, 11 in various other categories, and 235 categorized "other offenses" which includes a variety of park and local rules and regulations -- leash laws, nuisances, illegal residence on federal land, and so forth. There are no comparable published data for Gary or other local jurisdictions.

If the scope of inquiry is broadened to include all NPS areas in order to compare parks to one another or parks to national crime averages, much of the data are still insufficient for satisfactory statistical analysis. For example, NPS Division of Ranger Activities and Protection (NPS 1979) reports a 29.4 decrease in homicides and a 51.7 increase in rapes in national park system areas between 1977 and 1978. However, these percentages represent absolute changes of five and thirty-one incidents, respectively. While these figures are significant for the individuals involved in these crimes, they may not reveal the actual trends and are not appropriate for statistical analysis. Further,

it is questionable whether crime rates based on spatially and temporally transient populations of park visitors are in any way comparable to those used by the LEAA or FBI based on permanent resident populations (HLMA 1972, p. 22).

The above discussion leads to two major conclusions: (1) although crimes in national park system areas may be fewer in number than those in other settings, they appear to be increasing, and this increase is causing concern among park police, rangers, managers, and visitors; and (2) investigation of these problems requires more than the analysis of official records.

In 1977 the federal General Accounting Office (GAO) released a controversial report titled: *Crime in Federal Recreation Areas -- A Serious Problem Needing Congressional and Agency Action* (Comptroller General 1977). GAO reviewed the operations and records of the six federal agencies managing recreation lands, held open-ended interviews with selected agency personnel, visited twenty-four sites (none were NPS urban facilities), and analyzed questionnaire responses from 1216 federal agency field staff with enforcement responsibilities. Nearly eighty-five percent of the survey respondents felt crime was a serious problem in their area. The three Type I crimes most often rated "moderate" to "very great" problems by field enforcement personnel were burglary (38 percent of the respondents), larceny (36 percent) and assault (30 percent). GAO found visitor protection in federal areas to be mired in a "legal jungle" with overlapping jurisdictions, ambiguous statutory authorities, and a wide variation in enforcement training and policies among agencies. New federal legislation was recommended.

Richard Hite, Acting Assistant Secretary of Administration and Management for the Department of the Interior reviewed the GAO report (Comptroller General 1977, p. 151) and suggested that while the Department was obviously not content with current crime levels in units under its jurisdiction, the "crime problem" should be put in proper perspective by considering the total number of areas administered by the NPS and the amount of visitation they receive. He holds that "analysis of [NPS crime report data] would hardly indicate that National Parks are unsafe to visit" and questioned why GAO had not included NPS park police (responsible for the three urban park areas -- National Capital Region, Gateway East, and Golden Gate NRA -- where 25 percent of all NPS felony offenses occur) in the survey. Mr Hite also pointed out that superintendents, managers, and visitors were not asked for their evaluations of the problem. In short, he felt that the report overstated the problem and that new federal legislation was unlikely to effectively reduce crime in national parks.

It is likely that visitors to most national parks are relatively unconcerned about being crime victims. Flickinger (1976) stated that over 90 percent of Ohio state park visitors felt both safe and protected, although one-third brought weapons for protection. During four months of peak season use, Flickinger reported that 1420 crimes were committed -- 4.7 percent (67) against persons and 43.2 percent (613) thefts. In a study of behavior problems in campgrounds, Campbell et al. (1968) report that: "Suprisingly, depreciative behavior in public parks is much more extensive than we were led to expect from interviews with recreation managers and campers." They found theft to be an especially serious problem, and one that was often not reported. Theft victims continued

to regard the campground as a safe environment, attributing their loss to their own negligence rather than to lack of appropriate management or facilities.

This is in marked contrast to visitors' perceptions of personal safety in urban parks. Eighty-seven percent of Flickinger's park visitor respondents indicated they felt safer in Ohio state parks than in the city parks of Cincinnati, Columbus, Akron or Cleveland and 29 percent reported not using their local neighborhood parks for fear of crime. The *National Urban Recreation Study: Chicago/Gary* (BOR et al. 1977, p. 23) reports that: "Many people in the study area hesitate to use recreational facilities, especially in the evening, because they fear for their personal safety. This danger -- real or perceived danger -- is a major factor underlying the poor usage of parks in some areas of the SCSA." Other studies (HLMA 1972) and our own discussions with urban park and recreation professionals throughout the Midwest lead us to believe that this danger may, indeed, be more imagined than real. Very few stranger-to-stranger violent crimes appear to occur in parks, belying popular perceptions of a mugger lurking behind every tree. However, it is possible that other methods of evaluating park crime (such as calculating crime rates based on the number of potential targets -- a function of number of users and their length of stay on-site) might reveal it to be more prevalent than first glance suggests. It is possible that people's perceived levels of safety are accurate and low numbers of incidents reflect low use, rather than low risk (HLMA 1972, p. 22).

Overall, violent crime against persons is, in general, difficult to understand and predict. Criminologists find most homicides to be crimes of passion, often involving people who know one another. Rape is a crime that has received much attention in recent years but remains under-reported and misunderstood (McDermott 1979, Brownmiller 1975). At this point in our investigation, we are treating violent crime against persons (murder, rape, assault) as statistically random events. Available data do not reveal spatial patterns or environmental attributes reliably associated with these crimes in park settings.

Vandalism

Investigation of crimes against property (burglary, theft, vandalism, etc.) may reveal regularities amenable to the development of conceptual and mathematical models identifying environmental correlates and spatial patterns. Of felony crimes, larceny is the most often reported in park settings (5986 in national parks in 1978) and vandalism is a major concern for nearly all recreation agencies. In 1978 the National Park Service recorded 7734 vandalism incidents, involving a conservatively estimated dollar loss of $284,095 (NPS 1979). The urban units of the system ranked high in vandalism losses. The National Capital Region reported the second highest losses with 736 incidents reported and $12,328 estimated in damages; Golden Gate NRA is third with 310 incidents for $4594 in damages; Gateway East comes in sixth with 201 incidents for a cost of $1470; and Indiana Dunes is ranked fifteenth with 101 incidents for $2723 in damages. Again, these figures are conservative estimates, more representative than exhaustive, and do not reflect the actual extent of the vandalism problem (NPS 1979).

The GAO study (Comptroller General 1977, p.7) found that "vandalism of Government property" was reported most frequently as a

substantial problem, followed by "destruction of natural and historic resources." Driessen's (1978, p.v) recent survey of U.S. Forest Service recreation managers revealed vandalism "to be the number one . . . problem associated with facilities and equipment." Other types of inappropriate, often destructive, types of visitor behavior were also high on managers' problem priority lists. The U.S. Forest Service estimated the 1974 nation-wide cost of vandalism in the national forests to be $7.5 million. California's Department of Parks and Recreation reported $87,000 in vandalism damages during 1975 but estimated the full costs to be as high as $180,000 (Alfano and Magill 1976, p. 1). The City of Gary Parks and Recreation Department, like many others in our study area, reported vandalism to be its biggest problem, requiring a major portion of the department's maintenance staff time (BOR et al. 1977, p. 73).

Although vandalism is unquestionably a serious problem, it has been the subject of remarkably little empirical research. The major factors limiting such investigations are: (1) lack of clear definitions of vandalism (as distinct from inappropriate or over-use, for example); and (2) the difficulty of developing appropriate and accurate measurement techniques. Clark (1976, pp.63-64) categorizes vandalism literature as either "not based on data" (subjective reports or theoretical discussions), or "research based." He then separates the research based articles into those that are primarily descriptive (establishing baseline data) and those that are evaluative. He points out that evaluative studies are the most directly useful and the least common.

It is difficult, and perhaps not particularly useful, to differentiate vandalism from other types of rule violations or depreciative behavior (Clark 1976, Christensen and Clark 1978). Differences are often of magnitude rather than kind. Furthermore, since most of the available information consists of after-the-fact damage reports rather than observations of the destruction and/or the participants, it is generally impossible to determine the offenders' motivations. These reports are often biased in that they tend to include only large or dramatic incidents. Maintenance staff, like enforcement personnel, frequently neglect to report minor problems, preferring to use their time for repairing damages or solving problems instead of writing reports. The net effect is to conceal the impact of many minor incidents of vandalism. When aggregated, these probably contribute dramatically to maintenance costs and may be a source of clues regarding general patterns and correlates of the problem.

In the case of recorded vandalism incidents, the same kinds of difficulties arise as in other crime report data. The classification of an incident as "vandalism" may depend on the inclination of the person making the report; anything from an attempted burglary to a plugged tiolet might, conceivably, fall into this classification. Overlapping jurisdictions may also result in incomplete or inaccurate records. Further, the opportunity to commit acts of vandalism varies from park to park and within different areas of the same park. Indiana Dunes National Lakeshore and Golden Gate National Recreation Area, for example, contain many empty buildings scheduled for eventual removal or destruction. In the meantime, these structures are convenient targets for vandals, thieves and derelicts.

With the notable exception of work done by researchers at the Pacific Northwest Forest Experiment Station, most investigations of

vandalism in recreation environments tend to concentrate on formal or informal theories of the motivations underlying destructive behavior and the applicable management solutions under these constructs. Academic theories in sociology (means-end, social control, social pathology, functionalism, anomie, value conflict, labeling theory), and psychology (ecological behavior-environment congruence theory, individual psychological or personality traits, proxemics) have been drawn upon, as well as a growing body of "conventional wisdom" developed from experience and observation. The search for the roots of destructive behavior is an important one. As Wendling (1979) and Christensen and Clark (1978) suggest, managements' assumptions about the causes of vandalism influence policy, maintenance and enforcement actions. For example, if it is assumed that damages are primarily the result of visitors' negligence, urban values and experience, or ignorance, then the control approach is likely to concentrate on visitor education concerning appropriate uses of park resources and the impacts of misuse. If, instead, the fault is assumed to lie in the park environment (crowding, inadequate supervision, inappropriate design, insufficient facilities) then resources will be applied to increasing and improving recreation space, dispersing park users to a greater extent, and increasing supervisory or enforcement personnel. However, if managers are convinced that problems stem mainly from basic value conflicts (park users damage resources because they disagree with park regulations or the manner in which they are enforced) then the control approach is likely to involve some form of political action, community involvement, stricter enforcement practices, and the "target-hardening" or "vandal-proofing" of facilities (Wendling 1979).

We feel that developing management programs directly from motivational theory omits a very important intermediate step. That step is the establishment of accurate, reliable, information on the frequency, type, extent, and spatial and temporal characteristics of vandalism incidents and the development of an understanding of the entire process through analysis of this data. Clark (1976), Christensen and Clark (1978), and others (Driessen 1978, Parkman Center for Urban Affairs 1978) have called for improving the quality of descriptive, baseline, vandalism data. Without a clear picture of where and when damage occurs, what is damaged, how the damage is accomplished, and the frequency of incidents in various locations and types of facilities, costly control programs may be misdirected or ineffective.

Clark et al. (1971), Campbell et al. (1968), and Miller (1976) have demonstrated the usefulness of participant observation in investigating damage and behavior problems. Miller (1976) found, for example, that central city youth gangs do not damage public property as an "ideological protest" or in response to "diffuse and arbitrary anger," but rather as a "direct and responsive" expression of anger against individuals and organizations. Clark et al. (1971) reported that depreciative acts in forest campgrounds are committed by a variety of visitors, not just "youths," for what appeared to be a variety of reasons, not just ignorance, negligence, poor park design, or general maliciousness. Sommer (1969) and Ley and Cybriwsky (1974) found evidence that graffiti may be more a matter of territorial delineation or self-expression than directed destruction. Several researchers have uncovered specific environmental components (facility design, location, screening, etc.) that appear to influence crime incidents and people's

perceptions of safety (Newman 1973, Becker 1977, Reppetto 1974, Molumby 1976). There are also indications that public input or involvement programs have widely varying impacts and effectiveness, depending on the approach, the clientele, and the problems addressed (Fridgen 1980, Muth and Clark 1978). These examples support both Clark's (1976) warning that management approaches which prove successful in one location may be disappointing when applied in another setting and our position that the key variables influencing crime and depreciative behavior in recreation settings have yet to be clearly identified.

CONFLICT IN PARKS

Conflict is even more difficult to detect and accurately measure and evaluate than is criminal behavior. Large, dramatic confrontations such as civil disobedience, the American Indians' occupation of Alcatraz Island (part of Golden Gate National Recreation Area), or the infamous 1970 Yosemite Park riot (Hadley 1971, p.156) receive considerable attention and documentation. Less dramatic, but increasingly common, conflicts between nearby community residents and park management are important locally and impact park development and use patterns (Stocking 1979, *Singing Sands' Almanac* 1979). These problems range from persistent, illegal removal of barriers controlling entry to park lands where local residents previously had unrestricted access, to lawsuits or political action.

A more common and largely undocumented kind of conflict occurs among users. Many times these conflicts involve contrasts in lifestyles and values; issues such as nude sunbathing, snowmobilers versus cross-country skiers, and park use by motorcycle clubs, homosexuals, or other counter-culture groups, for example, can generate considerable controversy. In other cases, certain user groups may feel they have a proprietary right to certain facilities and object to sharing or changing them. These conflict situations may be recorded in complaints from visitors, decreased park use by some groups of potential visitors and increases in other user types, observations of rangers, and/or user modification of park facilities to meet their specific needs (often recorded as vandalism).

The particular type of behavior setting presented by a park and the social norms associated with recreation activities and environments is receiving increased attention (Becker 1978, Heacock 1970, Hendee et al. 1968, Lee 1977, Schreyer and Roggenbuck 1978, Sommer and Becker 1969) but results are usually site or activity specific. It has been frequently noted that rule violations, and other types of depreciative and destructive behavior may stem from incongruities between the needs, values, and attitudes of visitors and the constraints or behavioral cues available in the park environment. Work by environmental psychologists (Sommer 1969, Wicker 1972, Stokols 1976) suggests that visitor behavior can be modified, and satisfaction with the environment increased, by perceptive site designs and operation practices that provide clear behavioral cues.

Our investigations to date suggest that many current conflicts center on the interaction of youthful and older park user groups. In particular, the boisterous behavior, alcohol or drug consumption, and apparently intimidating impact of large groups of young people often

discourages park use by other groups. Some parks appear to gain reputations as meeting places for young people -- a place to see and be seen. A park's informal "reputation" or "image" strongly influences use patterns. In some cases, reputations appear to be helpful in avoiding conflicts among users. For example, Kent (1979) reported finding very little conflict among the often widely divergent social groups using sections of Gateway National Recreation Area in New York because of users' voluntary segregation and established use patterns; territorial boundaries of the various user groups appear to be recognized and respected. A similar situation prevails on many California beaches -- some are "known" to be nude bathing areas and users are expected to, at least, tolerate this activity. Perhaps management can ease tensions among users by officially recognizing "special use" areas even though the uses may be controversial. Canadian provincial park managers have been experimenting with separate campgrounds to reduce conflicts between often noisy youth groups and family campers (Robertson 1975, White et al. 1978, Wall 1979). However, reputations may have long lasting negative impacts as well. A beachfront park in Gary, Indiana, for example, has retained a negative reputation from racial conflicts that occurred several years ago and is still little used, even on days when the adjacent West Beach of Indiana Dunes National Lakeshore is overflowing with visitors.

Another type of conflict arises when new parks are located in developed areas. Neighborhood groups may regard such parks as their "territory" and refuse to recognize the needs or desires of other users or management policies that conflict with their own perceived rights. Examples range from gang "turfs" (State of California Department of the Youth Authority 1978) to the "civilized" protests of affluent resort community residents when faced with the possibility of an influx of "outside" visitors to areas previously considered their private preserve. Similarly, managers of parks located in areas that experience rapid residential development suddenly find that the new residents have brought new management problems.

RESEARCH APPROACH

Because of the complex nature of crime and conflict and the general lack of reliable, site specific, information for study area parks, our first task has been to develop instruments for comprehensive data gathering. Since summary data from law enforcement divisions generally do not provide detailed information, we are sampling individual incident reports and activity logs to gain information about the location and time of reported incidents, characteristics of targets and offenders, source of reported incidents (for example, are most reports officer instigated or responses to calls?), and the routes and types of patrol activities enforcement personnel pursue. Secondly, we are interviewing enforcement, management, interpretive and maintenance staff, using both open-ended interviews and a standard questionnaire. We are requesting information about the severity and location of various types of criminal behavior and conflict problems as well as opinions regarding sources and solutions to these problems. We have enjoyed excellent cooperation and assistance from the park agencies, particularly National Park Service personnel at Indiana Dunes National Lakeshore where the questionnaire

was recently pilot tested.

Before major data collection activities begin next summer, we hope to develop and test additional instruments that will: (1) record site-specific information about site and facilities design, protective features, landscaping (in terms of visual screening and use barriers), environmental "messages" (conveyed by signs, upkeep, equipment, etc.), access and movement patterns both to and within the site, and surrounding land uses; (2) be used by park maintenance personnel for simply and systematically recording destructive acts; and (3) record systematic observations of park user identity, activity patterns, and behavior.

Collecting data from several sources by a number of methods and at several different kinds of sites should provide (1) information regarding practical research approaches to problems of crime and conflict; (2) data concerning common patterns and possibly atypical situations; (3) clues to the identity of key variables; (4) appropriate, accurate baseline descriptive data; and (5) information suitable for empirically testing conceptual models of crime and conflict behavior. Webb et al. (1966, pp.1-10) argue that overlapping several data sources provides a less biased picture than relying on a single method or source.

A model of criminal decision-making that seems especially promising for evaluating some aspects of thefts, burglaries, and vandalism is suggested by Utano (1979, p.18). His general model evaluates the probability that an individual will select a particular target as a function of:(1) the type of crime; (2) individual characteristics of the offender such as age, distance from target site, etc.; (3) the characteristics of the target such as the potential reward, means of escape, etc.; and (4) the constraints of the destination such as the time needed to get to the site and to complete the crime, the resources required, and risk involved. We feel that careful evaluation of the opportunities presented by park settings for various crimes is central to investigation of these problems. If we can assume that most criminals are rational people, then there must be an individual decision process that weighs the potential profits (monetary, personal satisfaction, and probability of success) against the potential losses (costs of travel and preparation, risk of injury, probability of apprehension). The probability of success or apprehension can be evaluated as a function of (1) enforcement patrol routes and frequency; (2) visitor density, on-site travel patterns, and propensities to report or intervene in particular crimes; (3) target characteristics such as ease of access or damage, and visibility of vulnerable portions; (4) ease of access and escape; and (5) availability of alternate targets.

Similarly, careful observation of visitors' on-site movement, distribution, and behavior may illuminate the processes by which social order is normally maintained in recreation environments. By identifying the basic components of both functional and dysfunctional systems, it may be possible to determine the key variables in conflict situations.

In conclusion, it seems clear that the need for and use of urban open space for recreation is likely to continue to increase dramatically, in spite of the problems involved. Not only will travel to extra-urban parks be discouraged by fuel costs and scarcities, but urbanization will gradually surround parks that were previously in rural environments. This will produce added problems of anti-social behavior for both park users and park managers as visitors with widely different attitudes,

values, and expectations converge on increasingly scarce recreation resources. However, it also presents an opportunity for both users and providers to learn to understand and cooperate with one another. This can be encouraged by providing a physical and operational environment that is conducive to appreciation rather than conflict. Nowhere is this more important than in units of the national park system that lie in or near urban centers.

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