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GANG ACTIVITY IN ORANGE COUNTY, CALIFORNIA

Final Report to the National Institute of Justice

Award Number: 96-IJ-CX-0030

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EXECUTIVE SUMMARY: GANG ACTIVITY IN ORANGE COUNTY

Background

This analysis of “Gang Activity in Orange County” began in March 1995, when the Orange County Chiefs’ and Sheriff’s Association (OCCSA) asked the University of California, Irvine (UCI) to enter into a long-term partnership to assist them in evaluating and monitoring the effectiveness of their community-based, multi-agency efforts to address gang violence.

In response, the UCI School of Social Ecology established a Focused Research Group (FRG) on Gangs within its Department of Criminology, Law & Society. The goal of the FRG was to work with OCCSA and its countywide Gang Strategy Steering Committee (GSSC) to resolve a number of previously intractable questions about gangs, gang crime, and their effects on the community, and help them develop strategies to prevent and control illegal gang activity.

Co-principal investigators for the UCI FRG were Dr. Bryan J. Vila (now with the University of Wyoming) and Dr. James W. Meeker. Drs. Vila and Meeker supervised the work of four UCI doctoral students: Thomas E. Fossati, Ph.D.; Jodi Lane, Ph.D.; Katie J.B. Parsons, Ph.D.; and Douglas Wiebe, ABD.

Initial funding for the project was provided by \$30,000 seed-money grants from Pacific Mutual Corp. of Newport Beach, California, and UCI. Two-year funding for the study reported here was received from the U.S. Department of Justice’s National Institute of Justice (Award Number 96-IJ-CX-0030) in 1996. Additional support for technical assistance to participating law enforcement agencies was received as part of a grant to OCCSA from the Office of Community Oriented Policing Services (PNG-22294),

One of the primary programs developed by OCCSA and GSSC to be evaluated during the two-year study was the Orange County Gang Incident Tracking System (GITS). GITS was established in 1993 to document the extent of gang-related crime in the county and provide information for strategic planning and evaluation purposes by establishing a baseline against which to identify future trends in gang-related crime over time, and determining regional variation in gang-related crime patterns.

GOALS

GITS collected more, and more detailed, cross-jurisdictional information about gang incidents than had ever been assembled before. So long as these data provide a reasonably valid, reliable, and complete picture of gang activity, they pose a unique opportunity to evaluate the nature, extent, and effects of street gang crime in a large metropolitan region. Therefore, our main research objectives were to:

- Evaluate the validity and reliability of GITS data;
- Describe and, if possible, explain the nature and distribution of gang crime using geographic information systems and multi-variate statistical techniques as well as attempt to assess the effectiveness of various gang prevention, intervention, and control strategies;
- Determine the effects of fear of gangs and gang crime on residents of Orange County; and
- Evaluate how well GITS met the initial goals set for it.

Following is a brief summary of some of the more important findings from this study:

Key Findings

VALIDITY

- Data being collected by GITS appears to present a reasonably unbiased and complete picture of gang incidents handled by the police. The study found little evidence to support

concerns that the police are drastically over-estimating gang-related crime in Orange County. In fact, based on a substantial number of ride-alongs and interviews, as well as field observation, and evaluation of official records, we found that law enforcement agencies tend to *under-report* gang incidents to the GITS database.

- Orange County's concentrated effort to train officers about legal criteria in California for defining who is a gang member appears to have paid off. Contrary to some claims, we found no evidence that officers were classifying young people as gang members merely because of their mode of dress, ethnicity, or place of residence when they reported gang incidents for use in the countywide database.

NATURE AND DISTRIBUTION OF GANG INCIDENTS

- There were 3,600 gang-related incidents reported to the GITS database in 1994, 3,407 in 1995, 3,408 in 1996, and 3,227 in 1997. Of these incidents, the majority of gang-related crimes committed each year were violent crimes—45.2 percent, 46.9 percent, 53.8 percent, and 48.9 percent, respectively. Vandalism/graffiti was the next most frequent gang-related crime during this four-year period (23.4 percent, 21.3 percent, 21 percent, and 31.6 percent, respectively), followed by weapons violations (15.1 percent, 16.1 percent, 15.3 percent, and 11.7 percent, respectively) and property crimes (13.7 percent, 12.5 percent, 6.9 percent and 6.3 percent, respectively), and narcotic sales (2.6 percent, 3.3 percent, 3.0 percent, and 1.5 percent, respectively).
- Overall, adult street gang crime in Orange County appears to be a more serious problem than juvenile gang crime. While similar proportions of juveniles and adults were arrested for gang-related incidents reported to the police, adults have much higher *violent* arrest rates than juveniles, and—compared to juveniles—a much lower proportion of gang-related adult arrests are for property crimes.
- The data clearly suggest that adult and juvenile gang intervention strategies reflect different needs at different times of the day. Adult offenses for all types of crime are unaffected by schoolday and non-schoolday periods; that is, they show similar time-of-day patterns during either period. In contrast, gang-related juvenile offenses peak much earlier in the day on schooldays. Moreover, the number of juvenile gang-related arrests at

the peak hours on schooldays (from 2–2:59 p.m.) is much higher than at the peak on non-schooldays (from 11–11:59 p.m.). Another important difference between juvenile and adult gang-related arrests is that, on schooldays, the number of juvenile arrests for all offenses increases sharply early in the day (climbing steadily from 7 a.m. to 3:59 p.m.), whereas adult arrests climb slowly throughout the day and peak in the evening.

- *Regional approaches* such as the one mounted by the Orange County Chiefs' and Sheriff's Association are required for tracking, understanding, or addressing street gang problems. We found that communities tend to be significantly impacted by violent crime in neighboring communities. This means that any attempt to reduce the gang problem in areas of Orange County where it is more concentrated will have to consider neighboring communities as well.

FEAR OF GANGS AND GANG CRIME

The focus of the study is on gang crime and associated fears. We specifically studied perceptions of fear, risk, and seriousness for six crimes typically association with gangs and two crimes that are not.

- Overall, women tend to be more afraid than men of all eight crimes measured in the study—graffiti, home invasion robbery, drive-by shootings, physical assault, harassment, carjacking, burglary, and rape. However, women's perceived risk of actually being a victim of these crimes was significantly related only to burglary and rape. Therefore, although women report more fear of all eight crimes than do men, they don't necessarily feel more at risk. Women also are more likely to rate crimes, except carjacking, as more serious than do men.
- Age was found to be *negatively* related to ratings of seriousness for gang-related assault, carjacking, and home invasion robbery—i.e., younger residents tended to rate these crimes as more serious than did older residents. Younger residents also perceived greater risk of graffiti, gang-related harassment, and gang-related assault than did older residents, and were more fearful of gang-related assault, carjacking, home invasion robbery, drive-by shootings, and rape.

- Although lower income and education were significantly related to perceived risk for most of the crimes in the study, income was not significantly related to fear of any of the crimes.
- Prior victimization was related to perceived risk of future victimization, but not significantly related to fear of any of the crimes.
- Whites generally were more likely to rate the crimes named in the study as serious. But in terms of risk and fear, Vietnamese felt more at risk and more fearful than Hispanics, who felt significantly more at risk and more fearful than whites.
- As with previous studies, concern about community disorder was a significant predictor of perceived risk and fear for almost all of the crimes. However, concern about community *diversity* was not significantly related to seriousness ratings, perceived risk, or fear of any of the crimes named in the study.

Final Comments

The Gang Incident Tracking System (GITS) project clearly demonstrates the usefulness—and the necessity—of multi-jurisdictional efforts to understand, prevent, intervene with, and suppress street gang activities. Just as clearly, we think, it demonstrates the value of partnerships between criminal justice practitioners and university researchers.

One of the most heartening surprises associated with this project is that several dozen law enforcement and community agencies can collaborate successfully with one another and with a team of university researchers. The Orange County Chief's and Sheriff's Association and the county Gang Strategy Steering Committee provide an excellent model for regions struggling with the reality that crime often is multi-jurisdictional in nature. The findings reported here provide evidence of the utility of this type of cooperative endeavor for practitioners. They also reveal opportunities for fruitful scholarly research (see Summary and Conclusions).

INTRODUCTION

Organization of Report

This is the final report for a research grant titled “Gang Activity in Orange County” awarded to the University of California, Irvine (UCI) by the U.S. Department of Justice’s National Institute of Justice (Award Number 96-IJ-CX-0030). The grant was administered by the UCI School of Social Ecology. Co-principal investigators were Dr. Bryan J. Vila (now with the University of Wyoming) and Dr. James W. Meeker.

Drs. Vila and Meeker supervised the work of four UCI doctoral students, each of whom took the lead on a different aspect of the project; developing the research design, overseeing implementation, conducting analyses, and preparing draft reports. Three of the students, Thomas E. Fossati, Ph.D.; Jodi Lane, Ph.D.; and Katie Parsons, Ph.D., worked on the project from its inception in March 1995. Douglas Wiebe, ABD, joined the project in 1997. Although Drs. Vila and Meeker bear sole responsibility for the work reported here, we acknowledge the invaluable role played by Fossati, Lane, Parsons, and Wiebe. Although their individual contributions are noted as appropriate in each of the following sections of the report, it is important to recognize that during the course of the project each student participated in a wide variety of activities. We also gratefully acknowledge the diligent work of more than 20 undergraduate research assistants who entered data, checked the accuracy of locator data, and assisted with database development.

The report first provides an overview of the GITS project and relevant history regarding its development. After a collective description of the project’s research goals, each of the goals is treated as a separate chapter that discusses key problems, describes research methods and analysis, then presents findings. Because one of the non-research goals of this project was the

dissemination of information to scholars, practitioners, and relevant officials, we next list scholarly publications that have been made or are currently being prepared, conference presentations, public presentations, and reports prepared by project staff for local government agencies. The report ends with a summary discussion of findings and future research needs.

Project Overview

In recent years, many communities that previously considered themselves insulated from inner-city problems have been forced to acknowledge that gang violence also can extend into their neighborhoods (Curry, Ball and Fox, 1994; Spergel and Curry, 1995). Orange County, California is one such community. Located 40 miles south of Los Angeles, Orange County is a highly heterogeneous suburban county with 2.7 million people living in 31 cities and unincorporated areas. Since 1980, the county has experienced rapid growth, increasing urbanization, and racial and ethnic change. Despite a few traditional Hispanic “turf” gangs firmly entrenched in its less affluent areas (see Vigil and Long, 1990), Orange County historically has enjoyed low crime rates and relative tranquility.

During the past decade, however, gang activity appears to have been on the rise in the county. In 1991, the Orange County Grand Jury reported that gang problems were escalating at an alarming rate, a sentiment echoed by the 1995 Orange County Grand Jury. According to police and media reports, gang crime in Orange County not only had become more frequent, but more violent. More mobile Asian gangs, as well as white “skinhead” gangs have emerged within the county, along with a growing number of more traditional turf-oriented gangs.

Orange County residents also have become increasingly concerned about gangs and crime. A 1994 survey¹ found that 75 percent of residents were aware of gang problems in their community, and 61 percent thought gang activities have increased in the past few years. In addition, the Orange County Annual Survey² found that residents' worries about crime—once a low concern—ranked highest on the list of county problems for the first time in 1993 and again in 1994.

Project History

In response to escalating gang activities that often overlapped jurisdictional boundaries, the Orange County Chiefs' and Sheriff's Association (OCCSA) established a countywide Gang Strategy Steering Committee (GSSC) in 1992. Joining forces with school districts, local government agencies, community groups, and businesses, all 22 law enforcement agencies in the county developed and implemented an unprecedented community-based, multi-agency effort to address gang violence.

Since then, following the recommendations of the California State Task Force on Gangs (1989:37, 57), OCCSA launched a comprehensive set of programs:

- *Project No Gangs*, a countywide community education and awareness prevention program aimed at mobilizing community resources to fight the influence of gangs;
- *TARGET*, a suppression program strategically located in eight cities involving law enforcement, probation, and prosecution staff in targeting hard-core gang leaders and repeat offenders through vigorous surveillance and prosecution (Kent and Smith, 1995);

¹ The survey, conducted for Drug Abuse is Life Abuse, involved random telephone interviews with 600 adult Orange County residents (Mark Baldassare and Associates, 1994).

² A random telephone survey of 1,000 adult county residents conducted annually since 1982 (Baldassare and Katz).

- *The Gang Incident Tracking System (GITS)*, designed to document the extent of gang-related crime in the county and provide information for strategic planning and evaluation purposes (Vila and Meeker, 1997).

Although OCCSA laid the foundation for interagency coordination and data collection, it lacked the analytical resources and expertise to fully evaluate and monitor the effectiveness of these programs. Early in 1995, OCCSA asked UCI to enter into a long-term partnership to enhance their analytical capabilities. The UCI School of Social Ecology established a Focused Research Group (FRG) on Gangs within its Department of Criminology, Law & Society. In keeping with the School's tradition for using innovative research techniques to tackle important community problems in a holistic fashion, the goal of the FRG was to work with OCCSA and GSSC to resolve a number of previously intractable questions about gangs, gang crime, and their effects on the community and help them develop strategies to prevent and control illegal gang activity.

GITS

Orange County's Gang Incident tracking System (GITS) is intended to accurately identify the extent of gang-related crime in Orange County, establish a baseline against which to identify future trends in gang-related crime over time, and determine regional variation in gang-related crime patterns. This information is used by Orange County law enforcement agencies to facilitate strategic planning and improve resource allocation for controlling gang activities.

GITS became operative January 1, 1993, when county law enforcement agencies began reporting all gang-related incidents, based on police reports, to a centralized database. By the end of 1993, all 22 independent cities and the Orange County Sheriff-Coroner's Department (which serves contract cities and unincorporated areas) had established relatively consistent internal procedures for identifying and tracking gang-related crime, and were reporting to the

centralized database. Training programs and a short training videotape were used to teach patrol officers countywide how to identify and report gang-related incidents to GITS. The GSSC declared publicly that 1994 GITS data was to be the benchmark by which future law enforcement activities involving gang activities would be judged.

To help avoid discrepancies between agencies, the GSSC definition of the term “gang” closely follows the one used in California's Street Terrorism Enforcement and Prevention (STEP) Act (CPC §186.22), “...a group of three or more persons who have a common identifying sign, symbol or name, and whose members individually or collectively engage in or have engaged in a pattern of criminal activity creating an atmosphere of fear and intimidation in the community.”

Gang-related crimes were defined as those where:

- Suspects(s) are identified as gang members, or admit(s) membership in a gang;
- A person becomes a victim due to his/her gang association;
- A reliable informant identifies an incident as gang activity; or
- An informant of previously untested reliability identifies an incident as gang activity, and it is corroborated by other independent information.

Incidents also may be included that do not fit these criteria if there are strong indications of gang involvement (e.g., suspects display gang hand signs, or the incident fits the profile of gang incidents, such as drive-by shootings, or home invasion robberies).

The definition adopts the gang-involved definition of gang crime. This is often called the Los Angeles model because of its adoption by law enforcement in that county. The other definition used by law enforcement is the gang-motivated, or Chicago model. This definition restricts gang crime to incidents that have a clear gang motivation. The gang-involved model is the broader perspective including not only gang-motivated crime, but all crime involving gang

members. While the gang-involved definition will clearly include more crime, the limited research on this issue to date suggests both definitions cover crimes that produce similar patterns in factors associated with the crime (see Maxson and Klein, 1990 and 1996).

Data Collection

GITS DATABASE DEVELOPMENT

The original GITS reporting forms (Appendix A) collected information on gang identification, map grid location, 21 crime categories, and number of juveniles and adults arrested during each incident. Additional information about motivating factors, drugs and alcohol, and weapons involved in the incident also were collected, as was information about victim/offender relationship. The form was changed in 1995 to collect specific address data, and all 1994 cases were updated to include address. For reporting purposes, the type of incident is divided into three primary categories: violent crime, property crime, and other crime.

In 1996 the data coding forms were revised based upon input from all jurisdictions (Appendix B). There were two major category changes. First, the crime categories were expanded to allow coders to list the penal code violations associated with each incident on the departmental reports. This eliminated the need for coders to translate specific penal codes into the 1994–1995 crime categories, reducing error. Coders also were given the opportunity to indicate more than the most serious crime related to the incident; this provided an opportunity to identify most of the crimes associated with each incident. Another major change in the data coding form was the inclusion of a victim relationship category. On the 1994–1995 forms, the victim category was not reliable due to overlapping meanings in the categories. This created confusion for coders and resulted in unreliable coding. The new form was modified to clear up

confusion and to reflect the desire for information about gang-on-gang crime versus gang-on-non-gang crime.

THE REPORTING PROCESS

Figure 1. Information flow into the GITS database

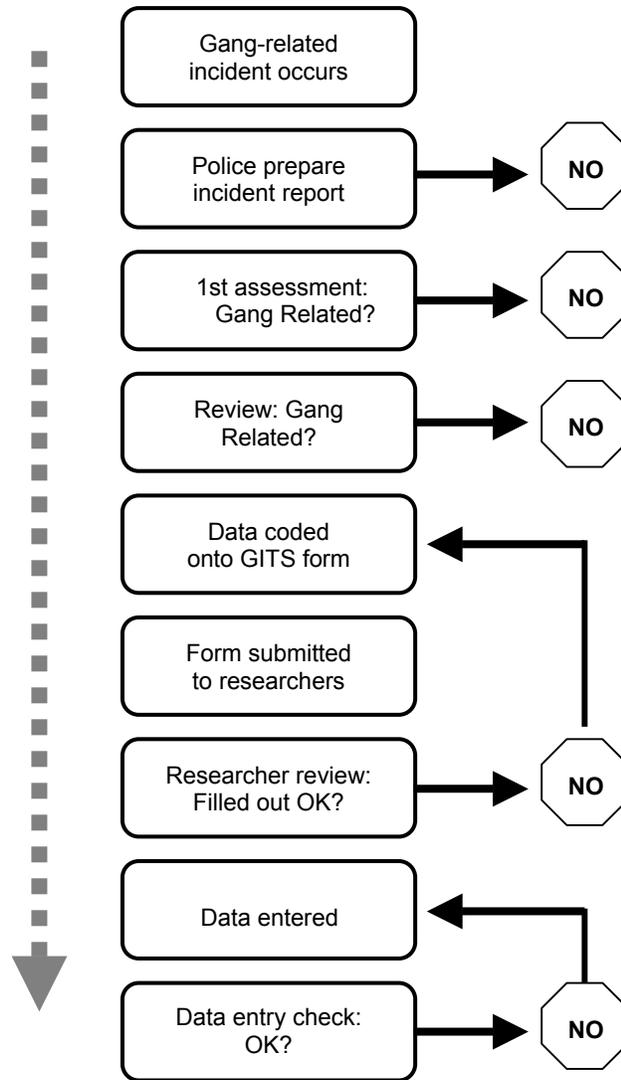


Figure 1 illustrates the flow of information from a gang incident to entry of incident data into GITS. When an incident comes to the attention of police and a field incident report is taken, officers may indicate that they believe the incident is gang related. If so, the report is reviewed

later by the person responsible for review of departmental reports for possible inclusion in GITS. If the review process is working properly (see reliability evaluation later on), every field incident report also receives another review for gang-relatedness. Gang-related incidents then are coded onto the GITS form by individuals assigned that task in each department and forwarded to the research team. There, the forms are reviewed for completeness and potential errors. Those that fail this screening are rejected and returned to the department for correction. Those that pass are entered into the GITS database. Once data have been entered, a member of the project team conducts a last check to assure that they were entered accurately. If not, the errors are corrected.

Research Objectives

The Orange County Gang Incident Tracking System (GITS) collected more, and more detailed, cross-jurisdictional information about gang incidents than had ever been assembled before. So long as these data provide a reasonably valid, reliable, and complete picture of gang activity, they pose a unique opportunity to evaluate the nature, extent, and effects of street gang crime in a large metropolitan region. Our initial research objectives were to:

- Evaluate the validity and reliability of GITS data;
- Describe and, if possible, explain the nature and distribution of gang crime as well as attempt to assess the effectiveness of various gang prevention, intervention, and control strategies;
- Determine the effects of fear of gangs and gang crime on residents of Orange County; and
- Evaluate how well GITS met the initial goals set for it.

Obviously, it would not be possible to exhaust the research potential of such an extensive data collection project—especially when more than half of project staff time was devoted to mundane tasks such as data collection, entry, and geocoding as well as the endless coordination and

administrative tasks associated with the cooperative effort of more than 30 government agencies. In the following four sections we present results of our evaluation of GITS reliability and validity and our assessment of the effects of fear of gangs and gang crime on county residents. We also describe the nature and extent of gang crime in the region and present results of explanatory research (with the caveat that there still is substantial potential in the data with regard to explaining gang crime).

Objective 1: Understanding Gang Crime and Anti-Gang Strategies. Use geographic information system and multi-variate statistical techniques to analyze the extensive Orange County gang incident data collected by OCCSA in order to (1) increase understanding of the nature and distribution of gang incidents reported by the police, and (2) test the effectiveness of different gang prevention and control efforts initiated by law enforcement agencies, such as “street sweeps” and targeting gang leadership. Potential research questions under this objective included:

- What is the extent of the gang problem in Orange County?
- How many gang-related incidents are there?
- How many gangs are there, where are they located, how many members do they have, what are their personal characteristics, and what types of crimes do they commit?
- Are there statistically significant relationships between gang incidents reported by police in Orange County and social, economic, demographic, educational, ecological and geographical variables?
- What strategies are likely to be more effective for combating gang crime?
- Are different control and prevention strategies effective against different types of gangs?
- Does suppression of gang activities in one area displace them to another area?

- Does suppression of one type of gang activity deflect gang members toward other types of crime?
- What effect does removal of gang leaders have (i.e., does it lead to more or less violence by gang members and is any increase in violence focused inside or outside the gang)?

Objective 2: Fear of Gang Crime. Identify factors that contribute to community members' perceptions of—and fears about—gang violence and compare residents' fears to actual levels of gang activity in the county so that law enforcement efforts may be targeted to address community concerns more efficiently and effectively. Potential research questions under this objective included:

- How much fear do Orange County residents currently have about gang violence?
- How closely are these fears related to actual risks of victimization?
- What factors have the most impact on residents' perceptions of, and fears about, gang activity?
- What effect does increased gang violence—or the perception of increased gang violence—have on residents' day-to-day activities and quality of life?

Objective 3: GITS Validity and Reliability Evaluation. Determine how completely, accurately and reliably Orange County law enforcement agencies measure illegal gang activity. Potential research questions under this objective included:

- Are current techniques for measuring gang-related incidents and violence and for identifying gang members valid?
- How consistently are gang members and gang-related incidents identified by officers within and between law enforcement agencies?

- What can be done to improve collection of data on gangs and gang incidents in Orange County?

Objective 4: GITS Program Evaluation. Determine how well GITS meets the goals originally set by law enforcement officials and identify ways to improve the original program goals.

Dissemination of Project Information

Another of the project deliverables was an active effort to disseminate information to academics, practitioners, and policy makers. Since 1995, we have presented 23 conference papers on GITS research, given 17 talks to practitioner bodies and the general public, prepared nine extensive reports for local agencies, and prepared two more specialized analyses for federal agencies. We also have published three doctoral dissertations, one refereed journal article—with an additional eight under preparation along with a book. Appendix C provides a complete listing of publications, presentations, and other information dissemination activities.

OBJECTIVE 1: UNDERSTANDING GANG CRIME AND ANTI-GANG STRATEGIES

Our objective in this portion of the research was to analyze the extensive Orange County gang incident data collected by OCCSA using geographic information system software and multivariate statistical analysis techniques to (1) increase understanding of the nature and distribution of gang incidents reported by the police, and (2) test the effectiveness of different gang prevention and control efforts initiated by law enforcement agencies, such as “street sweeps” and targeting gang leadership. Dr. Katie J.B. Parsons shouldered primary responsibility for oversight of data screening and entry activities, Dr. Thomas E. Fossati was team leader for crime mapping and geospatial analyses. Mr. Douglas Wiebe took a leadership role with regard to temporal analyses and the evaluation of gang prevention and control efforts.

Nature and Distribution of Gang Incidents, 1994-1997

GANG INCIDENT TRACKING SYSTEM DATABASE

The original Gang Incident Tracking System (GITS) reporting forms collected information on gang identification, map grid location, 21 crime categories, and number of juveniles and adults arrested for each incident. Information about motivating factors, drugs and alcohol, and weapons involved in the incident also were collected, as was information about victim/offender relationship. The form was changed in 1995 to collect specific incident address data that would enable us to apply GIS analysis, and all 1994 cases were updated to include incident addresses. For reporting purposes, the “type of incident” entry is divided into three main categories: violent crime, property crime, and other crime. More specific findings are listed for

particular elements found on the GITS reporting sheet. Due to the amount of information tracked by this database, specific findings are limited to major elements found on the GITS data form.

In 1996 the data coding forms were revised based upon departmental input from all jurisdictions. There were two major category changes. First, the crime categories were expanded to allow coders to indicate the penal codes designated on the departmental reports. This eliminated the need for coders to translate specific penal codes into the 1994–1995 crime categories, reducing error. Coders also were given the opportunity to indicate more than the most serious crime related to the incident. Another major change in the data coding form included the victim relationship category. On the 1994–1995 forms, the victim category was not reliable due to overlapping meanings in the categories creating confusion for coders. The new form was modified to clear up confusion and to reflect the desire for information about gang-on-gang crime versus gang-on-non-gang crime. Appendix A provides copies of the coding forms and describes the data collection system in more detail.

Findings for 1994-1997 Gang-Related Crimes

GENERAL FINDINGS

The findings reported here represent all data entered into the Gang Incident Tracking System (GITS) by May 1, 1998 for Orange County. Because data forms were changed to collect information on penal codes, only incidents that contained one of the original 21 crime categories are included in 1996 and 1997 data. The use of penal codes resulted in 42 separate crime categories. Those additional categories include alcohol, conspiracy, contributing to minors, counterfeiting, court order violations, curfew violations, domestic abuse, fraud, narcotic possession, narcotic use, probation violation-adult, probation violation-juvenile, receiving stolen

property, reimprisonment of parolee, school, status offenses, suspicious circumstance, theft, traffic, trespassing, and other.

NUMBER OF GANG-RELATED INCIDENTS

The first two tables present the number of violent, property and other crimes reported to the GITS system for 1994, 1995, 1996, and 1997. To the right of the total number is the relative proportion of reported gang-related crime that this category represents. Table 1 reports the number of crimes occurring in the broad categories, and Table 2 reports a more detailed description of the specific crimes included in the original 21 crime categories.³

Table 1. Major crime categories

INCIDENT CATEGORY	ALL 94	% 94	ALL 95	% 95	ALL 96	% 96	ALL 97	% 97
TOTAL REPORTED	3600	100	3407	100	3408	100	3227	100
VIOLENT INCIDENTS	1628	45.2	1598	46.9	1832	53.8	1578	48.9
PROPERTY INCIDENTS	492	13.7	425	12.5	235	6.9	204	6.3
OTHER INCIDENTS:	1480	41.1	1384	40.6	1341	39.3	1445	44.8
NARCOTIC SALES	94	2.6	114	3.3	102	3.0	48	1.5
VANDALISM/GRAFFITI	844	23.4	725	21.3	716	21.0	1019	31.6
WEAPON LAW VIOL.	542	15.1	545	16.0	523	15.3	378	11.7

³ Data collection for the years 1994 and 1995 are directly comparable. The 1996 data were collected on a new form with crimes being recorded differently. In 1994 and 1995, broad crime categories were checked by the data coders. In 1996 and 1997, data coders simply entered the penal code section(s) from the police field report in the incident blank on the form. These penal codes then were aggregated into the larger crime categories used in 1994 and 1995. In 1994 and 1995 vandalism and graffiti were two distinct categories. The penal code used for law enforcement purposes covers both activities. For ease in analyzing the data, vandalism and graffiti were collapsed for the first two years and are described as “other crimes.” This category was created to avoid weighing down the “property incidents” category with unreliable data.

Table 2. Detailed crime incidents by year

TOTAL REPORTED INCIDENTS	94	%94	95	%95	96	%96	97	%97
VIOLENT INCIDENTS								
ASLT/BATT. ON POLICE	33	0.9	18	0.5	101	3.0	103	3.2
CARJACKING/ROBBERY	48	1.3	47	1.4	28	0.8	18	0.6
EXTORTION	9	0.3	8	0.2	2	0.1	5	0.0
FELONIOUS ASSAULT	542	15.1	585	17.2	516	15.1	359	11.1
HOME INVASION ROB'RY	21	0.6	42	1.2	0	0.0	0	0.0
HOMICIDE/MANSLA'TER	67	1.9	66	1.9	45	1.3	29	0.9
WITNESS INTIMIDATION	12	0.3	11	0.3	13	0.4	6	0.2
KIDNAPPING	9	0.3	4	0.1	8	0.2	6	0.2
MISD. ASSAULT/BATTERY	177	4.9	161	4.7	162	4.8	149	4.6
ROBBERY	519	14.4	424	12.4	764	22.4	748	23.2
SEXUAL ASSAULT	22	0.6	10	0.3	13	0.4	12	0.4
SHOOT-INHAB. DWELNG.	108	3.0	116	3.4	110	3.2	75	2.3
SHOOT-UNINHAB. VEH.	25	0.7	44	1.3	20	0.6	15	0.5
TERRORISM	36	1.0	62	1.8	50	1.5	53	1.6
VIOLENT TOTAL	1628	45.2	1598	46.9	1832	53.8	1578	48.9
PROPERTY INCIDENTS								
ARSON	7	0.2	4	0.1	6	0.2	1	0.0
AUTO THEFT	169	4.7	122	3.6	83	2.4	72	2.2
BURGLARY	316	8.8	299	8.8	146	4.3	131	4.1
PROPERTY TOTAL	492	13.7	425	12.5	235	6.9	204	6.3
OTHER INCIDENTS								
NARCOTICS SALES	94	2.6	114	3.3	102	3.0	48	1.5
VANDALISM/GRAFFITI	844	23.4	725	21.3	716	21.0	1019	31.6
WEAPON LAW VIOL.	542	15.1	545	16.0	523	15.3	378	11.7
OTHER TOTAL	1480	41.1	1384	40.6	1341	39.3	1445	44.8
TOTAL ALL INCIDENTS	3600	100.0	3407	100.0	3408	100.0	3227	100.0

Figure 2 illustrates the relative proportion of incidents which fall into each broad crime category during all years. Therefore, it is possible to determine the change in the relative proportions over time. Remember that vandalism and graffiti have been collapsed into one category.

Figure 2. Percentage of incidents in each major crime category

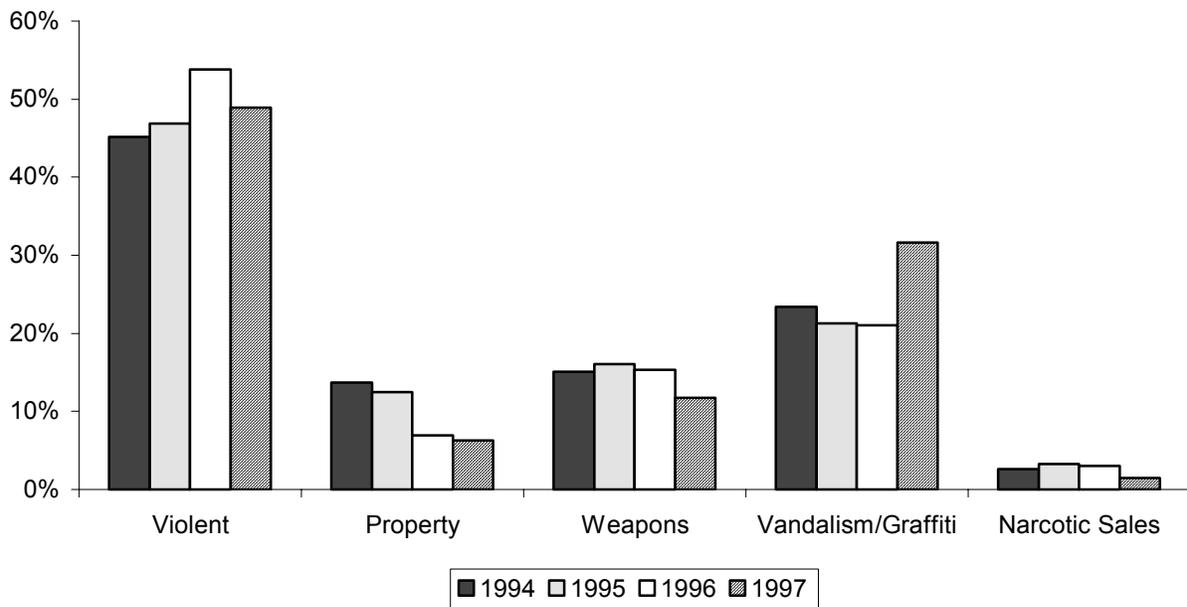


Figure 3 has two columns, one indicating adult arrests and another indicating juvenile arrests. Each column illustrates the *number of incidents* in which there was an arrest. It does not represent the total number of adult and juvenile arrests. A single incident could be counted in each component because:

- both adults and juveniles could be arrested in a single incident
- more than one individual can be arrested in a single incident.

Figure 3. Adult and juvenile arrests in gang-related incidents

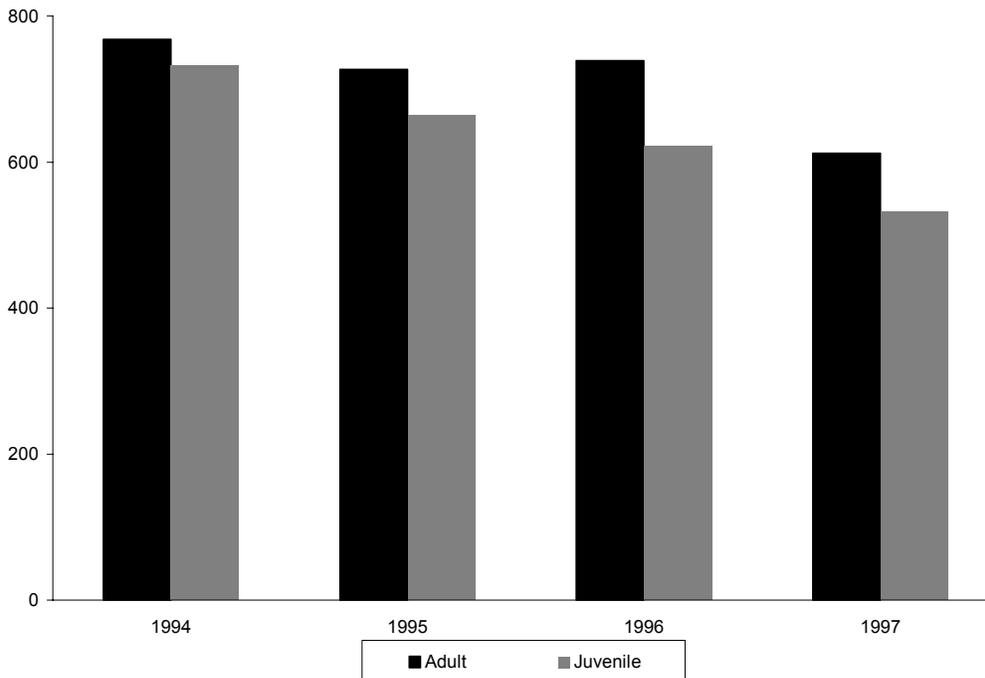


Figure 4 indicates the number of times that three key types of motivating factors were linked to gang incidents in from 1994 to 1997. Gang-related factors include gang rivalry, retaliation, territorial disputes, intimidation and initiation. Economic gain and personal conflict are self-explanatory. It is important to note that coders could choose more than one factor when filling out the GITS form based upon the information contained in the police field report. For example, an incident could be linked to both personal conflict and economic gain.

Figure 4. Known motivating factors in Orange County gang incidents, 1994–1997

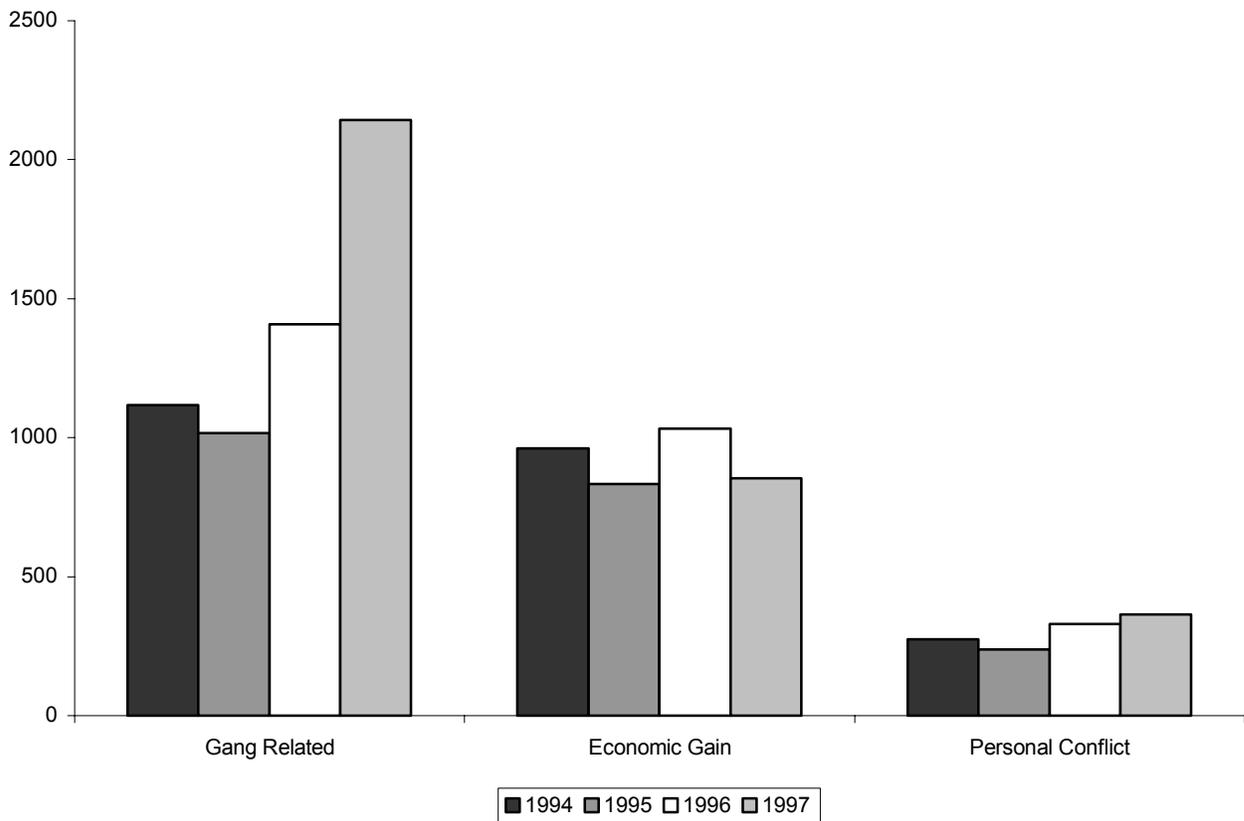
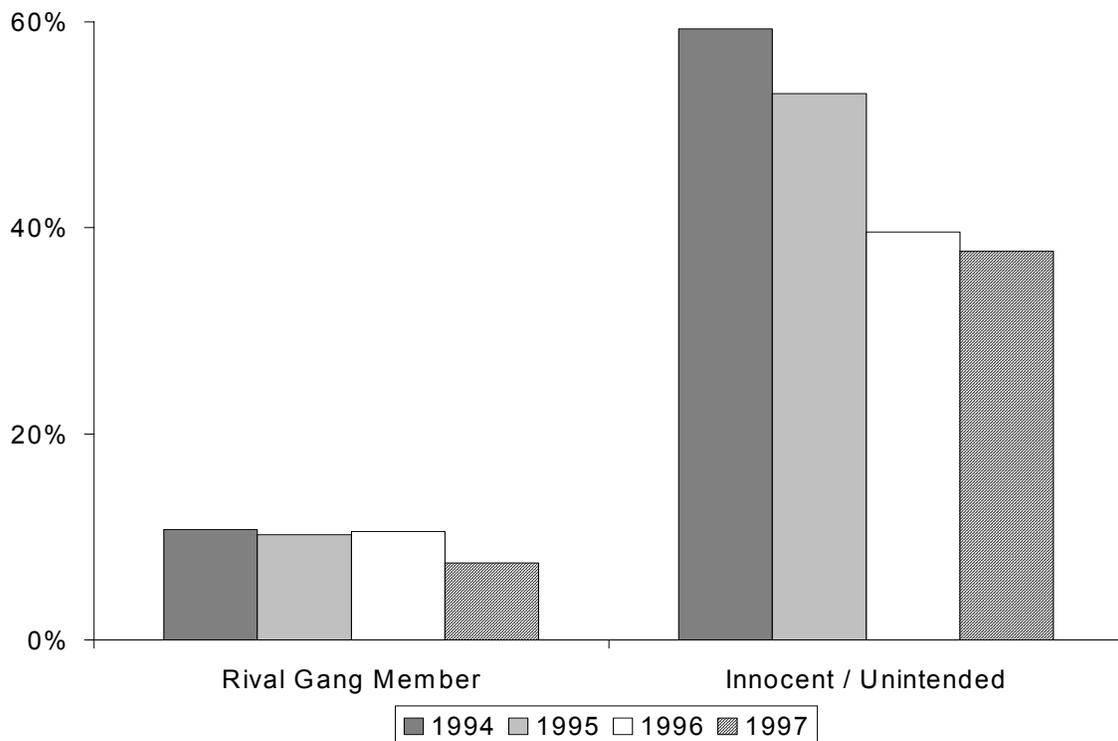


Figure 5 provides information about known victims of gang-related crime (personal and property).⁴ Changes in reporting make it difficult to compare victim information for 1994–1995 with that from 1996–1997. Coders were asked to determine if the victim was an acquaintance of the suspect, an innocent or unintended victim, or a rival gang member. However, a person actually could be an acquaintance, an innocent bystander, and an unintended victim. This was confusing for coders and we do not consider data for 1994–1995 to be reliable. In 1996, we modified the coding sheet to minimize these sources of error. Coders were asked to respond to two separate questions, whether the victim was a rival gang member or not, and whether the victim was intentionally or unintentionally injured.

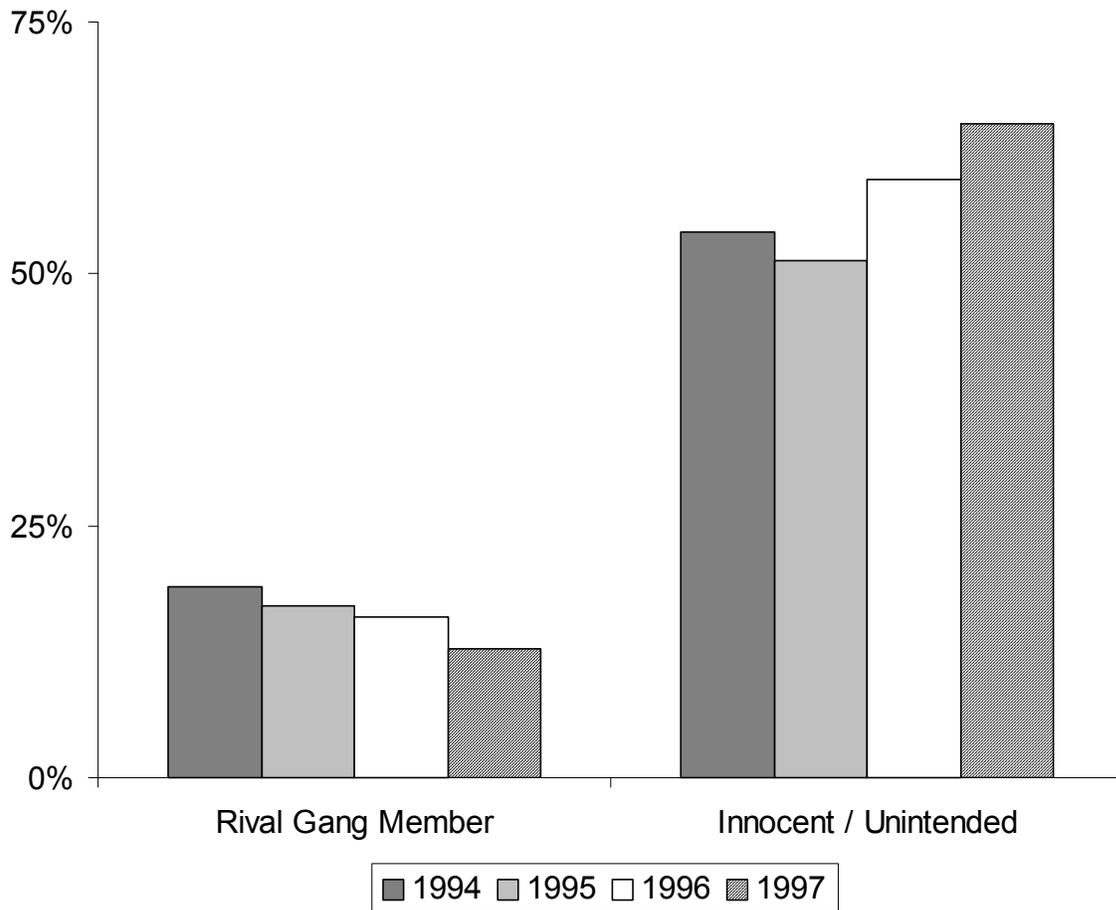
Figure 5. Known victims of gang incidents, 1994-1997



⁴ Victims were identified in 3,058 incidents in 1994, 2,951 incidents in 1995, 2,763 in 1996, and 2,715 in 1997.

Figure 6 provides information about known victims of gang-related *violent* crime.⁵ Again, data for 1994 and 1995 are not reliable due to overlapping categories on the old data coding sheet. Nevertheless, relative consistency of reports over the four-year period gives some perspective on relationships between victims and offenders in violent gang incidents.

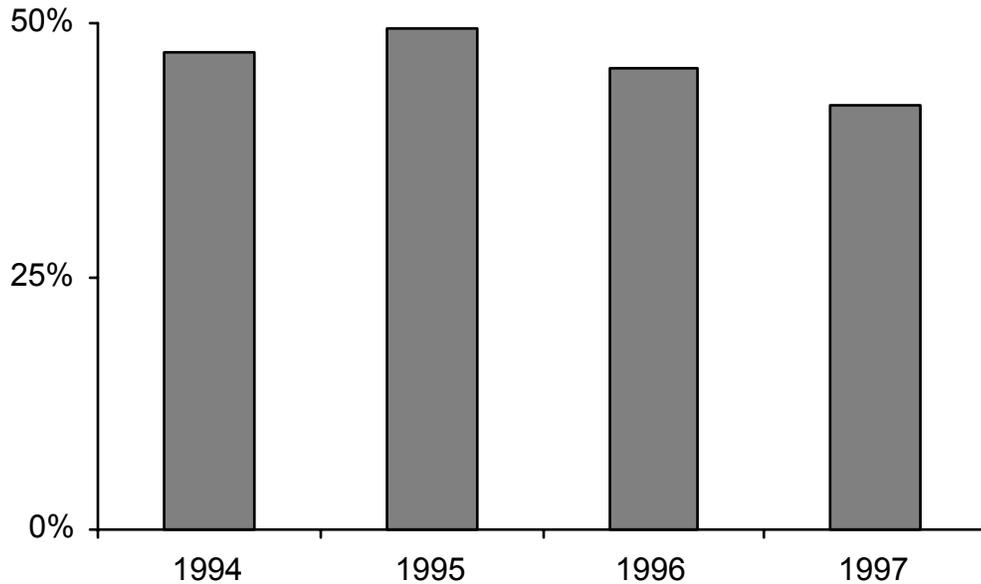
Figure 6. Known victims of violent gang Incidents, 1994-1997



⁵ The number of violent incidents in which a victim was identified in 1994, 1995, 1996, 1997 respectively was 1,528, 1,532, 1,718, and 1,454.

Figure 7 depicts the proportion of gang-related incidents in which firearms such as handguns, rifles, shotguns, or automatic weapons were used during 1994–1997.⁶

Figure 7. Firearm use in gang-related incidents



Temporal Distribution of Gang Incidents: Hourly Trends for Juvenile and Adult Arrest Incidents, 1994–1996

INTRODUCTION

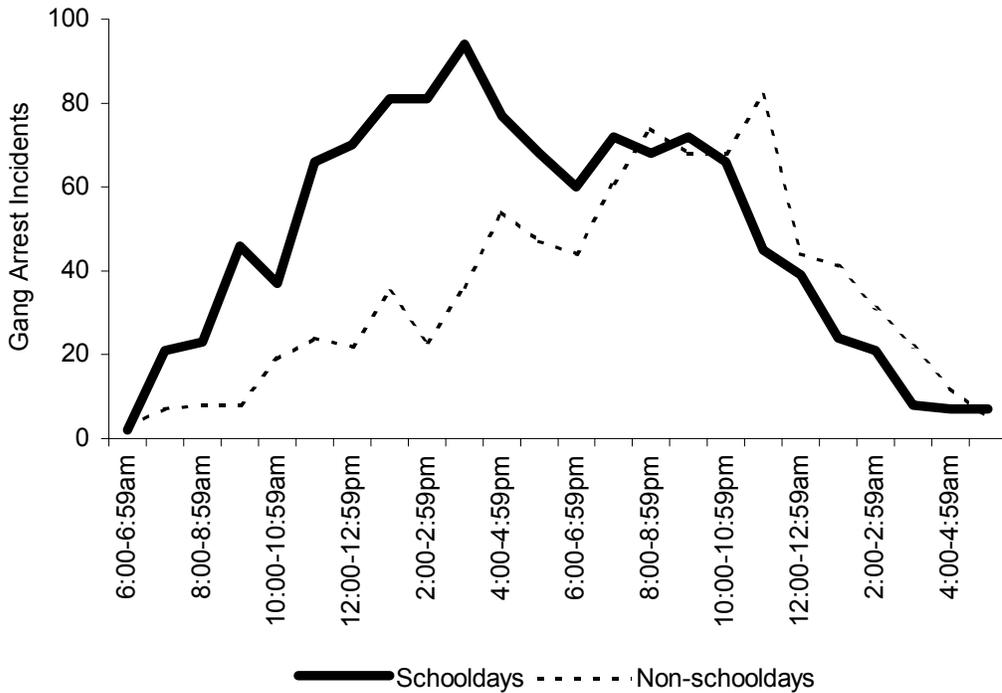
We used data from the Gang Incident Tracking System (GITS) to analyze hourly trends of gang incidents that resulted in a juvenile and/or adult arrest. Mr. Douglas Wiebe took the lead on temporal analysis of gang arrest incidents. GITS records contain 10,393 incidents of gang-related crime in the years 1994–1996. Of these, 3,801 (36.6 percent) involved arrests of

⁶ Incidents involving the use of firearms numbered 1,628 in 1994, 1,598 in 1995, 1,832 in 1996, and 1,578 in 1997.

juveniles under age 18 or adults. Both juveniles and adults were arrested in 445 incidents (11.7 percent). 2,016 incidents (53.0 percent) had at least one arrest of a juvenile, and 2,230 incidents (58.7 percent) had at least one arrest of an adult.

JUVENILE GANG INCIDENTS ON SCHOOLDAYS AND NON-SCHOOLDAYS

Figure 8. Hourly juvenile gang-related arrest incidents on 550 schooldays (N=1,155) and 546 non-schooldays (N=838) in 1994–1996.



The hourly trend of juvenile gang-related arrest incidents committed during schooldays in Orange County is substantially different than the trend for non-schooldays. Figure 8 shows the hourly trend of (gang related) juvenile arrest incidents for all crime categories (i.e., violent crime, property crime, narcotics offenses, weapons law violations, and tagging/vandalism) occurring during schooldays and non-schooldays. The number of incidents resulting in arrest on

schooldays increases rapidly during the morning and early afternoon and peaks between 3–3:59 p.m. Unlike non-gang violent juvenile victimization (Sickmund, Snyder & Poe-Yamagata, 1997: 26), gang arrest incidents begin increasing sharply very early on schooldays (between 7:59 a.m). The hourly number of arrest incidents then decreases until 6:59 p.m, increases slightly between 8–9:59 p.m., and then steadily decreases after 10 p.m. During the data collection period, all Orange County jurisdictions had curfew laws in effect on schooldays, most starting at 10 p.m.

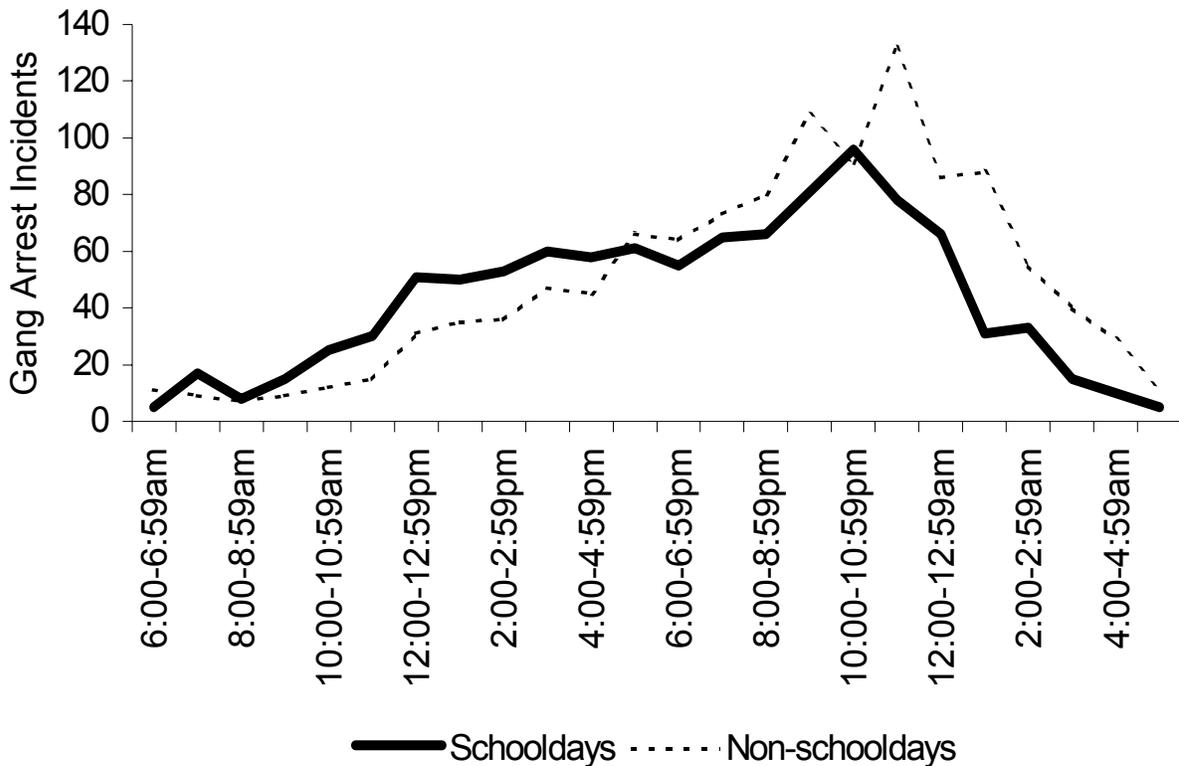
Thirty-five percent of juvenile gang arrest incidents on schooldays occur during the typical seven-hour schoolday from 8 a.m. to 2:59 p.m., and 20.7 percent occur during the first three hours after school, from 3–5:59 p.m. While other research found this after-school period to be the peak time for *all* juvenile crime (Sickmund, Snyder & Poe-Yamagata, 1997: 26), the GITS data show a different pattern. That is, the same number of gang-related juvenile arrest incidents (20.1 percent) in Orange County occur during the last three hours of the school/day as occur during the three hour after-school period. The early afternoon on schooldays appears to be just as volatile as the period immediately after school with regard to gang incidents involving juveniles.

On non-schooldays (weekends, summers and vacations), the hourly arrest trend follows a different pattern. Arrest incidents increase more gradually overall until the most active hour between 11–11:59 p.m. A greater proportion of non-schoolday incidents occurs later in the evening, and far fewer daytime incidents occur on non-schooldays. This becomes evident when the incident rate during the 8 a.m. to 2:59 p.m. period is compared for schooldays and non-schooldays: .74 arrest incidents per period on schooldays versus only .26 arrest incidents per period on non-schooldays. The overall daily incident rates also differed. There were 2.1 arrest incidents per schoolday and 1.5 arrest incidents per non-schoolday in 1994–1996.

ADULT GANG INCIDENTS ON SCHOOLDAYS AND NON-SCHOOLDAYS

Hourly trends for adult incidents do not vary significantly between schooldays and non-schooldays. Figure 9 shows that while adult gang arrest incidents peak an hour earlier on schooldays than on non-schooldays, the overall trends of gradually increasing arrest incidents over the course of the day are quite similar. The most notable difference is that more of the schoolday arrest incidents occur earlier in the day, and more of the non-schoolday arrest incidents occur later in the evening. There were 1.9 arrest incidents per schoolday for adults and 2.2 arrest incidents per non-schoolday. Finally, adult gang-related arrest incidents do not increase rapidly in early morning hours on schooldays as do juvenile arrest incidents.

Figure 9. Hourly number of adult gang-related arrest incidents on 550 schooldays (N=1,034) and 546 non-schooldays (N=1,180) in 1994–1996



JUVENILE GANG-RELATED ARRESTS FOR DIFFERENT TYPES OF CRIMES⁷

Figure 10 compares the hourly trends of juvenile gang-related violent crime⁸ and property crime⁹ arrest incidents that were reported to GITS. There were a total of 605 violent arrest incidents and 413 property arrest incidents in the period 1994–1996. Violent crimes peak in the afternoon (between 3–3:59 p.m.), early evening (between 8–8:59 p.m.), and nighttime (between 11–11:59 p.m.). This trend varies substantially between schooldays and non-schooldays with schoolday incidents occurring mainly during the afternoon, and non-schoolday incidents in the evening and nighttime.

A majority of the juvenile property crime arrest incidents occur after 4 p.m. (68.0 percent), and juveniles are involved in more property crime arrest incidents than violent crime arrest incidents in the early morning hours.

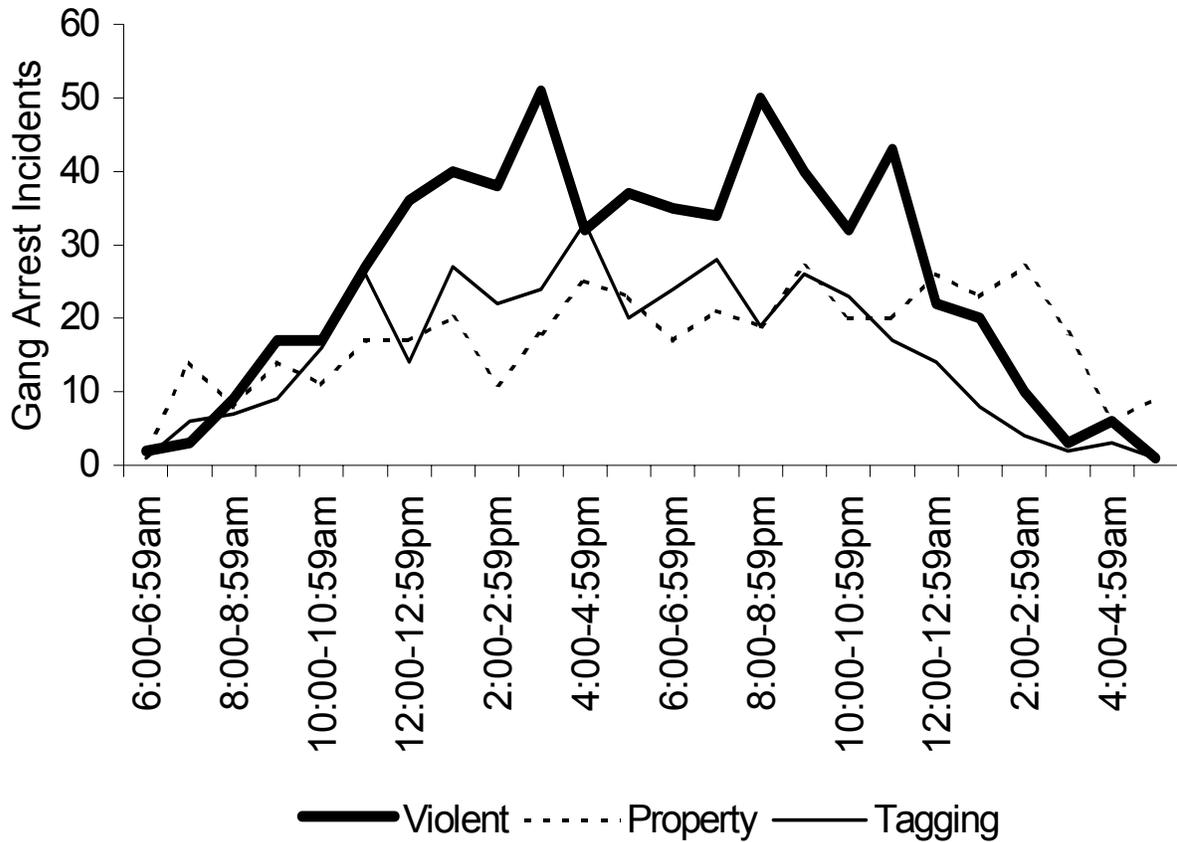
Juveniles were arrested in 374 incidents of tagging and vandalism, and the distribution of those incidents is quite consistent between the hours of 4 p.m. and 2:59 a.m. Tagging appears to be more of a late night activity for juveniles than are violent and property crimes.

⁷ GITS data are grouped by five major crime types: violent crimes, property crimes, narcotics offenses, weapon law violations, and tagging/vandalism. The juvenile and adult trends of narcotics offenses and weapons law violations are not addressed here.

⁸ Violent crime incidents include assault and battery on a police officer, car jacking, extortion, felonious assault, home invasion robbery, homicide, intimidation of a witness, kidnapping, misdemeanor assault and battery, robbery, sexual assault, shooting into an inhabited dwelling, shooting into an uninhabited vehicle, and terrorism.

⁹ Property crime incidents include arson, auto theft, and burglary. Theft data are available only for 1996 and subsequent years and are therefore excluded from this analysis.

Figure 10. Hourly number of juvenile gang-related violent (N=605), property (N=413) and tagging (N=374) arrest incidents in 1994–1996

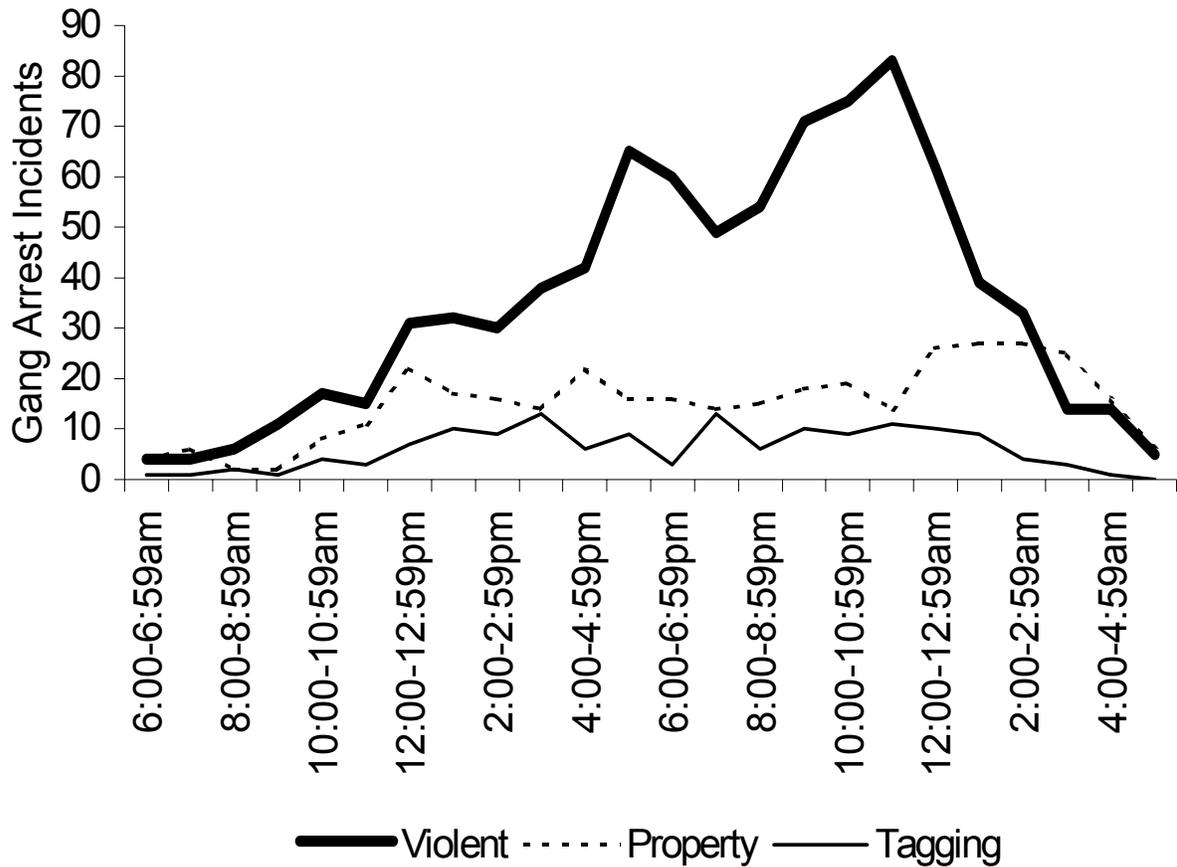


ADULT GANG-RELATED INCIDENTS OF VIOLENT CRIME, PROPERTY CRIME, AND TAGGING

Figure 11 shows that the majority (38.4 percent) of gang-related incidents resulting in adult arrests involve violent crime, and that violent gang arrest incidents are most likely to occur between 5–6:59 p.m. and in the late evening between 9–11:59 p.m. It also is important to note that the number of violent adult gang-related arrest incidents is much greater than the number of violent juvenile arrest incidents. Adult arrests peak at 83 between 11–11:59 p.m., compared to a peak of 50 juvenile arrest incidents between 3–3:59 p.m. Adults actually were involved in 41.2 percent more violent arrest incidents than were juveniles. In each of the three years, adults have much higher rates of gang-related arrests for violent crimes than juveniles.

Arrest incidents for property crime indicate a much flatter trend and relatively few adults were arrested for tagging and vandalism (which were widely dispersed, with some fluctuation, between 10 a.m. and 2:59 a.m). Note that whereas Figure 10 shows 374 juvenile arrests for tagging, only 145 adults were arrested for tagging.

Figure 11. Hourly number of adult gang-related violent (N=854), property (N=363) and tagging (N=145) arrest incidents in 1994–1996



CONCLUSIONS

We reached several tentative conclusions with respect to the temporal distribution of gang-related crime in Orange County. Similar proportions of juveniles and adults were arrested for gang-related incidents reported to the police. However, adults have much higher violent

arrest rates than juveniles, and—compared to juveniles—a much lower proportion of gang-related adult arrests are for property crimes. Overall, adult street gang crime in Orange County appears to be a more serious problem than juvenile gang crime.

Adult offenses for all types of crime are unaffected by schoolday and non-schoolday periods; that is, they show similar time-of-day patterns during either period. In contrast, gang-related¹⁰ juvenile offenses peak much earlier in the day on schooldays. Moreover, the number of juvenile gang-related arrests at the peak hours on schooldays (at 2–2:59 p.m.) is much higher than at the peak on non-schooldays (from 11–11:59 p.m.). Another important difference between juvenile and adult gang-related arrests is that, on schooldays, the number of juvenile arrests for all offenses increases sharply early in the day (climbing steadily from 7:00 a.m. to 3:59 p.m.), whereas adult arrests climb slowly throughout the day and peak in the evening. The data clearly suggest that adult and juvenile gang intervention strategies reflect different needs at different times of the day.

Explaining Violent Gang Crime Variation

INTRODUCTION

Orange County officials began to measure gang crime in 1993 to determine its extent and to track changes over time. While a number of researchers have found a relationship

¹⁰ At the request of OJJDP, we compared our findings regarding gang-related juvenile arrests with data from another state (Sickmund et al., 1997) on juvenile temporal offense patterns. We found that there appears to be an important difference between temporal patterns for gang-related versus non-gang-related juvenile offenses. While gang-related juvenile offenses precipitously and steadily increase throughout the schoolday, non-gang juvenile offenses increase much more slowly throughout the schoolday and show a sharp increase between 3–4:00 p.m. (Sickmund et al., 1997: 26). However, a strict comparison of these trends is problematic as are assumptions concerning when the school day ends. The gang and juvenile data are from different states, which well may differ in terms of school dismissal times. What is clear, however, is that more crime occurs in the early afternoon for both sets of data and policies should be tailored to focus on this time period.

between violent crime and community characteristics in larger, well-established cities such as Chicago, it was unclear if such relationships existed in a region like Orange County, which is made up of many smaller cities and unincorporated areas. (See generally Blau and Blau, 1982; Block and Block, 1995; Burgess, 1925; Bursik, 1986; Bursik, 1988; Bursik and Grasmick, 1993; Byrne and Sampson, 1986; Figlio, Hakim and Rengert, 1986; Sampson, Castellano, and Laub, 1981; Stahura and Huff, 1981; Sampson, 1985; Sampson and Groves, 1989; Taylor and Covington, 1988; Warner and Pierce, 1993). To date, researchers have not been able to study violent gang crime in multiple contiguous jurisdictions. Thus, it is unclear if relationships between community factors and gang crime will be in areas that depart from traditional city modes of organization, or when a mosaic of multiple contiguous cities like these existing in Orange County are analyzed together.

Our goal here is to determine if similar patterns exist in Orange County between violent gang crime and community characteristics, as are suggested by research conducted in traditional cities (e.g., see Evans, 1980; Fabrikant, 1979; Georges, 1978; Georges-Abeyie and Harries, 1980; Gottfredson, McNeil and Gottfredson, 1991; Greenberg, Rohe, and Williams, 1982; Harries, 1976; Harries, 1990; Maxson, Gordon and Klein, 1985; Reiss, 1986; Roncek, 1981; Roncek and Bell, 1981; Sampson, 1983). Previous research has been unable to determine if the geographic concentration of crime is solely an inner city problem, or if similar relationships would be found in non-urban areas with similar social, economic, and demographic characteristics. It also is unclear whether community-based theories can explain violent gang crime in a growing metropolitan area that includes multiple jurisdictions. In other words, do community-based theories have any external validity when the area under study is not a large traditionally structured city?

BACKGROUND

The social disorganization perspective can be traced back to Durkheim (1897) who suggested rapid social change and the resulting breakdown of social controls are associated with increases in crime. These basic tenets were further examined by Park and Burgess (1921) and later by Shaw and McKay (1931), who found geographic mobility was related to crime within a community. Shaw and McKay's central thesis was that a high rate of delinquency reflected the inability of a community to engage in self-regulation. Berry and Kasarda (1977) suggest that primary associations result in forms of informal social control that are less effective when local networks are in a constant state of flux.

Ecological factors and social disorganization often have been used to explain crime in communities. Shaw and McKay (1942), contended crime rates are associated with the inability of local institutions and organizations to control behavior. Neighborhood deterioration, shifts from single to multiple family dwellings, residential mobility, size of the minority population and the number of females in the labor force appear to be antecedents to rising crime rates in communities (Burgess, 1925; Bursik, 1986; Schurman and Kobrin, 1986). Burgess (1925) suggested that these ecological factors contribute to crime because they overload the ability of local institutions to function effectively. Recent studies (see Cau and Maume, 1993; Sampson, Raudenbusch and Earls, 1997; Taylor and Covington, 1988; Taylor and Covington, 1993; Warner and Pierce, 1993) have used a more integrated theoretical framework, which includes many of the dimensions found in traditional community-based theories.

More recently, technological advances have given rise to changes in methodological approaches for studying the community/crime relationship. The use of Geographic Information System (GIS) and spatial statistics have proven beneficial in other fields, and are likely to enhance our understanding of geographic or spatially related problems such as crime (See

generally Anselin, 1990; Anselin, 1994; Anselin and Getis, 1992; Anselin and Hudak, 1992; Anselin and Hudak, 1993; Baily, 1994; Cliff and Ord, 1973; Cliff and Ord, 1981; Goodchild, 1987; Goodchild, Haining and Wise, 1992; Griffith, 1987; Haining, 1990; Land, McCall and Cohen, 1990; Rich, 1995).

We examined the community-based theoretical dimension of crime in Orange County to determine if similar patterns exist between community structure and violent gang incidents, as have been found by past research, in mature cities. This relationship was tested by applying GIS and spatial analytical methods to GITS data on gang incidents and tract-level census data.

RESEARCH DESIGN

Dr. Thomas E. Fossati took the lead in performing GIS analysis for the project. We used 5,540 violent gang incidents for the years 1994–1997 from the Gang Incident Tracking System database. Violent incidents are represented by points located at the address where the incident occurred. Census tract boundaries are polygons created from U.S. Bureau of the Census Tiger files. Orange County contains 485 census tracts covering approximately 798 square miles with a population of 2.4 million people. Analysis for this study is based on 471 census tracts, excluding 14 tracts found in mostly rural or sparsely populated areas within the county. Of these 14 tracts, nine contained fewer than 100 persons per square mile, four were missing all census-based data, and one was a naval station. The total area under study was reduced by 224 square miles, approximately 28 percent of the total area within Orange County. Total persons were reduced by 12,792 or 0.53 percent of the county population. Gang incidents were reduced by 41 or 0.6 percent of the violent gang incidents reported in the county over the four-year period.

Incident and census data sets were integrated using ArcView version 3.0a. A point in polygon overlay was used to determine the tract containing each incident. Incident level data

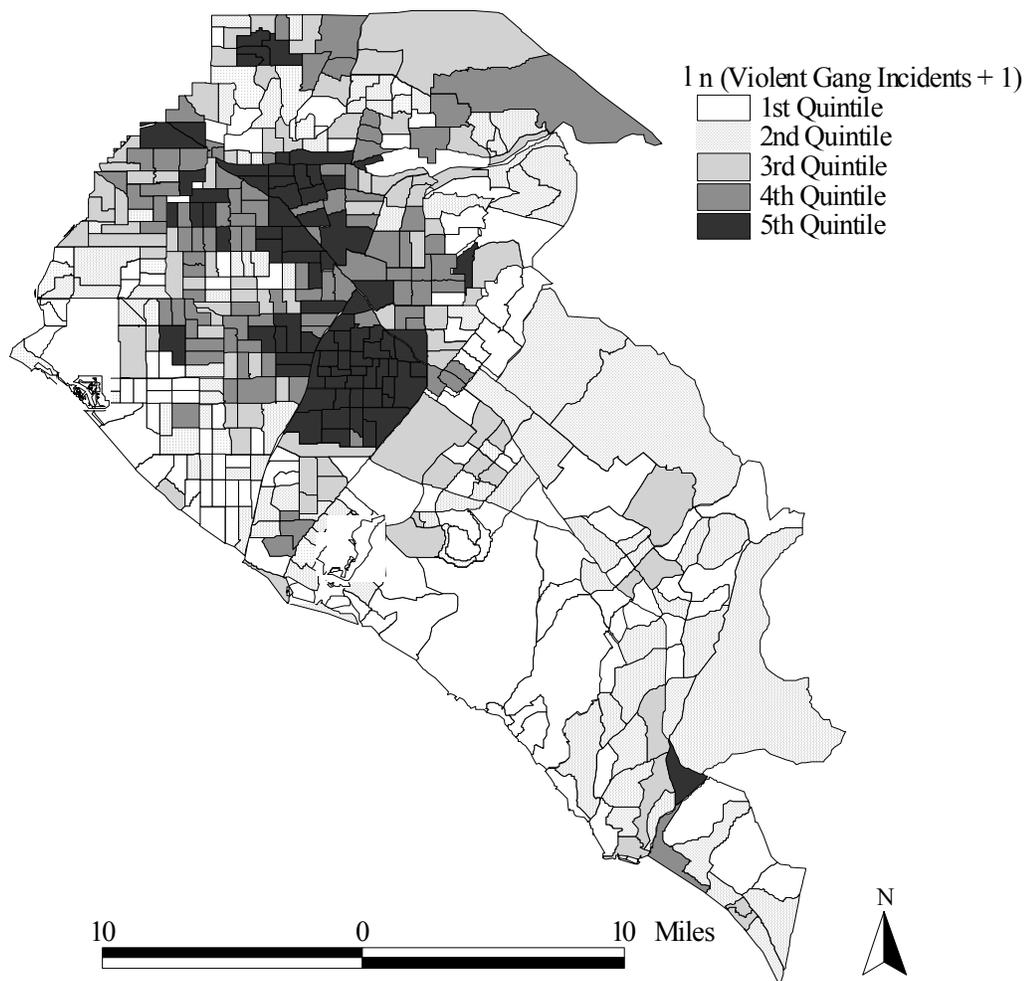
then were aggregated, resulting in counts for the number of violent crimes contained within each tract boundary. Table 3 contains descriptive statistics for violent gang incidents.

Table 3. Descriptive statistics for violent incident measures in Orange County census tracts

VIOLENT INCIDENT:	Min	MAX	SUM	MEAN	STD. DEV	SKEW	KURT
CARJACKING/ROB'RY	0	6	155	.33	.84	3.40	13.92
FELONIOUS ASSAULT	0	39	2135	4.53	7.05	2.35	5.78
HOMICIDE	0	9	208	.44	1.14	3.82	17.51
ROBBERY	0	102	2501	5.31	11.77	3.83	18.17
SHOOTING INTO INHABITED DWELLING	0	19	429	.91	2.35	3.71	16.43
SHOOTING INTO UNINHAB. DWELLING	0	8	112	.24	.84	4.85	28.39
VIOLENT GANG INCIDENTS	0	160		11.76	21.76	3.17	11.60
LN (VIOLENT GANG INCIDENTS +1)	.00	5.08		1.59	1.34	.50	-7.25

The individual incidents along with the variable created for violent incidents are highly skewed. To induce normality in violent incidents the variable was transformed with a natural log function. Since the natural log of 0 is undefined, a constant (+1) was first added to the violent incident variable for each census tract. Descriptive statistics for incidents used in the creation of the violent incident measure, along with violent incidents and the transformed violent incident measure are located in Table 3. Further analysis with violent incidents will be based on the natural log transformation of violent gang incidents. Figure 12 illustrates the location and concentration of violent gang incidents within each census tract throughout the county.

Figure 12. Violent gang incidents by census tract. (Darker colors represent greater numbers of violent incidents)



Community structure data are based on 1990 U.S. Census data for 471 census tracts in Orange County. Census data were extracted from Summary Tape Files (STF) 1A and STF 3A. STF 1A contains full count demographic information down to the block group level. STF 3A provides more detailed demographic information but is based on sample count information. Full count STF 1A data have no sampling error, while the more detailed STF 3A data are subject to sampling variability (Myers, 1992). Brief descriptions of the census-based data used in this study are provided in Table 4.

Table 4. Description of data sources used and variable information for community structure

VARIABLE:	CENSUS FILE	DESCRIPTION	UNIVERSE
NOVEHICLE	STF3A	% Housing units with no vehicles available	Occupied housing units
RACIAL HETERO	STF1A	$(1 - \sum p^2)$ where p is fraction of population in a given group	Persons
FOREIGNBRN	STF3A	% Foreign Born	Persons
MINUNDER25	STF1A	% Minorities under age 25	Minority under 25/ persons under 25
HOUSE85	STF3A	% Living in same residence in 1985	Persons age 5 and up
HOMEOWNERS	STF1A	% Owner occupied housing units	Occupied housing units
OWN1UNIT	STF1A	% Owner occupied single unit (attached and detached)housing units	Occupied housing units
PUBTRANSWRK	STF3A	% Traveling to work via public transportation	Workers age 16 & over
LOW INCOME	STF3A	% Household income less than \$12,500	Households
URBANIZATION	—	Number of years city containing census tract has been incorporated	—

Under the social disorganization framework, community structure consists of three dimensions: economic deprivation or status, minority and youth concentration, and community stability. Principal components analysis of census information at the tract level were used to create measures representing these dimensions of community structure. Each of the census variables used in the principal components analysis is described in Tables 4 and 5. Census variables used in this analysis were selected because of similarity with variables used in prior research (See generally Berry and Kasarda, 1977; Taylor and Covington, 1988; Sampson, Raudenbush, and Earls, 1997).

Table 5. Descriptive statistics for census measure of community structure

VARIABLE:	MIN	MAX	MEAN	STD. DEV	SKEW	KURT
NOVEHICLE	.000	28.959	4.260	4.124	2.231	7.452
PUBTRANSWRK	.000	17.800	2.243	2.853	2.403	6.460
LOWINCOME	.000	45.338	8.861	5.682	1.574	4.782
RACIALHETERO	.049	.683	.403	.150	-.182	-.857
FOREIGNBRN	3.370	72.071	22.315	14.255	1.365	1.399
MINUNDER25	2.460	98.840	33.390	21.728	1.180	.890
HOMEOWNERS	.170	97.940	60.917	22.080	-.403	-.662
HOUSE85	3.058	85.450	46.990	14.189	-.406	.206
OWN1UNIT	.160	97.350	53.857	24.035	-.149	-.920

One variable used in model specification but not included in the principal components analysis is urbanization (Years of Incorporation). A number of studies have noted a relationship between ecological change and crime (Cau and Maume, 1993; Taylor and Covington, 1988; Jackson, 1991). While ecological factors likely play a role in Orange County, links between crime and changes in the ecology of communities associated with urbanization are difficult to measure using cross-sectional data. However, a general measure may detect this urbanization effect. Data for the number of years a particular city has been incorporated were added to each census tract contained within that city. Tracts within unincorporated areas represent number of years of incorporation, and are likely to represent areas that are less urbanized than tracts lying within the oldest city, represented by 121 years of incorporation. Since Orange County, and the cities within, are relatively young, this measure is likely to tap urbanization for this region. Descriptive statistics for urbanization are found in Table 4.

Results from the principal components analysis are listed in Tables 6 and 7. Each of the components was subjected to varimax rotation since it tends to produce clearer separation of components. Table 6 shows the eigenvalues and explained variance for each of the community

structure components. Economic deprivation explains most of the variance for the variables included in the analysis, followed by minority/youth concentration and community stability. Overall, these components account for 83 percent of the variance among the original variables.

Table 6 Principal components eigenvalues for community structure dimensions

COMPONENT:	EIGENVALUES	% OF VARIANCE	CUMULATIVE %
ECONOMIC DEPRIVATION	2.639	29.322	29.322
MINORITY/YOUTH CONCENTRATION	2.436	27.068	56.390
COMMUNITY STABILITY	2.427	26.971	83.361

Table 7 contains the loadings for each component. Values for each component factor are expressed as correlations, and describe the relationship between each variable and a factor. Variable communalities indicate the amount of variance contributed by each variable. Component scores were calculated for each of the community structure dimensions using regression.

Table 7. Principal components loadings: varimax rotated solution

VARIABLE:	COMPONENT:			
	ECONOMIC DEPRIVATION	MINORITY/YOUTH CONCENTRATION	COMMUNITY STABILITY	EXTRACTION COMMUNALITIES
NOVEHICLE	.877	.112	-.227	.832
LOWINCOME	.773	.160	-.407	.789
PUBTRANSWRK	.675	.572	-8.382E-2	.790
MINUNDER25	.420	.873	-9.508E-2	.948
FOREIGNBRN	.489	.821	-7.334E-2	.918
RACIAL HETERO	-.242	.737	-.323	.707
HOUSE85	-3.171E-02	-7.194E-02	.856	.739
HOMEOWNERS	-.339	-.258	.828	.867
OWN1UNIT	-.477	-.138	.816	.913

Reliability analysis was used to assess how well each of the census-based variables represents its respective component dimension. Table 8 contains the results from the reliability analysis. Under the economic deprivation dimension, percent using public transportation to commute to work has the weakest relationship with other items and with the economic deprivation scale. Households without vehicles and percent households with income under \$12,500 are similar in strength with moderate correlations. All three variables were extracted from sample census data. Percent using public transportation is based on the sample universe of employed workers while households without vehicles and household income under \$12,500 use the sample universe 'households'. Cronbach's alpha statistics suggest that the economic deprivation scale is fairly reliable.

Within the minority and youth concentration scale, racial heterogeneity is weakest in strength. Both foreign born and minorities under age 25 have strong item and scale correlations. Racial heterogeneity is calculated differently than percent foreign born or minorities under age 25. Racial heterogeneity taps the degree of racial and ethnic mixture within each census tract, taking into consideration the number of groups and number of persons within each group. Percent foreign born and minorities under 25 simply indicate group size (foreign born and minorities under 25 are not mutually exclusive groups).

Community stability shows a pattern similar to that found with the previous two dimensions. Percent living in same house during the previous five years has the lowest item and scale correlations. Both percent homeowners and percent homeowners of single-unit dwellings are moderately strong and similar in strength. The weak relationship found with percent living in the same house may be due to measurement error. The variable was extracted from STF 3A

files, which are derived from sample counts rather than the full-count census. Reliability for community stability is moderately strong.

Table 8 Reliability Results for items used in creation of community dimensions

VARIABLE:	SCALE MEAN IF ITEM DELETED	CORRECTED ITEM CORRELATION.	SQ. MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
ECONOMIC DEPRIVATION				
NOVEHICLE	11.103	.834	.708	.592
LOWINCOME	6.503	.789	.685	.697
PUBTRANSWRK	13.121	.569	.335	.879
SCALE:	Mean = 15.363	S.D. = 11.249		
N = 471	Alpha = .819	Std. Alpha = .842		
MINORITY/YOUTH CONCENTRATION				
RACIALHETERO	55.705	.464	.292	.931
FOREIGNBRN	33.793	.950	.909	.014
MINUNDER25	22.718	.951	.918	.017
SCALE:	Mean = 56.108	S.D. = 35.622		
N = 471	Alpha = .702	Std. Alpha = .828		
COMMUNITY STABILITY				
HOMEOWNERS	100.847	.882	.817	.715
HOUSE85	114.774	.655	.429	.945
OWN1UNIT	107.908	.875	.815	.736
SCALE:	Mean = 161.764	S.D. = 55.281		
N = 471	Alpha = .878	Std. Alpha = .889		

ANALYTICAL MODELS

A number of spatial diagnostics are included in the following regression equations in order to measure the possibility of spatial effects. These diagnostics, along with the specifications of the final regression model require the use of a spatial weights matrix. The weights matrix is a first order contiguity matrix computed from census tract boundaries within ArcView. The weights matrix contains information values for the dependent variable on the surrounding areas of a given census tract. Weight matrices calculated from boundary files in this manner follow the queen convention, which means that tracts are considered a neighbors when

they have one or more nodes in common (for a complete description on weight matrices and methods for computing them see Anselin, 1995; Anselin and Bao, 1996; Anselin and Bao, 1997). All regression models and diagnostics were computed with SpaceStat version 1.86 (Anselin, 1995a).

ORDINARY LEAST SQUARES REGRESSION

An ordinary least squares (OLS) model was specified by regressing violent gang incidents on economic disadvantaged, minority/youth concentration, community stability and urbanization. Table 9 provides the descriptive statistics for the independent variables included in the OLS regression model.

Table 9. Descriptive statistics for OLS regression model

VARIABLE:	MIN	MAX	MEAN	STD. DEV	SKEW	KURT
ECONOMIC DEPRIVATION	-1.731	6.368	-8.493E-08	1.000	2.294	8.096
MIN/YOUTH CONCENTRATION	-3.894	2.381	-1.911E-07	1.000	-.066	.100
COMMUNITY STABILITY	-3.343	2.286	-6.369E-08	1.000	-.447	.032
URBANIZATION	.000	121.000	67.289	37.717	-0.146	1.759

Results for the OLS regression model are found in Table 10. Each of the community structure dimensions and the urbanization variables are significant. Violent gang incidents increase as communities with greater economic deprivation, minority and youth composition, and greater urbanization. Additionally, the model suggests that as communities become more stable, violent gang incidents tend to decrease. Community-based factors account for approximately 70 percent of the variance in violent gang incidents for these data.

Table 10. Results from OLS regression model

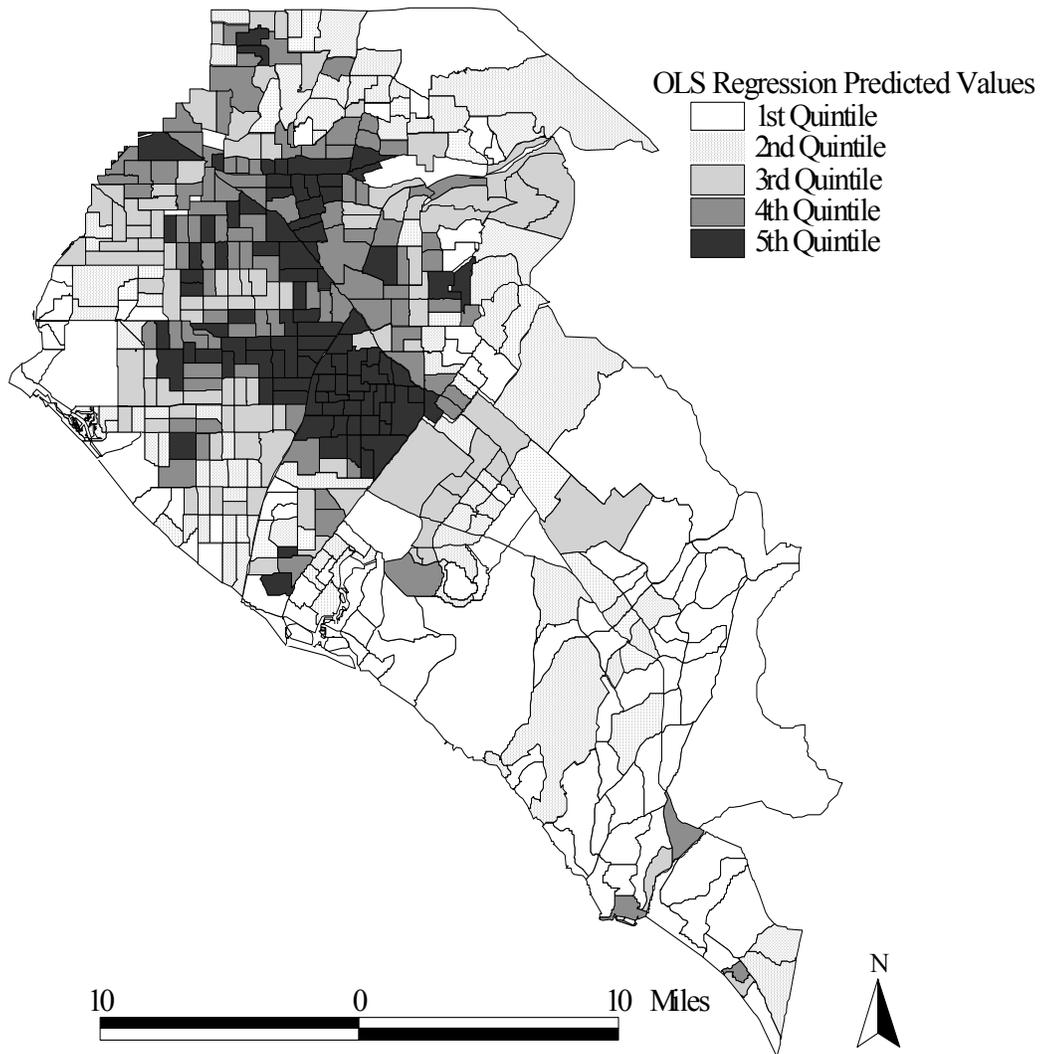
Dependent Variable: ln (Violent Incidents +1)
 R^2 0.705; R^2 -adj 0.702; OLS σ = 0.536; σ^2 = 0.732; ML σ = 0.530; σ^2 = 0.728
 LIK -518.826; AIC 1047.65
 RSS 249.651; F-test 278.245; Prob 0.00
 N = 471; DF 466

VARIABLE:	B	STD. ERROR	BETA	t-VALUE	PROB
CONSTANT	1.203	0.074		16.308	0.000
ECONOMIC DEPRIVATION	0.421	0.035	.314	11.882	0.000
MIN/YOUTH CONCENTRATION	0.917	0.035	.684	26.069	0.000
COMMUNITY STABILITY	-0.201	0.034	-.150	-5.950	0.000
URBANIZATION	5.759E-03	0.001	.162	5.906	0.000

MULTICOLLINEARITY: Multicollinearity Condition Number 4.223
 NORMALITY OF ERRORS: Jarque-Bera = 4.395 (p = 0.111)
 HETEROSKEDASTICITY: Breusch-Pagan (Sq. Miles) = 0.871 (p = 0.351)
 DIAGNOSTICS FOR SPATIAL DEPENDENCE:
 Moran's I (error) = 0.249; z = 9.243 (p = 0.000)
 Robust LM (error) = 4.488 (p = 0.034)
 Robust LM (lag) = 39.253 (p = 0.000)

Figure 13 contains a map of the predicted values based on the OLS regression model. This map can be compared to the map of observed values (Figure 12) to observe how well the regression model fits these data.

Figure 13. Predicted values for violent gang incidents based on OLS regression



OLS REGRESSION RESIDUAL ANALYSIS

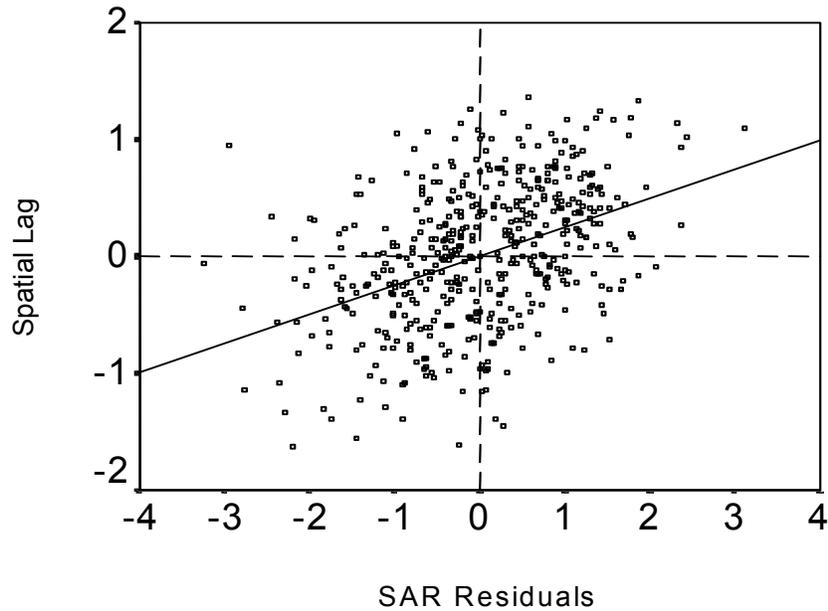
We used a number of diagnostics to determine the level of confidence in interpreting the OLS regression model. Statistics testing for the presence of multicollinearity, normality and heteroskedasticity did not indicate any problems. A number of spatial diagnostics also were used to determine if residual error is spatially related. Diagnostics for spatial dependence indicate a significant amount of spatial autocorrelation may be present in the residuals. Moran's I, a familiar statistic for spatial autocorrelation, is significant. However, Moran's I is sensitive to a

number of misspecification errors such as non-normality and heteroskedasticity (Anselin and Rey, 1991; Anselin, 1995). The Lagrange Multiplier tests are robust to other forms of misspecification and aid in narrowing down the source of spatial dependence (See generally Anselin, 1990; Anselin, Bera, Florax and Yoon, 1996). Robust LM (lag) can detect spatial lag¹¹ error and is robust to the presence of spatial error dependence. This statistic is significant, indicating error in the form of spatial lag. The LM (error) statistic tests for the presence of spatial error and is robust to the presence of spatial lag, if it exists. The value for the Robust LM (error) test is lower than the Robust LM (lag) value, and is not significant at the .01 level. These diagnostics suggest spatial dependence in the residuals is due to the presence of spatial lag error. Ignoring the presence of lag error results in OLS estimates that are biased and any inference based on the regression model may be incorrect (Anselin, 1995b).

Based on the results of the diagnostic tests a plot of the residual and associated spatial lag is shown in Figure 14. The slope coefficient in an OLS regression model of residual spatial lag on the regression residuals is equivalent to Moran's I (Anselin, 1995b). Figure 14 also contains the regression line, which summarizes the overall spatial pattern of linear association in the residuals. The presence of spatial autocorrelation in variables specified in the model and in the residuals suggests that including a variable in the model representing these neighborhood effects may decrease the amount of residual variation.

¹¹ Spatial lag for a tract is represented by the number of violent incidents that occur in closely contiguous areas.

Figure 14. Moran scatterplot of OLS residuals with regression line



To further clarify the behavior of the residuals two maps (Figures 15 and 16) were generated that display the distribution of positive and negative residuals. Figure 15 contains residual values by Moran quadrant. Spatial autocorrelation is clearly visualized by groupings of areas where the OLS model over-predicts surrounded by areas that also were over predicted. Similarly, under-predicted areas surrounded by areas of under prediction are grouped together.

Figure 15. OLS residuals by Moran Quadrant

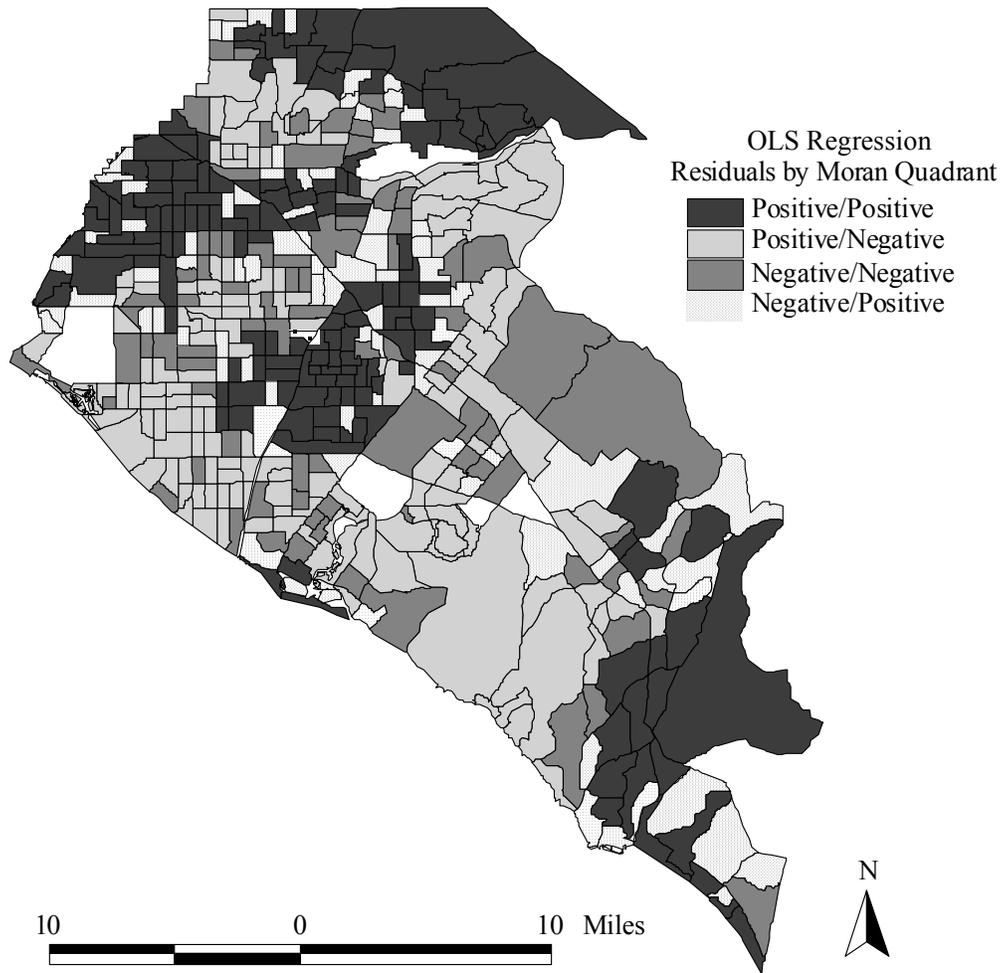
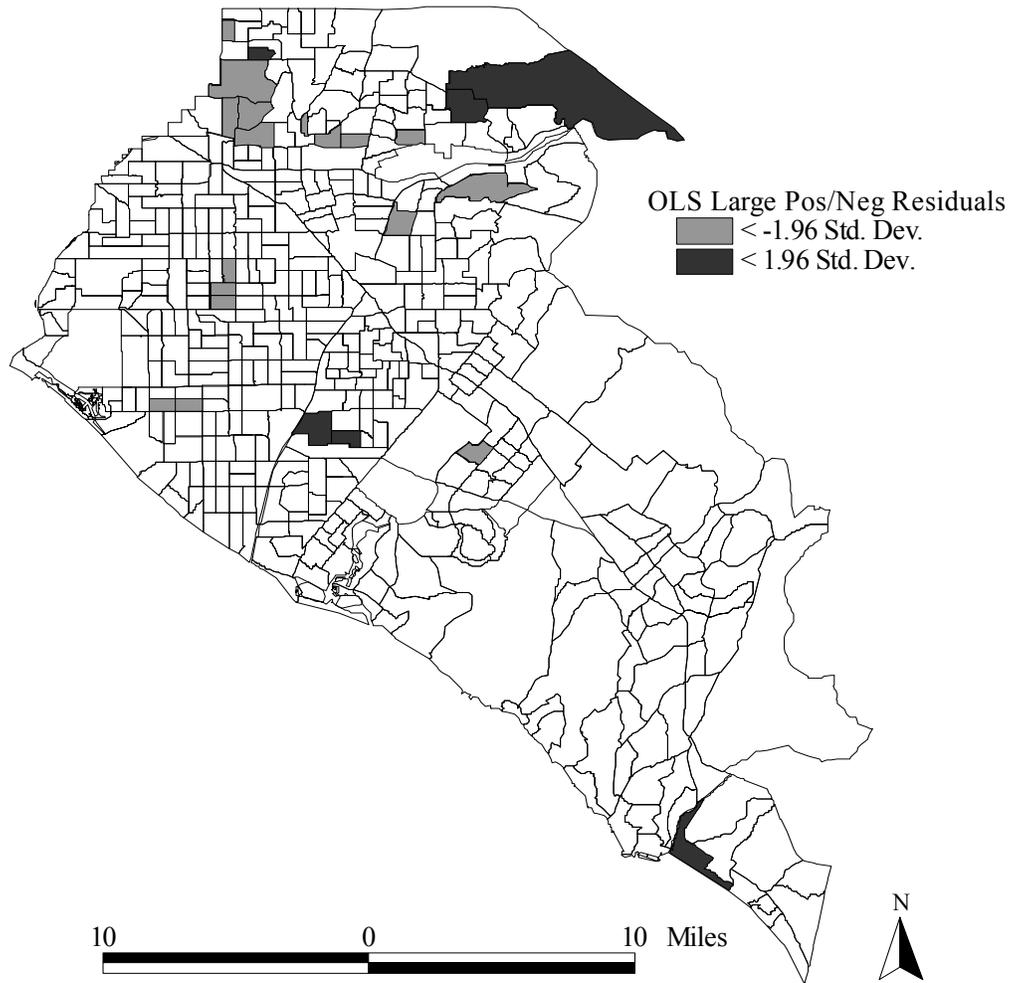


Figure 16 illustrates areas with large standardized residuals. Although Figure 15 represents general grouping of residuals, it does not differentiate between significantly large or small residuals. Figure 16 indicates only those areas where over and under prediction are significantly large.

Figure 16. Significantly large positive and negative standardized residuals



MAXIMUM LIKELIHOOD REGRESSIVE SPATIAL AUTOREGRESSIVE (SAR) MODEL

Based on diagnostics suggesting the presence of spatial lag in residuals of the OLS regression model, a spatial lag regression model was specified. This model is justified since the OLS model, with spatial dependence in the residuals, results in biased coefficients. Therefore, interpretation of the OLS model should be used with caution. All variables included in the OLS model were included in the SAR model in addition to a spatial lag of the dependent variable. The spatial lag for a tract is represented by the number of violent incidents surrounding a tract.

A spatial lag variable thus represents the neighborhood effect of violent gang incidents. Results from the SAR model are located in Table 11.

Table 11. Results from SAR regression model

Dependent Variable In (Violent Incidents +1)
 (pseudo) R² 0.732; Sq. Corr. 0.725; $\sigma = 0.399$; $\sigma^2 = 0.632$
 LIK -463.365; AIC 938.731
 RSS = 188.107
 N = 471; DF 465

VARIABLE:	B	STD. ERROR	BETA	Z-VALUE	PROB
LAG VIOLENT INCIDENTS	0.487	0.042	0.487	11.650	0.000
CONSTANT	0.622	0.080		7.829	0.000
ECONOMIC DEPRIVATION	0.256	0.033	0.191	7.669	0.000
MIN/YOUTH CONCENTRATION	0.552	0.044	0.411	12.680	0.000
COMMUNITY STABILITY	-0.191	0.029	-0.142	-6.524	0.000
URBANIZATION	2.643E-03	8.842E-04	7.431E-02	2.989	0.003

HETEROSKEDASTICITY: Spatial Breusch-Pagan (Sq. Miles) = 0.122 (p = 0.727)
 SPATIAL DEPENDENCE: Likelihood Ratio Test = 110.920 (p = 0.000)
 SPATIAL ERROR DEPENDENCE:
 Moran's I = -0.007; z = -0.165 (p=0.869)
 Lagrange Multiplier Test = 0.121 (p = 0.728)

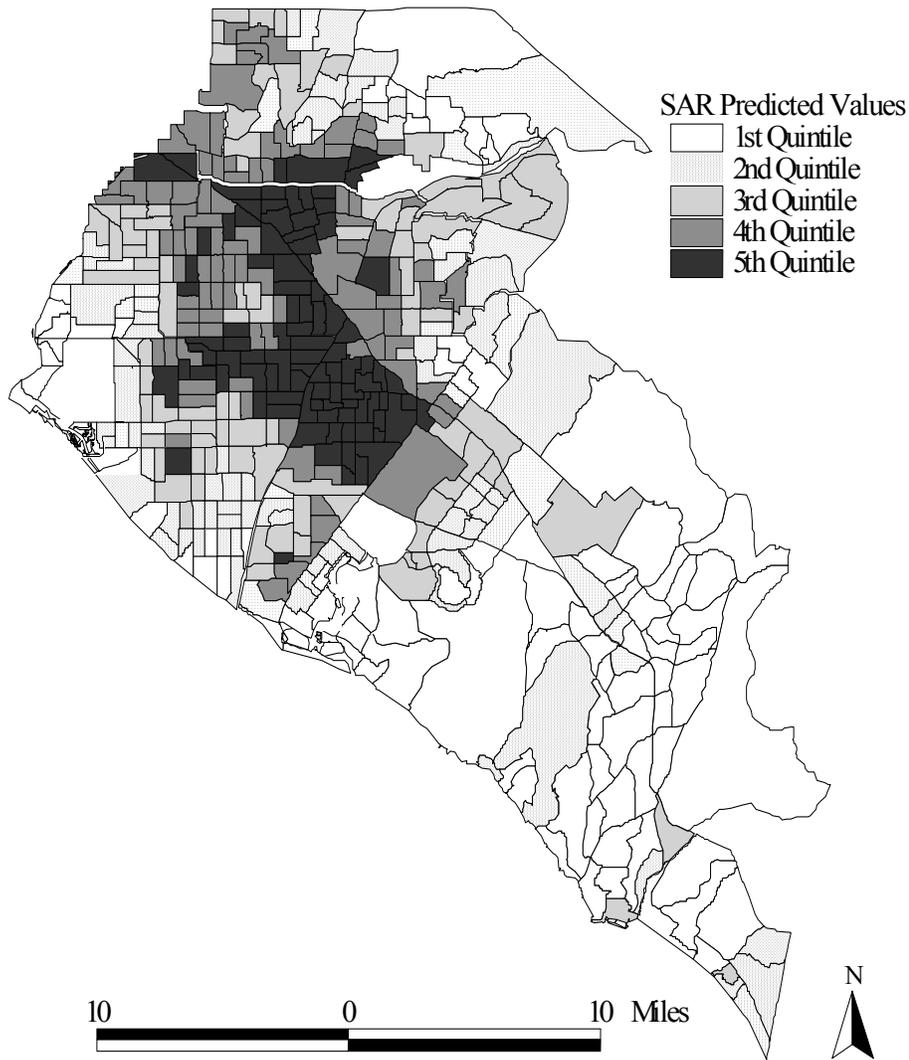
Figure 17 contains the predicted values from the SAR model. The spatial lag for violent gang incidents is significant and has several impacts on the model. The coefficient for community stability has changed little (-0.191 vs. -0.201), while the constant (0.622 vs. 1.203), economic deprivation (0.256 vs. 0.421), minority and youth concentration (0.552 vs. 0.917) and urbanization (2.643E-03 vs. 5.759E-03) have been reduced. This suggests that the coefficients in the OLS model are biased, since a significant explanatory variable was omitted from the model.

The top portion of Table 11 contains a number of statistics used to assess model fit. Commonly used OLS statistics such as R², R²_{adj} and estimates for error variance and standard

deviations measures are not appropriate for maximum likelihood based models. SpaceStat produces two estimates of the R^2 labeled (pseudo) R^2 and Sq.Corr. The (pseudo) R^2 is the ratio of the variance for predicted values over the variance of the observed. The Sq. Corr is computed as the squared correlation between predicted and observed values (Anselin, 1995). Both (pseudo) R^2 and Sq. Corr are estimates and cannot be compared to OLS-based R^2 . Based on these statistics, approximately 72 percent of the variance in violent gang incidents can be explained by the level of crime in neighboring communities, along with community structural characteristics and urbanization.

For comparison purposes ML based statistics, log-likelihood (LIK), Akaike Information Criterion (AIC) and ML estimates for error variance and standard deviation are located in the top portion of Table 10. When comparing multiple models, higher LIK represents the better fitting model while a lower AIC indicates better fit. Including the spatial lag for violent gang incidents improves the overall fit of the model suggested by the higher LIK value (-463.365 vs. -518.826) and lower AIC (938.731 vs. 1047.65) of the SAR model. Additionally, the residual sums of squares for the SAR model is lower (188.107 vs. 249.651) and standard estimates of the error are lower (0.632 vs. 0.728).

Figure 17. SAR model predicted values for Orange County census tracts



SAR RESIDUAL ANALYSIS

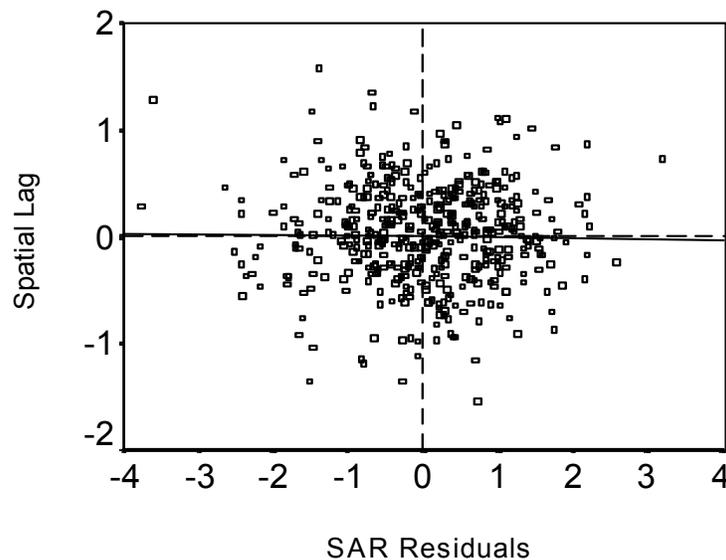
The bottom portion of Table 11 contains diagnostics for the SAR model. Anselin (1995) suggests a variable related to unit size is often a good choice in the heteroskedastic specification for variance in the residuals. Due to the irregular polygon structure of census tracts in this study, the area for each tract was specified. The Breush-Pagan value of .122 was not significant, indicating no apparent heteroskedasticity in the residuals.

The Likelihood Ratio (LR) test is an evaluation of the spatial lag variable for violent crime. The LR test is equivalent to twice the difference between the log likelihood of the spatial lag model and the log likelihood for the OLS regression model for violent gang incidents. This test is significant, indicating that spatial lag has contributed significantly to the model.

The final diagnostic in Table 11 is the Lagrange Multiplier test for spatial error dependence. The value of 0.121 is not significant, suggesting that spatial dependence is no longer present in the model.

Figure 18 contains the Moran scatterplot of the residuals and associated spatial lag. The Moran's I coefficient of -0.007 is not significant (See bottom of Table 11).

Figure 18. Moran scatterplot of SAR residuals with regression line



The regression line from the regression used to calculate the Moran coefficient, which is equivalent to the slope in a regression of residual spatial lag on the residuals, is provided in Figure 18. Clearly, no detectable pattern is suggested in Figure 18 compared to the Moran scatterplot for the OLS regression (see Figure 14).

Figure 19 is a map of residuals from SAR model by Moran quadrant. The map is useful for detecting the two types of positive spatial autocorrelation (large residuals surrounded by large residuals and small residuals surrounded by small residuals) and corresponding negative spatial autocorrelation (large residuals surrounded by small residuals or small residuals surrounded by large).

Figure 19. SAR residuals by Moran Quadrant

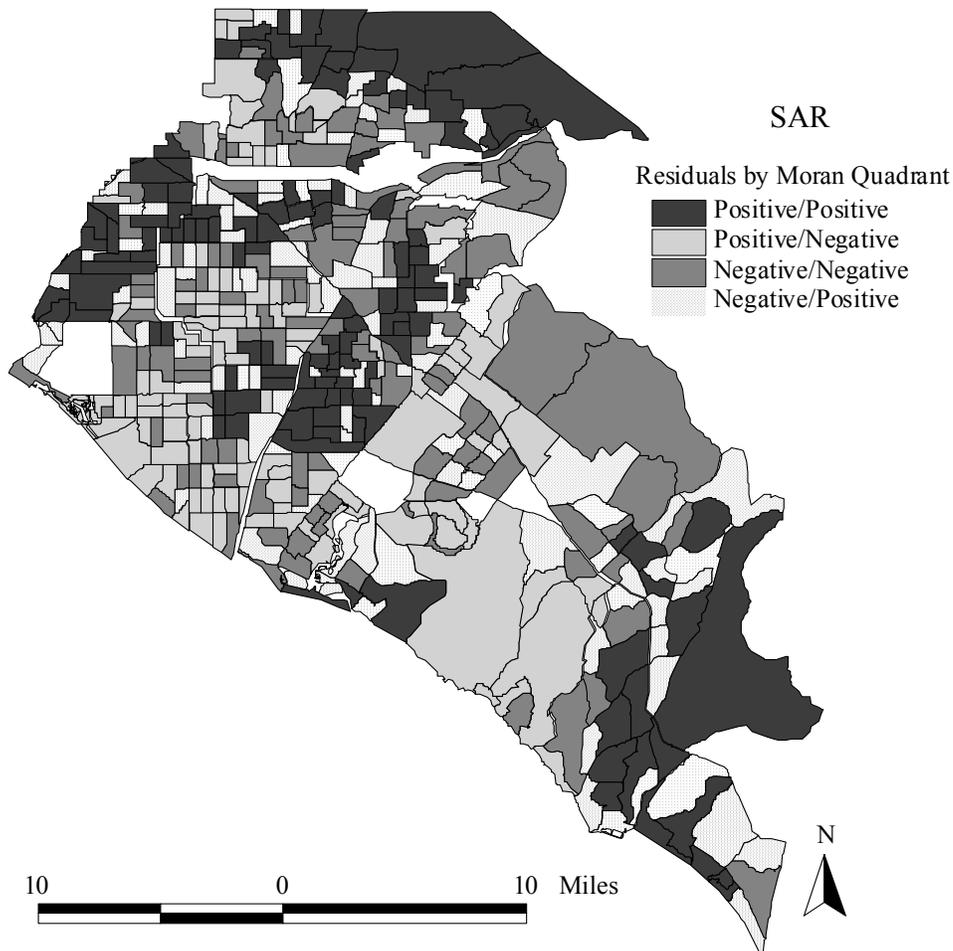
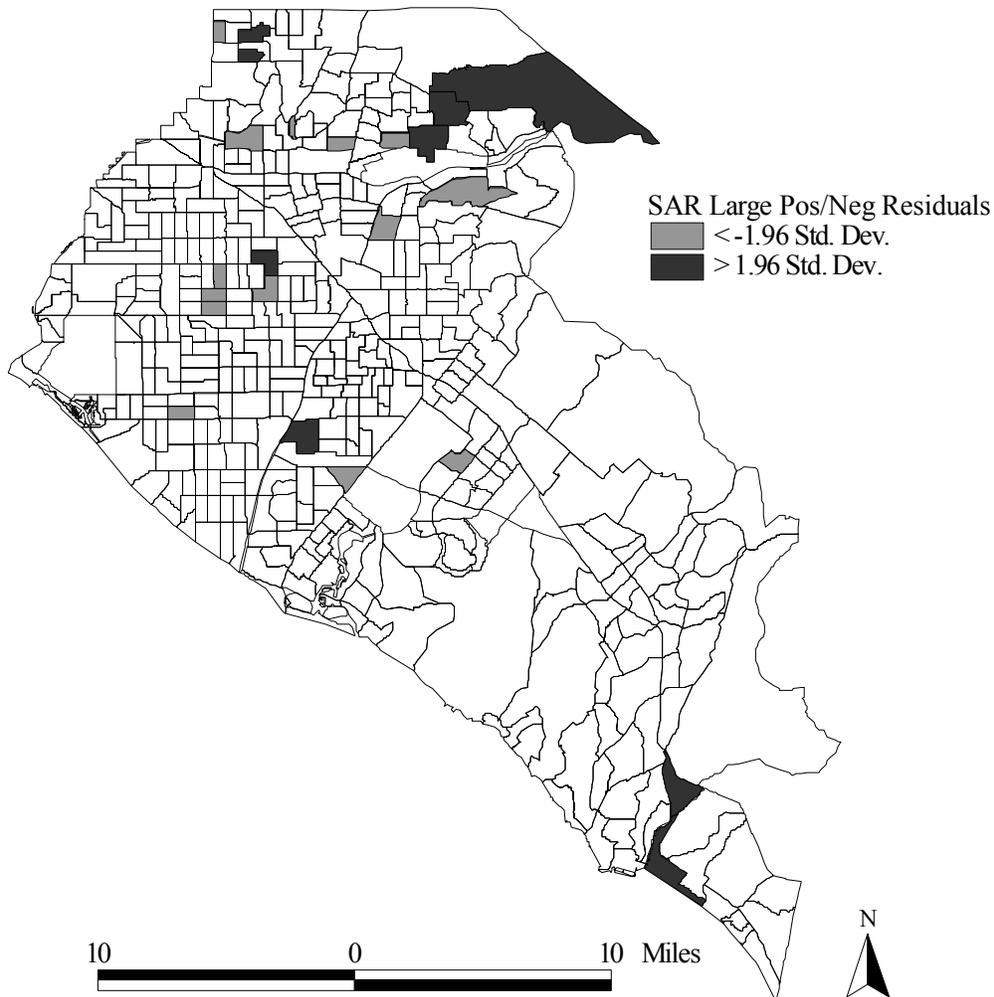


Figure 20 is a map of significantly large residuals for the SAR regression model. There are noticeably few large residuals present in the map for the SAR model. Compared to the map in Figure 15 for the OLS model, there are fewer large positive or negative residuals spatially grouped. Interestingly, the location of large residuals is in approximately the same location as predicted by the OLS model.

Figure 20. Significantly large residuals for the SAR regression model



CONCLUSIONS

The strength of the spatial relationship for violent gang incident results from OLS based regression make them somewhat difficult to interpret. However, since the maximum likelihood spatial autoregressive model was successful in reducing the spatial effect to an insignificant level, the relationship between community structure and violent gang incidents can be safely interpreted. Based on the findings of the SAR model, approximately 72 percent of the variance in violent gang incidents can be explained by community structural characteristics, urbanization, and the level of crime in neighboring communities. It appears that modern community-based theories provide robust explanations for the relationship between communities and gang crime in a region with many contiguous cities.

One of the strongest findings from the SAR model—and one with important policy implications—is that communities tend to be significantly impacted by violent crime in neighboring communities. Clearly, any attempt to reduce the gang problem in concentrated areas within Orange County will have to consider neighboring communities as well. This means that regional approaches such as the one mounted by the Orange County Chiefs' and Sheriff's Association are required for tracking, understanding, or addressing street gang problems.

Although the aforementioned OLS regression model is similar to models found in other studies (Schuerman and Kobrin, 1986; Messner and Sampson, 1991; Sampson and Grove 1989) it should be interpreted with caution. Due to the level of spatial dependence, stemming from the level of spatial autocorrelation in the dependent variable estimates for the coefficients will be biased and any inference based on the t-tests and indication of fit from R^2 are incorrect. As an alternative, a spatial autoregressive model (SAR) is estimated which allows us to correctly estimate the significance of the theoretical variables after controlling for spatial dependence. Admittedly, the comparison of the two models suggests only minor differences in the degree of

fit and the coefficients. Preliminary analysis revealed a number of individual indicators of community structure to be unstable. Unique factors of community structure included in the OLS and SAR models illustrate more stability since they have been generalized to represent those characteristics that best represent the components of the community structure.

Using GITS to Evaluate the Effectiveness of Anti-Gang Strategies

INTRODUCTION

As part of a project funded by the USDOJ Community Oriented Policing Services Office (COPS), a Tri-Agency Resource/Gang Enforcement (TARGET) Team¹² was funded for the Orange County city of Santa Ana. This brought the total number of TARGET Teams¹³ to four in that city and 11 for the county as a whole. Each team is located in a specific police department and consists of officers from that police department who serve as gang investigators, a probation officer, a senior deputy district attorney and a district attorney's investigator. The hallmark of such teams is mutual cooperation across law enforcement agencies and vertical prosecution¹⁴ (see Kent and Smith, 1995). As part of the COPS grant the FRG was to explore the potential usefulness of the GITS database for assessing TARGET Teams' impact on gang activity. For this analysis, the focus is only on the efforts in the City of Santa Ana.

TARGET Teams aim to suppress gang crime in Santa Ana through the efficient identification, apprehension, and conviction of the violent gang leaders thought to be responsible for much of the city's gang problems. In the past, the usual method of determining the impact of TARGET teams was to examine law enforcement records for changes in arrests, prosecutions, convictions and sentencing. The GITS database also allows one to examine the impact of

¹² For a description of TARGET Teams see Kent and Smith (1995).

¹³ In Santa Ana the TARGET Teams are called Street Terrorist Offender Programs (STOP).

TARGET team activity on levels of gang activity within defined areas as well as effects on the spatial distribution of gang incidents involving targeted gangs.

LAW ENFORCEMENT RECORD

Analyses of the TARGET Teams' adjudication efforts use data on the prosecution of targeted gang members. These data are compiled by the Orange County District Attorney's Office, and TARGET Teams also maintain records of each case handled by their prosecutors. The District Attorney Office's report on the county TARGET Team efforts contains greater detail on county-wide law enforcement statistics; what follows is a brief look at some of the statistics for the city of Santa Ana.

In 1994, 1995, and 1996, the TARGET Teams reported substantial success in the arrest, prosecution, and conviction of targeted gang offenders. After two years of targeting 42 members of one Santa Ana gang, 28 members had been arrested, and 24 (86 percent) had been convicted on a wide variety of charges. The average sentence length for all those convicted was 34 months (not including one triple life sentence). After one year of targeting 20 members of another Santa Ana gang, nine members had been arrested, and all nine had already been convicted within that year. Not only are the cases of targeted gang members adjudicated quickly, conviction rates also are high. As of December of 1996, only three of the targeted gang members who had been arrested did not receive convictions.

In general TARGET teams throughout the county have managed to generate impressive records with regard to both conviction rates and sentencing for individuals who have been targeted. An alternative approach to evaluating TARGET teams is to look at their impact on gang criminal activity.

¹⁴ Vertical prosecution refers to the Team's continued and coordinated focus on an offender from level to level within the criminal justice system (e.g., from investigation through arrest and prosecution).

USING GITS TO EVALUATE TARGET PERFORMANCE

Our knowledge of a TARGET Team's ability to successfully convict and prosecute targeted gang members is complimented nicely by evaluations of gang-related crime incidents in Santa Ana. The analyses used here help us understand the relationship between the TARGET team's use of targeting strategies and actual levels of gang crime. As is shown below, the GITS database makes several methods of analysis possible. Each method provides a unique view of the relationship between gang crime and targeting. The effects of a TARGET team's efforts against a particular gang can be examined from longitudinal trends in gang crime by comparing pre- and post-targeting crime levels. Not only can changes in the annual number of incidents committed by a gang be determined, but the nature of those incidents also can be examined. For example, a gang may commit more incidents in a year following targeting, but the majority of those incidents may be for less serious crimes than were committed before targeting. Because the GITS database is longitudinal and because it contains many categories of variables, it is a relatively straightforward task to build upon analyses in this manner. Clearly, doing so affords a greater understanding of gang crime.

The following example focuses on the question, "What are the effects of targeting gang rivalry, how does this affect criminal activity?" A related question concerns the possibility of targeting impacting activity outside the targeting jurisdiction. That is, a gang that is targeted may commit more or less crime in places outside the jurisdictional area of the TARGET Team. Evaluations that consider only the amount of crime (not location) reported by the Santa Ana Police Department may show a reduction in one targeted gang's criminal activity, when in fact the gang has reacted to police pressure and is offending in areas outside the city. Because gang crime data from cities outside Santa Ana are not always readily available to the Santa Ana TARGET Teams, if this is occurring, they may have inaccurate perceptions of their impact.

Some of the gangs that have been targeted in Santa Ana are known to commit a majority of their crimes in certain areas of the city. To demonstrate the use of GITS for monitoring the spatial distribution of gang activity and targeting we focus on two active and violent gangs with territories in Santa Ana, gang A and gang D.¹⁵ These gangs were long-time rivals with violent histories of repeat offending and retaliation against one another. The TARGET team began targeting gang D in 1995 in an attempt to ameliorate this rivalry. Given limited resources, it was hoped that the targeting of one gang would remove some of its violent gang leaders from the streets, which would directly impact on the level of activity for the targeted gang. This reduction in gang presence was also intended to limit opportunities for inter-gang violence between gang D and gang A and as a consequence impact the non-targeted rival gang A. The following maps illustrate the effects of this strategy and help us understand whether targeting just one gang was an effective way to interrupt the cycle of rivalry-related crime.

Figure 21 is a map of Santa Ana and surrounding areas that shows the turf of gang D and gang A. Each point represents an incident of gang crime committed in 1994 by gang A. In 1994, when neither of the gangs was targeted, 88 percent of gang A's incidents (15 out of 17) occurred in Santa Ana. Thirty-five percent of their incidents occurred on their own turf, six percent occurred on rival gang D's turf, and only twelve percent occurred outside of Santa Ana. Most of gang A's activity was restricted to Santa Ana (88 percent).

¹⁵ The Santa Ana Police Department has a policy of not using actual gang names in public reports because public exposure tends to enhance gang identity.

Figure 21. Location of incidents committed by gang A in 1994

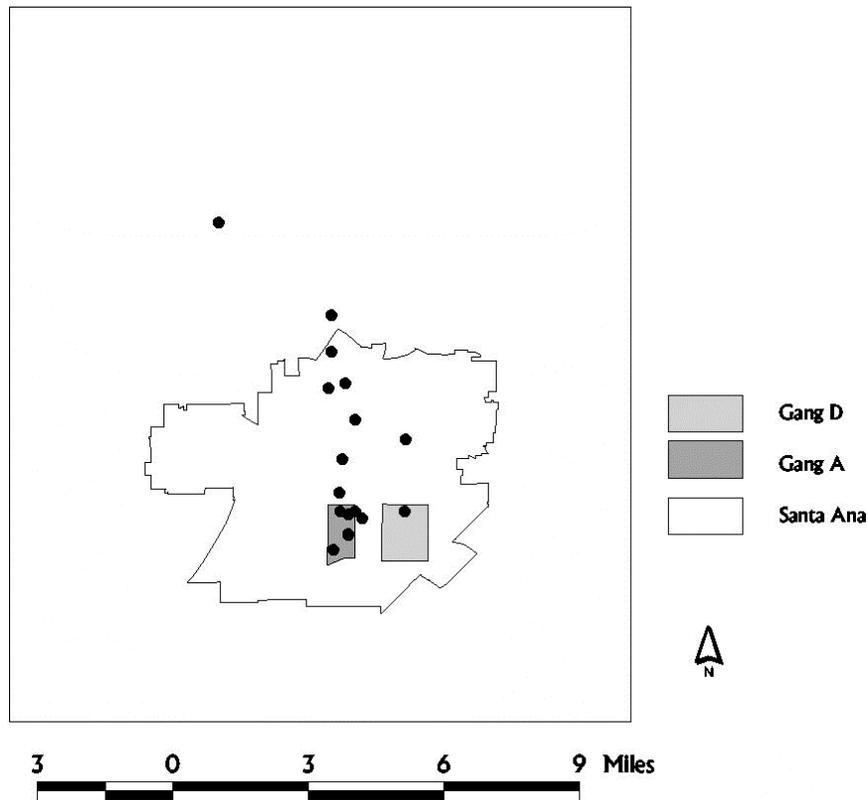
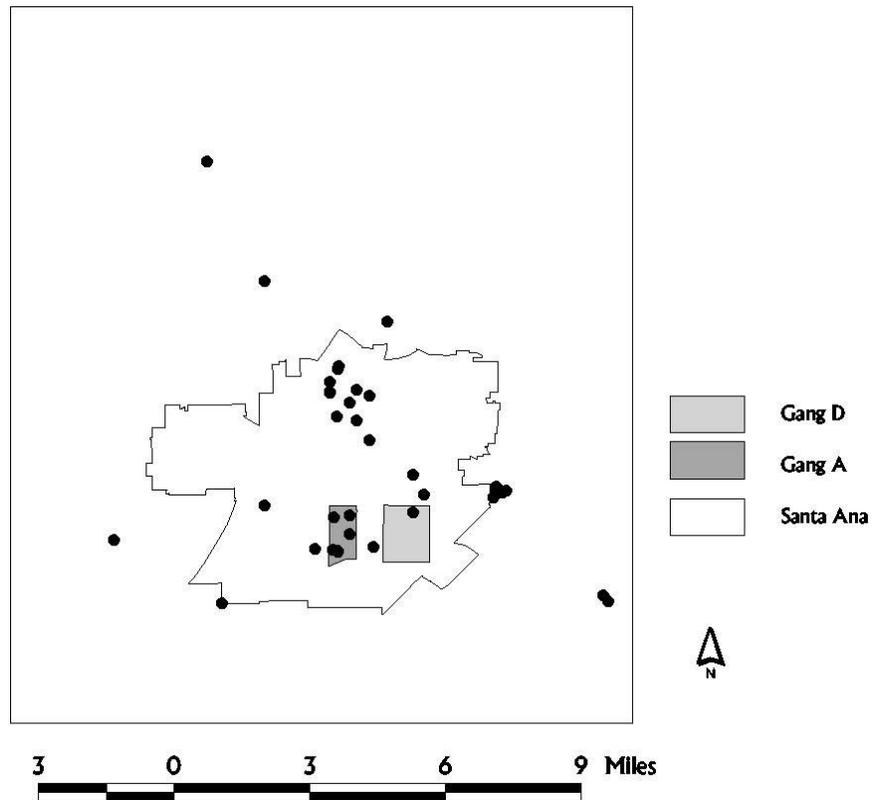


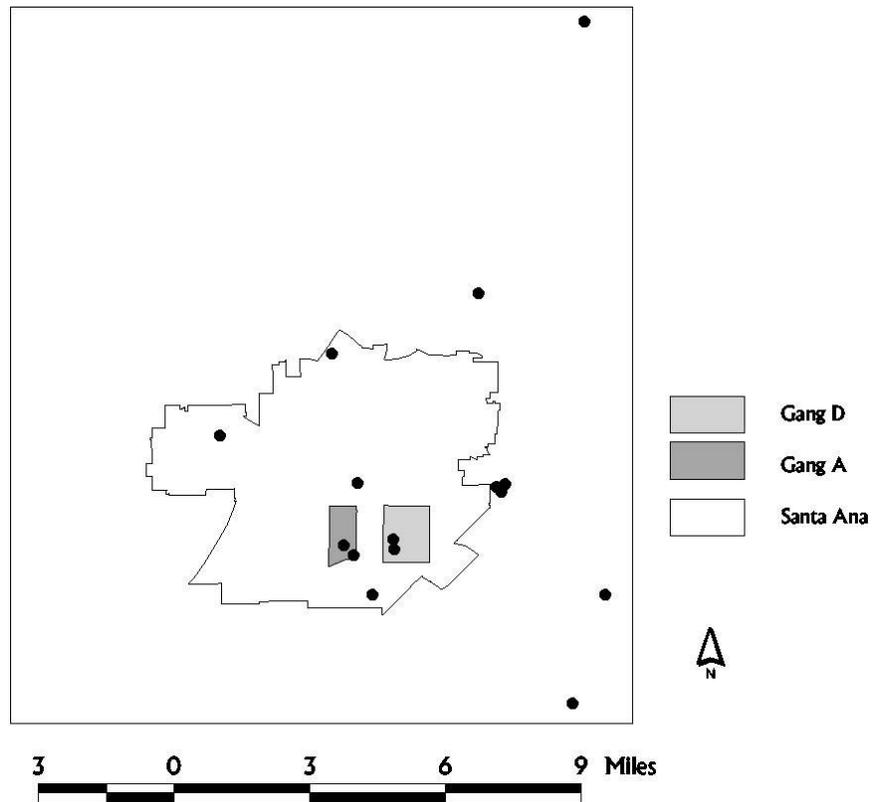
Figure 22 shows that during 1995, when gang D was targeted (but rival gang A was not), the level of gang A's activity increased dramatically by 159 percent (from 17 to 44) but only 57 percent (25) now occurred in Santa Ana. While the proportion of gang A's activity on their turf and gang D's turf dropped, the actual number stayed about the same. The major change occurred in the actual increase in number of incidents both inside Santa Ana (but not on either A or D's turf) and the number of incidents outside Santa Ana (an increase from two incidents to 19 incidents or 850 percent).

Figure 22 Location of incidents committed by gang A in 1995. (Each dot may represent more than one incident.)



Targeting of gang D was continued in 1996. At this point, because of continued rivalry and a growing number of incidents as well as increased police resources, the decision was made to also target the gang A directly. Figure 23 indicates that direct targeting further dispersed as well as decreased gang A's activity. The number of incidents were decreased by 66 percent (from 44 to 15). By targeting gang A directly, its level of activity was brought back down to where it was before the big increase in 1996 when rival gang D was targeted. The actual level of activity outside of Santa Ana also decreased by 63 percent (from 19 to seven) but the pattern of conducting a significant proportion of activity outside of Santa Ana, 47 percent, continued.

Figure 23. Location of incidents committed by gang A in 1996



Spatial analysis of gang incidents clearly indicates the possibility of both direct and indirect effects when a gang is targeted. Targeting gang A's rival, gang D, is associated with changes in the number and location of incidents involving gang A. Incidents involving gang A increased, a greater proportion of their activity shifted to outside Santa Ana, and the proportion of activity occurring on either gang's turf diminished. When gang A was targeted directly, its overall activity decreased dramatically both inside and outside Santa Ana. However, there still was substantial activity outside Santa Ana. This example suggests that targeting a gang within one city may affect its level of activity outside that city.¹⁶ Without county-wide data it is unlikely that the Santa Ana TARGET Team would have been able to assess its impact on gang A this completely.

¹⁶Of course other factors besides targeting, or interacting with targeting, may explain the geographic shift of incidents (e.g., increased recruitment of members outside Santa Ana or gang members moving outside the city.)

ONGOING ANALYSES AND POLICY IMPLICATIONS

The county-wide data provided by GITS enable us to consider the activity of gangs in the city where they are targeted. But they also let us look well beyond the city of origin. Our ongoing analyses of crime committed by gangs A and D, as well as other targeted gangs, take advantage of these comprehensive data. Density analyses are used to determine location of “hot-spots” involving all gangs or particular gangs of interest. These analyses are provided to gang-enforcement teams to judge whether they are targeting the most volatile areas of their cities.

Nearest-neighbor analyses also are being used to investigate spatial randomness of incidents. For instance, it can be determine whether the activity of one gang is occurring randomly within an expected area of activity, or if that gang is most likely to commit crime in discrete locations. The spatial distribution of incidents around a point is being evaluated as well. These analyses determine whether juvenile gang members, for example, are committing offenses disproportionately around popular locations such as stores, schools, or parks.

Analyses such as these that currently are being conducted by the FRG appear very promising for helping guide gang control policy and tactics at local and regional levels. GITS data helps us understand the relationship between gang crime in Orange County and gang-suppression efforts in a manner that would not be possible without such data. Individual law enforcement agencies generally have data that are idiosyncratic, very limited in scope, and often stored in formats that make empirical evaluation difficult. Given the limited (by location and depth) data that individual departments may maintain, in-house analyses can lead to inaccurate perceptions of gang crime, and thus to the implementation of misguided gang-suppression strategies. Furthermore, police departments typically lack physical resources (e.g., software, hardware) and skilled analysts to critically interpret the data that are available.

OBJECTIVE 2: FEAR OF GANG CRIME

Our objective in this part of the research was to identify factors that contribute to community members' perceptions of—and fears about—gang violence. In order to determine the accuracy of people's perceptions of gang activities and their risks of becoming victims of gang activities, we also compared residents' reported fears to actual levels of gang activity in the county as indicated by gang incidents reported by police. A final, and important, issue addressed in this domain was how much perceptions about gang activities affected routine behavior and quality of life. Dr. Jodi Lane was the team leader for this portion of the research.

Literature Review

Public opinion polls indicate that the fear of crime is increasing in the United States and that people are modifying their behavior (e.g., including restricting nighttime activities and avoiding shopping malls and parks) to escape becoming victims of crime (Baldassare and Katz, 1994, 1995, see also Miethe, 1995). There is evidence that recent increases in fear result mostly from people's fear of youth crime, and both media and police reports indicate that much of this fear may result specifically from gang violence. As Lewis and Maxfield (1980: 184) note, "Fear of crime may be directly affected by concern about local adolescents." This fear of youthful offenders is likely to become even more important as communities that previously considered themselves immune from gang violence are forced to face gangs moving beyond the inner city and extending into previously untouched neighborhoods (Curry, Ball, and Fox, 1994; Spergel and Curry, 1995).

Although statistics show that some types of crime are increasing (e.g., youth violence), overall crime trends suggest we are not experiencing a surge of crime that would explain recent

steep increases in public fear (Ferraro, 1995; Lewis and Maxfield, 1980; Taylor & Hale, 1986; Taylor & Shumaker, 1990; Tyler, 1980). In fact, overall crime levels in Orange County dropped 14 percent in 1994 and crime rates in California dropped to the lowest level in a decade. The number of crimes in all major categories (including homicide, rape, robbery, assault, burglary and automobile theft) decreased during this period (Los Angeles Times, 1995). Crime has continued to drop during each year since 1994 (Grad and Hua 1997: A1). In other words, fear of crime appears to be based on something other than crime rates.

This accelerating yet apparently unrealistic fear of crime is an important subject of study for two reasons. First, because it can have a number of psychological and behavioral consequences for individuals who are fearful (e.g., Liska, Sanchirico, and Reed, 1988; Liska and Warner, 1991; Miethe, 1995; Ross, 1993; Taylor and Shumaker, 1990). Second, because public opinion is critically important in driving public policy (e.g., Lewis and Maxfield, 1980; Taylor and Hale, 1986; Warr, 1994). Recently, fear of crime has resulted in the passage of harsh mandatory sentencing policies (so-called ‘Three Strikes and You’re Out’ initiatives) that so far have increased prison populations drastically without creating a substantial reduction in crime (Blumstein, 1995). This substantial increase in prisoners pulls funds away from other needed social services like prevention programs, schools, and child health care (Vila 1997a, 1997b). Yet the public demands more incarceration, in part because they are afraid of crime. It doesn’t appear possible for state governments to continue to answer public calls for harsher prison sentences when there is little evidence that indiscriminate increases in imprisonment cause significant decreases in crime (see Greenwood et al., 1996; Greenwood et al., 1994; Spelman, 1994; Zimring, 1995). Thus it seems particularly important to understand and attempt to alleviate factors that contribute to disproportionate public fear of crime.

Since the 1970s, criminologists have made substantial progress toward understanding the incongruence between fear levels and actual criminal victimizations. These studies have mostly analyzed official data (e.g., reported crime and arrest rates) and correlated overall crime indicators with information on resident characteristics (e.g., age, gender, race, income level, prior victimization) and reported fear levels, which generally have been measured through public opinion surveys (typically random telephone surveys). Although there have been “a bewildering variety of questions [employed] to measure fear,” most of these studies have relied on the standard, well-known fear of crime survey questions used by the General Social Survey (GSS) and Gallup (Warr, 1994: 6-7). Questions asked include, for example, “How safe do you feel or would you feel being out alone in your neighborhood at night?”¹⁷ There has been considerable debate over the validity and reliability of the GSS and Gallup questions in measuring fear of crime (see DuBow et al., 1979; LaGrange and Ferraro, 1987). As Warr (1994: 7) notes, these standard questions are better suited for measuring the prevalence rather than the magnitude of fear and have the major limitation of not indicating exactly *what* people “are afraid of.” Further, as Warr and Stafford (1983) indicate, the seriousness of the crime and one’s perceived risk of being victimized also may be important to understanding how these questions are answered. However, we have a relatively good understanding of the prevalence of fear and its demographic correlates because the standard questions and trends have been used for decades.

During the 1970s and 1980s, about one-third to one-half of Americans reported that they were afraid of crime. However, fear of crime began to increase during the 1990s (Baldassare and Katz, 1994, 1995). Individual characteristics that are important for predicting reported fear of

¹⁷ This question typically is used in the National Crime Survey (Ferraro, 1995; LaGrange and Ferraro, 1989). Although the wording of the GSS question varies, it generally reads: “Is there any area around here—that is, within a mile—where you would be afraid to walk alone at night (or during the day)?” (Ferraro, 1995; Warr, 1994: 6; Yin, 1985).

crime include age, gender, race, income level, and victimization. In general, studies have found that women and older individuals are more afraid than males and younger people, even though women and the elderly face the lowest objective risk of victimization (Baumer, 1978; Ferraro, 1995; Garofalo and Laub, 1978; Miethe, 1995; Riger, Gordon and Le Bailly, 1978). However the findings for age effects are not consistent, some have argued that the elderly are not necessarily as fearful as many assume (see Ferraro and LaGrange 1987, 1988; LaGrange et al. 1992; McCoy et al. 1996). It also is possible that the disproportionate reporting of fear among groups that are less likely to be victimized reflects perceptions about ability to bear the consequences of victimization. For example, an elderly person who is beaten may be disabled for the rest of his or her life while a young man receiving a similar beating may recover in a matter of days.

Minorities (especially African-Americans) are typically more fearful than whites (Baumer, 1978; Skogan, 1995; Warr, 1994). People who live in low-income areas also typically are thought to be more fearful, although the evidence here is inconclusive (Taylor and Covington, 1993; Warr, 1994; Will and McGrath, 1995). The relationship between prior victimization and fear is likewise problematic in that those most victimized are not necessarily most fearful (Garofalo, 1979; Garofalo and Laub, 1978; Taylor and Hale, 1986; Warr, 1994).

Recognizing that the demographic characteristics most closely associated with fear do not necessarily correspond with likelihood of victimization, studies now typically analyze community characteristics that may help explain this discrepancy. In general, urban residents are more fearful than people who live in rural areas (Boggs, 1971, Warr, 1994), and people who live in larger cities tend to be more fearful than those who live in smaller ones (Clemente and Kleinman, 1977). Residents in areas with more racial heterogeneity and higher poverty levels

also tend to report more fear (Covington and Taylor, 1991; Lizotte and Bordua, 1980; Merry, 1981; Skogan, 1995; Will and McGrath, 1995)—purportedly because they are more likely to have direct experience with crime and with incivilities (Ferraro, 1995).

Other community characteristics hypothesized to be crucial in explaining fear of crime include public disorder and/or community decline. Disorder, as indicated by social (e.g., loitering or rowdy youths, drunks, prostitution) and physical incivilities (e.g., litter, vacant buildings, abandoned lots, broken windows, graffiti), is often found to lead to and increase fear (e.g., Lewis and Maxfield, 1980; Perkins et al., 1992; Taylor, 1991; Taylor and Shumaker, 1990; Taylor, Shumaker, and Gottfredson, 1985; Wilson and Kelling, 1982). Another important predictor of fear is concern over community decline and deterioration (see Conklin, 1975; Garofalo and Laub, 1978). Including community variables has added an important dimension to research on fear of crime, suggesting it is influenced not simply by personal characteristics, but also by the *relationship* between personal characteristics, community characteristics, and actual crime victimization probabilities.

There currently are four dominant theoretical models that incorporate both individual and community correlates of fear of crime: indirect victimization, incivilities, community concern (decline) and subcultural diversity/racial heterogeneity (Covington and Taylor, 1991).

- **“Indirect victimization”** refers to the idea that people hear about crime through local social networks and through the media and consequently experience vicarious victimization which makes them fearful (Skogan, 1977; Tyler, 1980).
- **“Incivilities”** refers the idea that when community members perceive social and physical signs of an “underlying level of disorder” in their immediate surroundings, they feel more vulnerable and therefore more fearful (e.g., Covington and Taylor, 1991: 232; see also Lewis and Maxfield, 1980; Taylor, 1991).

- **“Community concern”** argues that fear of crime is primarily the result of concern over community deterioration (Conklin, 1975; Covington and Taylor, 1991; Garofalo and Laub, 1978).
- **“Subcultural diversity”** argues that individuals who live near people of different cultural (or racial) backgrounds are more fearful because they find it difficult to interpret the manners and behaviors of people who are different from themselves (Merry, 1981; see also Skogan, 1995).

Covington and Taylor (1991) found support for aspects of all four models but even using expanded models, they were unable to explain much of the variance in the fear of crime phenomenon. At best, these types of models explain only about 10 percent of the variance (Covington and Taylor, 1991; Taylor and Hale, 1986). To date, no study has tested the applicability of these models to fear of youth and street gangs. We believe that such a focus is particularly important to the study of community characteristics and their relationship to fear of crime. As noted earlier, gang membership and violence are believed to be on the rise, and communities that have never experienced gang crime now are being forced to confront it. Media reports heinous and seemingly random crimes committed by young people such as the murder of a 3-year-old girl in Los Angeles whose family members took a wrong turn into a “gang-infested” neighborhood, seem likely to exacerbate fear of gangs.

Fear of Crime and Gangs Survey Methods

CONDUCTING THE SURVEY

From September 3–28, 1997, we conducted a random digit dial survey of 1,000 Orange County residents with a 50-50 split between men and women.¹⁸ In addition to the random sample, we sampled 100 Hispanic and 100 Vietnamese county residents to allow for smaller

analyses of fear of crime and gangs in these large ethnic groups. The survey had a total of 1,200 respondents and took approximately 20 minutes to administer. The random digit dial portion of the survey broadly reflects the ethnic distribution of the county: 63 percent white, 18 percent Hispanic, 6 percent Asian-American and 9 percent others.

The survey instrument itself was designed to measure the level of fear in the community with regard to gangs and gang crime, investigate the theoretical factors related to fear, and relate these perceptions to variations in crime across the county. To measure prevalence of fear, for example, we asked if gangs were a problem in the community, if so, when they became a problem, and if respondents believed that different types of crime had increased or decreased in recent years. We also measured behavioral reactions to fear of gangs, such as avoiding certain areas of the community and carrying a weapon for protection (see Appendix B).

We also hoped to measure theoretical propositions put forth by fear of crime researchers about the causes of fear (see above). For example, one section of the survey measured concern about community problems such as disorder/incivilities, community decline, and subcultural diversity/racial heterogeneity. We also wanted to examine Warr and Stafford's (1983) proposition that fear is at least correlated with one's perception of the crime's seriousness and the perceived risk of victimization. This required us to examine specific criminal acts rather than just generalized perceptions of crime. Therefore, for eight different crimes (six personal and two property), we asked respondents to indicate the seriousness, the likelihood that they would be victimized by that crime in the next two to three years, and how personally afraid they were of that crime. Since the focus of this study is on gang crime, six of the eight crimes were specified as gang crimes or were crimes typically associated with gang members. These six crimes were:

¹⁸ We contracted with Interviewing Services of America in Van Nuys, California to administer the survey. Interviews were closely monitored by Dr. Jodi Lane, the lead researcher on this aspect of our project.

- Having your property damaged by gang graffiti or tagging
- Having a gang member commit a home invasion robbery against you
- Being a victim of a drive-by or random gang-related shooting
- Being physically assaulted by a gang member
- Being harassed by gang members
- Being a victim of a carjacking

The other two crimes in the list were:

- Having someone break into your home while you are away
- Being raped or sexually assaulted by a stranger

The general burglary question was included to allow us to compare fear of gang crimes with fear of a crime not necessarily associated with gangs. Rape was included to allow us to control for fear of rape in understanding women's fear of crime in later analyses.

In addition to measuring fear of crime and gangs, the survey measured respondents' concern about community-level problems which theorists have noted are important to predicting fear of crime. The question asked:

We have a number of questions about your community as you define it. I will read you a list of some things that currently might be problems in your community. After I read each one, please tell me whether you think it is a big problem, somewhat of a problem, a small problem, or no problem in your community.¹⁹

Some of the community problems listed overlap constructs from different theories about community effects and therefore can be included as measures of more than one theory. The questions and the theoretical constructs they were designed to measure are listed in Table 12.

Table 12. Theoretical constructs and survey questions used to measure them

THEORETICAL CONSTRUCT	COMMUNITY PROBLEM QUESTION(S)
<p style="text-align: center;">DISORDER</p>	<p>Social Disorganization:</p> <ul style="list-style-type: none"> • Poverty and economic hardship • People moving in and out without personally becoming attached to the community • Racial differences between residents <p>Physical Incivilities:</p> <ul style="list-style-type: none"> • People or landlords allowing their property to become run down • Abandoned houses or other empty buildings • Graffiti <p>Social Incivilities:</p> <ul style="list-style-type: none"> • Too many people living in one residence • Youths hanging out • Gangs
	<ul style="list-style-type: none"> • People or landlords allowing their property to become run down • People moving in and out without personally becoming attached to the community • Abandoned houses or other empty buildings • Graffiti • Too many people living in one residence • Youths hanging out • Gangs
<p style="text-align: center;">SUBCULTURAL DIVERSITY/ RACIAL HETEROGENEITY</p>	<ul style="list-style-type: none"> • Language differences between residents • Cultural differences between residents • Racial differences between residents • Too many people living in one residence²⁰

¹⁹ An earlier question asked respondents to indicate how they defined their community.

²⁰ This question is included as a measurement of this construct because another study of fear in Orange County using focus groups with residents of six Santa Ana, California, neighborhoods indicated that residents associated their neighborhood crime and gang problems and therefore their fear of them with Hispanic immigrants. Part of the

Analysis of Random Digit Dial Survey Findings

To ensure that our analysis applies to the county at large, much of what we report here deals only with the random digit dial sample of 500 men and 500 women. The research questions presented in this section will report analysis and findings from these 1,000 respondents. Later, we will examine the differences in fear of crime and gangs between the subsamples of whites, Hispanics, and Vietnamese residents.

HOW MUCH FEAR DO RESIDENTS CURRENTLY HAVE ABOUT GANG VIOLENCE?

As noted above, the survey asked respondents to indicate on a 4-point scale personal perceptions about seriousness, risk, and fear regarding eight different crimes.²¹ Tables 13-15 provide the percentages of the random digit dial sample respondents who answered in each of the four category options for each of the eight crimes. The tables rank order crimes from most to least serious, likely to occur, or fear provoking.

problem according to these respondents was that Hispanic immigrants often lived with multiple families in one household, which often led to more neighborhood disorder (Lane 1998).

²¹ The order of these crimes was rotated randomly during the survey to control for response effects.

Table 13. RDD respondents rank the seriousness of eight crimes

CRIMES:	n	NOT SERIOUS (%)	SOMEWHAT SERIOUS (%)	SERIOUS (%)	VERY SERIOUS (%)	MEAN	95% CONFIDENCE INTERVAL
PROPERTY CRIMES:							
Burglary	996	7.9	11.3	33.1	47.6	3.20	3.15–3.26
Graffiti	998	11.5	20.7	34.7	33.1	2.89	2.83–2.95
PERSONAL CRIMES:							
Rape	994	8.6	3.2	5.9	82.3	3.62	3.56–3.68
Drive-By/Random Gang Shooting	998	9.7	3.1	6.8	80.4	3.58	3.52–3.64
Gang-Related Assault	997	9.4	3.8	12.2	74.5	3.52	3.46–3.58
Home Invasion Robbery	995	9.2	4.3	15.6	70.9	3.48	3.42–3.54
Carjacking	996	9.0	5.9	18.8	66.3	3.42	3.36–3.48
Gang-Related Harassment	995	10.9	13.5	34.5	41.2	3.06	3.00–3.12

Table 14. RDD respondents indicate the likelihood that they will become a victim of eight crimes in the next 2-3 years

CRIMES:	n	NOT LIKELY (%)	SOMEWHAT LIKELY (%)	LIKELY (%)	VERY LIKELY (%)	MEAN	95% CONFIDENCE INTERVAL
PROPERTY CRIMES:							
Burglary	983	37.1	40.2	17.4	5.3	1.91	1.85–1.96
Graffiti	985	57.6	26.0	9.9	6.5	1.65	1.60–1.71
PERSONAL CRIMES:							
Rape	980	49.2	33.6	12.3	4.9	1.73	1.68–1.78
Drive-By/Random Gang Shooting	985	55.7	27.4	12.2	4.7	1.66	1.60–1.71
Gang-Related Assault	979	59.3	26.9	9.9	3.9	1.58	1.53–1.63
Home Invasion Robbery	981	61.6	24.2	9.8	4.5	1.57	1.52–1.62
Carjacking	981	63.3	23.6	7.6	5.4	1.55	1.50–1.60
Gang-Related Harassment	982	69.2	19.0	7.2	4.5	1.47	1.42–1.52

Table 15. RDD respondents indicate how personally afraid they are of eight crimes

CRIMES:	n	NOT AFRAID (%)	SOMEWHAT AFRAID (%)	AFRAID (%)	VERY AFRAID (%)	MEAN	95% CONFIDENCE INTERVAL
PROPERTY CRIMES:							
Burglary	995	29.3	37.3	16.3	17.1	2.21	2.15–2.28
Graffiti	994	47.9	26.8	14.5	10.9	1.88	1.82–1.95
PERSONAL CRIMES:							
Rape	994	35.5	23.8	13.0	27.7	2.33	2.25–2.40
Drive-By/Random Gang Shooting	995	32.5	29.0	13.6	24.9	2.31	2.24–2.38
Gang-Related Assault	994	42.4	16.4	10.6	30.7	2.30	2.22–2.38
Home Invasion Robbery	993	37.5	24.1	12.3	26.2	2.27	2.20–2.35
Carjacking	995	36.4	24.5	14.6	24.5	2.27	2.20–2.35
Gang-Related Harassment	995	41.5	28.4	14.2	15.9	2.04	1.98–2.11

COMPARING THE PERCENTAGES

Based upon the percentages presented in the above three tables, there are clear differences between respondents' ratings of the seriousness of these crimes, their perceived risk of victimization and their personal fear of them. In general, respondents see personal crimes as serious but have a low perceived risk and are only "somewhat afraid." However, an examination of the percentages by type of crime indicates that ratings of seriousness, perceived risk, and fear are very different. For example, for the property crimes of tagging/graffiti and burglary, about one-third to one-half thought the crimes were very serious, about 5-7 percent felt very likely it would happen to them, and 10–20 percent were very afraid of them. For gang-related assault, 74.5 percent of respondents felt it was "very serious," but only 4.5 percent felt that it was "very likely" to happen to them in the next two to three years and about 26.2 percent of them were "very afraid" of gang assault. For the "random" crimes often focused on by the media such as drive-by shootings, carjacking, and home invasion robbery there also were clear differences. Although a strong majority felt that these crimes were very serious, only about a quarter of respondents were "very afraid" of them, and most of them did not think that they were very likely to be victimized by these serious violent crimes—even though they were "random" and theoretically could happen to anyone. Interestingly, rape was ranked as the most serious crime in the list, but was seen as the least likely, and ranked in the middle in terms of fear.²²

These data only provide partial support for Warr and Stafford's (1983) proposition that fear is correlated with one's perception of crime seriousness and perceived risk of victimization. For personal crime, the relative rank order for risk, seriousness and fear are the same indicating association. Property crime, on the other hand, follows a core couples relationship. Both burglary and graffiti are seen in terms of low fear and seriousness, but very likely for

victimization. A more sophisticated analysis of Warr and Stafford's (1983) propositions follows later.

FACTORS AFFECTING RESIDENTS' PERCEPTIONS AND FEARS REGARDING GANG ACTIVITY

Importance of Demographics

The foregoing tables indicate differences between people's perceptions about seriousness, risk, and fear of the eight crimes. It also is important to know what factors are most likely to predict feelings about these eight crimes. Past research has shown that demographics — especially age and gender—are important predictors of fear and have emphasized the importance of subjective concern about community problems such as disorder and community decline. To better understand the relationship between demographics and concern about community problems, we conducted regressions predicting seriousness, perceived risk, and fear for each of the eight crimes based upon demographic characteristics other than race/ethnicity (Tables 16-18).

²² For this table, both men and women's assessments of rape are included.

Table 16. Predicting crime seriousness ranking based upon RDD respondent demographic characteristics

DEMOGRAPHICS	SERIOUSNESS ²³							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
SEX²⁴	.226** (.115)	.133* (.072)	.275*** (.140)	.241*** (.129)	.082 (.043)	.177** (.095)	.201** (.106)	.199** (.112)
AGE	-.043 (-.068)	-.019 (-.033)	-.033 (-.051)	-.056** (-.093)	-.055* (-.091)	-.042* (-.070)	-.037 (-.060)	-.039 (-.068)
INCOME	.024 (.047)	.034 (.071)	.040 (.078)	.051** (.106)	.056** (.114)	.030 (.061)	.031 (.064)	.039* (.084)
EDUCATION	-.030 (-.040)	-.027 (-.038)	-.051 (-.067)	.069* (.096)	.019 (.026)	.055 (.077)	.027 (.037)	.047 (.068)
VICTIM²⁵	.005 (.002)	.163 (.074)	.028 (.012)	.019 (.008)	.059 (.026)	.104 (.047)	.152 (.068)	.073 (.035)
R²	.018	.015	.026	.049	.025	.028	.026	.032
R² ADJ	.012	.009	.020	.043	.020	.022	.020	.026
F	3.104**	2.587*	4.375**	8.592***	4.332**	4.701***	4.376**	5.508***
Df	5, 830	5, 829	5, 827	5, 830	5, 829	5, 827	5, 830	5, 827

B (Beta) * p < .05 ** p < .01 *** p < .001; 1000 Respondents, 500 Men, 500 Women

²³ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

²⁴ Gender is dummy coded. 1 = female, 0 = male.

²⁵ Victimization is dummy coded with 1 equaling some type of personal victimization by crime in the past 2 to 3 years, and 0 equaling no personal victimization in the past 2 to 3 years.

Table 17. Predicting perceived risk of victimization based upon RDD respondent demographic characteristics

DEMOGRAPHICS	PERCEIVED RISK ²⁶							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
SEX²⁷	.066 (.037)	.136* (.080)	-.007 (-.004)	-.019 (-.011)	.041 (.024)	.076 (.047)	.092 (.055)	.354*** (.222)
AGE	-.058** (-.100)	-.037 (-.067)	-.072*** (-.130)	-.057* (-.107)	-.022 (-.040)	-.028 (-.054)	-.014 (-.026)	-.027 (-.052)
INCOME	-.069*** (-.148)	-.018 (-.041)	-.037* (-.082)	-.064*** (-.148)	-.030 (-.068)	-.063*** (-.151)	-.065*** (-.149)	-.042* (-.101)
EDUCATION	-.080** (-.116)	-.036 (-.055)	-.101*** (-.153)	-.139*** (-.219)	-.122*** (-.188)	-.085*** (-.137)	-.116*** (-.181)	-.101*** (-.165)
VICTIM²⁸	.296 (.138)	.222** (.110)	.427*** (.209)	.217** (.109)	.182** (.091)	.258*** (.135)	.153* (.077)	.160* (.084)
R²	.093	.033	.118	.138	.067	.092	.096	.120
R² ADJ	.088	.028	.113	.133	.062	.086	.091	.115
F	16.91***	5.69***	22.05***	26.23***	11.82***	16.54***	17.40***	22.36***
Df	5, 824	5, 821	5, 824	5, 818	5, 819	5, 818	5, 819	5, 819

B (Beta) * p < .05 ** p < .01 *** p < .001; 1000 Respondents, 500 Men, 500 Women

²⁶ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

²⁷ Gender is dummy coded. 1 = female, 0 = male.

²⁸ Victimization is dummy coded with 1 equaling some type of personal victimization by crime in the past 2 to 3 years, and 0 equaling no personal victimization in the past 2 to 3 years.

Table 18. Predicting personal fear based upon RDD respondent demographic characteristics

DEMOGRAPHICS	FEAR ²⁹							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
SEX³⁰	.374***	.405***	.593***	.678***	.631***	.549***	.549***	1.165***
	(.184)	(.196)	(.274)	(.282)	(.271)	(.231)	(.226)	(.451)
AGE	-.013	-.011	-.046	-.010***	-.064*	-.062*	-.088**	-.130***
	(-.020)	(-.017)	(-.066)	(-.128)	(-.085)	(-.080)	(-.113)	(-.156)
INCOME	-.023	-.010	-.007	-.001	.018	-.006	-.019	-.009
	(-.043)	(-.019)	(-.012)	(-.001)	(.029)	(-.010)	(-.030)	(-.014)
EDUCATION	-.105**	-.083**	-.106**	-.073*	-.075*	-.079*	-.107**	-.079*
	(-.135)	(-.105)	(-.127)	(-.079)	(-.084)	(-.087)	(-.115)	(-.079)
VICTIM³¹	-.040	.087	.037	.089	.155	.148	-.054	.042
	(-.017)	(.035)	(.014)	(.031)	(.056)	(.052)	(.019)	(.014)
R²	.062	.054	.098	.102	.088	.072	.083	.230
R² ADJ	.056	.049	.092	.096	.083	.067	.078	.225
F	10.87***	9.52***	17.93***	18.76***	16.05***	12.91***	15.06***	49.43***
Df	5, 828	5, 829	5, 828	5, 828	5, 828	5, 828	5, 828	5, 829

B (Beta) * p < .05 ** p < .01 *** p < .001; 1000 Respondents, 500 Men, 500 Women

Tables 16-18 again support the notion that predictors of fear of crime, as well as seriousness and perceived risk, differ depending upon the type of crime. For crime seriousness, which is presented in Table 16, gender (being female) is significantly related to ratings for every crime except carjacking. Age also is significantly and negatively related to ratings of seriousness for gang-related assault, carjacking, and home invasion robbery. Income is significantly and

²⁹ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

³⁰ Gender is dummy coded. 1 = female, 0 = male.

³¹ Victimization is dummy coded with 1 equaling some type of personal victimization by crime in the past 2 to 3 years, and 0 equaling no personal victimization in the past 2 to 3 years.

positively related to seriousness ratings for gang-related assault, carjacking, and rape.

Interestingly, education is significantly and positively related only to ratings of the seriousness of gang-related assault. Previous victimization is not significantly related to seriousness ratings for any of the crimes.

Table 17 presents results of regression analyses predicting perceived risk for each of the eight crimes based upon respondent's demographic characteristics. For perceived risk, being female is positively and significantly related to rape and burglary. Age is significantly and negatively related to perceived risk of graffiti, gang-related harassment, and gang-related assault. Income is significantly and negatively related to perceived risk of graffiti, gang-related harassment, gang-related assault, home invasion robbery, drive-by shootings, and rape. Education is significantly and negatively related to perceived risk of all crimes except burglary. And prior victimization is significantly and positively related to perceived risk of burglary, gang-related harassment and assault, carjacking, home invasion robbery, drive-bys and rape.

Table 18 presents results of regression analyses predicting fear of crime from demographic characteristics. Consistent with most of the previous literature, being female is significantly and positively related to reported fear of all eight crimes. On the other hand, unlike findings from most studies, our analyses indicate that, in Orange County at least, younger (rather than older) people are significantly more likely to be afraid of gang-related assault, carjacking, home invasion robbery, drive-by shootings, and rape. Education is significantly and negatively related to fear of all eight crimes. Interestingly, income and victimization are not significantly related to fear of any of the crimes.

COMPARING EFFECTS OF DEMOGRAPHICS ON SERIOUSNESS, PERCEIVED RISK, AND FEAR

Tables 16–18 show that predictors of seriousness, perceived risk, and fear vary depending upon the type of crime. In addition, perceived risk and personal fear clearly are not the same phenomena. Here, gender (being female)—one of the strongest predictors of fear in previous research (Baumer 1978; Ferraro 1995; Garofalo and Laub 1978; Miethe 1995; Riger, Gordon and Le Bailly 1978)—again is significantly related to fear of all types of crime included in the survey. It also is significantly related to seriousness ratings for all crimes except carjacking. However, gender is significantly related to the perceived risk for only two crimes—burglary and rape, the two crimes that are not necessarily “gang-related.”

Age is negatively and significantly related to fear of gang-related assault, carjacking, home invasion robbery, drive-by shootings, and rape. Although many studies have found a positive relationship between age and fear, our finding is not unique (see Ferraro and LaGrange 1987, 1988; LaGrange et al. 1992; McCoy et al. 1996). Age also is negatively related to perceived risk of graffiti, gang harassment, and gang-related assault. In Orange County, it appears younger people are more likely to fear these crimes and to believe they are more likely to become victims of them.

Previous findings that poverty is positively related to fear (Taylor and Covington 1993; Warr 1994; Will and McGrath 1995) receive mixed support here. Income is *positively* and significantly related to perceptions of the seriousness of gang-related assault, carjacking, and rape, but it is *negatively* and significantly related to perceived risk of graffiti, gang harassment, gang assault, home invasion, drive-bys and rape. However, it is not significantly related to fear for any of the crimes. Education shows the same pattern, although it is significantly and negatively related to fear of all eight crimes. For seriousness, education is *positively* and significantly related to gang assault, but for perceived risk it is *negatively* and significantly

related to graffiti, gang harassment, gang assault, carjacking, home invasion robbery, drive-bys, and rape. As some previous research has indicated, personal victimization within the past two to three years is not a significant predictor of fear of any of the crimes. Nor is it predictive of seriousness ratings for them. However, it *is* significantly related to perceived risk of all the crimes except burglary.³²

Because previous studies have indicated that fear and actual victimization risk based upon demographic characteristics do not coincide, fear of crime theorists have emphasized the importance of measuring concern about community problems like disorder, community decline, and subcultural diversity/racial heterogeneity as important factors in predicting fear. As noted previously, our survey was designed to measure all three theories, but a factor analysis indicated the presence of two, rather than three, factors. The survey data loaded primarily on a “disorder” factor and a “diversity” factor. The failure of community decline to emerge as a coherent factor may have occurred because many of the variables indicative of concern about disorder also indicate concerns about community decline. The factors that emerged are:³³

DISORDER

- Poverty and economic hardship
- People or landlords allowing their property to become run down
- Abandoned houses or other empty buildings
- Gunfire
- Graffiti
- Gangs
- Youths hanging out

DIVERSITY

- Language differences between residents
- Cultural differences between residents
- Racial differences between residents
- People moving in and out without becoming attached to the community

We developed composite variables in order to enter the disorder and diversity constructs into regression equations by computing arithmetic averages for each respondent, summing the scores for all variables in the factor, and dividing by the number of variables (seven for disorder

³² The direction of relationships in the multiple regression analysis are consistent with the direction of relationships for the bivariate correlations.

and four for diversity). We then computed the same regressions as before with the addition of disorder and diversity variables. Tables 19–21 show the results of these the regression analyses.

Table 19. Predicted perceptions of seriousness based upon demographic, disorder, and diversity variables

VARIABLES	SERIOUSNESS ³⁴							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
SEX	.216** (.110)	.176** (.095)	.306*** (.158)	.280*** (.149)	.127 (.067)	.230** (.122)	.218** (.115)	.242*** (.135)
AGE	-.034 (-.053)	-.013 (-.021)	-.005 (-.007)	-.038 (-.061)	-.049* (-.079)	-.033 (-.053)	-.024 (-.039)	-.029 (-.048)
INCOME	.032 (.063)	.041* (.085)	.053* (.104)	.056** (.113)	.058** (.117)	.044* (.088)	.043* (.086)	.056** (.119)
EDUCATION	-.006 (-.007)	-.010 (-.014)	-.038 (-.050)	.070* (.094)	.028 (.038)	.059 (.079)	.030 (.040)	.038 (.055)
VICTIM	.004 (.002)	.181* (.082)	.041 (.018)	.035 (.016)	.054 (.024)	.096 (.043)	.146 (.064)	.080 (.037)
STEP 2								
DISORDER	.149* (.126)	.103 (.092)	.150** (.128)	.067 (.059)	.080 (.070)	.094 (.082)	.023 (.020)	.070 (.065)
DIVERSITY	-.015 (-.012)	-.075 (-.063)	.000 (.000)	.017 (.014)	-.017 (-.014)	-.037 (-.030)	.047 (.038)	.039 (.037)
R ² CHANGE STEP 1	.016*	.021**	.030***	.048***	.025**	.033***	.029**	.038***
R ² CHANGE STEP 2	.013**	.005	.015**	.004	.004	.004	.003	.008
MODEL R ²	.029	.025	.045	.053	.028	.037	.031	.046
MODEL R ² ADJ	.020	.016	.036	.044	.019	.028	.022	.037
MODEL F	3.232**	2.764**	5.029	5.960**	3.127**	4.117**	3.458**	5.095**
MODEL df	7, 749	7, 748	7, 748	7, 749	7, 748	7, 747	7, 749	7, 746

B (Beta) from final model including both steps * p < .05 ** p < .01 *** p < .001

³³ The alpha for the disorder scale is .9059 and for the diversity scale is .7752.

Table 20. Predicted perceived risk of victimization based upon demographic, disorder, and diversity variables

VARIABLES	PERCEIVED RISK ³⁵							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
SEX	.075 (.043)	.141* (.086)	.007 (.004)	-.012 (-.007)	.044 (.027)	.073 (.048)	.098 (.062)	.347*** (.221)
AGE	-.036 (-.063)	-.025 (-.046)	-.039* (-.072)	-.029 (-.056)	.007 (.012)	-.009 (-.017)	.022 (.041)	-.009 (-.017)
INCOME	-.054** (-.119)	-.000 (.000)	-.014 (-.034)	-.044** (-.105)	-.016 (-.037)	-.048** (-.119)	-.052** (-.125)	-.025 (-.061)
EDUCATION	-.068* (-.101)	-.038 (-.058)	-.109*** (-.170)	-.145*** (-.232)	-.116*** (-.181)	-.077** (-.129)	-.105*** (-.169)	-.112*** (-.181)
VICTIM	.194** (.094)	.122 (.062)	.318*** (.162)	.087 (.045)	.109 (.116)	.140* (.077)	.069 (.036)	.071 (.038)
STEP 2								
DISORDER	.231*** (.221)	.116* (.116)	.206*** (.208)	.171*** (.179)	.198*** (.200)	.207*** (.224)	.212*** (.221)	.129** (.136)
DIVERSITY	.038 (.034)	.095 (.089)	.072 (.068)	.076 (.074)	.002 (.002)	.006 (.006)	.046 (.045)	.073 (.071)
R ² CHANGE STEP 1	.092***	.028**	.111***	.138***	.066***	.090***	.105***	.123***
R ² CHANGE STEP 2	.055***	.032***	.061***	.050***	.037***	.048***	.059***	.033***
MODEL R ²	.147	.061	.172	.188	.103	.138	.163	.157
MODEL R ² ADJ	.139	.052	.165	.181	.095	.130	.155	.149
MODEL F	18.33***	6.85**	22.13***	24.50***	12.15***	16.94***	20.60***	19.61***
MODEL df	7, 743	7, 742	7, 742	7, 739	7, 740	7, 740	7, 739	7, 739

B (Beta) from final model including both steps * p < .05 ** p < .01 *** p < .001

³⁴ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

³⁵ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

Table 21. Predicting personal fear based upon demographic, disorder, and diversity variables

VARIABLES	FEAR ³⁶							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
SEX	.305*** (.153)	.357*** (.175)	.555*** (.257)	.612*** (.256)	.570*** (.247)	.505*** (.214)	.503*** (.208)	1.098** * (.427)
AGE	.006 (.008)	-.002 (-.004)	-.036 (-.050)	-.081** (-.102)	-.046 (-.060)	-.053 (-.068)	-.075* (-.093)	-.127*** (-.148)
INCOME	-.006 (-.011)	.008 (.014)	.023 (.041)	.015 (.024)	.031 (.050)	.004 (.006)	.011 (.017)	.003 (.005)
EDUCATION	-.097** (-.124)	-.068* (-.084)	-.110** (-.130)	-.071 (-.076)	-.084* (-.092)	-.058 (-.063)	-.117** (-.123)	-.078* (-.077)
VICTIM	-.061 (-.025)	.045 (.018)	-.014 (-.006)	.081 (.028)	.116 (.042)	.109 (.039)	-.008 (-.003)	.042 (.013)
STEP 2								
DISORDER	.196** (.162)	.218*** (.176)	.198** (.152)	.168* (.116)	.194** (.139)	.171* (.120)	.227** (.155)	.115 (.074)
DIVERSITY	.027 (.021)	-.055 (-.041)	.046 (.033)	.040 (.026)	-.027 (-.018)	-.020 (-.013)	-.024 (-.016)	.015 (.009)
R ² CHANGE STEP 1	.052***	.044***	.091***	.089***	.079***	.063***	.078***	.123***
R ² CHANGE STEP 2	.029***	.021***	.028***	.017**	.015**	.012*	.019***	.006
MODEL R ²	.080	.065	.119	.106	.094	.074	.098	.219
MODEL R ² ADJ	.071	.057	.111	.098	.085	.066	.089	.211
MODEL F	9.30***	7.48***	14.48***	12.64***	11.04***	8.59***	11.55***	29.96***
MODEL df	7, 748	7, 748	7, 747	7, 747	7,748	7, 747	7, 747	7, 749

B (Beta) from final model including both steps * p < .05 ** p < .01 *** p < .001

³⁶ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

COMPARING EFFECTS OF DEMOGRAPHICS AND COMMUNITY PROBLEMS

Tables 19–21, which were generated from equations that included concern about community disorder and diversity, again indicate that the significant predictors of perceived seriousness, perceived risk and fear vary depending upon the crime. Interestingly, concern about diversity is not significantly related to any seriousness ratings, perceived risk, or fear of any of the crimes. However, concern about disorder is significantly related in most equations predicting risk and fear. For seriousness ratings, concern about community disorder is significantly and positively related to graffiti and gang harassment. For perceived risk, belief that disorder is a community problem is related to all eight crimes, and for fear of crime, disorder is related to all crimes except rape.

Being female is a significant predictor of perceptions of seriousness for all crimes except carjacking—as in the previous equations. For perceived risk, being female is significant only for burglary and rape. However, being female is significantly related to fear of all eight crimes.

Age again is negatively related to only a few crimes. For seriousness, age is significantly and negatively related only to carjacking. In the previous equations that did not include concern about community problems, age was significantly and negatively related to seriousness ratings for gang assault and home invasion robbery. For perceived risk, it was negatively and significantly related to gang-related harassment. Now, however, the earlier significant relationships between age and perceived risk of graffiti and gang assault drop out. For fear, age is negatively and significantly associated with gang-related assault, whereas in the previous equations it was negatively and significantly associated with fear of carjacking and home invasion robbery.

Income is significantly and positively related to seriousness ratings for all crimes except graffiti while, in the previous equations it was significantly related only to gang assault,

carjacking, and rape. With regard to risk, the inclusion of the composite variables made income significantly and negatively related to perceived risk of graffiti, gang assault, home invasion robbery, and drive-by shootings. However, as before, income is not significantly related to fear levels for any of the crimes.

Education, on the other hand, is significantly and negatively related to fear levels for graffiti, burglary, gang harassment, carjacking, drive-by shooting, and rape, whereas it previously was significantly related to all eight crimes. As in the previous equations for perceived risk, education is significantly and negatively related to all crimes except burglary. Again, however, education is positively and significantly related only to the seriousness with which respondents rated gang-related assault.

With the inclusion of the diversity and disorder constructs, victimization became positively related to the seriousness rating for burglary and positively related to the perceived risk of graffiti, gang-harassment and home invasion robbery when the earlier equations indicated it was significantly related to all crimes except graffiti. As before, previous victimization is not significantly related to fear of any of the crimes.

Similar to previous findings (Lewis and Maxfield 1980; Perkins et al 1992; Taylor 1991; Taylor and Shumaker 1990; Taylor, Shumaker and Gottfredson 1985; Wilson and Kelling 1982; and Covington and Taylor 1991), the disorder construct is positively associated with almost all of the fear items and all of the risk items. However, disorder is not related to seriousness. Also contrary to the findings of Merry 1981 and Skogan 1995, the disorder construct is not strongly associated with fear, risk or seriousness. The strength of association for the final models, including demographic variables, victimization, diversity and disorder constructs are similar to the ten percent findings of Covington and Taylor (1991) for fear and risk. Seriousness is much

less. Average explained variation was 9.8 percent for fear, 13.3 percent for risk and 2.8 percent for seriousness.

RELATIONSHIPS AMONG SERIOUSNESS RANKINGS, PERCEIVED RISK OF VICTIMIZATION, AND FEAR

The next step was to test Warr and Stafford's (1983) idea that fear of a particular crime is a function of a person's perceived risk of the crime and his or her beliefs about the seriousness of the crime. We took a different approach to investigating question by using regression equations and a structural equation model to examine fear of crime as a function of perceived risk and perceived seriousness.

Tables 22 and 23 present the result of regression analyses examining the extent to which fear of crime was explained by perceived risk and by perceived seriousness. We ran two regressions for each crime. First, Table 22 illustrates the effects of seriousness and risk ratings for each crime on fear of that crime after controlling for demographic characteristics. Table 23 illustrates the effects of seriousness and perceived risk of the crime after controlling for demographics as well as respondents' concerns about community disorder and diversity.

Table 22. Predicting fear of crime from demographics, perceived seriousness and perceived risk.

	FEAR ³⁷							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
SEX	.299*** (.148)	.333*** (.162)	.549*** (.254)	.647*** (.269)	.600*** (.257)	.488*** (.205)	.489*** (.201)	1.016** * (.394)
AGE	.011 (.016)	.006 (.009)	-.013 (-.019)	-.065* (-.083)	-.044 (-.058)	-.039 (-.051)	-.081** (-.103)	-.120*** (-.144)
INCOME	-.005 (-.009)	-.011 (-.021)	-.004 (-.007)	.010 (.015)	.015 (.024)	.015 (.024)	.002 (.003)	.005 (.008)
EDUCATION	-.080** (-.103)	-.054 (-.068)	-.064* (-.077)	-.029 (-.032)	-.034 (-.038)	-.042 (-.046)	-.069 (-.073)	-.046 (-.046)
VICTIM	-.143 (-.059)	-.025 (-.010)	-.127 (-.049)	.019 (.007)	.080 (.029)	.024 (.008)	-.028 (-.010)	-.030 (-.010)
STEP 2								
SERIOUSNESS RANK	.206*** (.200)	.164*** (.147)	.132*** (.120)	.124** (.097)	.187*** (.153)	.118** (.093)	.133** (.103)	.052 (.036)
RISK PERCEPTION	.298*** (.264)	.389*** (.321)	.338*** (.268)	.361*** (.249)	.360*** (.261)	.431*** (.292)	.370*** (.254)	.382*** (.237)
R² CHANGE STEP 1	.062***	.053***	.096***	.100***	.087***	.069***	.084***	.230***
R² CHANGE STEP 2	.111***	.130***	.084***	.068***	.095***	.087***	.073***	.052***
MODEL R²	.173	.183	.180	.168	.182	.156	.157	.282
MODEL R² ADJ	.166	.176	.173	.160	.175	.149	.150	.276
F	24.49***	26.18***	25.59***	23.46***	26.02***	21.46***	21.73***	45.63***
df	7, 821	7, 818	7, 818	7, 815	7, 816	7, 812	7, 816	7, 813

B (Beta) from final model including both steps * p < .05 ** p < .01 *** p < .001

³⁷ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

Table 23. Predicting fear of crime from demographics, community concerns, perceived seriousness, and perceived risk

	FEAR ³⁸							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
SEX	.231** (.116)	.274*** (.134)	.499*** (.232)	.572*** (.239)	.527*** (.229)	.434*** (.184)	.427*** (.176)	.936*** (.364)
AGE	.019 (.028)	.007 (.010)	-.018 (-.025)	-.060* (-.075)	-.036 (-.047)	-.040 (-.051)	-.078** (-.097)	-.125*** (-.146)
INCOME	.007 (.014)	-.003 (-.005)	.017 (.031)	.021 (.033)	.022 (.037)	.016 (.026)	.024 (.038)	.012 (.017)
EDUCATION	-.082 (-.105)	-.043 (-.053)	-.068* (-.081)	-.023 (-.024)	-.048 (-.053)	-.033 (-.036)	-.085* (-.090)	-.039 (-.038)
VICTIM	-.136 (-.057)	-.030 (-.012)	-.136 (-.053)	.038 (.013)	.069 (.025)	.030 (.009)	-.052 (-.018)	-.007 (-.002)
STEP 2								
DISORDER	.102 (.085)	.152** (.123)	.117* (.090)	.095 (.066)	.111 (.080)	.060 (.042)	.152* (.104)	.064 (.042)
DIVERSITY	.029 (.022)	-.081 (-.061)	.027 (.020)	.021 (.014)	-.019 (-.013)	.004 (.003)	-.041 (-.026)	-.015 (-.009)
STEP 3								
SERIOUS RANK	.198*** (.194)	.163*** (.148)	.123** (.110)	.127** (.100)	.190*** (.156)	.132** (.106)	.151** (.118)	.057 (.040)
RISK PERCEPTION	.287*** (.250)	.383*** (.309)	.326*** (.249)	.382*** (.254)	.354*** (.251)	.431*** (.278)	.362*** (.237)	.411 (.252)
R² CHANGE STEP 1	.052***	.043***	.089***	.087***	.078***	.060***	.078***	.214***
R² CHANGE STEP 2	.032***	.020***	.031***	.019**	.016**	.012**	.021***	.007*
R² CHANGE STEP 3	.093***	.119***	.066***	.066***	.088***	.077***	.065***	.056***
MODEL R²	.176	.181	.186	.172	.182	.149	.164	.277
MODEL R² ADJ	.166	.171	.176	.162	.172	.139	.154	.268
F	17.61***	18.20***	18.74***	17.00***	18.16***	14.32***	16.04***	31.19***
Df	9, 741	9, 739	9, 740	9, 736	9, 737	9, 735	9, 736	9, 734

B (Beta) from final model including all steps * p < .05 ** p < .01 *** p < .001

³⁸ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

Comparing the Effects of Seriousness Ratings and Perceived Risk

Tables 22 and 23 again illustrate the importance of treating fear of different crimes differently, and they indicate that ratings of seriousness and perceived risk for particular crimes are important factors with regard to explaining fear of crime. Table 22 indicates that, after controlling for demographic characteristics, perceived risk is a significant predictor of fear for all eight crimes. Crime seriousness is a significant predictor for all crimes except rape. Again, being female is a significant predictor for all eight crimes. Age is negatively and significantly related to fear of gang-related assault, drive-by shooting, and rape. Education is negatively and significantly related to fear of graffiti and gang-related harassment.

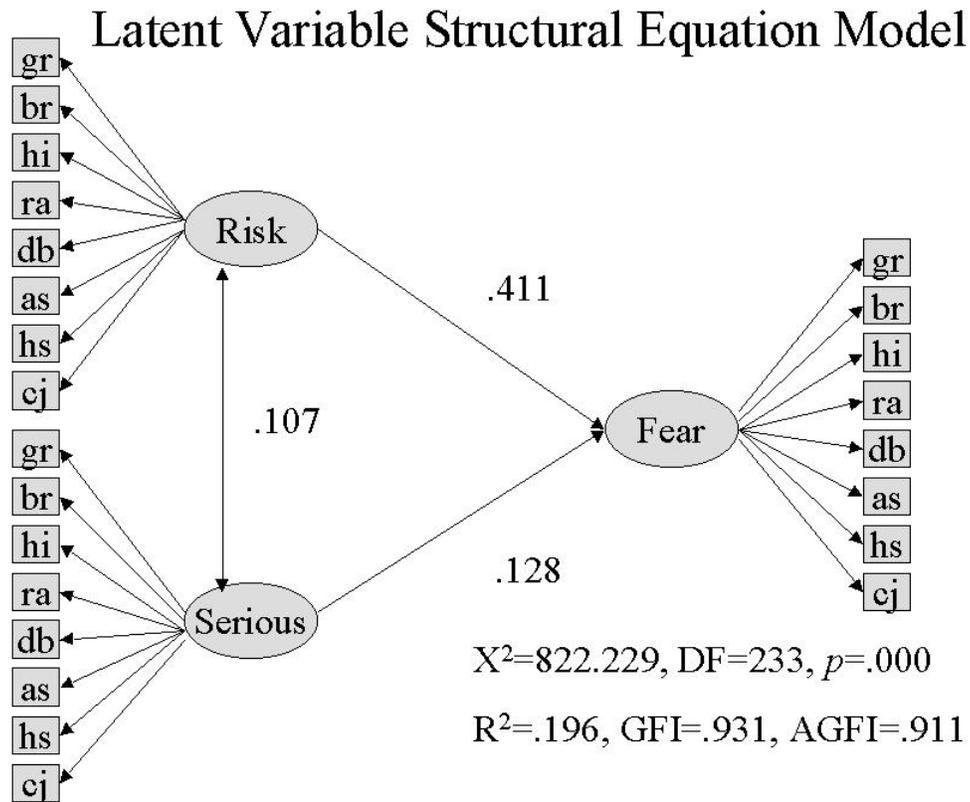
Table 23 shows that, for all crimes except rape, seriousness rating and perceived risk of a crime are significant predictors of fear even after controlling for concern about community disorder and diversity. In fact, seriousness and perceived risk have the greatest impact on fear compared to the other variables tested supporting Warr and Stafford (1983). Being female still is a significant predictor for fear of all eight crimes and age still is significantly and negatively related to fear of gang assault, drive-by shootings, and rape. However, unlike the results reported in Table 22, education is negatively and significantly related to fear of drive-bys, but it no longer is significantly related to fear of graffiti. Interestingly, in these analyses disorder only is significantly related to fear of burglary, gang-harassment, and drive-bys. Concern about diversity is unimportant in any of the equations.

Another approach to understanding the contribution of perceived risk and seriousness ratings to fear of crime is to create a latent variable structural equation model for predicting fear from seriousness ratings and perceived risk. In concordance with the regression equations and Warr and Stafford's (1983) findings, the model presented in Figure 24 indicates an excellent fit,

shows that both risk and seriousness are positively associated with fear, and that risk has the greater impact.

These results clearly support Warr and Stafford's (1983) proposition that fear is a function of perceived risk and perception of seriousness. This appears to hold generally across different types of crimes, even though we found that other variables associated with fear apparently vary with different crimes. Also, disorder and diversity appear related to fear and risk, but is much less associated with seriousness. These findings are in the context of gang crime and future studies of fear should include both different crimes and the distinction between fear, risk and seriousness.

Figure 24. Structural equation model predicting fear of crime and gangs³⁹



Impact of Fear of Gang Crime

To measure the effects of perceived gang violence on residents' behavior, we examined their beliefs about crime, youth violence, and gang violence and asked them to indicate whether or not they had taken behavioral precautions to avoid gang-related crime. We first asked them to relate their perceptions about levels of crime in their community and then to indicate whether they believed each type of crime had increased, decreased, or remained the same during the past two to three years. Table 24 illustrates the percentage of respondents in each response category for community crime levels and Table 25 presents the percentage of respondents reporting each behavioral precaution.

Table 24 indicates that most respondents believed there was either none or a small amount of each type of crime in their community. The majority of respondents believed that crime, youth violence, and gang violence had stayed the same in the previous two to three years. In general, people believed there was more property crime than violent crime.

Table 25 shows that the most frequent behavioral precaution was avoiding certain areas of Orange County, with over half of the respondents reporting this behavior. The next most frequent behavior was arranging to go out with someone else to avoid being out alone (38.9 percent of respondents). About a third of respondents indicated that they avoided certain areas of their own neighborhood. Interestingly, about 10 percent indicated that they had bought or secured a gun to protect themselves or said that they carried a weapon when they went out.

³⁹ The model presented in Figure 24 is simplified and errors are not shown. In addition, for all latent variables, the errors for the following variables were allowed to correlate (graffiti and burglary, graffiti and gang harassment, burglary and gang harassment, assault and gang harassment, and assault and car jacking).

Table 24. Perceptions of current community crime levels and crime changes in the last two to three years⁴⁰

HOW MUCH COMMUNITY CRIME	N	NONE (%)	SMALL AMOUNT (%)	MODERATE AMOUNT (%)	A LOT (%)	MEAN	95% CONFIDENCE INTERVAL
PROPERTY CRIME	989	18.3	44.7	27.3	9.7	2.28	2.23–2.34
PROPERTY CRIME BY GANGS	975	40.8	36.0	15.1	8.1	1.90	1.85–1.96
VIOLENT CRIME BY GANGS	984	42.6	34.2	14.9	8.2	1.89	1.83–1.95
VIOLENT CRIME	985	42.2	40.0	12.8	5.0	1.81	1.75–1.86
CHANGE IN LAST 2-3 YEARS:	N	DECREASED (%)	STAYED THE SAME (%)	INCREASED (%)	MEAN	95% CONFIDENCE INTERVAL	
YOUTH VIOLENCE	910	15.7	52.7	31.5	2.16	2.11–2.20	
GANG VIOLENCE	887	19.2	51.3	29.5	2.10	2.06–2.15	
CRIME	933	23.8	49.3	26.9	2.03	1.99–2.08	

⁴⁰ Please note: Valid percentages are used in this table. Types of crime are listed in descending order with the most likely listed at the top of each section of the table. For the amount of community crime, respondents were asked to answer on a Likert scale (1 = none through 4 = a lot). For the change in the previous two to three years, decreased = 1, stayed the same = 2, and increased = 3.

Table 25. Gang crime avoidance behaviors⁴¹

BEHAVIOR	% SAYING YES
AVOIDED CERTAIN AREAS OF ORANGE COUNTY	60.3
ARRANGED TO GO OUT WITH SOMEONE SO YOU WOULD NOT BE ALONE	38.9
AVOIDED CERTAIN AREAS OF YOUR OWN COMMUNITY	33.6
BOUGHT OR SECURED A GUN	10.0
CARRIED A GUN OR OTHER WEAPON WHEN YOU WENT OUT	9.8

Comparing Perceptions of Gang Crime with Reported Levels

The previous sections of this chapter reported respondents’ beliefs about crime levels in their community and assessed the ability of theoretically important factors to predict fear about gang-related crime. Our results indicated that perceived community problems and perceived risk of victimization were important factors for predicting fear of crime.

Another approach to understanding fear is to compare “objective” risk of victimization as indicated by local crime levels to reported levels of fear in local areas. Because there were only 1,000 survey respondents, the five judicial districts in Orange County were the smallest geographical areas at which the data are generalizable to the population as a whole.

In the analyses that follow we present gang-related incidents as reported by local law enforcement agencies to the Gang Incident Tracking System (GITS) database during the years 1996 and 1997. Figure 25 illustrates the percentage breakdown of all police-reported gang-related incidents occurring in each of the five judicial districts. The Central region reported the most gang-related incidents—44 percent of all those reported. The North region was second with 33 percent of all reported incidents, followed by the West region with 16 percent. Harbor

⁴¹ Please note: Valid percentages are used in this table. Behaviors are listed in descending order with the most likely behavior at the top of the table.

and Southern regions reported the smallest proportion of gang incidents, 4 percent and 3 percent respectively.

Figure 26 presents a map of the county's judicial districts with the "hot spots" of gang-related incidents for 1996 and 1997. The largest hot spot is located in the Central region with other hot spots in the North and West regions. We examined average perceptions of crime across the different districts for all crimes. Our analyses indicated that, on average, people in the Central and Northern districts perceived the designated crimes as being significantly more common than did those in other districts. This corresponds with the general distribution of gang-related crime as reported by the police. Residents living in the Central district were significantly more likely to think there was more gang-related violent and property crime in their community than individuals living in other districts. Respondents living in the Central district also were significantly more likely to believe that they were more at risk of victimization by gang-related assault, harassment, and random or drive-by shootings by gang members. However, the districts were not significantly different in terms of seriousness ratings or personal fear. This is surprising given the variation in crime across districts. Our findings were consistent with previous studies (see Warr 1994), we found that objective likelihood of victimization (i.e., statistical risk) is not necessarily a primary correlate of personal fear.

Figure 25. Percentage of reported gang-related incidents by judicial district

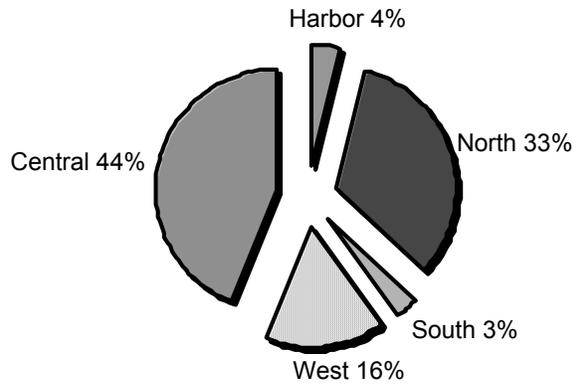
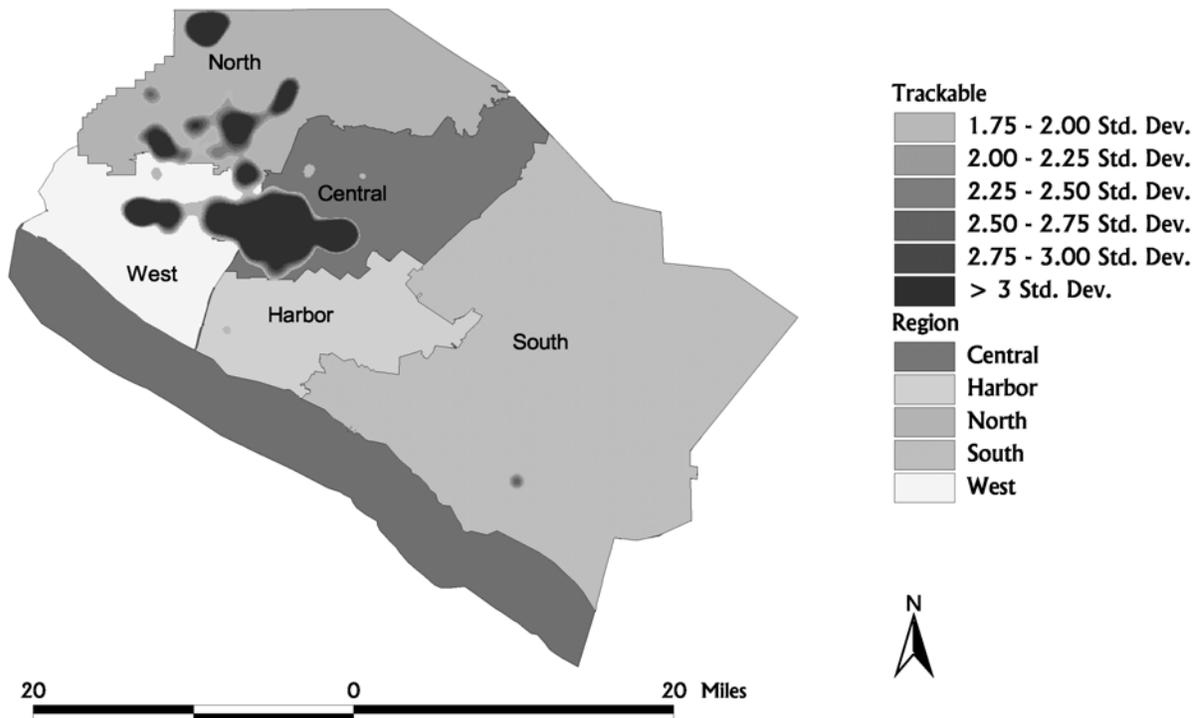


Figure 26. Gang incident hot spots for Orange County judicial districts



Ethnicity as a Predictor of Perceived Seriousness, Risk, and Fear of Gang Crime

Because we expected the random digit dial data set (1,000 respondents; 500 men and 500 women) to contain small numbers of the two largest ethnic groups in Orange County—Hispanics and Vietnamese—we oversampled 100 residents from each of these two ethnic groups. The final complete data set of 1,200 respondents contained 628 whites, 280 Hispanics, and 104 Vietnamese. Because few members of other ethnic or racial groups were selected in by random sampling, we conducted the ethnic analyses on this subset of 1,012 white, Hispanic, and Vietnamese respondents. We compared the means among the three groups and conducted Tukey HSD post-hoc comparisons to determine if there were significant differences among the groups in terms of seriousness ratings, perceived risk of victimization and personal fear.⁴² Tables 26–28 report the means and significant comparisons for seriousness, risk, and fear for each of the eight crimes.

Table 26 presents the mean seriousness ratings for each ethnic group and the significant Tukey HSD comparisons. On average, whites were significantly more likely to rate gang-related assault, carjacking, home invasion robbery, drive-by shootings, and rape as more serious than were Hispanics. Whites also were significantly more likely than Vietnamese to rate gang-related assault as more serious. However, Vietnamese were more likely to rate home invasion robbery and rape as more serious than were Hispanics. These responses are consistent with police reports that Asian gang members are more likely to engage in home invasion crimes and they disproportionately target their own ethnic community.

⁴² We also conducted LSD post-hoc comparisons which overall were comparable to the more conservative Tukey HSD comparisons, although the LSD indicated a few more significant comparisons.

Table 26. Tukey HSD comparisons of ethnic differences in seriousness ratings for eight crimes

	SERIOUSNESS ⁴³							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
WHITES (N)	626	625	624	626	624	625	626	624
HISPANICS (N)	280	279	279	279	280	279	279	279
VIETNAMESE (N)	100	102	103	103	104	104	103	102
WHITES (MEAN)	2.86	3.20	3.07	3.61	3.50	3.55	3.67	3.71
HISPANICS (MEAN)	2.84	3.08	3.06	3.15	3.20	3.18	3.26	3.30
VIETNAMESE (MEAN)	2.91	3.13	3.28	3.37	3.27	3.62	3.47	3.63
F	.187	1.46	2.24	23.21***	10.84***	16.95***	18.19***	20.76***
Df	2, 1003	2, 1003	2, 1003	2, 1005	2, 1005	2, 1005	2, 1005	2, 1002
SIGNIF. CONTRASTS:								
TUKEY HSD				W>H***	W>H***	W>H***	W>H***	W>H***
				W>V*		V>H***		V>H**

* p < .05; ** p < .01; *** p < .001

Table 27 presents the mean perceived risk scores for the eight crimes and reports significant Tukey HSD comparisons among the three groups. In contrast to the previous table, Hispanics and Vietnamese were significantly more likely to perceive themselves to be at risk than whites for all eight crimes. Vietnamese were significantly more likely to feel at risk than Hispanics for six of the crimes—burglary, gang-related harassment, carjacking, home-invasion robbery, drive-by shootings, and rape.

⁴³ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape. Range from 1 = not serious, not likely, or not afraid to 4 = very serious, very likely or very afraid.

Table 27. Tukey HSD comparisons of ethnic differences in perceived risk of victimization for eight crimes

	PERCEIVED RISK ⁴⁴							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
WHITES (N)	622	622	623	619	622	620	622	622
HISPANICS (N)	274	271	272	272	270	269	269	269
VIETNAMESE (N)	92	94	91	94	94	89	93	93
WHITES (MEAN)	1.54	1.84	1.55	1.43	1.59	1.46	1.44	1.38
HISPANICS (MEAN)	2.15	2.20	2.10	2.11	2.16	2.03	2.03	1.92
VIETNAMESE (MEAN)	2.26	2.65	2.35	2.32	2.60	2.69	2.57	2.30
F	55.48***	42.77***	58.81***	88.61***	80.83***	109.79***	97.57***	73.38***
Df	2, 985	2, 984	2, 983	2, 982	2, 983	2, 975	2, 981	2, 981
SIGNIF. CONTRASTS:	H>W***	H>W***	H>W***	H>W***	H>W***	H>W***	H>W***	H>W***
TUKEY HSD	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***
		V>H***	V>H*		V>H***	V>H***	V>H***	V>H**

* p < .05; ** p < .01; *** p < .001

Table 28 presents the mean scores and significant comparisons among the three groups for personal fear of these crimes. As with perceived risk, Hispanics and Vietnamese were significantly more likely than whites to fear all eight crimes. Vietnamese respondents reported significantly higher levels of fear for all eight crimes than Hispanics. Vietnamese reported being more afraid than Hispanics who reported being more afraid than whites. This is consistent with other studies finding increased fear among minorities (see Warr, 1994). However, most of these studies focused on African Americans.

⁴⁴ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape. Range from 1 = not serious, not likely, or not afraid to 4 = very serious, very likely or very afraid.

Table 28. Tukey HSD comparisons of ethnic differences in fear for eight crimes

	FEAR ⁴⁵							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
WHITES (N)	624	625	624	625	625	624	624	625
HISPANICS (N)	278	278	279	276	278	278	278	279
VIETNAMESE (N)	99	101	101	100	100	102	101	100
WHITES (MEAN)	1.74	2.09	1.91	2.14	2.19	2.12	2.20	2.15
HISPANICS (MEAN)	2.25	2.50	2.40	2.64	2.52	2.57	2.64	2.67
VIETNAMESE (MEAN)	2.58	2.92	3.06	3.23	3.07	3.30	3.31	3.24
F	43.66***	37.45***	60.68***	46.70***	29.74***	54.09***	44.79***	42.14***
Df	2, 998	2, 1001	2, 1001	2, 998	2, 1000	2, 1001	2, 1000	2, 1001
SIGNIF. CONTRASTS:	L>W***	L>W***	L>W***	L>W***	L>W***	L>W***	L>W***	L>W***
TUKEY HSD	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***	V>W***
	V>L**	V>L**	V>L***	V>L***	V>L***	V>L***	V>L***	V>L***

* p < .05; ** p < .01; *** p < .001

GEOGRAPHICAL LOCATION AND ETHNIC DIFFERENCES IN PERCEIVED SERIOUSNESS, RISK, AND FEAR

The above tables indicate that Hispanics and Vietnamese felt more at risk than did whites, and that Vietnamese were more fearful than Hispanics who were more fearful than whites. After seeing these results, the next obvious question is “Is it about where they live?” Unfortunately, our sample was not large enough to compare city of residence. However, as a simple test of this question, we dummy-coded each ethnicity and region and ran regressions predicting seriousness, perceived risk, and personal fear. Tables 29–31 provide the results of the regressions which excluded whites and the Southern region (which is predominantly white). Our analyses indicate that, ethnicity generally is more significant in explaining perceptions of

⁴⁵ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape. Range from 1 = not serious, not likely, or not afraid to 4 = very serious, very likely or very afraid.

seriousness, risk, and fear of gang crime that region of residence. This indicates that in Orange County ethnicity contributes to perceptions about gang crime *independent of place of residence*.

Table 29. Predicting seriousness ratings of eight crimes based upon ethnicity and region of residence

	SERIOUSNESS ⁴⁶							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
HISPANIC	-.038 (-.017)	-.101 (.049)	-.027 (-.013)	-.457*** (-.215)	-.308*** (-.147)	-.367*** (-.175)	-.414*** (-.196)	-.417*** (-.206)
VIETNAMESE	-.087 (-.025)	-.125 (-.039)	.159 (.048)	-.292** (-.090)	-.291** (-.091)	.048 (.015)	-.273* (-.084)	-.117 (-.037)
STEP 2								
CENTRAL REGION	.104 (.043)	-.046 (-.020)	.170 (.072)	.095 (.041)	.109 (.048)	.033 (.015)	.112 (.049)	.048 (.022)
HARBOR REGION	.022 (.007)	-.124 (-.044)	.048 (.016)	.159 (.055)	.061 (.021)	.028 (.010)	.070 (.024)	.039 (.014)
NORTH REGION	-.079 (-.036)	-.141 (-.068)	-.032 (-.015)	-.076 (-.036)	-.057 (-.028)	-.126 (-.061)	-.048 (-.023)	-.062 (-.031)
WEST REGION	.175 (.070)	-.041 (-.017)	.160 (.066)	.061 (.026)	.086 (.036)	.041 (.017)	.120 (.050)	.087 (.038)
R² CHANGE STEP 1	.000	.003	.004	.047***	.023***	.033***	.037***	.041***
R² CHANGE STEP 2	.009	.003	.008	.007	.005	.006	.005	.004
MODEL R²	.009	.007	.011	.054	.028	.039	.042	.045
MODEL R² ADJ	.003	.001	.005	.048	.022	.033	.036	.039
MODEL F	1.465	1.104	1.857	9.190***	4.584***	6.473***	7.097***	7.494***
MODEL df	6, 961	6, 961	6, 961	6, 963	6, 963	6, 963	6, 963	6, 960

⁴⁶ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

Table 30. Predicting perceived risk of victimization of eight crimes based upon ethnicity and county region of residence

	PERCEIVED RISK ⁴⁷							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
HISPANIC	.536*** (.247)	.289*** (.141)	.468*** (.228)	.617*** (.306)	.497*** (.242)	.498 (.243)	.540*** (.259)	.488*** (.243)
VIETNAMESE	.650*** (.190)	.760*** (.240)	.734*** (.228)	.793*** (.254)	.946*** (.295)	1.15*** (.358)	1.043*** (.322)	.872*** (.280)
STEP 2								
CENTRAL REGION	.211* (.089)	.300** (.134)	.285** (.127)	.141 (.064)	.149 (.067)	.272** (.123)	.165 (.073)	.209* (.096)
HARBOR REGION	-.139 (-.048)	.001 (.000)	-.092 (-.034)	-.109 (-.040)	-.118 (-.043)	.017 (.006)	-.152 (-.054)	.061 (.023)
NORTH REGION	.090 (.041)	.105 (.052)	-.050 (-.024)	.068 (.034)	.055 (.027)	.139 (.068)	.054 (.026)	.057 (.028)
WEST REGION	.006 (.003)	.067 (.029)	-.050 (-.022)	.047 (.021)	.024 (.010)	.120 (.052)	.108 (.046)	.117 (.052)
R² CHANGE STEP 1	.096***	.078***	.100***	.144***	.133***	.176***	.158***	.124***
R² CHANGE STEP 2	.011*	.013*	.021***	.006	.007	.010*	.010*	.006
MODEL R²	.107	.091	.122	.150	.140	.186	.168	.130
MODEL R² ADJ	.101	.085	.116	.145	.134	.181	.162	.125
MODEL F	18.89***	15.70***	21.85***	27.84***	25.52***	35.71***	31.63***	23.55***
MODEL df	6, 945	6, 945	6, 945	6, 943	6, 942	6, 938	6, 942	6, 942

⁴⁷ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

Table 31. Predicting fear of eight crimes based upon ethnicity and county region of residence

	FEAR ⁴⁸							
	GRF	BRG	HAR	ASS	CRJ	HNV	DBY	RAP
STEP 1								
HISPANIC	.487*** (.209)	.406*** (.175)	.518*** (.209)	.496*** (.182)	.283** (.110)	.462*** (.174)	.384*** (.142)	.521*** (.182)
VIETNAMESE	.735*** (.204)	.737*** (.207)	1.100*** (.289)	1.053*** (.251)	.770*** (.194)	1.135*** (.280)	1.031*** (.248)	1.050*** (.237)
STEP 2								
CENTRAL REGION	.108 (.043)	.110 (.044)	.197 (.073)	.122 (.041)	.119 (.043)	.074 (.025)	.138 (.047)	.111 (.035)
HARBOR REGION	-.047 (-.015)	-.038 (-.012)	.009 (.003)	-.124 (-.034)	-.294* (-.085)	-.108 (-.030)	-.156 (-.043)	-.052 (-.013)
NORTH REGION	.009 (.004)	-.070 (-.030)	.022 (.009)	-.097 (-.036)	-.033 (-.013)	-.083 (-.031)	.008 (.003)	-.092 (-.032)
WEST REGION	-.072 (-.027)	-.020 (-.007)	-.037 (-.013)	-.137 (-.045)	-.056 (-.019)	-.036 (-.012)	-.131 (-.043)	-.144 (-.045)
R² CHANGE STEP 1	.074***	.062***	.103***	.082***	.048***	.092***	.072***	.073***
R² CHANGE STEP 2	.003	.004	.005	.006	.010	.003	.007	.005
MODEL R²	.077	.066	.108	.088	.058	.094	.079	.078
MODEL R² ADJ	.071	.060	.103	.082	.052	.089	.073	.072
MODEL F	13.29***	11.29***	19.39***	15.37***	9.84***	16.67***	13.69***	13.51***
MODEL df	6, 956	6, 959	6, 959	6, 956	6, 958	6, 959	6, 958	6, 959

⁴⁸ GRF = graffiti or tagging, BRG = burglary, HAR = harassment by gang members, ASS = physical attack or assault by a gang member, CRJ = carjacking, HNV = home invasion robbery, DBY = drive-by or random gang-related shooting, RAP = rape.

INTERPRETATION OF ETHNIC AND GEOGRAPHIC ISSUES

After controlling for ethnicity, none of the regions were significantly different from the Southern region with regard to seriousness ratings for any of the eight crimes. However, ethnicity still is important. Hispanics still are significantly less likely than whites to rate gang-related assault, carjacking, home invasion robbery, drive-by shootings and rape as serious. And Vietnamese are significantly less likely to rate gang-related assault, carjacking, and drive-bys as serious.

With regard to perceived risk, residents of the Central region feel significantly more at risk for all crimes except gang-related assault and carjacking than do those in the Southern region, even after controlling for ethnicity. However, Hispanics still report perceiving themselves to be significantly more at risk than whites for all crimes except home invasion robbery. Vietnamese feel significantly more at risk than whites for all eight crimes.

Table 31 again shows that Hispanics and Vietnamese are significantly more fearful of becoming victims of all eight crimes than whites, even after controlling for region of residence—which does not appear to be a significant predictor.

Conclusions

One of the strongest findings is support for researchers who argue for measuring fear of particular crimes rather than fear of crime in general (see Warr 1994). All of the analyses indicate that significant predictors of seriousness ratings, perceived risk, and fear are different for different types of crime. In addition, this study shows that perceived risk and perceived fear *are* different and emphasizes the importance for researchers in this area of being conscience of what really is being measured (see Ferraro 1995). Further, as Warr and Stafford (1983) predicted, perceived crime seriousness and perceived victimization of crime are important for

understanding the extent to which people fear the crimes we examined. However, unlike Warr and Stafford (1983), we found that the relationship between fear and risk was direct and additive, rather than the result of interaction effects.

With regard to demographics, this study supports previous research regarding gender—women report being more afraid of all eight crimes measured here. This was true even after we controlled for concern about diversity and disorder. With regard to perceived risk, however, being female is significantly related only to burglary and rape. Although women are more afraid, they don't necessarily feel more at risk—at least for the gang-related crimes included here. Women also are more likely to rate crimes, except carjacking, as more serious than do men.

Unlike many previous studies (e.g., Clemente and Kleiman 1976; Ortega and Myles 1987; Warr 1994), we find that age is *negatively* related to ratings of seriousness for gang-related assault, carjacking, and home invasion robbery. And it is negatively related to perceived risk of graffiti, gang-related harassment, and gang-related assault. With regard to fear, age is again negatively related to fear of gang-related assault, carjacking, home invasion robbery, drive-by shootings, and rape (see Ferraro and LaGrange 1988; Ferraro 1995; LaGrange and Ferraro 1987).

Findings about income and education are interesting. Although lower income and education are significantly related to perceived risk for most of the crimes, income is not significantly related to fear of any of the crimes. Prior victimization is related to perceived risk of future victimization, but not significantly related to fear of any of the crimes.

With regard to ethnicity, whites generally are more likely to rate crimes as serious. But in terms of risk and fear, Vietnamese feel more at risk and more fearful than Hispanics who feel significantly more at risk and more fearful than whites. These perceptions are not necessarily

related to region of residence. In fact, when fear across regions was analyzed, we found that the districts were not significantly different, even though gang-related crime varied a great deal from area to area. An analysis of smaller geographical areas might shed more light on the importance of actual environmental characteristics in predicting perceived risk and fear.

Interestingly, concern about community diversity was not significantly related to seriousness ratings, perceived risk, or fear of any of the crimes. It may be that residents in such a diverse region did not feel threatened by ethnic diversity per se or that disorder frightened them more than diversity. It also is possible that people felt it was socially unacceptable to admit that racial, cultural, or language differences were a problem in their eyes—especially to a university-sponsored research survey. As with previous studies, concern about community disorder was a significant predictor of perceived risk and fear for almost all of the crimes, although for gang-related harassment it only was related to perceived seriousness (see Covington and Taylor 1991; Lewis and Maxfield 1980; Taylor 1991). Future research on this data set will examine these issues further.

OBJECTIVE 3: GITS VALIDITY AND RELIABILITY EVALUATION

Our goal in this part of the research was to determine how completely, accurately and reliably Orange County law enforcement agencies measure illegal gang activity. Because GITS was intended to provide information upon which strategic decisions could be based, special attention also was given to the overall quality of the data being collected. Dr. Katie J.B. Parsons was the team leader for this portion of the research.

Validity of Gang Incident Measures

Several issues associated with validity were addressed here. Since GITS definitions of the terms “gang” and “gang-related” followed California law, their reasonableness (i.e., face validity) did not appear to be a serious concern, even though the criteria are different from those used in some jurisdictions. For example, Chicago uses a more strict “gang-motivated” criteria to measure gang incidents. The California definitions, while more broad, still capture all of the gang-motivated crime as well as other crimes committed by gang members. After considerable deliberation, we have come to favor the California definition for gang data collection purposes because it encompasses more information and offers the flexibility of extracting a narrower subset at a later date. We also were concerned with measurement validity—whether incidents reported by police agencies as gang-related actually fit GITS criteria and whether the GITS system itself met the objectives originally set by OCCSA and the participating law enforcement agencies.

We identified four groups responsible for collecting information on gang-related activity in Orange County. The behavior of these groups, officers, reviewers, data coders, and records departments/bureaus were assessed via direct observation, tests, and interviews.

As Figure 1 (see p. 7) illustrated, all gang incident cases are processed in four stages:

- In the *identification* stage an officer responds to an incident or crime. What the officer sees and what he/she chooses to put in the incident report narrative aids in the initial identification of a gang-related incident.
- In the *review* stage, someone verifies whether previously identified incidents in fact were gang-related and reviews unidentified incidents for possible gang relatedness.
- *Data coding* is the last stage that takes place within a police agency. This is where a GITS form is completed based upon information contained in an offense/incident report.
- Actual *data entry* takes place at the University at California, Irvine in the Focused Research Group's office.

We assessed reliability and validity at all of these stages.

Several potential threats were identified at the identification, review, and data coding stages. We examined internal procedures, gang indicators, and definitions with special care because of their potential ability to bias results. The primary threats to data coding validity and reliability that we considered were training and consistency.

After a careful review of each of the 22 participating law enforcement agency's reporting procedures, we identified three different reporting models that described the ways in which gang incidents were being identified, reviewed, verified, and recorded. We labeled them the General Supervisor model, the Gang Unit model, and the Reviewer model. Our goal was to identify any differences between the models with regard to the likelihood of either incorrectly identifying a non-gang incident as gang related or failing to identify a gang-related incident when officers' field incident reports were reviewed. The position of the person responsible for the review stage within the organization (e.g., watch commander, gang unit supervisor, records clerk) is the biggest difference between these models. The review stage is critical because it is where cases

are certified for reporting into GITS. GITS depends heavily upon reviewers' abilities to accurately identify gang-related incidents.

In all of the models, an original crime report may remain in the patrol division or be routed to many different units or divisions within a department. In these models it is vital that the reviewer correctly identify an incident as gang-related so that it gets routed to the proper place for a GITS form to be completed. Strengths shared by all models included initial identification by patrol officers who often are highly qualified to identify an incident as gang-related because of frequent contact with gang members and first-hand experience with the incident. A second strength was that all models included some sort of review step that attempted to verify the officer's initial evaluation and check for missed cases.

Weaknesses shared by all three models include substantial between-officer variation in identifying incidents as gang-related or non-gang-related, report distribution and routing problems within departments, inadequate training of data coders, and tardy submission of GITS report forms.

GENERAL SUPERVISOR MODEL

In the General Supervisor model, a general supervisor or watch commander reviews all crime reports for gang-related activity. In addition to his/her regular duties, the general supervisor looks for cases that fit gang-related criteria and then either completes a GITS data-report or forwards the report to someone else who completes the form. The person responsible for review in the General Supervisor model has law enforcement training, but generally no specific gang training. The main strength of the General Supervisor model is that the reviewer is the power loop to request reports and require completion and accuracy by subordinates. The weaknesses of this model revolve around distributional and procedural problems. General

supervisors have other priorities and sometimes fail to accurately follow definitions and reporting directions. As with other models, reports often are directed out of the loop by being assigned to other departments before they have been reviewed for gang relatedness.

GANG UNIT MODEL

In the Gang Unit model, a supervisor from the gang unit reviews all crime reports to determine if any of the incidents are gang-related and then someone in the gang unit completes a GITS data report form. In this model, a supervisor with law enforcement training who also is a gang expert is responsible for review. The strength of this model is that the gang unit supervisor has up-to-date knowledge about local and regional gangs. Weaknesses of the Gang Unit model are that the gang supervisor may not receive all reports to review and the gang unit may have more pressing matters than reviewing cases and completing GITS forms.

REVIEWER MODEL

In the Reviewer model, an outside reviewer examines *all* crime reports for indicators of gang-related activity and completes a GITS form. The reviewer usually is a member of the department's support staff, a clerk, or a cadet. The main strength of this model is that the reviewers tend to do a complete and thorough job. Although the reviewer may not have any specific training, after working with GITS for a time he/she becomes quite consistent and accurate in review procedures. The reviewer also is the same person who completes the GITS forms. Distributional problems do not affect this model because the review takes place at a nexus where all reports usually are collected—in the records section. The greatest weaknesses of the model are that the reviewers are completely out of the power loop, they often have many other responsibilities, and they have little if any law enforcement training and no specific gang training.

Of the three models, the Gang Unit model often provides the greatest validity. Unfortunately, GITS responsibilities often are a low priority for gang unit supervisors—something that tends to interfere with the reliability of GITS reporting and the timeliness with which they are submitted. We found that an experienced reviewer who is attached to a gang unit or involved in gang duties for a prolonged period of time, is more reliable and, if trained properly, can make equally valid assessments regarding report classification. Therefore, in spite of its inherent weaknesses, more and more agencies are adopting the reviewer model

VALIDITY ASSESSMENT METHODS

It was especially important to know if personnel in each of the agencies involved understood and applied the administrative definitions of key concepts associated with this project.⁴⁹ We also were concerned that internal procedures and directives that affect when an officer should identify an incident as gang-related might threaten valid identification by officers. If the administrative definitions were not applied uniformly across jurisdictional boundaries, data from different agencies would not be compatible.

How accurately and completely crime reports were completed affected a reviewer's ability to complete his or her responsibilities. In some agencies, a reviewer was responsible for identification as well as review. Reviewers included supervisors, cadets, senior volunteers, or interns; different departments designate people for this responsibility in different ways. The validity of a reviewer's decisions also may be limited due to internal procedures, gang indicators reported by police, and definitions. The reviewer must depend on crime reports and narratives to

⁴⁹ Gang crime was defined in Orange County using a gang-related model. The criteria are 1) Those crimes wherein the suspect(s) is identified as a gang member, or admit(s) to membership in a gang; 2) Those crimes wherein a person becomes a victim due to his gang association; 3) When a reliable informant identifies an incident as gang activity; 4) When an informant of previously untested reliability identifies an incident as gang activity, and it is corroborated by other independent information; and 5) When there are strong indications that an incident is gang related, but it does not fit the above criteria, it may be considered gang activity. (For example: if suspects display gang hand signs, or the incident fits the profile of gang

correctly identify gang-related incidents. Thus, it was imperative to know if reviewers were relying on officers to check a "gang-related" box on incident reports or if they were taking the time to read incident report narratives to obtain clues regarding gang-relatedness.⁵⁰

We used several research strategies in order to assess the extent to which these threats (internal procedures, gang indicators, and definitions) affected GITS reporting: participant observation, review of a large sample of police reports, and experiments with data coders.

Observations Regarding Use of Definitional Criteria

Project staff conducted more than 50 ride-alongs with gang unit and patrol officers in order to assess how officers distinguished an incident as gang-related and identify the reporting criteria they actually applied. Ride-alongs began with semi-structured interviews with officers that allowed us to assess the extent of definitional inconsistencies between officers and agencies across the county. Similar interviews were conducted with supervisors and others responsible for review tasks.

FIELD OBSERVATIONS OF HOW POLICE APPLY KEY DEFINITIONS

Field observations and discussions with police, supervisors, and chiefs, indicate that there is some problem with the strict application of the gang-related versus gang-motivated definitions of gang incidents. While the GSSC officially adopted a gang-related definition in the beginning of GITS, it is clear that some officers and jurisdictions apply more restrictive criteria for classifying some types of incidents. In addition, discussions with chiefs of police, district attorney personnel, and police officers indicate that gang-involved crime and gang-motivated

incidents, such as drive-by shootings or home invasion robberies.)

⁵⁰Police field incident reports usually are completed by patrol officers. The reports contain data fields for specific information such as the name, address, and description of suspects and victims, the location of the incident, and the offense being reported. They also contain a narrative section where officers describe the incident in story format.

crime often were used interchangeably depending upon type of crime. This became apparent after the report form was expanded to use penal codes rather than the original 21 crime categories. For example, many officers and departments objected to including domestic violence and sexual assault crimes in the database because these crimes are not traditionally thought of as gang motivated. Thus, few domestic violence and sexual assault crimes are included in the database. However, robberies by known or suspected gang members are routinely entered with no examination as to whether they were motivated by gang interests. While training sessions routinely stressed the gang-related definition, evidence suggests it was more consistently applied to the original 21 categories and to crimes traditionally thought to be associated with gang behavior.

Field observations in which staff rode along with officers also indicate that there are reporting differences across jurisdictions, particularly in terms of reporting less serious gang-related crimes such as tagging and vandalism. We found that jurisdictions with serious levels of violent gang criminal activity tended to be more lax in reporting less serious gang incidents. Jurisdictions with less of a gang problem tended to be more diligent in reporting lesser property crimes. However, as was discussed previously, more serious violent crimes were more likely to be consistently reported across jurisdictions.

Based on field observations and evidence from the database, we conclude that an incident tracking database based on police reports will provide more reliable data if it employs a gang-involved rather than gang-motivated definition. At the police report stage in the criminal justice system there often is not enough information to adequately judge motivations in an incident. Indeed, in many cases, motivation often will not be finally determined until a jury returns a

verdict. Judgment as to how to determine *motivation* is extremely subjective and would be difficult, if not impossible, to standardize across officers and police departments.

After reviewing the data, we found little evidence to support the criticism that the police are drastically over-estimating the amount of gang-related crime. From 1994 through 1997 the number of gang incidents has remained relatively consistent—at around 3,500 incidents per year for the original 21 trackable offenses. This is a relatively small number for an area that includes 2.7 million people and only a fraction of the UCR crime for these categories. However, for the reasons given above, the data on serious violent gang crime appears to be more reliable than those for less serious crimes.

Based upon these interviews, we found that records departments were common chokepoints where gang-related cases got "lost" (i.e., were not circulated to correct personnel or departments for completion of a GITS coding sheet) (see Souryal, 1981). In particular, cases sometimes got lost due to what Weston (1978) called "horizontal communication barriers" where, for example, gang units failed to receive a robbery report because robbery detectives were assigned the report first and a copy was not forwarded. The "grapevine" was an informal method that existed for overcoming this problem, but the quality and amount of information passed along in this manner varied greatly.

There appeared to be only slight differences in how officers and reviewers across the county defined gang and gang-related crime. The formal countywide definition of gang and gang-related crime was followed quite closely. Without exception, gang unit officers could recite the official definition of gang-related word-for-word. Posters with the definition were found in report writing rooms, break rooms, and briefing rooms in each agency. However, we did not assess the extent to which the posters were noticed or read by patrol officers. Several

gang unit officers expressed the opinion that patrol officers probably understood the nuances of gang-related vs. gang-motivated definitions less well than experts like themselves.

This perception was troubling because our analysis of internal procedures indicated that agency review procedures often were not followed and an officer's preliminary classification of an incident sometimes tended to have a larger effect on reviewers than was supposed to be the case. Especially in the larger agencies, where thousands of cases a day needed to be reviewed for gang-related activity, review often was minimal. Review often was limited to cases marked by police officers as possibly being gang-related or cases requested by reviewers. Some individuals with review responsibilities were unaware of GITS or their role in collecting gang data for their agencies. Limited or missed review could result in missed cases—and perhaps mis-classified cases as well. However, based upon the results of the data validation effort which is described later on, it appears that the number of missed cases involving violent and weapons-related incidents was quite modest. However, there well may be more missed cases involving property-related offenses. We found no evidence of over-estimation of gang-related incidents.

HOW INCIDENTS WERE CLASSIFIED

We also used the ride-alongs and interviews with patrol and gang unit officers and reviewers to identify the extent to which internal procedures, definitions, and training affect the internal consistency with which these individuals classify incidents as gang-related. Gang officers were asked to explain the criteria they used to determine if an individual is a gang member (e.g., dress, tattoos, age, ethnicity [see Piliavin and Briar, 1964; Quinney, 1970; Smith and Visher, 1981]). Common descriptors of gang members that were related by officers and reviewers during interviews and ride-alongs included shaved heads, baggy jeans, tennis shoes, and tattoos. More important than *what* they wore, however, was *how* they wore it. Attitude,

stance, and walk all were important supporting indicators used by officers. All gang officers who described the appearance of gang members were careful to warn that these attributes do not make an individual a gang member, but they give officers a reason to stop, observe more closely, and ask questions. Officers seemed well aware that these types of clothing are quite popular among young people and that juveniles who are not involved in gangs often wear "gang attire."

We also interviewed supervisors and reviewers to determine what indicators they employed when screening and reviewing incident reports before they are forwarded for coding onto the GITS form. These semi-structured interviews aided in determining whether supervisors and reviewers in different agencies were applying similar criteria to determine if an incident was gang-related. We found that those responsible for review depended on quick glances at crime reports to classify an incident as gang-related. Classification of an incident as gang-related often required the presence of more than one indicator. Supervisors and reviewers looked for such things as the location of the crime (e.g., did it take place in a known gang area?) and clothing descriptions. The name of the suspect and victim also were considered good indicators of gang-related incidents. If gang unit officers were performing the review, they often could quickly recognize the names of gang members. Other reviewers ran names in a crime report through the Gang Reporting Evaluation and Tracking (GREAT) database operated by the Orange County District Attorney's office which lists the names and affiliations of known gang members to determine if anyone involved in an incident was a known gang member. The *modus operandi* of a particular crime also could serve as an indicator. For example, drive-by shootings and home invasion robberies often were attributed to gangs. In some departments, suspect description was vital (e.g., did the victim describe the suspect as a "cholo" or gang member type?). Some reviewers also took the time to read the narratives and look for gang indicators such as the

question "Where are you from?" which often is asked of strangers by gang members, or an admission of gang membership to interviewing officers.

We found that both officers and reviewers were quite consistent in the criteria they applied to classify incidents as gang-related throughout the county and across reporting models. This consistency may be due to the extensive training that officers receive from the Orange County Gang Investigators' Association and from gang seminars conducted by the District Attorney's office.

Validation of Data Collected

PRIOR DATA VALIDATION ATTEMPTS BY OUTSIDE CONSULTANT

Before we became involved in the project, a consultant supervised a "validation" check of GITS data for the first six months of 1994. Although the process was more of a verification than a validation exercise, we include a brief description here to provide a baseline against which to compare later data quality. Four areas were addressed in the verification: data acquisition, aggregation, analysis, and reporting. Agencies were asked to verify that GITS data reflected the original tracking form submitted for data entry, original field incident reports submitted by patrol officers, and that the incident followed gang-related criteria. No agency was asked to verify more than 30 incidents. The error rate reported was approximately 16 percent. Although we do not know with certainty which type of problem contributed most to the errors, our interviews suggest that a majority of the problems were with data entry.

The data never were validated in the sense of determining if the police were measuring what they thought they were measuring or if GITS data were an accurate or true measure of the gang problem known to police. Only cases already determined to be gang-related were verified; cases that had not been identified as gang-related were not rechecked.

VALIDATION OF 1994 AND 1995 DATA

In order to improve the validity of GITS data and the reliability with which they were reported, we took steps to validate 1994 and 1995 data by examining a random sample of all police reports in participating agencies for the last six months of 1994. After a careful review of each agency's procedures, validation strategies were developed for each department. In all departments we focused on four crime categories for which the most incidents had been reported up to 1995: shootings, robberies, assaults, and weapon law violations. Depending upon the size of the agency, the extent of reported gang problems, and the apparent reliability of agency tracking procedures, each agency was required to either review all gang-related cases, review a random sample of all reports within the four crime categories (not just gang-related reports), count all gang-related cases, or a combination of two or more of these activities. The validation was completed in early 1996. Project staff performed the validation activities with help from each agency.

When we took over the data collection, the data had not been cleaned or analyzed in six to eight months. The validation described above was performed by project staff with help from each agency. For 1994, 8,295 cases were reviewed and only 283 gang-related cases were found that needed to be added to GITS—at worst, an error rate of 3 percent. For 1995, 4,302 cases were reviewed and only 216 were added—at worst, an error rate of 5 percent.

Data Coding Reliability Tests

Reviewers referred gang-related incident reports to data coders within each agency who were responsible for completing GITS reports and forwarding them to the research team. As one can see from the original and revised GITS report forms (Appendices A and B, respectively), the coders were required to extract a substantial amount of information from the original incident report and exercise a good deal of judgment to decide about such things as crime category, victim/offender relationship, and what motivated the incident.

We used paper experiments to test data coder reliability. Experiments were administered in February 1996, October 1996, and October 1997. Since our goal was to both identify problems and to rectify them in order to strengthen the system, following each experiment we advised the data coders about problems and conducted training sessions to help rectify them.

In our experiments, we required data coders to review hypothetical narratives that were based on actual crime reports and fill out GITS report forms. Each experiment consisted of three narratives, one of which was retained in slightly modified form for all three experiments. The retained narrative was used to test the reliability of raters across time. The other narratives varied with each iteration of the experiment and were designed to test for inter-rater reliability, both within and between departments.

We found that coders from the same department often had a difficult time remaining consistent from one experiment to the next. Much of this appears to be due to substantial turn-over among data coders. Not surprisingly, more experienced coders were much more reliable and departments with at least one experienced coder tended to be more reliable because new coders were trained by experienced coders. The importance attached to the GITS project by a department also appeared to affect coder reliability; where GITS and gangs were a high priority,

coder reliability was high and coders tended to be retained for longer periods. When GITS was a lower priority, coder reliability suffered. A substantial number of experimental GITS forms were rejected because they contained one or more errors—on average, 34 percent across the three experiments. A similar proportion of the coders made one or more errors in interpreting the narratives. However, most of these errors involved rather trivial distinctions in areas of the form dealing with detailed arrest and victim information. With regard to substantive recording issues likely to impact policy such as specifying the proper crime, time of day, and location, we found strong reliability across coders, departments, and time.

Improving GITS Data Collection

Our experiences with the collection of gang incident data from many different law enforcement agencies in a large metropolitan region emphasize the importance of coder and reviewer training—and regular retraining targeted at specific problems. Another key problem we encountered was the need to increase the involvement of line officers and gang units in the data collection endeavor. If people in these positions were more committed to GITS, it seems likely that undercounting would be diminished—perhaps substantially. Line officers and gang units need to be informed about GITS, their responsibilities in the project, and how it can benefit them. These groups also need to be provided with feedback from the project, something that some chiefs elect not to do. GITS often depends on those with the least amount of personal involvement and interest in the project to perform critical tasks. To be effective, review must be made a priority in every department. In our view, it even would be preferable to narrow the scope of reviews, say to just violent crime, rather than lose cases to cursory review. Alternatively, agencies could place better trained volunteers or interns in review positions

instead of watch supervisors. Finally, GITS data forms could be improved further in order to address problems with the arrest and victim sections, as well as to clarify the issue of whether the gang code in the victim category should refer to the affiliation of the offender or the victim—something many coders continue to find confusing. Every effort should be made to make the forms as clear, simple, and efficient to complete as possible.

OBJECTIVE 4: GITS PROGRAM EVALUATION

Our objective in this part of the research was to determine how well GITS met the goals set by law enforcement executives and community leaders during the planning, development, and implementation stages. Dr. Katie J.B. Parsons was the team leader for this portion of the research.

The final question we evaluated was how well the Gang Incident Tracking System (GITS) fulfilled the original goals of the Orange County Gang Strategy Steering Committee (GSSC). Evaluation of existing programs such as this is particularly difficult because evaluators must act more like detectives than social researchers, trying to unearth and make sense out of the original reasons for the program (Rossi and Freeman, 1993: 106). As was explained previously, many different agencies are involved in the GSSC. These agencies include different branches of the criminal justice system in Orange County (law enforcement agencies, the District Attorney's Office, and the Probation Department), as well as federal law enforcement representatives, and local school superintendents. It seemed likely to us that many of these agencies may have had different agendas in planning and approving a multi-jurisdictional gang tracking system. Understanding how the goals of these agencies were transformed into the goals for the database is an essential first step toward evaluating how well GITS performs. Understanding whose goals and whose agenda the committee viewed as most important also is important. As one of the founders of the system explained, "Keep in mind the whole context of this being a compromise all the way around... all of [the agencies involved] have different priorities. In one respect I think it is rather remarkable that they all agreed to do something together" (personal interview, July 6, 1995).

Project researcher Dr. Katie J.B. Parsons used snowball-sampling techniques to identify public officials who were involved in the initial stages of GITS development, and then interviewed them to obtain historical information and documents. These public officials were interviewed about their expectations for GITS, the goals they believed GITS would accomplish, and why they believed a gang tracking system was necessary. Interviews were taped and transcribed for later analysis, although interviewees had the opportunity to refrain from being taped for the entire interview or for specific questions that they felt uncomfortable answering on tape. Only one interviewee asked to be off-record for some responses. Notes also were taken both as backup in case the tape recorder failed and to provide context for untranscribable portions of the interview. Dr. Parsons made field notes on perceptions or feelings about interviews immediately after they were completed. Other archival materials, including planning documents, research memos, and meeting notes, also were catalogued, inventoried, and analyzed to identify program goals and objectives. This was done to track the evolution of goals and decisions about what GITS was and what it was to accomplish. Thus we examined both the formal goals established for GITS and the goals held by individual participants early in the development process.

In addition to evaluating how well GITS met the goals set for it, we also critiqued the quality of the goals themselves. GITS has attracted much attention during the past two years and a number of jurisdictions have inquired about replicating the system. Thus, we felt that it was particularly important to clarify and strengthen foundational issues such as goal statements. Nakamura and Smallwood (1980) write that goals must be clear and specific because vague goals allow for misinterpretation and manipulation. Goals should provide clear written statements of objectives and include detailed descriptions of how they are to be accomplished. A

program's goals also should be technically and logically consistent. After discussing our findings, the planning evaluation concludes with a discussion of the extent to which GITS' goals and objectives were met. We also provide recommendations for modifying the goals in the future.

Findings

In the process of gathering information for this section, we interviewed 19 police chiefs,⁵¹ a research consultant who worked on the project prior to our involvement, the GSSC coordinator, and the District Attorney.

Although the previous consultant was instrumental in gathering background information, the planning process began almost a year before she was brought onto the project. Initially, local police chiefs who had worked in Los Angeles and were familiar with that county's attempts to track gang crime were volunteered/recruited by GSSC to be involved in the planning process. The original planning committee included these chiefs and other chiefs interested in research, gang experts, and representatives from the Sheriff's and District Attorney's Offices. This committee made several limited attempts to discuss the proposed project with Los Angeles city and county as well as other area agencies that were attempting to tackle similar problems in order to ascertain what those agencies were doing and what kinds of information they were collecting. GITS' goals and objectives reflect strategic and administrative criminal justice interests because the committee members were high-level administrators. Another reason for focusing on strategic rather than tactical information was that line personnel already had access to the Gang Reporting Evaluation and Tracking (GREAT, later CALGANGS) system, an investigative database

⁵¹ Interviews included 19 chiefs of police. There are 22 chief positions in Orange County. Several of chiefs have been replaced since the initial interviews took place. No attempt was made to interview new chiefs, because their knowledge of GITS was limited.

containing information about known gang members. Other participants of the GSSC accepted these goals and objectives, but were offered no other alternatives beyond discussion and final approval.

Interviews with the participants show that the main goal was a comprehensive countywide gang crime database that would help make better management decisions about gang issues. Management decisions included such things as personnel deployment, resource management, and other long-term policy decisions. Many of the interviewees suggested that GITS was intended to provide a snapshot of the shape, size, nature, and scope of the gang problem in Orange County that could be used to guide management decisions. As one chief stated:

I think one of the reasons the OCCSA became so involved in wanting to track gang activity was that we weren't sure what was happening around us or why gangs were doing what they were doing. We couldn't respond to our community leaders and residents. We were guessing a lot until we got involved with GITS and other gang initiatives that looked at what was happening and why it was negatively impacting our communities, we recognized that we needed more information to make better decisions. (chief interview, February, 18, 1997)

Written statements concerning the overall goal of GITS were found in archival materials. The only formal written program description states that GITS is to function as a management tool to facilitate strategic planning and resource allocation (Smith, 1994). Regional GSSC meeting notes suggest that “the purpose of the program [was] to develop a quality database from which we can develop management decisions (Hartl, 1993).” Minutes from the GSSC call GITS a “snapshot” statistical profile taken on a monthly basis for management information purposes—*not* a system for continuous record keeping and reporting (Hartl, 1994a). In August 1994, the GSSC updated the overall county gang strategy policy to include “findings compiled and

analyzed for purposes of providing management information to law enforcement officials to combat gang violence and gang activity” (Hartl, 1994b).

This goal specifically describes the intended uses of GITS and whom it was designed to serve. It also clearly indicates that the purpose of the database is to provide strategic intelligence for law enforcement managers so they can make better decisions. The GSSC also discussed how and whether this system could be used by individual gang units for investigative purposes. For example, investigators and middle-managers might have used GITS data to decide where to focus gang unit patrols and which gangs to focus on (GSSC interview, March 1, 1996).

However, because the timeliness of data submission varied substantially from agency to agency (many are months late submitting reports), members of the GSSC considered the utility of the database to be limited with regard to tactical decisions requiring up-to-date information.

GITS appears to provide the information needed to make strategic planning and resource allocation decisions. With regard to strategic utility, one chief called GITS “historically interesting” (chief interview, March 5, 1997). Usually the information contained in GITS is two to three months old. Routine reports currently are produced annually but individual agencies do make more frequent requests for data that concern their jurisdictions. The types of management decisions that this database is designed to help with are strategic planning, resource allocation, staffing issues, and deployment. Strategic planning requires the type, time, and place of gang incidents. GITS provides those types of information. Resource allocation deals mainly with “identifying the operational work needs for the department, providing information for manpower allocation and deployment” (Chang, Simms, Makres, and Bodnar, 1979: 107). The type of information needed to make these decisions also includes the type, time, place of occurrence, and possibly arrest data. The GITS program provides these kinds of information as well.

In early 1993, the OCCSA accepted the following series of objectives for a multi-agency gang research project:

- Establish a centralized database into which all of Orange County law enforcement agencies would report gang-related crime.
- Accurately identify the extent of gang-related crime in Orange County by identifying gangs that operate within the county, their membership, and the crime related to their activities.
- Establish baseline data on gang activity against which to compare future trends in gang-related crime.
- Determine regional variation in gang-related crime patterns.

Originally these objectives were taken from several documents and articulated by a consultant to the GSSC based upon minutes from several of the committee's meetings (personal interview, July 7, 1995). Other objectives that have been located in the files included a research proposal which stated that: "The purpose of this procedure is to establish a uniform method of reporting gang related crimes to a central statistical database in order to provide a clear profile of the gang crime problem to Orange County law enforcement agencies" (Smith, 1993).

As most often happens in real world planning, formal goals for GITS were established well after the development process began. This can be less than optimal because, without clearly articulated goals to guide the development process, it is easy for a project to diverge from its original purpose. As the following discussion indicates, however, there is no evidence of substantial problems with GITS goals.

Goal Analysis

We examined each of the formal objectives singularly and then as a group, looking for both technical and logical inconsistencies.

GOAL 1: ESTABLISH GITS

The first goal was to “Establish a centralized database into which all of Orange County law enforcement agencies would report gang-related crime.” Although this objective was achieved and the Gang Incident Tracking System was established, the goal neglected to address an important issue—maintenance of the database. Another minor inconsistency was that not all county law enforcement agencies contribute to GITS because some agencies seldom handle gang incidents (e.g., Marshals Office, Probation Department, and Federal Bureau of Investigation).⁵² A better restatement of this objective would be: “Establish *and maintain* a centralized database into which all of Orange County *policing* agencies will report gang-related crime.”

GOAL 2: EXTENT OF GANG CRIME

The second objective of GITS was to “accurately identify the extent of gang-related crime in Orange County by identifying gangs that operate within the county, their membership, and the crime related to their activities.” GITS, as it ultimately was established, tracks only crime related to gangs and the activities of gang members. This goal is unnecessarily diffuse because it also focuses on identifying gangs and gang members, a function that is redundant with the GREAT and (more recently) CALGANGS systems. Ideally, this objective also should state how the extent of gang crime is to be measured. Our recommendation for a restatement: “Identify the extent of gang-related crime in Orange County *by tracking gang incidents activities through official police offense/incident reports.*”

⁵² These agencies are part of the GSSC but their functions and interactions with gang crime limit their ability to participate. Although they deal with gangs, they rarely handle new gang incidents, focusing most of their attention on following up previous incidents, providing security during court appearances, or offering investigative assistance. Thus, these agencies' data generally are not comparable to police data. The Probation Department is somewhat of an exception; it contributes data that are maintained by GITS in a separate database.

GOAL 3: ESTABLISH A BASELINE FOR TREND COMPARISON

The third objective was to “Establish baseline data on gang activity against which to compare future trends in gang-related crime.” Had this goal been more specific regarding the types of trends to be tracked, it would have been easier to develop reporting forms. It also seems likely that the forms would have tracked fewer types of information—something that would have tended to improve reporting accuracy. Still, the database unarguably has been useful for trend analysis. The research consultant conducted a preliminary analysis of gang crime trends shortly after GITS began collecting data. More recently, we have conducted elaborate statistical and geographic analyses using the data. As the previous sections of this report demonstrate, GITS data enable identification of local and regional trends with regard to the nature and distribution of gang incidents across space and time. Overall, we think that this objective is acceptable as written but other agencies may want to consider limiting the scope of their collection efforts more narrowly in order to economize and, perhaps, improve reliability.

GOAL 4: REGIONAL VARIATION IN GANG ACTIVITIES

The last goal required that GITS “determine regional variation in gang-related crime patterns.” Gang-related crime patterns refer to groups of gang offenses which share common attributes or characteristics (e.g., geographic location, gang identifiers, or crime measures [see Chang, Simms, Makres, and Bodnar, 1979]). GITS produces countywide year-to-year information on crime patterns, juvenile and adult arrests, victim/offender relationship, and weapon involvement. However, the phrase “regional variation” has proven to be a source of substantial contention among the chiefs of police—and between the chiefs and project researchers. Some interpret “regional” to mean city-by-city analysis, others consider groups of cities or sections of the county as appropriate units of analysis within the region.

If any single issue manages to dissolve the astounding level of cooperation between the jurisdictions involved in GITS, it will be the question of how data are to be reported. Members of OCCSA who are most concerned about this issue fear that publication of maps or other data that make it possible to compare levels of gang incidents within different jurisdictions could have grave political, economic, and research implications. Politically and economically, some of the chiefs are concerned that their cities will be improperly or unfairly compared to neighboring jurisdictions with lower reported rates of gang incidents. Such a comparison, they fear, could have dire consequences for tourism, real estate values, and retail businesses in their cities. They also cite a concern that such comparisons would tend to penalize chiefs whose departments were meticulous in reporting gang incidents while casting a favorable light on those that under-reported.

Some chiefs, even several with substantial amounts of gang crime, have countered that the only appropriate strategy is to be open about the extent of the problem and try to use every analytical tool available to understand the causes of gang problems and evaluate which strategies under their control are most effective and efficient. As researchers, of course, we favor this latter stance. But we are bound by the Memorandum of Understanding (Appendix C) to only release analyses which would permit comparison of jurisdictions after their review by OCCSA.

The lack of specificity that plagues this goal has been problematic. However, it is important to recognize that the GITS project may never have been implemented if it had been articulated more clearly. We recommend that other jurisdictions implementing similar cross-jurisdictional programs do their best to develop a compromise acceptable to all participants early in the planning process in order to avoid the problems encountered in Orange County.

GITS Benefits, Expected and Unexpected

As was expected, GITS data are being used by law enforcement to deploy personnel, allocate resources, and evaluate gang prevention, intervention, and suppression activities. For example, GITS has been utilized by the Orange County District Attorney in the “1997 Annual Report Gang Unit & Tri-Agency Resource Gang Enforcement Teams (TARGET)” (Capizzi, 1997). GITS also provides a measure of gang activity in targeted neighborhoods and enables one to monitor the level of activity to see if other types of intensive supervision and prosecution have any effect on gang crime. Sub-regional analyses also are being used by a group of smaller cities to examine gang crime in their section of the county and help them coordinate both strategic activities and joint grant applications.

Additional benefits which accrued from GITS but were not foreseen during the formal planning process were its utility for grant-getting and public education. The GITS project helped attract grant funds that supported a number of anti-gang programs in several cities. “It [GITS] has brought us a tremendous amount of money to work on problems in a very real way” (chief interview, January 29, 1997). Even though GITS was designed to provide a countywide perspective, the data allows city-level analysis. Several chiefs of police have taken advantage of the rich data collected by GITS to bolster grant applications to private foundations, state, and federal agencies. They also have used reports generated using GITS data to educate city councils and citizen groups. One chief said that the data show that the problem isn’t as large as he thought and that the tracking of gang crime shows him that there is hope to relieve some of negative effects gangs have in his city (chief interview, January 29, 1997).

Structure of Interagency Cooperation

There are at least two different ways to structure an interagency cooperative effort to create a shared database like the Gang Incident Tracking System. One approach is from the top down, based on a cooperative agreement between the heads of the various law enforcement agencies involved. The other is from the bottom down, based on cooperative sharing of data from those in the law enforcement agencies that are actually managing and analyzing the data, usually the crime analysts in the law enforcement agencies are involved. For ease of discussion we will call the first the Chief Model, the latter the Analyst Model. Both have strengths as well as weaknesses. GITS represents an example of the Chief Model, while the Regional Crime Analysis System in the Baltimore area is an example of the Analyst Model.

GITS was created by the Gang Strategy Steering Committee of the Orange County Chiefs' and Sheriff's Association (OCCSA). OCCSA had already established a history of interagency cooperative effort between the law enforcement agencies. It also provided a forum for the heads of the different law enforcement agencies to meet with each other regularly to discuss issues of shared interest. GITS was created as a strategic tool to measure the level of gang crime in the county and to plot its variation over time. OCCSA declared GITS as a priority for the organization ensuring the cooperation of all the members. It is highly unlikely that all of the law enforcement agencies would have independently agreed to cooperate and create a shared database absent the support of OCCSA. Because OCCSA was behind the project, there was the potential of peer pressure to ensure cooperation of chiefs who might not have been cooperative otherwise. Since there is wide variation in the records management systems among the twenty-two departments and different reporting forms, GITS had to rely on the willingness of all departments to fill out a separate standardized reporting form for gang incidents. Only police

chiefs had the power to require all departments to fill out and submit an additional reporting form. In addition, OCCSA could speak on behalf of all law enforcement in the county, giving it a much stronger bargaining position to lobby for external funding from the Department of Justice and to enlist the aid of the University of California Irvine to provide researchers to evaluate the database. Because OCCSA adopted a strategy of using UCI to collect and analyze the data, it gave the database an additional claim to validity as well as allowing a level of analysis beyond the limits of individual departments. This was particularly important in the application of geographic information system technology. At the beginning of the project none of the departments had this advanced capability. Even today there is wide variation among the departments in their ability of handling GIS analysis.

However, the GITS example has demonstrated some drawbacks for the Chief Model of interagency cooperation. The original goal was to create a strategic tool to provide a countywide summary of gang crime. Because different chiefs have different management styles and philosophies concerning access to data, the ability to use the database on a more tactical level has been limited. Not all chiefs have been willing to give tactical personnel direct access to the data. Because of incompatible record management systems GITS relies on a separate reporting form requiring additional effort on behalf of the departments. Different departments place different priorities in keeping their part of the database up to date, so timely use of the data is limited. So far this has limited the reporting ability of the database to twice a year. Since each department maintains control over the use of their data, sharing of the data across departments requires permission of the respective chiefs that can cause delays, and in some cases has limited analysis. Because those that collect the data, officers on the street, don't have direct access to the database,

their perception of the utility of gathering the data is limited which potentially can effect the validity of the data.

At the Second Annual Crime Mapping Research Conference sponsored by NIJ's Crime Mapping Research Center during December 10-12, 1998, the Regional Crime Analysis System for the Baltimore Washington area made a presentation of their interagency efforts to share crime mapping data. The origin of this effort was with crime analysts in contiguous jurisdictions trying to improve their ability to recognize and respond to evolving crime patterns. This cooperative effort involves less than ten departments where the analysts send each other updated geocoded crime data formatted according to standards specified by an oversight committee. While it operates with permission of the chiefs of the participating agencies it is designed and operated by the analyst. This gives them access to very current data and they have been successful in tactical tracking of criminals operating across jurisdictions. Its origins in tactical concerns may limit its strategic value. Not all agencies in the geographic area can participate because not all have the analytical ability to provide data or analyze it according to format required by the oversight committee. The ability of smaller departments without GIS capability, to participate is limited. Because there is not an existing cooperative area-wide organization of chiefs to back the efforts, their ability to secure outside funding and support has been limited. Finally, the analysis is all in house, so the advantages of outside analysis such as credibility and expertise, which can be useful for strategic and publicity purposes, have not been realized.

Both types of interagency cooperation have advantages as well as drawbacks. It may well be possible to combine the strengths of both in more of a hybrid approach. It is clear that how the interagency cooperative effort is structured and evolves has clear implications for the utility and flexibility of the efforts.

SUMMARY

The Gang Incident Tracking System (GITS) project clearly demonstrates the usefulness—and the necessity—of multi-jurisdictional efforts to understand, prevent, intervene with, and suppress street gang activities. Just as clearly, we think, it demonstrates the value of partnerships between criminal justice practitioners and university researchers. Below we provide a brief summary of key findings from this research and discuss a number of particularly interesting opportunities for future collaborative research.

Discussion of Findings

One of the most heartening surprises associated with this project is that several dozen law enforcement and community agencies can collaborate successfully with one another and with a team of university researchers. The Orange County Chiefs and Sheriff's Association and the county Gang Strategy Steering Committee provide an excellent model for regions struggling with the reality that crime often is multi-jurisdictional in nature. The findings reported here provide evidence of the utility of this type of cooperative endeavor for practitioners. They also reveal opportunities for fruitful scholarly research. In particular, we would draw attention to the following points:

- Development and refinement of the GITS database has enabled law enforcement agencies and public officials to identify the nature and extent of gang crime in the county. It also provides them with a useful tool for evaluating gang prevention, intervention, and suppression programs. Moreover, the fact that the data are being collected and analyzed by the university independent of direct law enforcement control helps increase public confidence that policy-makers' assessments about gang-related crime are reasonable and accurate. This, we think, is likely to help bring more balance to public perceptions of a problem that often is exaggerated.

- Applying powerful tools such as geographic information systems (GIS) technology and multivariate statistical analysis has increased the utility of GITS data substantially.

Examples of this utility include:

- Preparation of crime maps that make complex statistical and GIS analyses accessible to criminal justice practitioners, elected officials, and the public.
- Establishment of a baseline against which to compare future changes in gang activity.
- The ability to identify spatial and temporal patterns of criminal offending in order to target resources more carefully (e.g., our temporal analyses indicate that ‘midnight basketball’ programs that recently were in vogue are inappropriate in Orange County—and perhaps other regions as well).
- Theoretically, the development of geographic and statistical models that can predict more than 70 percent of the variation in violent gang incidents at the census tract level is very interesting. From a practical standpoint, this means that it should be possible to make much more valid evaluations of gang control programs.
- Geocoded data also have made it possible to compare people’s perceptions and fears about gangs and gang crime with the prevalence of gang incidents in their communities.
- Fear of crime corrodes the social fabric of our communities. The damage fear of crime causes tends to be less dramatic, immediate, and obvious than the tragic deaths, injuries, and property loss on which we usually focus. But the cumulative loss of quality of life, community efficacy, and public resources associated with people who are afraid to talk to strangers, help one another, or venture outside their own neighborhoods also is a tragedy that needs to be understood much more fully.
- Our analyses emphasize the importance of measuring fear of crime in a very specific manner. Predictors of seriousness ratings, perceived risk, and fear all are different for different types of crime.
- It also is important to pay more attention to the impact of fear of different types of crime on minority groups—especially groups such as Hispanics and Asians which often are ignored by this line of research. We found that, although whites were likely to rate the seriousness of street crimes higher, Vietnamese and Hispanics perceive themselves to be significantly more at risk and more fearful than whites (even when controlling for place of residence).

- In a region like Orange County with high levels of ethnic diversity, it also was interesting to find no significant relationship between community diversity and perceived risk or fear of crime among respondents to our survey.
- Minority activists and others have voiced substantial concern about whether the increase in gang activity in areas like Orange County reflects biases within the criminal justice system rather than reality.
- Based on a substantial number of ride-alongs, interviews, field observation, and evaluation of official records, we found that law enforcement agencies tend to *under-report* gang incidents reported to GITS.
- We also found that the concerted effort to train officers about legal criteria in California for defining who is a gang member appeared to pay off. Contrary to activists' claims, we found no evidence that officers were classifying young people as gang members merely because of their mode of dress, ethnicity, or place of residence when they reported gang incidents for use in the countywide database.
- On a similar note, we also found that the data being collected by GITS appeared to present a reasonably unbiased and complete picture of gang incidents handled by the police. And we have identified ways that other jurisdictions interested in adopting or adapting the GITS system may do so while avoiding some of the implementation difficulties that plagued OCCSA's early efforts.
- GITS has been successful in meeting the goals set for it by law enforcement managers:
- Annual announcements by OCCSA regarding countywide trends in gang crime enable the public to judge progress regarding gang-related issues.
- GITS data are being used by many chiefs to deploy personnel, allocate resources, and evaluate gang prevention, intervention, and suppression activities.
- GITS output also has been used by a number of chiefs to help educate local residents and leaders and strengthen requests for additional resources from granting agencies.
- Finally, GITS reports have helped practitioners keep gang problems in perspective; gang incidents represent a relatively small—if especially troublesome—portion of the overall crime problem faced by most jurisdictions.

Future Research Opportunities

GITS represents a unique multi-jurisdictional effort to systematically measure the extent of gang crime across jurisdictional boundaries over time. This project now has collected a continuous database for gang activity countywide since 1994. If the database can be continued for another two to three years, it should be possible to explore its utility for various tactical uses. It also would be very useful to study the ramifications of using “gang-motivated” versus “gang-involved” definitions of gang crime for incident based databases. We recommend that future research with this database should focus on endeavors such as:

- Increase the detail of analysis regarding causes and correlates of gang crime from the level of a community to the neighborhood-level (i.e., from the census tract to the census block).
- Extend explanatory analyses which now are quite good at predicting levels of violent gang crime in a very different direction: Identify “cold spots” for crime where levels are much lower than predicted, and then determine what makes some neighborhoods more resilient or resistant to this type of crime.
- Determining the impact of daytime and nighttime curfews on juvenile gang crime.
- Empirically identify potential foci for civil abatement proceedings by using GITS and GIS technology to identify community hot spots and their characteristics.
- Explore the implications of using gang-involved versus gang-motivated definitions of gang crime.

If the GITS database continues to collect data, it will be possible to pursue both cross-sectional and longitudinal research strategies to address these sorts of research questions. At present, the database contains more than four years of data on gang-involved crime as well as information concerning victim, drug, alcohol and motivational factors. We believe this endeavor has the potential to provide the most thorough and comprehensive study to date on local attempts to measure and track gang activity for an extended set of jurisdictions. Results from future

studies would continue to provide guidance to Orange County law enforcement agencies. They also would provide information on the effectiveness of different strategies for controlling gang crime and provide a model for other jurisdictions to follow.

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INTERVIEWS CONDUCTED BY DR. KATIE J.B. PARSONS

Personal Interviews

July 6, 1995

July 7, 1995

GSSC Interviews:

March 1, 1996

Chief Interviews:

January 20, 1997

January 29, 1997

February, 18, 1997

March 5, 1997

APPENDIX A: GITS DATA CODING FORMS

OCCSA's Gang Strategy Steering Committee created the original GITS data form shown in Figure A1. This form had several key elements:

- Data collected were acquired from police reports and each incident in the database could be traced back to its original police report if further information or validation was needed.
- Geographical location data were collected for each incident, but in a manner that severely limited their utility for spatial analysis.
- Twenty-one crime categories were listed, many of which track offenses enumerated in California's Street Terrorism Enforcement and Prevention (STEP) Act (CPC §186.22). This limited the ability of the database to measure the amount of gang crime and made comparisons with other measures of crime such as the Uniform Crime Reports difficult.
- Information about characteristics of crime incidents such as weapons use and motivating or precipitating factors also were collected, as were drug and alcohol information.
- Victim information was collected but non-mutually exclusive categories led to data coding unreliability.

Location

Due to technological limitations, incident location originally was coded using Thomas Brothers™ map page and grid coordinates. Originally, the Sheriff's Department was designated to administer the GITS database. Because the Sheriff's Department used an out-dated main-frame computer for most information storage and retrieval, data could only be collected in numeric fields. This required the use of one-half mile square map grid locations instead of exact address. This restricted geographical information in the database to a very coarse scale. It also introduced coder unreliability because the map data usually were not available in the police report requiring that each address be looked up and recorded on the GITS data form.

FIGURE A1. ORIGINAL GITS CODING FORM

**ORANGE COUNTY GANG INCIDENT TRACKING SYSTEM
DATA CODING SHEET**

AGENCY NAME (CODE) _____ DATE _____ HOUR _____

DEPARTMENT CASE NO.: _____ GANG (GREAT CODE) _____

THOMAS BROTHERS (1992 EDITION OR NEWER) GRID LOCATION: PAGE _____ GRID _____

<u>CRIME CATEGORY</u> (CHECK ONE)	ARRESTS	
	ADULT	JUVENILE
01 ARSON	_____	_____
02 ASSAULT/BATTERY ON A POLICE OFFICER	_____	_____
03 AUTO THEFT	_____	_____
04 BURGLARY	_____	_____
05 CAR JACKING ROBBERY	_____	_____
06 EXTORTION	_____	_____
*07 FELONIOUS ASSAULT	_____	_____
08 HOME INVASION ROBBERY	_____	_____
09 HOMICIDES/MANSLAUGHTER	_____	_____
10 INTIMIDATION OF A WITNESS (P.C. 136, 137)	_____	_____
11 KIDNAPPING	_____	_____
12 MISDEMEANOR ASSAULT/BATTERY	_____	_____
13 NARCOTIC SALES	_____	_____
14 ROBBERY	_____	_____
15 SEXUAL ASSAULT	_____	_____
16 SHOOTING INTO INHABIT. DWELLING (P.C. 246)	_____	_____
17 SHOOTING INTO UNINHABITED. VEHICLE (P.C. 247)	_____	_____
18 TAGGING/GRAFFITI	_____	_____
19 TERRORISM (P.C. 422)	_____	_____
20 VANDALISM	_____	_____
21 WEAPON LAW VIOLATIONS	_____	_____

*INCLUDES ALL ATTEMPTS NOT RESULTING IN DEATH

<u>FACTORS INVOLVED</u>	<u>WEAPONS USED</u>	<u>INVOLVED</u>	<u>RECOVERED</u>
DRUG INVOLVEMENT	_____	_____	_____
ECONOMIC GAIN	_____	_____	_____
EXTORTION/TERRORISM	_____	_____	_____
GANG INITIATION	_____	_____	_____
GANG INTIMIDATION	_____	_____	_____
GANG RIVALRY	_____	_____	_____
PERSONAL CONFLICT	_____	_____	_____
RETALIATION	_____	_____	_____
TERRITORIAL DISPUTE	_____	_____	_____
WEAPONS ACCESS	_____	_____	_____
OTHER (Specify):	_____	_____	_____
UNDETERMINED	_____	_____	_____

<u>DRUGS INVOLVED:</u> YES _____ NO _____	<u>VICTIM RELATIONSHIP</u>
POSSESSION FOR SALE	UNINTENDED VICTIM _____
PERSONAL POSSESSION	INNOCENT VICTIM _____
UNDER THE INFLUENCE	ACQUAINTANCE VICTIM _____
	RIVAL GANG MEMBER _____
	RIVAL GANG CODE (GREAT) _____
	OTHER (Specify): _____
	UNKNOWN _____
	<u>ALCOHOL INVOLVED:</u> YES _____ NO _____

COMPLETED BY: _____ DATE: _____

IM Rev. 10-93

Database Crime Categories

Limiting the database to the 21 crime categories reflected the interests of the GSSC and its concerns about monitoring only serious gang crime, as reflected in the Street Terrorism Enforcement and Protection (STEP) Act. This introduced several problems. First, any particular gang incident can involve several different crimes. For example, a single incident can include kidnapping, rape, robbery and homicide. The GSSC followed the hierarchical reporting rule commonly used by other crime databases such as the Federal Bureau of Investigation's Uniform Crime Reports (UCR), and recorded only the most serious crime occurring in an incident. This meant that GITS data reflected the number of gang incidents as characterized by the most serious crime in the incident, rather than an actual count of the number of gang-involved crimes.

This categorization scheme also created coder and compatibility problems. Because only 21 crime categories were being tracked, coders had to determine which category the crimes listed in a police report (usually as California penal code sections or municipal and other codes) fell into, increasing the chance for error. In addition, because the crime list did not include theft-related crimes, comparability of GITS data with other reports such as the FBI's UCR Part One property crime statistics was limited.

Evaluating Reporting Reliability

After reviewing the old form and the structure of the database, a number of changes were made. First, during the validation of the 1994 and 1995 data, all previously-reported incidents were reviewed and address data was added. During this review process law enforcement agencies also were asked to carefully review police reports involving shootings, robberies, assaults and weapon law violations for gang involvement in order to obtain a complete census of

the most serious crime reports from which a random sample of reports could be drawn. The review done was based on how the individual agencies reviewed gang cases, their record of reporting to GITS during 1995, and the completeness of the data collected. For 1994, 8,295 reports were reviewed and 283 gang-related cases were added to GITS for an error rate of 3 percent. For 1995, 4,302 reports were reviewed and 216 cases were added for an error rate of 5 percent.

Revised Data Form

The GITS data form was revised and adopted for use in 1996. The new form corrected a number of the problems noted previously with the original data form. As Figure A2 shows, the new form specifically asks for street address, the exact criminal code violations as they appear on the police reports, and provision is made for up to four crimes per incident. This not only reduces coder error by making the crime categories consistent with the penal codes used in police reports, but it also allows tracking of up to four separate crimes per incident. Once the system began tracking all gang incidents instead of only the 21 listed in the original form, the number of gang incidents reported in 1996 increased. For that year there were 3,384 incidents for the original twenty-one crime categories, compared to a total of 4,500 incidents for all gang crime, an increase of 33 percent. Looking at multiple counts in 1996 enabled us to collect information about a total of 6,134 gang-involved crimes; the old form would only have tracked 55 percent of these crimes. Although the new form provides a much more complete picture of the extent of gang crime in Orange County, the OCCSA had made the public commitment of using 1994 as the base year by which to judge the effectiveness of law enforcement efforts against gang crime.

Consequently, all countywide reports and public releases of the data had to be compatible with the original form which was used in 1994. The data presented in the rest of this report are

restricted to analysis of the original trackable 21 crimes using the most serious crime in an incident to characterize that incident.

The new form also clarifies a number of issues with which our analysis revealed coders were having difficulties. It tracks whether the victim was a gang or non-gang member and whether their victimization was intentional or unintentional. In order to improve coder reliability, the form is now divided into sections with instructions that each section needs to have a response. (Coders previously had been inconsistent in their responses to lack of applicability or information for certain items.) In order to improve coder reliability, we also included standardized instructions on the back of each form (see Figure A3) and revised training materials.

Figure A2. Revised GITS Coding Form

**ORANGE COUNTY GANG INCIDENT TRACKING SYSTEM
DATA CODING SHEET**

SECTION 1:
 Placentia Police Department - PLC DATE OF INCIDENT _____ HOUR _____
 DEPARTMENT CASE NO.: _____ GANG (GREAT CODE): _____
 ADDRESS OF INCIDENT: _____ CITY _____

**SECTION 2:
CRIME CATEGORIES**
 Penal Code Numbers listed on crime reports:

Count One	Count Two	Count Three	Count Four
<input style="width: 100px; height: 30px;" type="text"/>			

**SECTION 3:
WERE ANY ARRESTS MADE IN CONNECTION WITH THE INCIDENT?** (Check One)

Yes No

NUMBER OF ARRESTS:	Adults	Juveniles
Count One		
Count Two		
Count Three		
Count Four		

**SECTION 4:
FACTORS INVOLVED:**
(Check as many as apply)

Economic Gain	
Extortion	
Gang Initiation	
Gang Intimidation	
Gang Rivalry	
Personal Conflict	
Retaliation	
Territorial Dispute	
Other (Specify)	
Undetermined	

**SECTION 5:
WERE DRUGS INVOLVED IN THE INCIDENT?**

Possession for Sale: Yes No No Information
 Personal Possession: Yes No No Information

**SECTION 6:
WERE DRUGS AND/OR ALCOHOL USED PRIOR OR DURING THE INCIDENT?**

Drugs: Yes No No Information
 Alcohol: Yes No No Information
 Insufficient information to determine substance used

**SECTION 7:
WERE WEAPONS USED OR RECOVERED IN THE INCIDENT?**

Yes No No Information

WEAPON	INVOLVED	RECOVERED
Handguns		
Shotguns		
Rifles		
Assault Weapons		
Unknown Firearms		
Cutting/Stabbing		
Other Weapon (Specify)		

**SECTION 8:
WERE THERE ANY VICTIMS AS A RESULT OF THE INCIDENT?**

Yes No No Information

<p>CRIMES AGAINST PERSONS:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">TOTAL NUMBER OF VICTIMS</th> </tr> </thead> <tbody> <tr><td>Gang Member Intended</td><td></td></tr> <tr><td>Gang Member Unintended</td><td></td></tr> <tr><td>Gang GREAT Code</td><td></td></tr> <tr><td>Non Gang Member Intended</td><td></td></tr> <tr><td>Non Gang Member Unintended</td><td></td></tr> <tr><td>Relationship Undetermined</td><td></td></tr> </tbody> </table>	TOTAL NUMBER OF VICTIMS		Gang Member Intended		Gang Member Unintended		Gang GREAT Code		Non Gang Member Intended		Non Gang Member Unintended		Relationship Undetermined		<p>CRIMES AGAINST PROPERTY: (Check appropriate category)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>Public</td><td></td></tr> <tr><td>Private</td><td></td></tr> <tr><td>Undetermined</td><td></td></tr> </tbody> </table>	Public		Private		Undetermined	
TOTAL NUMBER OF VICTIMS																					
Gang Member Intended																					
Gang Member Unintended																					
Gang GREAT Code																					
Non Gang Member Intended																					
Non Gang Member Unintended																					
Relationship Undetermined																					
Public																					
Private																					
Undetermined																					

COMPLETED BY: _____

DATE: _____

Figure A3. Revised GITS Coding Form Instructions

Prior to starting this form be sure all initial crime reports of a single incident are together. Remember that regardless of the number of crime reports there will be a single data sheet filed. For more complete set of instructions and definitions, see the booklet describing the Gang Incident Tracking System.

All information in Section I **must be completed**. In all other sections, information **must be as complete as possible**. 'Yes,' 'No,' or 'No Information' decisions **must be marked**. Further information is required if a 'Yes' choice is made. Fill in all boxed information. If a choice cannot be made due to incomplete information or it cannot be determined from the information in the crime report, check the 'No Information' or 'Undetermined' box.

SECTION 1:

Date of incident: This should be the date of incident as indicated on the initial crime report. Date should be recorded month/date/year. (Use numerical code for month. For example, incident occurred on October 6, 1995, record as 10/6/95. Approximate date will suffice if actual date of occurrence is not known. Please use the code APR for approximate date. If it is known that incident occurred between two (Use dates, please use the midpoint.)

Hour: This should be the hour of the incident recorded on the initial crime report. Hour should be recorded in military time. (Approximate time will suffice if actual hour of occurrence is not known. Please use the code APR for approximate hour. If it cannot be determined what time the incident occurred, record the hour 0000.)

Department Case Number: This should be assigned by your department at the time of the incident. Number should appear on the crime report.

Gang GREAT Code: If gang membership is unknown or identified, refer to the District Attorney's gang GREAT code list. Select and record appropriate code number. If gang membership is unknown, record code 999. If there is not a gang GREAT code for the identified gang, call Patty Suarez at 935-7037 to receive a GREAT code. (These same instructions for gang GREAT codes apply to Section 8.)

Address of incident: This should be the address listed on the initial crime report as the place of occurrence. The address should be recorded as completely as possible, i.e., numerical, street, and city. (Cross streets will be acceptable if numerical address is unavailable.) (The Sheriff's Department will also include Thomas Brother's Grid locations.)

SECTION 2:

Record the crime(s) or penal code number(s) listed on the crime report. If multiple crime reports were involved, list each crime or penal code number from the crime reports. Count one corresponds to the most serious crime connection to the incident. For further information, please see the booklet.

SECTION 3:

Were any arrests made in connection with the incident? Please check either 'Yes' or 'No.'
If arrests were made, enter the total number of adults or juveniles arrested per criminal offense in the appropriate box.

SECTION 4:

Were any of the following factors involved in the gang incident? Please check all that apply. If none apply, check the factor 'Other' and specify which factor is involved. If it cannot be determined from the information on the face sheet, please check the 'Undetermined' category.

SECTION 5:

Were drugs involved in the gang incident? Please check 'Yes' or 'No,' or 'No information' for both 'Possession for sale' and 'Personal Possession.' See booklet for definitions of factors involved.

SECTION 6:

Were drugs and/or alcohol used prior or during the incident? Please check 'Yes' or 'No,' or 'No information' for both 'Drugs' and 'Alcohol.' If it was known that one of the offenders had taken something, but it cannot be determined which substance was taken, please check the 'insufficient information to determine the substance used' box.

SECTION 7:

Were any weapons used in the incident? Please check 'Yes,' 'No,' or 'No Information.' If the weapon used and/or recovered is not listed, check 'Other Weapon' and specify what weapon was used and/or recovered.

In the 'INVOLVED' column, check all appropriate weapon categories. In the 'RECOVERED' column, check which weapons were recovered at the incident. If weapons were not used in the incident, but a weapon was recovered, please mark the type of weapon that was recovered at the incident.

SECTION 8:

Were there any victims as a result of the gang incident? Please check 'Yes,' 'No,' or 'No Information.' In some incidents you will be able to complete both 'CRIMES AGAINST THE PERSON' and 'CRIMES AGAINST PROPERTY' boxes.

Crimes Against the Persons: Record the number of victims per category. If more than one gang member is a victim, please record all applicable codes for victims who are classified as gang members. (Remember if the victim is a known gang member but the gang is unidentified use the code 999. If the gang does not appear on the GREAT code list call patty Suarez at 935-7037 to receive a GREAT code.)

Crimes Against Property: Select all that apply. See booklet for explanation of the different types of victims.

If any questions arise while completing the data coding sheet, please contact the UCI Focused Research Group on Orange County Street Gangs at (949) 824-6170. (You can fax questions to (949) 824-2707.) Appendix B
Phone Number _____

I.D. NO. _____
 1 2 3 4

Appendix B: UCI FEAR OF CRIME AND GANGS SURVEY

(ENGLISH, SPANISH AND VIETNAMESE VERSIONS)

1000 ORANGE COUNTY ADULT RESIDENTS + 100 VIETNAMESE + 100 LATINO/ SEPTEMBER 3-28, 1997

HELLO, MY NAME IS _____, AND I AM CALLING ON BEHALF OF THE UNIVERSITY OF CALIFORNIA, IRVINE. WE ARE CONDUCTING A PUBLIC OPINION SURVEY IN ORANGE COUNTY REGARDING COMMUNITY ISSUES. WE ARE VERY INTERESTED IN YOUR OPINIONS ABOUT THE QUALITY OF LIFE IN ORANGE COUNTY. YOUR HOUSEHOLD HAS BEEN RANDOMLY SELECTED TO BE IN THIS STUDY. THIS IS NOT A SALES CALL AND YOUR ANSWERS WILL BE KEPT IN STRICT CONFIDENCE. YOU CAN STOP AT ANY TIME. THIS SURVEY WILL TAKE APPROXIMATELY _____ MINUTES, WILL YOU ANSWER OUR QUESTIONS?

(IF NO) IS THERE ANOTHER TIME THAT WOULD BE CONVENIENT FOR ME TO CALL YOU BACK?

Record number _____ and call back time: day _____ time _____

(IF YES)

A. ARE YOU AN ORANGE COUNTY RESIDENT?

Yes (skip to B)

No (terminate)

B. ARE YOU 18 YEARS OF AGE OR OLDER?

Yes (skip to 1)

No (ask C)

C. IS THERE ANYONE HOME WHO IS 18 OR OLDER?

Yes (ask to speak to person, go through introduction)

No (terminate)

1. FIRST, WHEN YOU THINK ABOUT YOUR COMMUNITY, DO YOU THINK OF IT AS?

YOUR OWN BLOCK	5-1
A FEW BLOCKS AROUND YOUR HOUSE	-2
YOUR HOUSING DEVELOPMENT	-3
A SECTION OF YOUR CITY	-4
YOUR ENTIRE CITY	-5
YOUR REGION OF THE COUNTY	-6
THE COUNTY	-7
(other) specify _____	-8
(dont know/refused)	-9

2-13. WE HAVE A NUMBER OF QUESTIONS ABOUT YOUR COMMUNITY AS YOU DEFINE IT. I WILL READ YOU A LIST OF SOME THINGS THAT CURRENTLY MIGHT BE PROBLEMS IN YOUR COMMUNITY. AFTER I READ EACH ONE, PLEASE TELL ME WHETHER YOU THINK IT IS A BIG PROBLEM, SOMEWHAT OF A PROBLEM, A SMALL PROBLEM, OR NO PROBLEM IN YOUR COMMUNITY.

(ROTATE 2-12, NOT 13)

BIG PROBLEM	-1
SOMEWHAT OF A PROBLEM	-2
A SMALL PROBLEM	-3
NO PROBLEM	-4
dont know	-8
refuse	-9

Gang Activity in Orange County, California

		BIG	SOM	SML	NOT	DK	RF
2. POVERTY AND ECONOMIC HARDSHIP. . . .	6-	1	2	3	4	8	9
3. PEOPLE OR LANDLORDS ALLOWING THEIR PROPERTY TO BECOME RUN DOWN	7-	1	2	3	4	8	9
4. PEOPLE MOVING IN AND OUT WITHOUT PERSONALLY BECOMING ATTACHED TO THE COMMUNITY	8-	1	2	3	4	8	9
5. LANGUAGE DIFFERENCES BETWEEN RESIDENTS	9-	1	2	3	4	8	9
6. CULTURAL DIFFERENCES BETWEEN RESIDENTS	10-	1	2	3	4	8	9
7. ABANDONED HOUSES OR OTHER EMPTY BUILDINGS	11-	1	2	3	4	8	9
8. GRAFFITI	12-	1	2	3	4	8	9
9. TOO MANY PEOPLE LIVING IN ONE RESIDENCE.	13-	1	2	3	4	8	9
10. GUNFIRE	14-	1	2	3	4	8	9
11. YOUTHS HANGING OUT	15-	1	2	3	4	8	9
12. RACIAL DIFFERENCES BETWEEN RESIDENTS	16-	1	2	3	4	8	9
13. GANGS (IF ANSWER 1-3, SKIP TO 14) (IF ANSWER 4,8,9, SKIP TO 15)	17-	1	2	3	4	8	9
14. HAVE GANGS BECOME A PROBLEM IN THE LAST FEW YEARS, IN THE LAST DECADE, DURING THE LAST FEW DECADES, OR HAVE THEY ALWAYS BEEN A PROBLEM IN YOUR COMMUNITY?							
last few years (1-3)							18-1
last decade (4-9 years)							-2
last few decades (10-20 years)							-3
always a problem							-4
(dont know)							-8
(refused)							-9

15-18. FOR EACH OF THE FOLLOWING TYPES OF CRIME, DO YOU FEEL THAT YOUR COMMUNITY HAS A LOT, A MODERATE AMOUNT, A SMALL AMOUNT, OR NONE. (ROTATE)

		LOT	MOD	SML	NO	DK	RF
15. PROPERTY CRIME, LIKE BURGLARY AND THEFT	19-	1	2	3	4	8	9

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16. VIOLENT CRIME, LIKE ASSAULT AND MURDER	20-	1	2	3	4	8	9
17. PROPERTY CRIME BY GANGS	21-	1	2	3	4	8	9
18. VIOLENT CRIME BY GANGS	22-	1	2	3	4	8	9

19. OVERALL, WOULD YOU SAY THAT CRIME IN YOUR COMMUNITY HAS INCREASED, REMAINED THE SAME, OR DECREASED IN THE LAST TWO TO THREE YEARS?

increased	23-1
stayed the same	-2
decreased	-3
(dont know)	-8
(refused)	-9

20. HOW ABOUT YOUTH VIOLENCE IN YOUR COMMUNITY? IS THIS A PROBLEM YOU SEE AS HAVING INCREASED, REMAINED THE SAME, OR DECREASED IN THE LAST TWO TO THREE YEARS?

increased	24-1
stayed the same	-2
decreased	-3
(dont know)	-8
(refused)	-9

21. HOW ABOUT GANG VIOLENCE? HAS IT INCREASED, REMAINED THE SAME, OR DECREASED IN THE LAST TWO TO THREE YEARS?

increased	25-1
stayed the same	-2
decreased	-3
(dont know)	-8
(refused)	-9

22-30. PEOPLE USUALLY THINK OF SOME CRIMES AS MORE SERIOUS THAN OTHERS. I AM INTERESTED IN HOW SERIOUS YOU THINK CERTAIN TYPES OF CRIMES ARE. PLEASE RATE THE SERIOUSNESS OF THE FOLLOWING CRIMES, WHERE 1 MEANS NOT SERIOUS, 2 MEANS SOMEWHAT SERIOUS, 3 MEANS SERIOUS, AND 4 MEANS VERY SERIOUS.

(ROTATE)

NOT SERIOUS	-1	(NS)
SOMEWHAT SERIOUS ...	-2	(SS)
SERIOUS	-3	(S)
VERY SERIOUS	-4	(VS)
dont know	-8	(DK)
refused	-9	(RF)

NS SS S VS DK RF

22. HAVING YOUR PROPERTY DAMAGED BY GANG GRAFFITI OR TAGGING	-26	1	2	3	4	8	9
--	-----	---	---	---	---	---	---

23. HAVING SOMEONE BREAK INTO YOUR HOME WHILE YOU ARE AWAY	-27	1	2	3	4	8	9
--	-----	---	---	---	---	---	---

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24. HAVING A GANG MEMBER COMMIT A HOME INVASION ROBBERY AGAINST YOU	-28	1	2	3	4	8	9
25. BEING RAPED OR SEXUALLY ASSAULTED BY A STRANGER.....	-29	1	2	3	4	8	9
26. BEING A VICTIM OF A DRIVE-BY OR RANDOM GANG-RELATED SHOOTING	-30	1	2	3	4	8	9
27. BEING PHYSICALLY ATTACKED OR ASSAULTED BY A GANG MEMBER.....	-31	1	2	3	4	8	9
28. BEING HARRASSED BY GANG MEMBERS	-32	1	2	3	4	8	9
29. BEING A VICTIM OF A CARJACKING.....	-33	1	2	3	4	8	9

30-37 NOW THAT YOU HAVE RATED THE SERIOUSNESS OF THESE CRIMES, I WOULD LIKE YOU TO TELL ME HOW LIKELY YOU THINK IT IS THAT YOU WILL BECOME A VICTIM OF THOSE CRIMES IN THE NEXT TWO TO THREE YEARS. IS IT NOT LIKELY, SOMEWHAT LIKELY, LIKELY, OR VERY LIKELY THAT YOU WILL ...

(ROTATE)

NOT LIKELY	-1	(NL)
SOMEWHAT LIKELY...	-2	(SL)
LIKELY	-3	(L)
VERY LIKELY	-4	(VL)
dont know	-8	(DK)
refused	-9	(RF)

		NL	SL	L	VL	DK	RF
30. HAVE YOUR PROPERTY DAMAGED BY GANG GRAFFITI OR TAGGING	-34	1	2	3	4	8	9
31. HAVE SOMEONE BREAK INTO YOUR HOME WHILE YOU ARE AWAY	-35	1	2	3	4	8	9
32. HAVE A GANG MEMBER COMMIT A HOME INVASION ROBBERY AGAINST YOU	-36	1	2	3	4	8	9
33. BE RAPED OR SEXUALLY ASSAULTED BY A STRANGER.....	-37	1	2	3	4	8	9
34. BE A VICTIM OF A DRIVE-BY OR RANDOM GANG-RELATED SHOOTING	-38	1	2	3	4	8	9
35. BE PHYSICALLY ATTACKED OR ASSAULTED BY A GANG MEMBER.....	-39	1	2	3	4	8	9
36. BE HARRASSED BY GANG MEMBERS. ...	-40	1	2	3	4	8	9

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37. BE A VICTIM OF A CARJACKING. -41 1 2 3 4 8 9

38-45. I HAVE ONE MORE QUESTION I WILL ASK YOU REGARDING THESE PARTICULAR CRIMES. I JUST ASKED YOU TO RANK THE SERIOUSNESS AND THE LIKELIHOOD THAT YOU WILL BECOME A VICTIM OF THESE CRIMES. NOW I WILL ASK YOU THE ABOUT THE SAME CRIMES, BUT I WOULD LIKE TO KNOW HOW PERSONALLY AFRAID YOU ARE OF EACH OF THEM. FOR EACH OF THE FOLLOWING CRIMES, PLEASE TELL ME IF YOU ARE NOT AFRAID, SOMEWHAT AFRAID, AFRAID, OR VERY AFRAID.

(ROTATE)

NOT AFRAID	-1	(NA)				
SOMEWHAT AFRAID . . .	-2	(SA)				
AFRAID	-3	(A)				
VERY AFRAID	-4	(VA)				
dont know	-8	(DK)				
refused	-9	(RF)				

		NA	SA	A	VA	DK	RF
38. HAVING YOUR PROPERTY DAMAGED BY GANG GRAFFITI OR TAGGING	-42	1	2	3	4	8	9
39. HAVING SOMEONE BREAK INTO YOUR HOME WHILE YOU ARE AWAY	-43	1	2	3	4	8	9
40. HAVING A GANG MEMBER COMMIT A HOME INVASION ROBBERY AGAINST YOU	-44	1	2	3	4	8	9
41. BEING RAPED OR SEXUALLY ASSAULTED BY A STRANGER.	-45	1	2	3	4	8	9
42. BEING A VICTIM OF A DRIVE-BY OR RANDOM GANG-RELATED SHOOTING	-46	1	2	3	4	8	9
43. BEING PHYSICALLY ATTACKED OR ASSAULTED BY A GANG MEMBER	-47	1	2	3	4	8	9
44. BEING HARRASSED BY GANG MEMBERS.	-48	1	2	3	4	8	9
45. BEING A VICTIM OF A CARJACKING.	-49	1	2	3	4	8	9

46-50. TO AVOID GANG CRIME IN PARTICULAR, HAVE YOU IN THE PAST YEAR, (ROTATE)

YES	-1				
NO	-2				
(dont know)	-8	(DK)			
(refuse)	-9	(RF)			

YES NO DK RF

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46. BOUGHT OR SECURED A GUN	50-	1	2	8	9
47. CARRIED A GUN OR OTHER WEAPON WHEN YOU WENT OUT	51-	1	2	8	9
48. ARRANGED TO GO OUT WITH SOMEONE SO YOU WOULD NOTBE ALONE	52-	1	2	8	9
49. AVOIDED CERTAIN AREAS OF ORANGE COUNTY	53-	1	2	8	9
50. AVOIDED CERTAIN AREAS OF YOUR OWN COMMUNITY..	54-	1	2	8	9
51. DO YOU KNOW THE NAMES OF ANY GANGS OR GANG MEMBERS IN YOUR COMMUNITY?					
Yes					55-1
No					-2
(dont know)					-8
(refused)					-9
52. ARE THERE AREAS RIGHT AROUND WHERE YOU LIVE--THAT IS, WITHIN A FEW BLOCKS-- WHERE YOU ARE AFRAID TO WALK ALONE?					
Yes (SKIP TO Q. 53)					56-1
No (SKIP TO Q. 54)					-2
(dont know)					-8
(refused)					-9
53. ARE YOU AFRAID THERE BECAUSE OF GANG-RELATED CONCERNS?					
Yes					57-1
No					-2
(dont know)					-8
(refused)					-9
54. IN THE PAST TWO TO THREE YEARS, DO YOU FEEL MORE SAFE, NOT AS SAFE, OR ABOUT THE SAME IN YOUR COMMUNITY?					
Safer					58-1
Not as safe					-2
About the same					-3
(dont know)					-8
(refused)					-9
55A. IN GENERAL, ARE YOU MORE, LESS, OR EQUALLY AFRAID FOR OTHER PEOPLE LIVING IN YOUR HOME AS YOU ARE FOR YOURSELF?					
MORE AFRAID (SKIP TO 55B)					59-1
LESS AFRAID (SKIP TO 56)					-2
EQUALLY AFRAID (SKIP TO 56)					-3
(dont know)					-8
(refused)					-9

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55B: ARE YOU MORE AFRAID FOR YOUR YOUR PARENTS, YOUR SPOUSE, YOUR CHILDREN, OR OTHER PEOPLE UNDER 18 WHO ARE LIVING IN YOUR HOME? (CODE, DONT READ)

parents	60-1
spouse	-2
children	-3
other under 18	-4
(other)	-5
(dont know)	-8
(refused)	-9

56. ON ANOTHER TOPIC, AT WHAT AGE WOULD YOU CONSIDER SOMEONE NO LONGER A YOUTH? (CODE, DONT READ)

(61-62)	
under 16	... -01
16	-02
17	-03
18	-04
19	-05
20	-06
21	-07
22	-08
23	-09
24	-10
25	-11
over 25	-12
(dont know)	-98
(refused)	-99

57. DO YOU THINK GANG MEMBERS ARE MOSTLY UNDER 18, ARE MOSTLY 18 AND OLDER, OR DO YOU THINK THEY ARE ABOUT HALF AND HALF?

Mostly under 18	63-1
Mostly 18 and older	-2
half and half	-3
(Dont know)	-8
(Refused)	-9

58. NOW I WILL ASK YOU A FEW QUESTIONS ABOUT YOUR COMMUNITY IN GENERAL. HOW WOULDYOU DESCRIBE THE PEOPLE WHO LIVE IN YOUR COMMUNITY IN TERMS OF SUCH THINGS AS INCOME, EDUCATION, AND LIFESTYLE? WOULD YOU SAY THEY ARE:

VERY MUCH LIKE YOU	64-1
SOMEWHAT LIKE YOU, OR	-2
NOT AT ALL LIKE YOU	-3
(dont know)	-8

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	(refused)		-9
59.	HOW MUCH DO YOU FEEL YOU BELONG TO YOUR COMMUNITY? WOULD YOU SAY <u>A LOT</u> (I FEEL VERY MUCH A PART OF IT), <u>A LITTLE</u> (SOMETIMES I FEEL A PART OF IT), OR <u>NOT AT ALL</u> (ITS JUST A PLACE TO LIVE)?		
	A lot		65-1
	a little, or		-2
	not at all		-3
	(dont know)		-8
	(refused)		-9
60.	IF YOU HAD A PROBLEM, COULD YOU RELY ON YOUR NEIGHBORS FOR HELP? (CODE, DONT READ)		
	yes		66-1
	no		-2
	(not sure/dont know)		-8
	(refused)		-9
61.	OVERALL, IN THE PAST TWO TO THREE YEARS, WOULD YOU SAY YOUR COMMUNITY HAS BECOME A BETTER PLACE TO LIVE, HAS GOTTEN WORSE, OR IS ABOUT THE SAME AS IT USED TO BE?		
	Better		67-1
	Worse		-2
	About the same		-3
	(dont know)		-8
	(refused)		-9
62.	ON ANOTHER TOPIC, WHAT ARE YOUR MOST IMPORTANT SOURCES OF INFORMATION ABOUT CRIME? (RECORD UP TO THREE ANSWERS, CODE, DONT READ)		
(68-69)			
62a:	television		-01
	newspapers		-02
	radio		-03
	co-workers		-04
	friends		-05
	neighbors		-06
	children		-07
	other family members		-08
	personal experience		-09
	other		-10
	(dont know)		-98
	(refused)		-99
(70-71)			
62b:	television	-01	
	newspapers		-02
	radio		-03
	co-workers		-04
	friends		-05
	neighbors		-06

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	children	-07
	other family members	-08
	personal experience	-09
	other	-10
	(dont know)	-98
	(refused)	-99
	(72-73)	
62c:	television	-01
	newspapers	-02
	radio	-03
	co-workers	-04
	friends	-05
	neighbors	-06
	children	-07
	other family members	-08
	personal experience	-09
	other	-10
	(dont know)	-98
	(refused)	-99
63.	ARE YOU A REGULAR VIEWER OF TELEVISION PROGRAMS THAT DEAL WITH CRIME OR CRIMINAL JUSTICE ISSUES, SUCH AS COPS, REAL STORIES OF THE HIGHWAY PATROL, JUSTICE FILES, OR AMERICAS MOST WANTED? (CODE, DONT READ)	
	yes	74-1
	no	-2
	(dont know)	-3
	(refused)	-9
64.	ON ANOTHER ISSUE, HAVE YOU SEEN OR HEARD ABOUT THE ORANGE COUNTY PROGRAM <u>DRUG USE IS LIFE ABUSE?</u>	
	yes (SKIP TO Q. 65)	75-1
	no (SKIP TO Q. 67)	-2
	(dont know)	-3
	(refused)	-9
65.	WHERE HAVE YOU SEEN OR HEARD THE SLOGAN <u>DRUG USE IS LIFE ABUSE?</u> (DONT READ, JUST CODE) (record up to 3 answers)	
	(76-77)	
65a.	bumper stickers	-01
	logo in advertising	-02
	childrens school	-03
	books, pamphlets	-04
	newspaper articles, newspaper ads	-05
	buses	-06
	bus shelters	-07

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	electronic message board	-08
	other	-09
	(dont know)	-98
	(refused)	-99
 (78-79)		
65b.	bumper stickers	-01
	logo in advertising	-02
	childrens school	-03
	books, pamphlets	-04
	newspaper articles, newspaper ads	-05
	buses	-06
	bus shelters	-07
	electronic message board	-08
	other	-09
	(dont know)	-98
	(refused)	-99
 (80-81)		
65c	bumper stickers	-01
	logo in advertising	-02
	childrens school	-03
	books, pamphlets	-04
	newspaper articles, newspaper ads	-05
	buses	-06
	bus shelters	-07
	electronic message board	-08
	other	-09
	(dont know)	-98
	(refused)	-99
66.	OVERALL, HOW FAVORABLE AN IMPRESSION DO YOU HAVE OF THE ORGANIZATION AND THE PROGRAMS INCLUDED IN <u>DRUG USE IS LIFE ABUSE?</u>	
	VERY FAVORABLE	82-1
	SOMEWHAT FAVORABLE	-2
	SOMEWHAT UNFAVORABLE	-3
	VERY UNFAVORABLE	-4
	(dont know)	-8
	(refused)	-9

67-72. TO WHAT DEGREE DO YOU THINK THAT THE FOLLOWING PROBLEMS ARE CAUSED BY DRUG ABUSE--ON A SCALE OF 1 TO 5 WITH 1 BEING NOT AT ALL AND 5 BEING A LOT?

							(ROTATE)	
			NOT			LOT	DK	RF
67.	CHILD ABUSE.	-83	1	2	3	4	5	8 9

68. PROPERTY CRIMES, LIKE BURGLARY

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AND THEFT	-84	1	2	3	4	5	8	9
69. VIOLENT CRIMES, LIKE ASSAULT AND MURDER	-85	1	2	3	4	5	8	9
70. VIOLENT CRIMES THAT ARE COMMITTED BY YOUTHS	-86	1	2	3	4	5	8	9
71. GANG CRIME	-87	1	2	3	4	5	8	9
72. POOR LEARNING ENVIRONMENT IN SCHOOLS	-88	1	2	3	4	5	8	9

NOW WE WILL ASK YOU A FEW PERSONAL QUESTIONS FOR RESEARCH PURPOSES ONLY. THESE QUESTIONS HELP US UNDERSTAND HOW DIFFERENT PEOPLE IN ORANGE COUNTY FEEL ABOUT THE QUESTIONS WE HAVE ASKED YOU. YOU WILL NOT BE PERSONALLY IDENTIFIED AS HAVING GIVEN THIS INFORMATION.

73. WHAT WAS THE LAST GRADE OF SCHOOL YOU COMPLETED? (CODE, DONT READ)

grade 0-4	89-1
grade 5-8	-2
grade 9-11, some high school	-3
grade 12, high school graduate	-4
grade 13-15, some college	-5
grade 16, college graduate	-6
graduate work	-7
(dont know)	-8
(refused)	-9

74. ARE YOU CURRENTLY EMPLOYED FULL-TIME, PART-TIME, OR ARE YOU NOT EMPLOYED?

full-time	90-1
part-time	-2
not employed (SKIP TO Q. 76)	-3
(dont know)	-8
(refused)	-9

75. IN YOUR JOB, HOW MUCH CONTACT WOULD YOU SAY YOU HAVE WITH MINORITIES? WOULD YOU SAY, A LOT, A MODERATE AMOUNT, A SMALL AMOUNT OR NONE?

a lot	91-1
a moderate amount	-2
a small amount	-3
none	-4
(dont know)	-8
(refused)	-9

76. WHAT IS YOUR APPROXIMATE TOTAL HOUSEHOLD YEARLY INCOME? IS IT:
(92-93)

LESS THAN \$15,000	-01
BETWEEN \$15,000 AND \$24,999	-02
BETWEEN \$25,000 AND \$34,999	-03
BETWEEN \$35,000 AND \$49,999	-04
BETWEEN \$50,000 AND \$74,999	-05
BETWEEN \$75,000 AND \$100,000	-06

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	MORE THAN \$100,000	-07
	(dont know)	-98
	(refused)	-99
77.	ARE YOU MALE OR FEMALE?	
	male	94-1
	female	-2
	(refused)	-9
78.	HOW WOULD YOU DESCRIBE YOUR RACE AND ETHNICITY? (CODE, DONT READ)	
	White/caucasion	95-1
	Latino/Hispanic (e.g., Puerto Rican, Mexican, Cuban, Central and South American)	-2
	African-American/black	-3
	Asian-American/Pacific Islander (e.g., Filipino, Chinese, Japanese, Hawaiian, Vietnamese)	-4
	American Indian/Native American	-5
	Biracial/mixed	-6
	other	-7
	(dont know)	-8
	(refused)	-9
79.	ARE YOU BETWEEN THE AGES OF:	
	18 to 20	(96-97)-01
	21 to 24	-02
	25 to 34	-03
	35 to 44	-04
	45 to 54	-05
	55 to 64	-06
	65-74, or	-07
	75 or older	-08
	(dont know)	-98
	(refused)	-99
80.	WHAT IS YOUR CURRENT MARITAL STATUS? (CODE, DONT READ)	
	married	98-1
	widowed	-2
	divorced	-3
	separated	-4
	never married	-5
	cohabiting/living with partner	-6
	(dont know)	-8
	(refused)	-9
81.	HOW MANY PEOPLE LIVE IN YOUR HOUSEHOLD? (CODE, DONT READ)	
	(99-100)	
	1	-01
	2	-02
	3	-03
	4	-04
	5	-05
	6	-06

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	7	-07
	8	-08
	9	-09
	10	-10
	more than 10	-11
	(dont know)	-98
	(refused)	-99
82.	HOW MANY PEOPLE LIVING WITH YOU ARE UNDER THE AGE OF 18?	
(101-102)		
	0	-00
	1	-01
	2	-02
	3	-03
	4	-04
	5	-05
	6	-06
	7	-07
	8	-08
	9	-09
	10	-10
	more than 10	-11
	(dont know)	-98
	(refused)	-99
83.	DO YOU OWN OR RENT YOUR RESIDENCE?	
	own	103-1
	rent	-2
	other	-3
	(dont know)	-8
	(refused)	-9
84.	HOW LONG HAVE YOU LIVED IN ORANGE COUNTY? _____	
	(RECORD EXACT ANSWER)	
85.	HAVE YOU <u>PERSONALLY</u> BEEN A VICTIM OF A CRIME IN THE PAST TWO TO THREE YEARS?	
	yes (SKIP TO Q. 86)	104-1
	no (SKIP TO Q. 88)	-2
	(dont know)	-8
	(refused)	-9
86.	WAS THIS A VIOLENT CRIME OR A PROPERTY CRIME?	
	violent	105-1
	property	-2
	both	-3
	(dont know)	-8
	(refused)	-9

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87. DO YOU THINK THIS WAS A GANG-RELATED CRIME?
- | | |
|-------------|-------|
| yes | 106-1 |
| no | -2 |
| (dont know) | -8 |
| (refused) | -9 |
88. HAS ANYONE ELSE IN YOUR FAMILY BEEN A VICTIM OF A CRIME IN THE PAST TWO TO THREE YEARS?
- | | |
|---------------------|-------|
| yes (SKIP TO Q. 89) | 107-1 |
| no (SKIP TO Q. 91) | -2 |
| (dont know) | -8 |
| (refused) | -9 |
89. WAS THIS A VIOLENT CRIME OR A PROPERTY CRIME?
- | | |
|-------------|-------|
| violent | 108-1 |
| property | -2 |
| both | -3 |
| (dont know) | -8 |
| (refused) | -9 |
90. DO YOU THINK THIS WAS A GANG-RELATED CRIME?
- | | |
|-------------|-------|
| yes | 109-1 |
| no | -2 |
| (dont know) | -8 |
| (refused) | -9 |
91. FOR RESEARCH PURPOSES ONLY, MAY I HAVE THE CLOSEST CROSS STREETS TO YOUR HOME?
- _____ AND _____
92. WHAT CITY DO YOU LIVE IN?

APPENDIX C. DISSEMINATION OF PROJECT INFORMATION ACTIVITIES

Publications

Vila, Bryan and James W. Meeker (1997) "A Regional Gang Incident Tracking System." *Journal of Gang Research* 4:3:23-36.

Meeker, James W. and Bryan Vila. (proposed) *Understanding Street Gang Crime*.

Doctoral Dissertations

Thomas E. Fossati, Thomas E. 1998. *The Social Ecology Of Violent Gang Crime: A Sociospatial Ratiocination*. University of California, Irvine.

Lane, Jodi. 1998. *Crime and Gangs in an Urban Sphere: Constructing the Threat and Fearing the Future*. University of California, Irvine.

Parsons, Katie J.B. 1998. *The Gang Incident Tracking System: Orange County, California's Collective Effort to Track Gang-Related Incidents*. University of California, Irvine.

Conference Presentations

November 1998: Research team members are scheduled to make five different presentations related to project research at the American Society of Criminology annual meeting.

March 1998: "Relationships Between Concentrations of Gang Incidents, Social and Demographic Factors, and Reported Fear of Gang Crime." James W. Meeker, Bryan Vila, and Douglas Wiebe, Academy of Criminal Justice Sciences Annual Conference.

February 1998: "Fear of Gangs in Orange County, California." Jodi Lane, James W. Meeker, and Bryan Vila, Western Society of Criminology.

December 1997: GITS presentation to National Community Oriented Policing Conference, James W. Meeker.

- November 1997: "Using a GIS-Based Gang Incident Tracking System to Evaluate Intervention and Violence Reduction Programs." Bryan Vila and James W. Meeker, American Society of Criminology Annual Conference.
- November 1997: "Relationships between Concentration of Gang Incidents, Social and Demographic Factors, and Reported Fear of Gang Crime." Thomas E. Fossati, James W. Meeker, Bryan Vila.
- November 1997: "GIS-Based Mapping of Gang Incidents in Orange County, California." James W. Meeker and Bryan Vila, American Society of Criminology Annual Conference.
- November 1997: "The Gang Incident Tracking System: A Geospatial Analysis of Gang Crime." Thomas E. Fossati, American Society of Criminology Annual Conference.
- November 1997: "If We Don't Deal with This, We are Going to Have Another LA Problem: The Social Construction of Gang Problems by Law Enforcement and Community Leaders." Jodi Lane, American Society of Criminology Conference.
- November 1997: "Target Type Approaches to Street Gangs: A Preliminary Evaluation of the Effects of Joint Prosecutor, Police, and Probation Teams. American Society of Criminology Annual Meeting." Douglas Wiebe and James W. Meeker.
- July 1997: "A Triangular Approach to Evaluating the Effectiveness of Regional Street Gang Prevention, Intervention, and Suppression Programs." Bryan Vila and James W. Meeker, U.S. Department of Justice-sponsored Conference on Criminal Justice Research and Evaluation.
- March 1997: "Spatial and Temporal Distribution of Gang Crimes." James W. Meeker, Bryan Vila and Douglas Wiebe, Academy of Criminal Justice Sciences Annual Conference.
- March 1997: "The Hourly Distribution of Incidents in Orange County Gang Incident Tracking System Data." Douglas Wiebe. Academy of Criminal Justice Sciences Annual Meeting
- March 1997: "Don't You Go [Out] There: The Effects of Social Disorganization Variables on Fear of Crime and Gangs." Jodi Lane, Academy of Criminal Justice Sciences Conference.
- November 1996: "Gang Typologies and Criminal Activities." James W. Meeker and Bryan Vila, American Society of Criminology Annual Conference.
- November 1996: "Subcultural Diversity and the Fear of Crime and Gangs." Jodi Lane, American Society of Criminology Conference.
- November 1996: "Temporal and Spatial Analysis of Gang Incidents at the Census Block Level." Thomas E. Fossati, American Society of Criminology Conference.

- June 1996: "Orange County, California's Regional Gang Incident Tracking System." Bryan Vila, National Youth Gang Symposium, Dallas, Texas.
- May 1996: "Gang Research in Orange County, California." All Staff, National Institute of Justice & Office of Juvenile Justice and Delinquency Prevention Gangs Cluster Conference.
- March 1996: "The Orange County Gang Incident Tracking System." Bryan Vila, Academy of Criminal Justice Sciences Annual Conference.
- March 1996: "An Approach to Understanding Fear of Gangs as a Function of Community Characteristics." Jodi Lane, Academy of Criminal Justice Sciences Annual Conference.
- March 1996: "Spatial Analysis of Gang Crime." Thomas E. Fossati, Academy of Criminal Justice Sciences Annual Conference.
- November 1995: "Regional Variation in Gang-Related Crime Patterns: A Preliminary Analysis of Orange County's Gang Incident Tracking System." Bryan Vila and James W. Meeker. American Society of Criminology Annual Conference.

Public Presentations

- December 1998: "Gang Turf & Political Turf: Mapping Gang Incidents Across 30 Municipal Boundaries." Bryan Vila. National Crime Mapping Conference.
- November 1998: "Opportunities and Difficulties Associated with Regional Gang Incident Mapping." James W. Meeker. National Community Oriented Policing Conference.
- April 1998: Presentation regarding GITS to San Jose, Calif. Task Force on Gangs, James W. Meeker.
- April 1998: Presentation on Orange County Street Gangs and GITS to OJJDP, James W. Meeker and Bryan Vila.
- October 1997: "Mapping and Understanding Gang Incidents." Thomas E. Fossati, University of Wyoming.
- August 1997: "GITS and GIS: Usefulness of Tracking Gang Incidents with Geographic Information Software." Thomas E. Fossati, Orange County Chiefs' and Sheriff's Association.
- May 1997: Presentation to annual meeting of Orange County Chiefs' and Sheriff's Association, Bryan Vila and James W. Meeker.
- April 1997: Television interview on OCN re Orange County gangs and GITS, James W. Meeker.

April 1997: “Logistics of Creating Orange County’s Fear of Gangs Survey.” Jodi Lane, the Anti-Gang Initiative Second Cluster Conference, Office of Community Oriented Policing, U.S. Department of Justice.

January 1997: “UCIFRG’S Approach to Measuring Fear of Gangs.” All Staff, National Youth Gang Center Data Collection Focus Group.

September 1996: “Gang Incident Tracking System (GITS).” James W. Meeker, Thomas E. Fossati, Jodi Lane, Katie J.B. Parsons, Orange County Crime Analysts’ Association.

September 1996: “Using GIS and Geographic Modeling to Track Gang Incidents Throughout the County.” Thomas E. Fossati, to Orange Coast Regional Career Criminal Apprehension Program. Training Workshop on GIS Capabilities in Law Enforcement.

September 1996: Presentation to COPS Intensive Case Study Workshop under Anti-Gang Initiative, James W. Meeker.

June 1996: Presentation to Pacific Mutual Foundation Board of Directors, James W. Meeker and Bryan Vila.

June 1996: “Policy Issues Associated with Cross-Jurisdictional Measurement of Gang Incidents.” James W. Meeker and Bryan Vila, FBI Southwest Command College Law Enforcement Executive Development Series.

April 1996: “Measuring Gang Activity in Orange County.” Bryan Vila, UCI Social Ecology Associates lecture series.

February 1996: Presentation to the California Wellness Foundation. Bryan Vila.

Reports Prepared for Local Government Agencies

1996–1998: Annual reports to Orange County Chiefs’ and Sheriff’s Association on gang incident trends (three were prepared).

1996–1998: Individual reports to each of the county’s 22 law enforcement agencies on gang incident trends (three were prepared).

1997: Special report regarding analysis of gang incidents involving drug use or possession

1997: Gang territories maps for City of Westminster

1997–1998: Gang “hot spot” maps countywide and for selected cities

Reports Prepared for Federal Agencies

Wiebe, Douglas, James W. Meeker, & Bryan Vila. (1998, under review). OJJDP Fact Sheet: *Hourly trends of juvenile and adult arrest incidents in 1994-1996*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Wiebe, Douglas. (1997). *Hourly Juvenile and Adult Arrest Incidents in 1994 and 1995*. Irvine, CA: University of California. In Sickmund, Melissa, Snyder, Howard N., & Poe-Yamagata, Eileen. *Juvenile Offenders and Victims: 1997 Update on Violence*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.