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# On Good Authority

AN EXECUTIVE BRIEFING ON TRENDS AND ISSUES IN CRIMINAL JUSTICE

JULY 1994

## The Geography of Arrests for Violent Crime

The second in a series of reports from the Illinois Criminal Justice Information Authority on violent crime in Illinois. The first, "Juvenile Offenders and Violent Crime," was published in May 1994.

### Overview

The geography of where arrests for violent crimes occur is changing in Illinois. That is one conclusion from a recent study the Illinois Criminal Justice Information Authority conducted using arrest data from 1985 and 1991.

Authority researchers discovered that while the majority of arrests for violent crime occurred in Chicago, suburban Cook County and five surrounding "collar" counties (DuPage, Kane, Lake, McHenry and Will), proportionately fewer arrests were made in those areas in 1991 than in 1985 (Figure 1).

The proportion of arrests for violent crime increased in 20 counties outside the immediate Chicago area. Those counties, called "urban" because they are located in Consolidated Metropolitan Statistical Areas (CMSAs), accounted for 19 percent of the state's violent crime arrests in 1991, up from 15 percent six years earlier. And, for the first time ever, more arrests were made in those urban counties in 1991 than in the combined suburban Cook County—collar counties area.

### The Geography

There are many ways to group the 102 counties that make up Illinois. Traditionally, studies have limited comparisons to Chicago/Cook County and the rest of Illinois, often referred to as "downstate." These analyses are useful, but as Illinois has grown in variety and complexity, dichotomous examinations have been inadequate in some instances, particularly at the decision-making level. To address

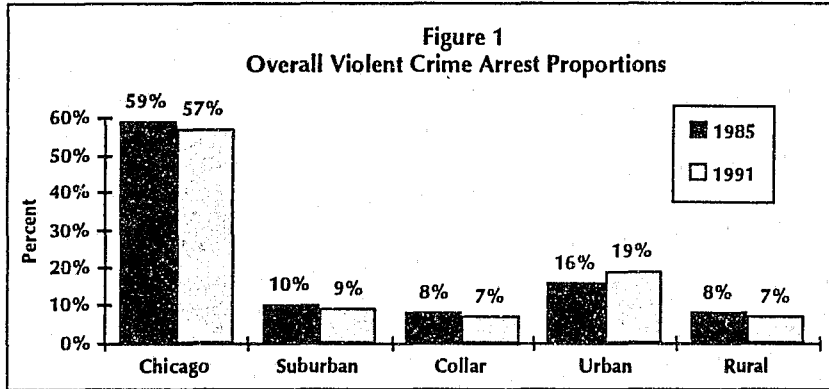


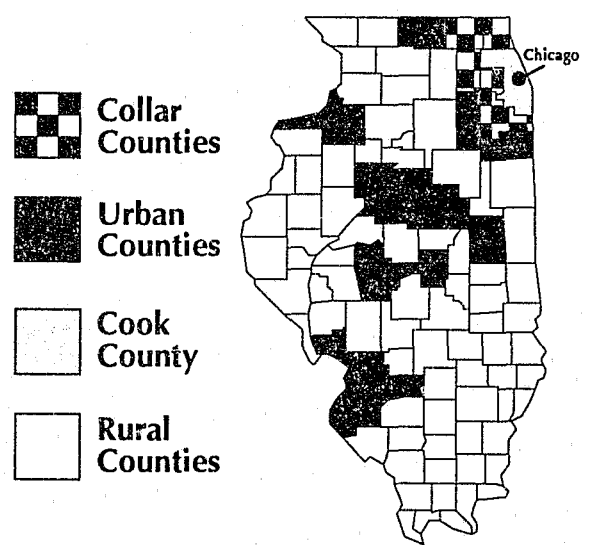
Figure 2  
State Map with CMSA Boundaries

The Uniform Crime Reports (UCR) defines murder, criminal sexual assault, robbery and aggravated assault as violent index crimes, and arrests for these crimes were used as the basis for this second report on trends in violent crime. Results from a third study, which examines arrest data in terms of demographics, will be published in the next issue of "On Good Authority."

Later studies will examine incident data as a measure of trends in violent crime; these three reports don't examine factors that might influence arrest trends.

### About the Study

The baseline year of 1985 was selected because it preceded major funding for state and federal crime control initiatives in 1986 and 1988. The comparison year of 1991 was chosen because it preceded the transition to incident-based (NIBRS) reporting that occurred in 1992.



this inadequacy, the five collar counties are now often separated from other downstate counties to form a third group.

The present analysis added two additional geographical groups by subdividing Cook County and downstate Illinois. Suburban Cook County was split away from Chicago, and the 96 counties outside the collar counties were separated into 20 "urban" and 76 "rural" areas. U.S. Bureau of the Census data were used to form the urban-rural

counties, as well as Cook County and Chicago. The urban counties include Boone and Winnebago; Henry and Rock Island; Grundy, Kankakee, and Kendall; McLean, Peoria, Tazewell, and Woodford; Champaign; Macon, Menard, and Sangamon; and Clinton, Jersey, Madison, Monroe and St. Clair.

Figure 3 compares arrests to the population percentages for each of the five CMSAs.

**Figure 3**  
**Violent Crime Arrest and Population Statistics**

Location	1991 Arrests	Percent 1991 Arrests	1990 Population	Percent 1990 Population
Chicago	15,765	57%	2,783,726	24%
Suburban Cook	2,621	9%	2,321,341	20%
Collar Counties	2,061	7%	2,156,109	19%
Urban Counties	5,385	19%	1,731,545	16%
Rural Counties	1,989	7%	2,387,881	21%
Illinois	27,821	*99% (doesn't add up to 100% due to rounding)	11,430,602	100%

groups. Urban counties are those that lie within one of the state's 14 Consolidated Metropolitan Statistical Areas (CMSAs). Rural counties are those that do not lie within a CMSA. The intent was to use existing knowledge about population density and commerce to form groups, since these are two factors that correlate with criminal activity.

While Chicago, suburban Cook County and the collar counties are contiguous, many of the urban and rural counties are not. Figures 2 and 3 help illustrate the geography of this analysis of arrests for violent crime.

Figure 2 shows the location of each county in Illinois, and the groupings for urban and collar

### Major Findings

- Data were examined in two ways:  
First, the data were examined to determine the nature of growth in violent index offense arrests during the period. That is, "were there more or fewer arrests in 1991 than in 1985?" What the data showed was:
  - Violent index offense arrests increased 72 percent between 1985 and 1991 in urban counties;
  - violent index offense arrests increased 38 percent statewide between 1985 and 1991;
  - arrests for rape (criminal sexual assault) declined between 1985 and 1991 in Chicago;

- arrests for murder and robbery declined between 1985 and 1991 in rural counties; and,
- arrests for all types of violent index offenses increased between 1985 and 1991 in suburban Cook County, collar and urban counties.

Second, proportional changes in violent index offense arrests were examined. The question was, "did a particular part of Illinois account for substantially more or less of the state's arrests in 1991 than in 1985?" What the data showed was:

- Chicago, suburban Cook County and the collar and rural counties all accounted for a smaller proportion of violent index offense arrests in 1991 than in 1985;
- substantial increases in the proportion of the state's violent index offense arrests occurred in the urban counties for murder (up 4 percent), rape (up 9 percent) and assault (up 4 percent); and,
- the rural counties had proportionately fewer arrests for all violent index offenses, except rape, in 1991 than in 1985.

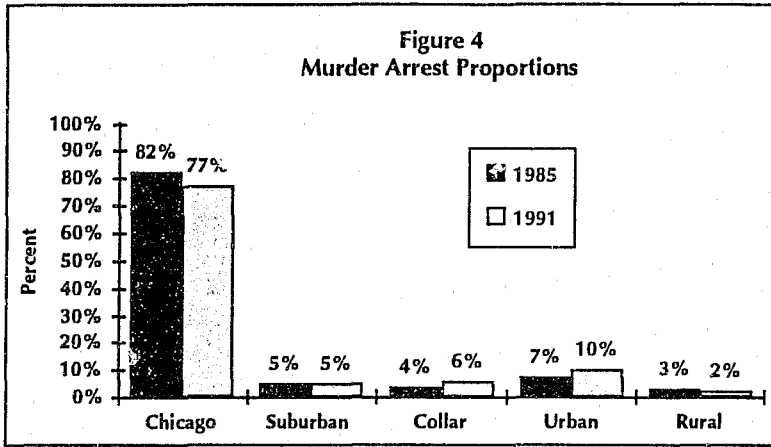
### Other Major Findings:

While proportions are useful when determining the amount of change in one area compared to another, they do not measure changes in volume. If, for example, the number of violent crimes doubled between 1985 and 1991 in each of the five areas, their proportions would remain approximately constant. We would find out the workload doubled only if we examined growth in arrest volume. See the discussion below for more data on violent crime arrest growth, and charts eight through 12.

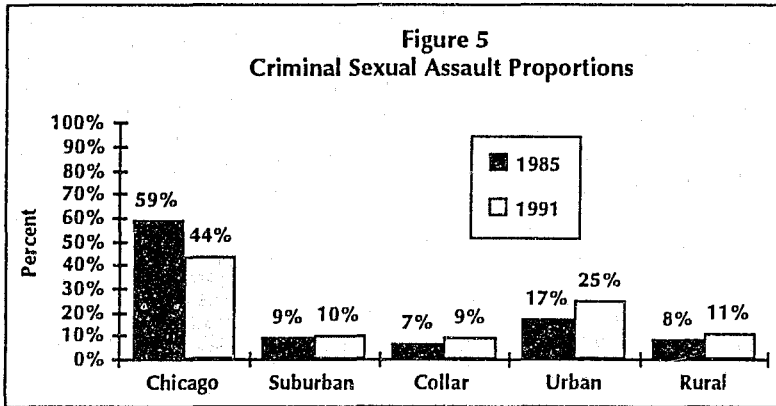
### Proportional Change in Violent Index Offense Arrests, by Offense Type

When proportional change occurs, it often means what you are measuring has changed direction. That is what our analysis shows is

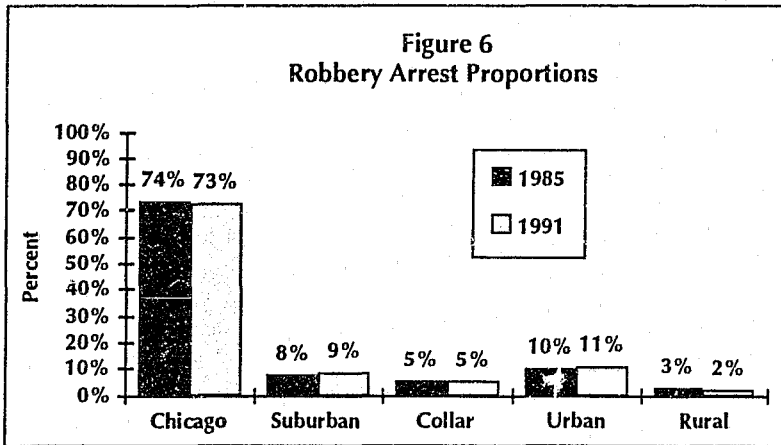
**Figure 4  
Murder Arrest Proportions**



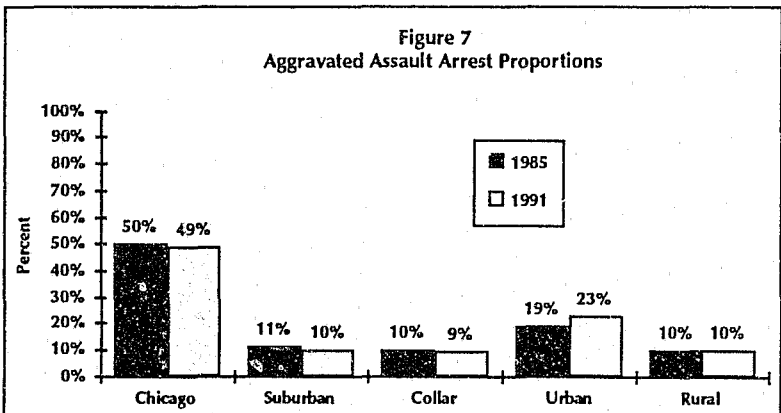
**Figure 5  
Criminal Sexual Assault Proportions**



**Figure 6  
Robbery Arrest Proportions**



**Figure 7  
Aggravated Assault Arrest Proportions**



happening with violent crime arrests in Illinois. In other words, arrests for violent crime increased in every area of the state between 1985 and 1991, but they increased more in certain areas than others.

For the past 20 years, most of the growth in criminal activity, as measured by arrests, was in the collar counties. And, arrests for violent crime have continued to grow in the collar counties, just as they have throughout Illinois. However, on a proportional basis, the percentage of arrests in the urban counties for violent crime have moved slightly ahead of arrests in other parts of the state. From that, we can surmise there have been fundamental changes in the underlying dynamics of arrests for violent crime; further analyses which include incident data can confirm this observation.

Figures 4 through 7 summarize the proportion of arrests, by offense type, that each area of the state accounted for in 1985 and 1991.

Only two areas had a larger proportion of the state's arrests for murder in 1991 than in 1985. The collar counties grew from 4 percent to 6 percent while the urban counties grew from 7 percent to 10 percent. In spite of a 5 percent decline in Chicago between 1985 and 1991, the city nevertheless accounted for more than three-fourths of the state's 1991 murder arrests. (Figure 4)

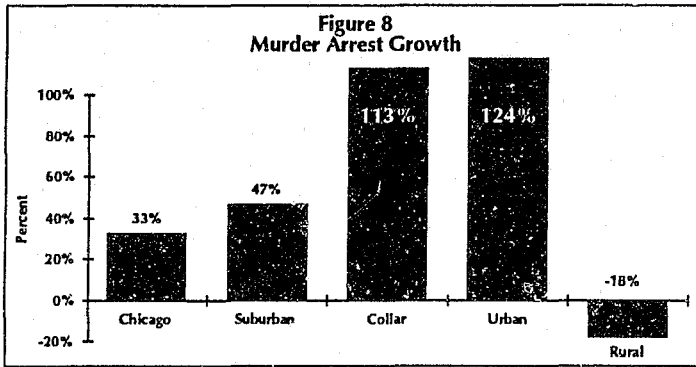
Chicago was the only area that did not have a proportional increase in arrests for criminal sexual assault in 1991. By far the largest increase occurred in the urban region. (Figure 5)

Robbery arrests remained relatively constant between 1985 and 1991. No area had more than a 1 percent change during the period. (Figure 6)

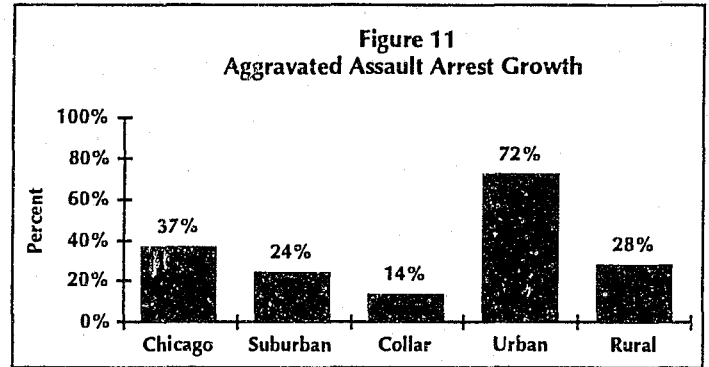
Arrests for aggravated assault declined in all but the urban area, where they increased 4 percent. (Figure 7)

### **Violent Crime Arrest Growth, by Offense Type**

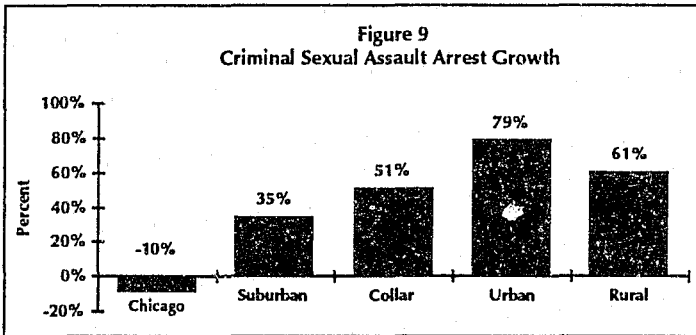
The illustrations that follow on the next page examine growth in violent crime arrests by geographical area between 1985 and 1991. It shows there were more arrests overall for violent offenses in 1991 than in 1985 statewide. Examining arrests by specific index offenses shows, however, that rural counties had fewer arrests for murder and robbery in 1991 than 1985; Chicago had fewer arrests for rape in 1991 than in 1985.



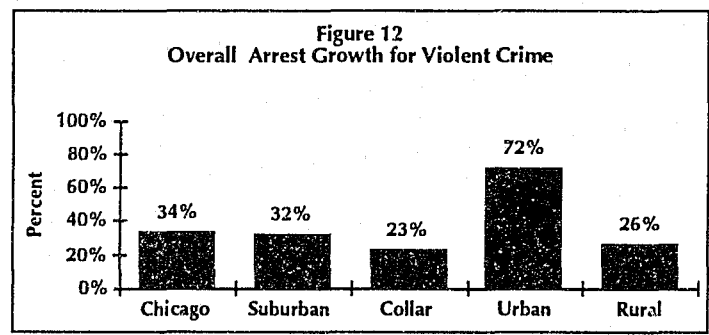
The urban region led the state in growth in arrests for murder between 1985 and 1991. Chicago's considerable growth (33 percent) was one-fourth that of the urban counties. (Figure 8)



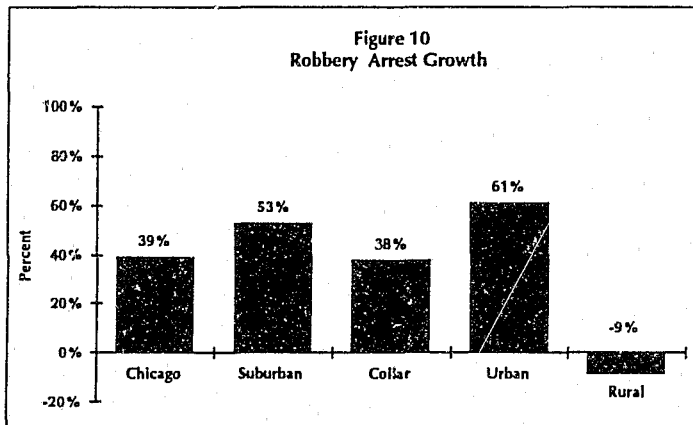
Between 1985 and 1991, arrests for aggravated assault grew two times faster in urban counties than Chicago, the area with the second highest growth. (Figure 11)



The rural counties had the second largest increase in arrests for criminal sexual assault (rape) between 1985 and 1991. There were fewer arrests for criminal sexual assault in Chicago in 1991 than 1985. (Figure 9)



Because aggravated assault is the single largest component of violent crime, the growth pattern for violent crime overall is very similar to that for aggravated assault. (Figure 12)



Robbery arrests grew almost as quickly in suburban Cook County between 1985 and 1991 as they did in urban counties. Robbery arrests declined in rural counties between 1985 and 1991. (Figure 10)

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