

## A CRIME CLASSIFICATION OF AMERICAN METROPOLITAN AREAS

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**W**e suspect that most students of the national crime picture are capable of identifying those cities which are typically burdened with a very high crime rate, and we think they may also be able to recognize those with characteristically low rates. However, it is doubtful whether anyone's knowledge is sufficiently broad as to enable him to characterize even a modest number of areas in terms of their standing relative to the various *kinds* of crime. At any rate, even an attempted classification of this sort would have to be made on the basis of intuition rather than exact knowledge.

While most of us suspect that each urban area exhibits its own particular crime profile, there exist no data with which

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we might directly validate this suspicion. It would, of course, be very desirable to express crime rates in standard score form; this procedure alone, however, provides no basis for a *classification* of cities. Thus, if we are to characterize a particular area as “high,” “low,” or “moderate” with respect to a certain offense, we must first agree upon the point at which a specific raw or standardized crime rate becomes sufficiently extreme as to merit special significance and nomenclature. In more general terms, we must decide as to the point at which a *quantitative* difference becomes sufficiently large as to be experienced as a *qualitative* difference. This necessity bears upon the very important problem of devising criteria for the reduction of higher-order (ordinal, interval, and ratio) scales to lower-order (nominal) scales.

Although much effort in sociology has been devoted to the creation of high-level scales of measurement, which bring to us all the advantages of ordered quantification, less attention has been invested in the reduction of higher to lower levels of measurement. This procedure introduces a methodological paradox whereby we gain in useful data by accepting losses in level of measurement. To illustrate this paradox is one of the purposes of our report.

## DATA

The annual *Uniform Crime Reports* of the Federal Bureau of Investigation are the best source of statistical data for a study that involves crime in cities.<sup>1</sup> These reports contain information about the commission of seven types of major crime—namely, homicide, forcible rape, robbery, aggravated assault, burglary, larceny (of \$50.00 and over), and auto theft. These particular modes of offense enjoy high victim reportability; their volume tends thus to be relatively free of police activity. As such, they have been employed together as an index of trends of crime in general.

The *Uniform Crime Reports* employ the Standard Metropolitan Statistical Area (SMSA) as one unit of analysis. We shall employ this unit in the present research because (1) a very high proportion (68%) of the nation's population, as of 1966, resides in SMSA's; (2) SMSA's contribute more than their population size would lead us to expect to the total volume of major crime (in 1966, for example, 82% of all major crimes reported to the police were reported in SMSA's); (3) the city-suburb complex is more and more becoming an important functional unit in matters pertaining to crime control and, finally, (4) SMSA's exist in sufficient number to permit us to carry out the analysis we have in mind.

Because of changes along the dimensions which serve as criteria for the SMSA, their number fluctuates from year to year. In 1960, for example, there were 199 SMSA's.\* This number dropped to 191 in 1963 and to 185 in 1966. Inasmuch as our investigation involves the same years, we were forced to eliminate those areas which failed to appear in *each* of them. This procedure left us with 164 areas.

#### THE CLASSIFICATION PROBLEM

Our 164 SMSA's exhibit considerable variance in each of the seven major crimes. The chief problem is to separate areas with extreme rates on each of the seven offense dimensions from those which cluster about the average. But how unusual a crime rate must a metropolitan area possess before it is to be defined as, say, a "high burglary area" or as a "low rape area?" We recognize at the outset that any criterion which we choose to employ will be an arbitrary one. The real dilemma revolves about the question of *how* we wish to divide our distributions or, more specifically, what objective and familiar measure of dispersion would best suit the purpose of

classification. This question has received very competent attention from the field of urban geography.

In a work to which we are heavily indebted, Howard J. Nelson sets for himself the task of constructing a service classification of 897 American cities. These cities are first ordered in accordance with the percentage of their labor force employed in nine major economic services. After having plotted his data into nine frequency distributions, Nelson (1955: 194) poses a question similar to the one which we have asked of ourselves: "How large a percentage of the labor force must be employed in a particular service to make the performance of the service far enough above normal to warrant separate classification?" The *standard deviation* is chosen for this purpose, with cities typified according to whether they stand above one, two, or three standard deviations from the mean of their distribution (over a specific economic service dimension). All cities above a standard deviation are considered extreme—i.e., as "manufacturing cities" or "wholesale trade cities"—according to what the service in question might be. Each of the 897 cities is thus typified in terms of the number of services in which its standing with respect to other cities is immoderate. Those cities which fail to place above a standard deviation on any of the nine dimensions are designated as "diversified cities." In this way, each city emerges with an economic profile.

It would be desirable to adopt Nelson's general procedure in order to produce a crime classification of American cities; in doing so, however, we must attend to three very serious questions raised by his method:

- (1) How may we express in an objective manner the stability of profiles obtained by the partition of frequency distributions?
- (2) How stable are the crime profiles thus obtained?
- (3) Is it possible to order urban areas in terms of the stability of their major crime profiles?

### PROCEDURE

A very simple procedure was employed to explore the problems which we have just raised. The generation of a crime profile for our 164 metropolitan areas requires that we first examine the manner in which these cases distribute themselves over the seven major offense dimensions. As it turns out, each of these distributions is somewhat skewed toward the higher rates. Because we wish to identify an equal number of extreme SMSA's from *both* ends of the distribution, it was necessary that we employ the sextile deviation which identifies the upper and lower 16.7% of the cases in the distribution. (With a normal distribution, this technique would yield cutting points which would be almost identical with those associated with one standard deviation above and below the mean.) All SMSA's falling above the fifth sextile and below the first were noted. This procedure was repeated for each of the seven major crime categories for the years 1960, 1963, and 1966. The data thus obtained enabled us to construct a crime profile for each of our 164 SMSA's for three separate years. That is, we obtained a *sequence* of profiles for each of the areas studied.

### THE STABILITY OF CRIME PROFILES

Appendix A enables us not only to quickly determine how a given SMSA stands in relation to all others on each major crime but also shows how stable this profile has been in selected past years. Such historical information helps us to decide how much confidence we may place in the assumption that a current pattern will maintain itself in the immediate future.

However, the stability of any typological pattern is not entirely an empirical problem, but partly a function of how large one chooses to make the tails of the distribution from which the extreme ("high" or "low") areas are selected. The

limiting case would be a distribution upon which extreme points were not imposed at all, forcing us to designate all areas as "moderate" ones, thereby guaranteeing ourselves perfect reproducibility, since all future distributions must be composed of these very same areas. On the other hand, we might choose to designate as high crime areas only those cases which fall within the top two percent of the distribution and to call low crime areas those falling within the bottom two percent of the same distribution. All other areas would be designated as moderate. Here again, we must expect a high degree of reproducibility, for even if none of the extreme areas reappeared as such in later years, almost all of the moderate areas would so remain, guaranteeing a high minimum reproducibility.

One may, of course, choose to partition a distribution into thirds. This procedure would minimize the reproducibility expected by chance alone; however, the more gross the partition, the less likely we are to assure ourselves that the areas labeled extreme really merit the designation. The choice of cutting points in a distribution is therefore always a compromise between the desirability of setting as low a minimum reproducibility as possible, and of setting a sufficiently small selection interval so as to assure the singularity of cases found therein.

We may illustrate the logic and computation of minimum reproducibility with our own data, using the sextile as cutting point. Each sextile represents approximately 16.7% of the distribution. Where  $N = 164$  the sextile encloses 27 cases (which actually constitutes 16.4% of the total number).<sup>2</sup> If the cases found in the upper or lower sextile were so allocated by chance alone, we would expect 16.4 (27) or 4.42 cases to reappear as extreme at a later time. This means that  $27 - 4.43$  or 22.57 of the 27 "extreme" cases at one end of the distribution would move to the remaining part of this distribution while 22.57 new "extreme" cases would replace them. Thus, when chance alone is operating to

distribute 164 cases into sextiles, a new distribution admits of 2(22.57) or 45.14 "errors" or replacements for each of its tails, or 4(22.57) = 90.28 errors for the distribution as a whole. This means that 45% [1 - (90.28/164)] of the cases will reproduce themselves as high, moderate, and low by chance alone and that 55% of the cases will fail to do so.

In general, minimum reproducibility for a random distribution is equal to

$$1 - \frac{[n_e - (n_e \cdot n_e/N)] 4}{N}$$

where N equals the total number of cases in the distribution, and  $n_e$  equals the number of cases in the extreme high or low interval and, of course,  $n_e/N$  equals the size of the fraction used to partition the distribution. (In our case this fraction is 1/6.)

We may now direct our attention to Table 1. Here we note the reproducibility coefficients obtained for each of the seven offense groups under three separate time intervals. It is at once clear that all the coefficients far surpass the minimum

**TABLE 1**  
**Reproducibility of Crime Classifications of 164 Standard  
 Metropolitan Statistical Areas for the Years  
 1960-1963, 1963-1966 and 1960-1966 by Major Offense**

	Time Interval			Mean
	1960-1963	1963-1966	1960-1966	
Murder	.73	.69	.71	.71
Forcible Rape	.75	.66	.76	.72
Robbery	.84	.83	.83	.83
Aggravated Assault	.82	.84	.74	.80
Burglary	.84	.83	.77	.81
Larceny (\$50.00 and over)	.79	.82	.74	.78
Auto Theft	.77	.76	.70	.74
Mean	.79	.78	.75	.77

reproducibility of .45. We notice also that, on the average, SMSA crime classifications tend to be nearly 80% reproducible after three years, with this coefficient dropping only slightly to 75% when examined after a lapse of six years. Moreover, classifications tend to be most stable with respect to robbery, assault, burglary, and larceny, and least stable for murder, forcible rape, larceny, and auto theft.

Incidentally, the reader must be cautioned not to assume the coefficient of reproducibility to be a measure of the covariance of the 164 SMSA's in two separate time periods. Reproducibility measures the stability of the tails of a distribution, whereas covariance takes into account the stability of the entire distribution.

In contrast to the reproducibility of classifications for particular offenses, "cross-reproducibility" refers to the reproducibility of particular SMSA crime profiles. In the former case, the offense is our unit of analysis, while in the latter it is the metropolitan area. In Table 2, we find the distribution of errors of prediction or reproducibility for our 164 metropolitan areas. The highest number of errors possible is seven. This number would obtain if the profile of an area in an earlier year completely failed to reproduce itself in a later year. This possibility fulfilled itself only once. Conversely, the smallest possible number of errors is zero, as when a profile is perfectly repeated in a later year. We have found the mean errors of the three-year periods of 1960-1963 and 1963-1966 to be 1.46 and 1.56, respectively. For the six-year interval of 1960-1966, the mean error rises to only 1.74. These figures represent a rather satisfying stability level for our SMSA crime profiles. Further, in our two three-year intervals, over 50% of the 164 SMSA's exhibited zero or one errors while over 80% of the cases in these two distributions displayed two errors or less. This means that large numbers of errors in SMSA profiles tended to be rare. Six-year cross-reproducibilities exhibited only slightly less stability. We may also note that the mean



**TABLE 2**  
**Errors in the Crime Classification of 164 Standard Metropolitan**  
**Statistical Areas for the Years 1960-1963,**  
**1963-1966 and 1960-1966**

Number of Errors	Years		
	1960-1963	1963-1966	1960-1966
0	35	34	23
1	57	50	55
2	45	50	44
3	17	20	29
4	8	6	10
5	2	3	3
6	—	—	—
7	—	1	—
Total	164	164	164
Mean	1.46	1.56	1.74
1 - Mean/7 = Mean reproducibility of seven major offenses	.79	.78	.75

reproducibility across offense groups (Table 1) equals the mean reproducibility across SMSA's (Table 2) when mean errors are divided by 7 (the highest possible error) and subtracted from unity.

If one were merely to heed stability coefficients, a great deal of important information would be sacrificed, for summary measures are designed to ignore the pattern which the passage of time bestows upon the individual SMSA crime profile. These patterns are of most help in predicting future profiles for particular areas. If we examine the Philadelphia area, for example, we find continual moderation in all offenses, save forcible rape and larceny. The area was high in forcible rape in 1960 and in 1963 but moderate in 1966. However, the latter condition may have been due to normal fluctuation, with the 1966 rate being just below the fifth sextile cutting point for rape. This turns out to be the case.

The opposite is true for larceny, which had been moderate in 1960 and 1963 but low in 1966. One may therefore refer to the 1966 designation for rape and larceny as "errors" and predict the Philadelphia area to be moderate on all offenses in a later year. Or it is possible to characterize this area as high-moderate on rape and low-moderate on larceny. At any rate, it is clear that a careful examination of the pattern created by a *sequence* of crime profiles permits us to correct the understatements of summary measures of reproducibility. In general, the more years we observe, the more clear-cut the profile sequence pattern, and the more adequate our forecasts.

In Appendix A, we have attempted to take advantage of the patterns provided by three-year profile sequences with a view to correcting for fluctuations about the cutting points of the first and sixth sextiles. Under any offense, the modal typification is assumed to be the true one; hence, a temporal pattern of, say, ++- (high, high, low) or +-+ will be considered as truly +++, with one error assigned to correspond to the nonmodal designation. In only one case do we find a tripartite designation. The Jacksonville, Florida, area shifts from low to moderate to high on forcible rape from 1960 through 1963 to 1966. Here we assign a double "error." In no other area, however, do we find such a two-stage shift. In any event, we have in Appendix A assigned a rank to each of the 164 SMSA's in accordance with pattern stability, using the criteria just set down. These ranks range from 1 (perfect stability over a three-year period) to 8 (imperfect, or 50% of the highest possible stability over a three-year period). A rank of 8, then, does not refer to perfect instability!

We must not overlook the fact that some SMSA's are consistently found in the upper or lower sextile for certain major offenses. Such areas, it seems, merit special designation as definite urban types with respect to crime insofar as they appear extreme in each of the three years examined. They

thus emerge from our data as the residue of a sifting procedure which eliminates all traces of moderation.<sup>3</sup> These metropolitan regions are listed in Appendix B. Of course, the factors to which these areas owe their criminological stability and extremity are an empirical problem which cannot be pursued here.

### CONCLUSION

We believe that the appendices that follow may be very useful reference tools, enabling others to objectively separate similarly classified areas with a view, perhaps, to examining them in relation to other variables. We may ask, for example, how differently classified SMSA's compare as to rate of growth, income, racial and ethnic composition, and the like.<sup>4</sup> We may also inquire into whether these associations maintain themselves when geographical area is held constant. Another important question has to do with the geographical distribution of similarly typified areas. It turns out, as we may expect, that, when only extreme cases are plotted, such distributions are far sharper than those found in most works.<sup>5</sup> Also, we have shown graphically in Appendix A (wherein SMSA's are broken down by region and state) that contiguous urban areas tend to exhibit similar crime profiles. In any event, we are hopeful that our data will stimulate further study. We trust as well that our research has been sufficient enough to dissuade the reader from a hasty dismissal of nominal in favor of higher-order data, and that he may indeed be encouraged to quantify downward to lower levels of measurement when it appears advantageous enough to do so.

**APPENDIX A  
CRIME PROFILES FOR 164 STANDARD METROPOLITAN  
STATISTICAL AREAS**

**Legend:**

- : Crime rate within lower sextile
- 0: Crime rate within second to fifth sextile
- +: Crime rate within upper sextile
- M: Murder
- FR: Forcible Rape
- R: Robbery
- A: Aggravated Assault
- B: Burglary
- L: Larceny (\$50.00 and over)
- AT: Auto Theft
- T: Total Crime. Although SMSA's will be classified below in terms of total crime this classification does not enter into computations of stability or reproducibility. Total crime rates derive largely from the most frequent offenses of burglary, larceny, and auto theft. Hence, classifications under these categories will associate highly with those under total crime.
- SR: Stability Rank. The rank of any SMSA in regard to stability of profile is computed according to criteria set forth in the last part of the text. The rank of an area is equal to the number of errors in a three-year profile sequence plus 1. This measure of stability is not to be confused with the coefficient of stability of cross-reproducibility, which refers to stability of profiles for two years taken at a time, wherein there is less possibility of error than in the present case. In order that the stability rank of an area be properly evaluated, the frequency distribution of such errors is given below:

Number of Errors	Rank	Frequency
0	1	11
1	2	35
2	3	45
3	4	40
4	5	24
5	6	7
6	7	1
7	8	1
Total		164
Mean Number of Errors		2.4

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SMSA <sup>a</sup>	Year	M	FR	R	A	B	L	AT	T	SMSA	Year	M	RF	R	A	B	L	AT	T	
NEW ENGLAND										Newark, N.J. SR: 4	1960	0	+	+	+	0	0	+	+	+
Connecticut										Paterson, N.J. SR: 3	1963	0	+	+	+	0	0	+	+	+
Bridgeport, Conn. SR: 3										1966	0	0	+	0	0	0	0	+	+	
Hartford, Conn. SR: 3										1960	0	0	0	0	0	0	0	0	0	
New Haven, Conn. SR: 2										1963	0	-	0	0	0	0	0	0	0	
New London, Conn. SR: 4										1966	0	-	0	0	0	0	0	0	0	
Maine										Trenton, N.J. SR: 5	1960	0	0	0	0	0	0	0	0	
Portland, Me. SR: 6										1963	0	-	0	0	0	0	0	0	0	
Massachusetts										1966	0	0	+	0	0	0	0	0	0	
Boston, Mass. SR: 2										1960	0	0	0	0	0	0	0	0	0	
Brockton, Mass. SR: 4										1963	0	0	0	0	0	0	0	0	0	
Fall River, Mass. SR: 4										1966	0	0	0	0	0	0	0	0	0	
Pittsfield, Mass. SR: 2										1960	-	-	-	-	-	-	-	-	-	
Springfield, Mass. SR: 4										1963	-	-	-	-	-	-	-	-	-	
Worcester, Mass. SR: 5										1966	0	0	0	0	0	0	0	0	0	
New Hampshire										1960	0	0	-	-	-	-	0	-	-	
Manchester, N.H. SR: 6										1963	0	0	-	-	-	-	0	-	-	
Rhode Island										1966	-	-	0	0	0	0	+	+	0	
Providence, R.I. SR: 2										1960	-	-	0	0	0	0	+	+	0	
New Jersey										1963	-	-	0	0	0	0	+	+	0	
Atlantic City, N.J. SR: 4										1966	-	-	0	0	0	0	+	+	0	
Jersey City, N.J. SR: 3										1960	0	0	0	0	0	0	0	+	0	
MIDDLE ATLANTIC										1963	0	0	0	0	0	0	0	+	0	
Philadelphia, Pa. SR: 3										1966	0	0	0	0	0	0	0	+	0	
Pittsburg, Pa. SR: 1										1960	0	0	0	0	0	0	0	0	0	
Lancaster, Pa. SR: 4										1963	-	-	-	-	-	-	-	-	-	
Erie, Pa. SR: 4										1966	0	0	0	0	0	0	0	0	0	
Harrisburg, Pa. SR: 4										1960	0	0	0	0	0	0	0	0	0	
Allentown, Pa. SR: 5										1963	0	0	0	0	0	0	0	0	0	
Altoona, Pa. SR: 6										1966	0	0	0	0	0	0	0	0	0	

<sup>a</sup> Principal city

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SMSA	Year	M	FR	R	A	B	L	AT	T	SMSA	Year	M	FR	R	A	B	L	AT	T	
Reading, Pa.	1960	0	-	-	-	-	-	-	-	Bay City, Mich.	1960	0	0	0	0	0	0	0	0	
SR: 1	1963	0	-	-	-	-	-	-	-	SR: 2	1963	-	0	0	0	0	0	0	0	
	1966	0	-	-	-	-	-	-	-		1966	-	0	0	0	0	0	0	0	
Scranton, Pa.	1960	-	0	-	-	-	0	-	-	Detroit, Mich.	1960	0	+	+	+	0	0	0	+	
SR: 4	1963	-	0	-	0	-	0	-	-	SR: 5	1963	0	+	+	+	0	0	+	+	
	1966	-	0	-	0	-	-	-	-		1966	0	+	+	+	0	+	+	+	
Wilkes-Barre, Pa.	1960	-	-	0	-	-	-	-	-	Flint, Mich.	1960	0	+	0	+	0	+	0	0	
SR: 3	1963	0	-	-	-	-	-	-	-	SR: 2	1963	0	+	+	+	0	+	0	+	
	1966	-	-	-	-	-	-	-	-		1966	0	+	0	+	0	+	0	0	
York, Pa.	1960	-	-	0	0	-	-	-	-	Grand Rapids, Mich.	1960	0	0	0	0	0	0	0	0	
SR: 6	1963	-	-	0	0	-	-	-	-	SR: 2	1963	-	0	0	0	0	0	0	0	
	1966	0	0	-	0	-	-	-	-		1966	0	0	0	0	0	0	0	0	
EAST NORTH CENTRAL										Jackson, Mich.	1960	0	+	0	0	0	0	0	0	
<u>Illinois</u>										SR: 4	1963	0	0	0	0	0	0	0	-	0
											1966	-	+	0	0	0	0	0	0	
Chicago, Ill.	1960	0	+	+	+	0	+	+	0	Kalamazoo, Mich.	1960	0	0	0	0	0	0	0	0	
SR: 3	1963	0	+	+	+	0	+	+	+	SR: 3	1963	0	0	0	0	0	0	-	0	
	1966	+	+	+	+	0	+	+	0		1966	-	0	0	0	0	0	0	0	
Decatur, Ill.	1960	0	-	0	-	0	0	-	0	Lansing, Mich.	1960	0	0	-	0	0	0	-	0	
SR: 4	1963	0	0	0	0	0	0	0	0	SR: 5	1963	0	+	0	0	0	0	0		
	1966	0	-	0	0	0	0	0	0		1966	0	0	0	0	0	+	0		
Peoria, Ill.	1960	0	0	0	0	0	0	0	0	Muskegon, Mich.	1960	+	+	0	0	0	0	0	0	
SR: 2	1963	0	-	0	0	0	0	0	0	SR: 4	1963	0	0	0	0	0	0	0		
	1966	0	0	0	0	0	0	0	0		1966	0	+	0	+	0	0	0		
Rockford, Ill.	1960	-	0	0	0	0	0	-	0	Saginaw, Mich.	1960	0	0	0	0	0	0	0	0	
SR: 5	1963	-	-	0	0	0	0	0	0	SR: 1	1963	0	0	0	0	0	0	0		
	1966	0	0	0	0	-	0	0	-	<u>Ohio</u>	1966	0	0	0	0	0	0	0		
Springfield, Ill.	1960	0	0	0	0	0	0	0	0	Akron, Ohio	1960	0	0	+	0	0	0	+		
SR: 1	1963	0	0	0	0	0	0	0	0	SR: 3	1963	0	0	0	0	0	0	+		
	1966	0	0	0	0	0	0	0	0		1966	0	0	0	0	0	0	0		
<u>Indiana</u>										Cincinnati, Ohio	1960	0	0	0	0	0	0	0	0	
Evansville, Ind.	1960	0	0	0	0	0	0	0	0	SR: 2	1963	0	0	0	0	0	0	0		
SR: 1	1963	0	0	0	0	0	0	0	0		1966	0	0	0	0	0	0	-		
	1966	0	0	0	0	0	0	0	0	Cleveland, Ohio	1960	0	0	+	0	-	-	0	0	
Ft. Wayne, Ind.	1960	-	0	0	0	0	0	0	0	SR: 3	1963	0	0	+	0	-	-	0		
SR: 2	1963	0	0	0	0	0	0	0	0		1966	0	0	+	0	0	-	+		
	1966	0	0	0	0	0	0	0	0	Columbus, Ohio	1960	0	0	0	0	0	0	0	0	
Gary, Ind.	1960	0	0	+	+	0	0	+	0	SR: 1	1963	0	0	0	0	0	0	0		
SR: 4	1963	0	0	+	+	0	0	+	0		1966	0	0	0	0	0	0	0		
	1966	0	0	+	0	0	0	+	0	Dayton, Ohio	1960	0	0	0	0	0	0	0	0	
Indianapolis, Ind.	1960	0	0	+	0	0	-	+	0	SR: 2	1963	0	0	0	0	0	-	0		
SR: 4	1963	0	+	+	0	0	0	+	0		1966	0	0	0	0	0	0	0		
	1966	0	0	+	0	0	0	+	0	Lima, Ohio	1960	0	0	0	0	-	0	-	0	
Muncie, Ind.	1960	0	0	0	0	0	-	0	0	SR: 4	1963	0	-	0	0	0	0	0		
SR: 4	1963	0	0	0	0	0	0	0	0		1966	0	-	0	0	0	0	0		
	1966	0	0	0	-	0	0	+	0	Lorain, Ohio	1960	0	0	0	0	-	-	-	-	
South Bend, Ind.	1960	0	-	0	0	0	0	0	0	SR: 3	1963	0	0	0	0	-	-	-		
SR: 3	1963	-	0	0	0	0	0	0	0		1966	0	0	0	0	0	-	0		
	1966	0	-	0	0	0	0	0	0	Springfield, Ohio	1960	0	0	0	0	0	0	0	-	
Terre Haute, Ind.	1960	0	0	0	0	0	0	0	0	SR: 5	1963	0	0	0	0	0	-	0		
SR: 2	1963	0	0	0	0	0	0	0	0		1966	0	-	0	-	0	-	0		
	1966	0	0	0	-	0	0	0	0	Toledo, Ohio	1960	0	0	+	0	0	+	0		
<u>Michigan</u>										SR: 3	1963	0	0	0	0	0	0	0		
Ann Arbor, Mich.	1960	0	0	0	0	0	0	0	0	SR: 2	1966	0	0	0	0	0	-	0		
SR: 3	1963	0	0	0	0	0	+	0	0		1966	0	0	0	0	0	0	0		
	1966	0	+	0	0	0	+	0	0	Youngstown, Ohio	1960	0	0	0	0	0	0	0		
											1963	0	0	0	0	0	0	0		
											1966	0	0	0	0	0	-	0		



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SMSA	Year	M	FR	R	A	B	L	AT	T	SMSA	Year	M	FR	R	A	B	L	AT	T	
<u>North Carolina</u>										<u>Kentucky</u>										
Asheville, N.C.	1960	0	0	0	0	0	0	0	0	Louisville, Ky.	1960	0	0	+	0	0	+	0	+	
SR: 3	1963	0	-	0	0	0	0	0	0	SR: 3	1963	0	0	+	0	0	+	0	0	
	1966	+	0	0	0	0	0	0	0		1966	0	0	0	0	0	+	+	0	
<u>Tennessee</u>																				
Charlotte, N.C.	1960	+	0	0	+	0	+	0	0	Chattanooga, Tenn.	1960	+	0	0	0	+	0	0	0	0
SR: 3	1963	+	0	0	+	0	0	0	0	SR: 3	1963	+	0	0	0	+	0	0	0	
	1966	+	+	0	+	0	0	0	0		1966	+	0	0	0	+	-	+	0	
Durham, N.C.	1960	+	0	0	+	0	0	0	0	Memphis, Tenn.	1960	0	0	0	0	0	0	0	0	
SR: 3	1963	+	+	0	+	0	0	0	0	SR: 1	1963	0	0	0	0	0	0	0		
	1966	0	0	0	+	0	0	0	0		1966	0	0	0	0	0	0	0		
Winston-Salem, N.C.	1960	0	0	0	+	0	0	0	0	Nashville, Tenn.	1960	+	0	0	0	+	0	+	+	
SR: 3	1963	+	0	0	+	0	-	0	0	SR: 5	1963	+	0	0	+	0	+	+	+	
	1966	+	0	0	+	0	0	0	0		1966	+	+	0	+	0	0	0	+	
<u>South Carolina</u>										<u>Arkansas</u>										
Charleston, S.C.	1960	+	+	0	0	+	+	0	+	Little Rock, Ark.	1960	+	0	+	0	0	0	0	0	
SR: 5	1963	+	0	0	0	0	0	0	0	SR: 5	1963	+	0	+	0	0	0	0	0	
	1966	0	+	0	0	0	0	0	0		1966	0	+	+	+	0	+	0	0	
<u>Virginia</u>										<u>Louisiana</u>										
Lynchburg, Va.	1960	+	0	0	0	-	-	-	-	Monroe, La.	1960	+	0	-	0	0	-	-	-	
SR: 3	1963	+	0	0	0	-	-	-	-	SR: 6	1963	+	0	-	+	-	-	0	0	
	1966	+	-	-	0	-	-	-	-		1966	0	-	-	0	-	-	-	-	
Newport News, Va.	1960	+	+	0	0	0	0	0	0	New Orleans, La.	1960	0	+	+	0	0	+	+	+	
SR: 4	1963	0	+	0	0	0	0	0	0	SR: 8	1963	0	0	0	0	0	0	0		
	1966	0	0	0	0	0	0	-	0		1966	+	+	+	+	+	+	+		
Norfolk, Va.	1960	0	0	0	+	0	0	0	0	Shreveport, La.	1960	+	-	0	0	0	0	0	0	
SR: 3	1963	+	0	0	+	0	0	0	0	SR: 4	1963	0	0	0	+	0	0	0		
	1966	0	0	+	+	0	0	0	0		1966	+	-	0	+	0	0	0		
Richmond, Va.	1960	+	+	0	+	+	0	+	+	<u>Oklahoma</u>										
SR: 5	1963	+	+	0	0	0	0	0	0	Lawton, Okla.	1960	0	0	0	0	0	0	0	0	
	1966	+	0	0	0	+	0	0	0	SR: 4	1063	0	+	0	+	0	0	0		
Roanoke, Va.	1960	0	0	0	0	0	0	0	0	Oklahoma City, Okla.	1960	0	0	0	0	+	0	+	0	
SR: 1	1963	0	0	0	0	0	0	0	0	SR: 4	1963	0	0	+	0	0	0	+		
	1966	0	0	0	0	0	0	0	0		1966	0	0	0	0	0	0	0		
<u>West Virginia</u>										<u>Texas</u>										
Charleston, W. Va.	1960	0	0	0	0	0	0	0	0	Tulsa, Okla.	1960	+	+	0	0	+	+	+	+	
SR: 3	1963	0	0	0	0	-	0	0	0	SR: 6	1963	0	0	0	0	0	0	0		
	1966	0	0	0	0	-	0	-	-		1966	0	+	0	0	0	0	0		
Huntington, W. Va.	1960	0	0	0	0	0	0	0	0	Abilene, Texas	1960	0	0	-	0	+	0	0		
SR: 3	1963	0	0	0	0	0	0	0	0	SR: 4	1963	0	0	0	0	0	0	0		
	1966	0	0	0	0	-	-	0	0		1966	0	0	-	0	0	0	-		
Wheeling, W. Va.	1960	0	-	-	-	-	-	-	-	Amarillo, Texas	1960	0	+	0	+	0	+	0	+	
SR: 3	1963	0	-	-	0	-	-	-	-	SR: 5	1963	+	0	0	0	0	+	0		
	1966	0	-	0	0	-	-	-	-		1966	0	0	0	0	0	0	0		
<u>Alabama</u>										<u>WEST SOUTH CENTRAL</u>										
Birmingham, Ala.	1960	+	0	0	+	0	0	0	0	Austin, Texas	1960	+	0	0	+	0	0	0	0	
SR: 1	1963	+	0	0	+	0	0	0	0	SR: 3	1963	0	0	0	+	0	0	0		
	1966	+	0	0	+	0	0	0	0		1966	+	0	0	+	0	0	0		
Mobile, Ala.	1960	+	0	0	0	+	0	0	0	Beaumont, Texas	1960	0	0	0	+	0	0	0		
SR: 2	1963	+	0	0	0	0	0	0	0	SR: 4	1963	0	0	0	0	0	0	-		
	1966	+	0	0	0	0	0	0	0		1966	0	0	0	0	-	-	0		
										Brownsville, Texas	1960	0	0	-	0	0	0	0		
										SR: 4	1963	-	0	-	0	0	0	-		
											1966	0	0	-	0	0	-	-		





**APPENDIX B**  
**STANDARD METROPOLITAN STATISTICAL AREAS**  
**FOUND IN THE UPPER OR LOWER SEXTILE**  
**IN EACH OF THE YEARS 1960, 1963 AND 1966,**  
**BY MAJOR OFFENSE**

SMSA's<sup>a</sup> in Lower Sextile  
in 1960, 1963 and 1966

SMSA's in Upper Sextile  
in 1960, 1963 and 1966

**Murder**

Albany, N.Y.	Scranton, Pa.	Atlanta, Ga.	Houston, Texas
Binghampton, N.Y.	Springfield, Mass.	Birmingham, Ala.	Jacksonville, Fla.
Johnstown, Pa.	Utica, N.Y.	Charlotte, N.C.	Lynchburg, Va.
Providence, R.I.		Chattanooga, Tenn.	Miami, Fla.
		Dallas, Texas	Mobile, Ala.
		Ft. Lauderdale, Fla.	Nashville, Tenn.
		Ft. Worth, Texas	Richmond, Va.
		Galveston, Texas	

**Forcible Rape**

Duluth, Minn.	Provo, Utah	Bakersfield, Calif.	Los Angeles, Calif.
Johnston, Pa.	Reading, Pa.	Chicago, Ill.	Phoenix, Ariz.
Lancaster, Pa.	Utica, N.Y.	Denver, Colo.	Sacramento, Calif.
New Haven, Conn.	Wheeling, W.Va.	Detroit, Mich.	St. Louis, Mo.
Pittsfield, Mass.	Wilkes-Barre, Pa.	Flint, Mich.	San Bernardino, Calif.
Providence, R.I.		Galveston, Texas	

**Robbery**

Binghampton, N.Y.	New Haven, Conn.	Chicago, Ill.	Miami, Fla.
Brownsville, Texas	New London, Conn.	Cleveland, Ohio	Newark, N.J.
Cedar Rapids, Iowa	Pittsfield, Mass.	Gary, Ind.	St. Louis, Mo.
Duluth, Minn.	Provo, Utah	Indianapolis, Ind.	San Francisco, Calif.
Green Bay, Wis.	Reading, Pa.	Jacksonville, Fla.	Savannah, Ga.
Johnstown, Pa.	Scranton, Pa.	Las Vegas, Nev.	Stockton, Calif.
Lincoln, Neb.	Springfield, Mass.	Little Rock, Ark.	Washington, D.C.
Monroe, La.	Utica, N.Y.	Los Angeles, Calif.	

**Aggravated Assault**

Allentown, Pa.	Madison, Wis.	Austin, Texas	Galveston, Texas
Binghampton, N.Y.	Manchester, N.H.	Birmingham, Ala.	Houston, Texas
Cedar Rapids, Iowa	Pittsfield, Mass.	Charlotte, N.C.	Los Angeles, Calif.
Duluth, Minn.	Provo, Utah	Chicago, Ill.	Miami, Fla.
Eugene, Ore.	Reading, Pa.	Corpus Christi, Tex.	Norfolk, Va.
Fargo, N. Dak.	Springfield, Mass.	Durham, N.C.	Savannah, Ga.
Green Bay, Wis.	Utica, N.Y.	Flint, Mich.	Washington, D.C.
Johnstown, Pa.		Ft. Lauderdale, Fla.	Winston-Salem, N.C.

a. Principal city.

**Burglary**

Allentown, Pa.	Madison, Wis.	Atlantic City, N.J.	Phoenix, Ariz.
Binghampton, N.Y.	Manchester, N.H.	Chattanooga, Tenn.	Sacramento, Calif.
Cedar Rapids, Iowa	Pittsfield, Mass.	Corpus Christi, Tex.	San Antonio, Texas
Fargo, N. Dak.	Provo, Utah	Ft. Lauderdale, Fla.	San Bernardino, Calif.
Johnstown, Pa.	Reading, Pa.	Houston, Texas	Stockton, Calif.
Lancaster, Pa.	Waterloo, Iowa	Jacksonville, Fla.	Tampa, Fla.
Lincoln, Neb.	Wheeling, W.Va.	Miami, Fla.	Waco, Texas
Lynchburg, Va.	Wilkes-Barre, Pa.	Los Angeles, Calif.	

**Larceny (over 50 dollars)**

Albany, N.Y.	Monroe, La.	Atlantic City, N.J.	Louisville, Ky.
Binghampton, N.Y.	Pittsfield, Mass.	Bakersfield, Calif.	Miami, Fla.
Cleveland, Ohio	Provo, Utah	Flint, Mich.	New York, N.Y.
Erie, Pa.	Reading, Pa.	Ft. Lauderdale, Fla.	Phoenix, Ariz.
Harrisburg, Pa.	Scranton, Pa.	Fresno, Calif.	Santa Barbara, Calif.
Johnstown, Pa.	Utica, N.Y.	Las Vegas, Nev.	Stockton, Calif.
Lancaster, Pa.	Wheeling, W.Va.	Los Angeles, Calif.	
Lorain, Ohio	Wilkes-Barre, Pa.		
Lynchburg, Va.	York, Pa.		

**Auto Theft**

Allentown, Pa.	Pittsfield, Mass.	Chicago, Ill.	Newark, N.J.
Altoona, Pa.	Provo, Utah	Denver, Colo.	Phoenix, Ariz.
Binghampton, N.Y.	Reading, Pa.	Indianapolis, Ind.	Providence, R. I.
Green Bay, Wis.	Utica, N.Y.	Jersey City, N.J.	Sacramento, Calif.
Harrisburg, Pa.	Wheeling, W.Va.	Los Angeles, Calif.	San Francisco, Calif.
Johnstown, Pa.	Wilkes-Barre, Pa.		
Lancaster, Pa.	York, Pa.		
Lynchburg, Va.			

**NOTES**

1. There have been many criticisms of the *Uniform Crime Reports*, one of which is of particular relevance to our data. This criticism is contained in Sellin and Wolfgang (1964), wherein we find demonstrated that offenses which are identically classified by the FBI vary substantially in terms of seriousness. However we may assume that seriousness variance within a single offense category is similar from one city to the next. Therefore, the FBI's failure to weight specific offenses does not affect the propriety of our comparisons. The above assumption appears all the more reasonable in view of the fact that the most serious and heavily weighted events are the most rare. Even among the smaller analytic units of census tract offense-specific seriousness distributions exhibit almost identical contours (see Cannavale, 1968).

2. The fact that certain areas may share an identical rate on a particular offense forced us on some occasions to include more than 27 cases in a sextile. In

the following instances, 28 cases were included in the upper sextile: murder, 1966; robbery, 1966; rape, 1960. Also, in 1963, 28 cases were found in the lower sextile for burglary, while 31 cases constituted the upper sextile for murder in 1960.

3. It is possible to group SMSA's in other ways. We found, for example, that five SMSA's were classified in the lower sextile for *all* offenses in each of the three years studied, save for one error. That is, 20 of the 21 classifications proved to be identical. The same could not be said for any area in respect to the upper sextile. However, 24 SMSA's were moderately homogeneous with respect to all offenses in each of the years that were observed, save again for one error.

4. Such an investigation has been conducted in terms of economic service classifications (see Nelson, 1957).

5. In general, high crime areas tend to form a distinct belt, spreading from the Southeast through the eastern and western South Central states to California. Low crime areas concentrate most conspicuously in the New England and Middle Atlantic states. This observation is based on a comparison of the number of extreme crime areas contributed by a particular geographical region divided by the number of SMSA's contributed by this same region to the total.

Notable studies making use of an entire national distribution of crime rates include: Lottier (1938), Porterfield (1949), Shannon (1954), Quinney (1966), and the President's Commission on Law Enforcement and Administration of Justice (1967).

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