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## STRUCTURAL CHARACTERISTICS, POPULATION AREAS, AND CRIME RATES IN THE UNITED STATES

RICHARD QUINNEY \*

It has been established that crime rates have a geographical distribution according to states and regions in the United States. In an early study Lottier reported that specific offenses have a gradient pattern throughout the country.<sup>1</sup> Several years later Shannon found a similar patterning of offense rates in the United States.<sup>2</sup> The results of ecological studies such as these suggest that crime is largely a function of social and cultural influences.

The research reported here is an attempt to go a step beyond the previous studies of crime rates in the United States by (1) testing the proposition that crime rates vary with the structure of geographical areas, (2) determining if structural characteristics differ in the relation to offense rates

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In the following article, through the analysis of the relation between offense rates and population statistics, the proposition is tested that crime varies with the structure of populations. More specifically, it is shown that (1) structural characteristics operate differentially in relation to offense rates according to three types of population areas (rural, urban, and standard metropolitan statistical areas); (2) rural and urban areas are more sensitive to structural variations in relation to crime rates than are the larger urban standard metropolitan statistical areas; (3) offenses vary from one another in the extent to which they are correlated with structural characteristics; and (4) structural characteristics differ in the degree to which they are correlated with offenses. Differentials in the relation of offense rates to structural characteristics according to the three population areas are interpreted within the larger framework of the increasing scale of society. Structural characteristics are studied in relation to offense rates in terms of a dual strategy which includes both the causation of criminal behavior and the administration of criminal law.

The present article is a revision of a paper which was presented at the annual meeting of the American Sociological Association, Chicago, August, 1965. The research was supported by a grant from the University of Kentucky Research Fund.

<sup>1</sup> Lottier, *Distribution of Offenses in Sectional Regions*, 29 J. CRIM. L., C. & P. S. 329 (1938).

<sup>2</sup> Shannon, *The Spatial Distribution of Criminal Offenses by States*, 45 J. CRIM. L., C. & P. S. 264 (1954).

according to types of population areas, and (3) interpreting the possible differences in patterns of offense rates.

### PROBLEM AND THEORETICAL ORIENTATION

The general problem of the research was to establish whether or not crime rates in the United States are related to structural characteristics of population aggregates. The basic geographical units selected in the study were the 50 states of the United States. In more specific terms, the problem was to determine if there are differentials in the relation of structural characteristics to offense rates according to three types of *population areas* within the states. The three types of state population areas used in the study were (1) rural areas, (2) urban areas, and (3) standard metropolitan statistical areas (SMSA's).

Because of the fairly consistent findings on rural and urban differences in crime and delinquency (offense rates usually being lower in rural areas than in urban areas), it has been usual to argue that urbanization and crime go together. Writers, extending Wirth's thesis on urbanism, have related crime to urban characteristics.<sup>3</sup> Clinard, in particular, has tested various hypotheses on the presence of urban characteristics among offenders from areas of varying degrees of urbanization.<sup>4</sup> The conclusion reached, and assumed by others, is that the relative incidence of urban features accounts for much of the difference in crime rates between rural and urban areas.

In this study, however, it was taken for granted that offense rates tend to be lower in rural areas as compared to rates in areas of greater population size and density. Such differences in offense rates appear to be the case at least at *this point* in the process of urbanization. As local communities

<sup>3</sup> Wirth, *Urbanism as a Way of Life*, 44 AM. J. SOC. 1 (1938).

<sup>4</sup> Clinard, *The Process of Urbanization and Criminal Behavior*, 48 AM. J. SOC. 202 (1942). 202-213; *ibid.*, *A Cross-Cultural Replication of the Relation of Urbanism to Criminal Behavior*, 25 AM. SOC. REV. 253 (1960); and see his recent *The Relation of Urbanization and Urbanism to Criminal Behavior*, in chapter 35 of BURGESS & BOGUE, *CONTRIBUTIONS TO URBAN SOCIOLOGY* (1964).

become a part of the larger urban-industrial society and as rural and urban distinctions diminish,<sup>5</sup> the differences between the amounts of rural and urban crime are likely to decrease. Interest should then turn from offense rate differences between rural and urban areas, *per se*, to an interest in the differential effects of various social structures on offense rates according to rural and urban population areas. It is possible that structures do not operate the same in relation to offense rates for the different types of population areas. This latter interest served as the problem for the research reported here.

### *Hypotheses and Strategy*

The research was guided by the general hypothesis that structural characteristics are differentially related to offense rates according to the three types of population areas (rural, urban, SMSA). More specifically, it was hypothesized that structural characteristics have greater effect on offense rates in rural and urban areas than in the larger urban centers—the SMSA's. It was also hypothesized that, both within and between population areas, some offenses are more highly correlated with structural characteristics than other offenses and some structural characteristics are more highly correlated with offenses than other structural characteristics.

The hypotheses are based on two separate theoretical strategies in regard to the relation between crime rates and characteristics of population aggregates. First, it is assumed that the structural characteristics of population aggregates are causally related to criminal behavior. This is the usual strategy underlying ecological studies of crime. The attributes of population aggregates serve as measures of the social and cultural structure of area populations; and it is inferred, in turn, that the structure produces specific kinds and amounts of social behavior.<sup>6</sup> This use of population statistics, in addition, avoids the "ecological fallacy" which would infer that the individuals involved in specific behaviors are representative of their proportion in the population.<sup>7</sup> For example,

<sup>5</sup> See Fuguitt, *The City and Countryside*, 28 *RURAL SOCIOLOGY* 246 (1963), and Young, F. & R., *The Sequence and Direction of Community Growth: A Cross-Cultural Generalization*, 27 *RURAL SOCIOLOGY* 374-386 (1962).

<sup>6</sup> Schnore, *Social Morphology and Human Ecology*, 63 *AM. J. SOC.* 620 (1958); Duncan & Schnore, *Cultural, Behavioral, and Ecological Perspectives in the Study of Social Organization*, 65 *AM. J. SOC.* 132 (1959); and Blau, *Structural Effects*, 25 *AM. SOC. REV.* 178 (1960).

<sup>7</sup> Robinson, *Ecological Correlations and the Behavior of Individuals*, 15 *AM. SOC. REV.* 351 (1950).

if it is found that areas characterized by high geographical mobility have high crime rates, this is no indication that crime is occurring primarily among mobile individuals but, more likely, that crime is caused by the change and redefinition of behavior patterns (as measured by geographical mobility) which may pervade an entire population aggregate.

Second, it is held in this study that structural characteristics are important in the administration of the criminal law: that is, structural characteristics influence the process by which behaviors are labeled as criminal.<sup>8</sup> It is reasoned that the structure of population aggregates may be important in determining the actions of persons in the population areas who define, report, and record certain behaviors as criminal. In other words, in regard to the use of official crime statistics, rather than assuming that the statistics indicate only the incidence of criminal behavior in a population, the writer is assuming that crime statistics reflect differentials in the administration of the law *as well as* the incidence of crime.<sup>9</sup> Both aspects of crime statistics are considered in the relation of structural characteristics to offense rates. Official statistics of crime may thereby be regarded as sociologically relevant and amenable to analysis, rather than merely a source of bias which must be assumed not to be great enough to prevent analysis. Thus, structural characteristics are studied in relation to crime rates within a single framework which includes (1) the causation of criminal behavior and (2) the administration of criminal law.

### *Population Areas and Scale of Society*

The three population areas (rural, urban, SMSA) and their associated structural characteristics are not considered strictly as the independent variables of the study. It is held, more correctly, that these areas are themselves in a sense dependent variables in a larger context. Urbanization must be understood in relation to the development of the whole of society.<sup>10</sup>

<sup>8</sup> Societal reactions to deviant behavior are discussed, and utilized in LEMERT, *SOCIAL PATHOLOGY* (1951); BECKER, *STUDIES IN THE SOCIOLOGY OF DEVIANCE* (1963); Gibbs, *Rates of Mental Hospitalization: A Study of Societal Reaction to Deviant Behavior*, 27 *AM. SOC. REV.* 782 (1962); and Kitsuse, *Societal Reaction to Deviant Behavior: Problems of Theory and Method*, 9 *SOCIAL PROBLEMS* 247 (1962).

<sup>9</sup> See Kitsuse & Cecourel, *A Note on the Uses of Official Statistics*, 11 *SOCIAL PROBLEMS* 131 (1963).

<sup>10</sup> Emphasized in SJOBERG, *THE PREINDUSTRIAL CITY* (1960); and REISSMAN, *THE URBAN PROCESS: CITIES IN INDUSTRIAL SOCIETIES* (1964).

The conception of the scale of society, as presented by two social anthropologists, the late Godfrey and Monica Wilson,<sup>11</sup> is especially useful in understanding the process of urbanization. Scale of society as thus conceived represents the scope of social interaction and dependency. Furthermore, an increase in scale indicates an increase in the range and intensity of social relations, a differentiation of function, an increase in dependency on the larger society accompanied by a decrease in dependency on the immediate social environment, and an increase in the complexity of organization.<sup>12</sup> Urbanization in Western society has been associated with the increasing scale of society. It appears that the requirements of large-scale society have been most effectively satisfied through the concentration of population in specific geographical locations. The conclusion may be reached that urbanization is a condition which occurs at a particular point in the increasing scale of society.<sup>13</sup> This conclusion halts us from viewing the city as a self-contained unit and allows us to see both the interdependence and independence of increasing scale and urbanization. In the future increase of scale, urbanization may not be the most effective form of population distribution.

The above conception of urbanization and scale points to the fact that the structural characteristics of population areas are not indigenous to the different geographical units, but in a larger context are associated with changes in society. Thus, it is argued that the structural characteristics which are related to crime are not intrinsic to the population areas. Nevertheless, structural characteristics are likely (as hypothesized in this study) to operate differentially in relation to offense rates according to the three types of population areas because the population areas represent differences in scale at this point in history. These differences, it must be cautioned, may not exist at some future time. In fact, it may be argued that the relation between structural characteristics and crime in the future is likely to be similar to the relation as found today in the SMSA. The relation of social structure to the causation of crime and the administration of law in the SMSA indicates the trend in a society of increasing scale.

<sup>11</sup> WILSON, G. & M., *THE ANALYSIS OF SOCIAL CHANGE* (1954).

<sup>12</sup> Scale of society as a concept has been used by Shevky and Bell in the construction of their social area typology. See SHEVKY & BELL, *SOCIAL AREA ANALYSIS* (1955).

<sup>13</sup> Quinney, *Urbanization and the Scale of Society: A Conceptual Analysis* (unpublished M. A. thesis, Northwestern University, 1957).

#### DATA COLLECTION PROCEDURES AND STATISTICAL ANALYSIS

The offense rates used in the analysis are based on "offenses known to the police" as reported in the *Uniform Crime Reports*.<sup>14</sup> Mean annual offense rates per 100,000 population were computed for the seven major offenses, as well as for total offenses. Mean annual rates for the 50 states were computed on the basis of the years 1959-1961. Because of a change in the census definition of the standard metropolitan statistical area (SMSA) in 1960, mean annual offense rates for the rural, urban, and SMSA population areas within the states were computed for the years 1960-1961.<sup>15</sup>

The measures of structural characteristics of the population aggregates of states and state population areas are based on data from the publications of the 1960 United States census.<sup>16</sup> Ten population aggregate statistics, divided into three categories of variables, were selected as measures of structural characteristics: (1) *Socioeconomic Variables* (median years of schooling, median family income, percent white collar males); (2) *Differentiation and Development Variables* (percent nonwhite, percent change in residence, percent employed in manufacturing, occupational diversity<sup>17</sup>); and (3) *Family Variables* (percent age 50 and over, percent females in labor force, percent owner-occupied housing).

The relation between structural characteristics and offense rates was statistically analyzed in terms of product-moment correlation. Correlation coefficients equal to or greater than .20 were arbitrarily established as being of theoretical importance. A test of significance was not used because data were gathered from all states rather than from

<sup>14</sup> Federal Bureau of Investigation, U. S. Department of Justice, *Uniform Crime Reports*, 1959, 1960, and 1961—Tables 1 and 3.

<sup>15</sup> The three types of population areas within states are mutually exclusive. That is, for example, urban areas consist only of the urban population *outside* of SMSA's.

<sup>16</sup> U. S. Bureau of the Census, *U. S. Census of Population: 1960 General Social and Economic Characteristics*, vol. C. U. S. Government Printing Office, Washington, D. C., Tables 37, 70, and 71; and U. S. Bureau of the Census, *1960 Census of Housing*, vol. 1, U. S. Government Printing Office, Washington, D. C., Table 1.

<sup>17</sup> The eleven major census categories of occupation were used in the measure of occupational diversity. The computation formula is  $(Ex)^2/Ex^2$ , whereby complete homogeneity yields a score of 1 (total labor force population being in one category) and complete heterogeneity yields a score of 11 (total labor force population being evenly distributed in the eleven occupational categories).

TABLE 1  
CORRELATION BETWEEN STRUCTURAL CHARACTERISTICS AND OFFENSE RATES OF STATES

Structural Characteristics	Offenses and Correlation Coefficients							
	Murder	Forcible Rape	Aggravated Assault	Robbery	Burglary	Larceny	Auto Theft	Total Offenses
Socioeconomic Variables,								
Median Years of Schooling . . . . .	-.26*	+.06	-.09	+.07	+.10	+.19	+.18	+.11
Median Family Income . . . . .	-.17	+.16	+.05	+.22*	+.20*	+.27*	+.32*	+.22*
Percent White Collar Males . . . . .	-.12	+.09	+.01	+.13	+.11	+.16	+.22*	+.13
Differentiation and Development Variables								
Percent Nonwhite . . . . .	+.32*	.00	+.11	-.03	.00	-.05	+.01	.00
Percent Change in Residence . . . . .	+.16	+.05	-.02	+.02	+.03	+.07	+.09	+.05
Percent Employed in Manufacturing . . . . .	+.08	+.14	+.22*	+.18	+.17	+.13	+.13	+.15
Occupational Diversity . . . . .	-.05	-.17	-.16	-.16	-.18	-.19	-.18	-.17
Family Variables								
Percent Age 50 and Over . . . . .	-.29*	-.12	-.13	-.02	-.07	-.10	-.16	-.10
Percent Females in Labor Force . . . . .	-.04	-.04	-.03	-.01	+.01	+.04	+.08	+.02
Percent Owner-Occupied Housing . . . . .	+.02	+.20*	+.15	+.19	+.20*	+.14	+.08	+.16

\* Indicates a correlation coefficient of .20 or above, arbitrarily established for theoretical importance.

a random sample of states, thus making meaningless a test of significance.<sup>18</sup>

#### STRUCTURAL CHARACTERISTICS AND OFFENSE RATES OF STATES

The proposition that offense rates vary with population structure—using first the *entire state* as the geographical unit—finds only limited support. As shown in Table 1, there are only twelve correlation coefficients of .20 or above out of eighty possible correlations between the structural variables and the rates for various types of offenses, and these correlations are relatively low. Median family income is the single most important structural variable in that it is correlated with all the property offenses, as well as being correlated with total offenses. Of the specific offenses, murder is correlated most frequently with the structural variables (median years of schooling, percent nonwhite, and percent age 50 and over). Burglary, in addition to being correlated with median family

income, is correlated with percent owner-occupied housing; and auto theft is correlated with percent white collar males, as well as with median family income.

The above limited findings suggest that the state as a geographical unit is too broad and heterogeneous a population aggregate to permit an underlying structure to be related to offense rates. In addition, differentials in the administration of the law from one population area to another within states are obscured when structural characteristics and offense rates of states are used rather than structural characteristics and offense rates of population areas within states. A more promising approach, therefore, is the analysis of the relation of offense rates to structural characteristics of state population areas. There then exists the possibility of observing correlation differentials between structural characteristics and offense rates according to the three types of population areas.

#### STRUCTURAL CHARACTERISTICS AND OFFENSE RATES ACCORDING TO POPULATION AREAS OF STATES

When population areas of states are used as units of analysis, the hypothesis that offense rates

<sup>18</sup> See Selvin, *A Critique of Tests of Significance in Survey Research*, 22 AM. SOC. REV. 519 (1957). Also see HAGOOD & PRICE, *STATISTICS FOR SOCIOLOGISTS* 188-196, 286-294, 419-423 (1952); and Schwirian & Prehn, *An Axiomatic Theory of Urbanization*, 27 AM. SOC. REV. 821 (1962).

TABLE 2  
CORRELATION BETWEEN SOCIOECONOMIC VARIABLES  
AND OFFENSE RATES BY POPULATION  
AREAS OF STATES\*

Socioeconomic Variables and Offenses	Population Areas of States and Correlation Coefficients		
	Rural	Urban	SMSA
Median Years of Schooling			
Murder.....	<i>-.44</i>	<i>-.28</i>	<i>-.24</i>
Forcible Rape.....	<i>-.12</i>	<i>+.26</i>	<i>+.11</i>
Aggravated Assault.....	<i>-.45</i>	<i>-.33</i>	<i>-.28</i>
Robbery.....	<i>+.06</i>	<i>+.25</i>	<i>-.03</i>
Burglary.....	<i>+.35</i>	<i>+.10</i>	<i>+.16</i>
Larceny.....	<i>+.40</i>	<i>+.50</i>	<i>+.22</i>
Auto Theft.....	<i>+.20</i>	<i>+.48</i>	<i>+.23</i>
Total Offenses.....	<i>+.30</i>	<i>+.29</i>	<i>+.16</i>
Median Family Income			
Murder.....	<i>-.46</i>	<i>-.34</i>	<i>-.62</i>
Forcible Rape.....	<i>-.19</i>	<i>+.40</i>	<i>+.06</i>
Aggravated Assault.....	<i>-.42</i>	<i>-.37</i>	<i>-.34</i>
Robbery.....	<i>-.06</i>	<i>+.22</i>	<i>+.20</i>
Burglary.....	<i>+.34</i>	<i>+.03</i>	<i>.00</i>
Larceny.....	<i>+.21</i>	<i>+.50</i>	<i>+.17</i>
Auto Theft.....	<i>+.13</i>	<i>+.53</i>	<i>+.27</i>
Total Offenses.....	<i>+.19</i>	<i>+.26</i>	<i>+.09</i>
Percent White Collar Males			
Murder.....	<i>-.20</i>	<i>.00</i>	<i>-.02</i>
Forcible Rape.....	<i>.00</i>	<i>+.33</i>	<i>+.16</i>
Aggravated Assault.....	<i>-.26</i>	<i>-.11</i>	<i>-.01</i>
Robbery.....	<i>-.12</i>	<i>+.19</i>	<i>+.04</i>
Burglary.....	<i>+.20</i>	<i>+.10</i>	<i>+.04</i>
Larceny.....	<i>-.04</i>	<i>+.33</i>	<i>+.02</i>
Auto Theft.....	<i>+.07</i>	<i>+.44</i>	<i>+.10</i>
Total Offenses.....	<i>+.05</i>	<i>+.25</i>	<i>+.05</i>

\* Italic numbers indicate the highest correlation coefficient (of .20 or above) among the three population areas for the correlation between a structural variable and a type of offence.

are related to structural characteristics of population aggregates finds considerable support. Furthermore, it is found that the structural characteristics differ in the degree to which they are correlated with offense rates of the state population areas. The findings are presented according to the three categories of structural variables.

#### *Socioeconomic Variables and Offense Rates of Population Areas*

Presented in Table 2 are the correlations between the socioeconomic structural variables of state population areas and the offense rates of the areas. A number of relatively high correlations can be

noted, correlations not found when entire states were used as geographical units. In support of the hypothesis, the structural variables are differentially related to offense rates according to the population areas, with the variables being more highly correlated with offense rates in rural and urban areas than in SMSA's. Thus, the socioeconomic variables appear to be more crucial in their effect upon crime causation and administration of law in rural and urban areas than in the large metropolitan areas. The differences in the degree of correlation between the socioeconomic variables and offense rates of the population areas may be due in part to a combination of more rigid law enforcement in small communities and greater conflict between socioeconomic status groups in these areas. Both factors operating together would make socioeconomic differences more critical in relation to crime (especially property crime) in rural and urban areas.

While most of the offenses are positively correlated with the structural variables, murder and aggravated assault are negatively correlated with most of the socioeconomic variables in all three population areas. In terms of crime causation, these negative correlations have meaning in light of Lipset's suggestion that populations with low levels of education, lack of sophistication, isolation from heterogeneous values, and a limited frame of reference are predisposed toward concrete and immediate solutions to problems.<sup>19</sup> Offenses against the person regardless of the population area may become institutionalized and perceived by people in these structures as the most appropriate solutions to interpersonal problems. There is also the related possibility that personal attack as a response is learned through socialization in a subculture which stresses aggression and violence.<sup>20</sup>

#### *Differentiation and Development Variables and Offense Rates of Population Areas*

The hypothesis of the differential effects of structural characteristics on offense rates in different population areas finds support again with the differentiation and development structural variables. As shown in Table 3, variations in occupational diversity are the most important in

<sup>19</sup> LIPSET, POLITICAL MAN Chap. 4 (1959).

<sup>20</sup> BREARLEY, HOMICIDE IN THE UNITED STATES 51-56 (1932); Gold, *Suicide, Homicide, and the Socialization of Aggression*, 63 AM. J. SOC. 651-661 (1958); PALMER, A STUDY OF MURDER (1960); and WOLFGANG, PATTERNS IN CRIMINAL HOMICIDE (1959).

TABLE 3  
CORRELATION BETWEEN DIFFERENTIATION AND  
DEVELOPMENT VARIABLES AND OFFENSE RATES  
BY POPULATION AREAS OF STATES\*

Differentiation and Development Variables and Offenses	Population Areas of States and Correlation Coefficients		
	Rural	Urban	SMSA
Percent Nonwhite			
Murder.....	+ .52	+ .42	+ .54
Forcible Rape.....	+ .19	+ .09	-.02
Aggravated Assault.....	+ .45	+ .39	+ .40
Robbery.....	+ .03	-.09	+ .01
Burglary.....	-.14	+ .18	+ .20
Larceny.....	-.08	-.20	-.01
Auto Theft.....	+ .03	-.19	+ .05
Total Offenses.....	.00	+ .02	+ .15
Percent Change in Residence			
Murder.....	+ .32	+ .32	+ .45
Forcible Rape.....	+ .41	+ .65	+ .45
Aggravated Assault.....	+ .28	+ .19	+ .26
Robbery.....	+ .35	+ .62	+ .29
Burglary.....	+ .31	+ .52	+ .64
Larceny.....	+ .44	+ .63	+ .54
Auto Theft.....	+ .30	+ .72	+ .49
Total Offenses.....	+ .48	+ .67	+ .63
Percent Employed in Manufacturing			
Murder.....	-.04	-.15	-.37
Forcible Rape.....	-.25	-.42	-.23
Aggravated Assault.....	-.03	+ .02	-.11
Robbery.....	-.41	-.49	-.09
Burglary.....	-.11	-.42	-.38
Larceny.....	-.47	-.45	-.38
Auto Theft.....	-.41	-.54	-.35
Total Offenses.....	-.36	-.48	-.38
Occupational Diversity			
Murder.....	+ .36	+ .02	+ .25
Forcible Rape.....	+ .42	+ .04	+ .16
Aggravated Assault.....	+ .39	-.02	+ .11
Robbery.....	+ .25	+ .16	-.02
Burglary.....	+ .28	+ .25	+ .09
Larceny.....	+ .29	+ .07	+ .12
Auto Theft.....	+ .30	+ .15	+ .02
Total Offenses.....	+ .43	+ .16	+ .09

\* Italic numbers indicate the highest correlation coefficient (of .20 or above) among the three population areas for the correlation between a structural variable and a type of offense.

relation to offense rates in rural areas. Percent employed in manufacturing and percent change in residence are important in relation to offense rates in urban areas.

The finding that percent non-white population is highly correlated (positively) with murder and aggravated assault in all population areas substantiates the conclusion that nonwhite areas are likely to be characterized by a tradition conducive to personal offenses.<sup>21</sup> Social change, as indicated by percent change in residence, is also positively correlated with offenses, with particularly high correlations in urban areas. Offenses thus appear to be a product of change in behavior patterns—or the lessening of social integration. Furthermore, the relation of offense rates to both percent non-white and percent change in residence suggests that differentials in the administration of the law occur according to variations in these structural variables.

Regarding industrialization and offense rates, there are negative correlations between percent employed in manufacturing and most offenses, especially in urban areas. There appear to be tendencies in the process of industrialization which reduce offenses.<sup>22</sup> In respect to occupational diversity, crime in rural areas is especially vulnerable to a differentiated and heterogeneous occupational structure. In addition, changes in the two structural variables of percent employed in manufacturing (industrialization) and occupational diversity probably provide an impetus for increased law enforcement, thus increasing the offense rates in relation to these variables.

#### *Family Variables and Offense Rates of Population Areas*

Finally, in support of the general hypothesis, the family structural variables are differentially related to offense rates according to the population areas. As shown in Table 4, percent age 50 and over is correlated (negatively) most highly with the offenses in urban areas, with the exception of a high correlation for murder in SMSA's. It is in urban areas that percent females in the labor force is correlated (positively) most highly with murder, forcible rape, aggravated assault, auto theft, and total offenses. Percent owner-occupied housing

<sup>21</sup> Pettigrew & Spier, *Ecological Structure of Negro Homicide*, 67 *Am. J. Soc.* 621 (1962). For related ideas, with stress on intergroup relations, see Grimshaw, *Lawlessness and Violence in America and Their Special Manifestations in Changing Negro-White Relationships*, 44 *J. NEGRO HIST.* 52 (1959).

<sup>22</sup> For a similar conclusion see Schuessler, *Components of Variation in City Crime Rates*, 9 *SOCIAL PROBLEMS* 321 (1962).

TABLE 4  
CORRELATION BETWEEN FAMILY VARIABLES AND  
OFFENSE RATES BY POPULATION  
AREAS OF STATES\*

Family Variables and Offenses	Population Areas of States and Correlation Coefficients		
	Rural	Urban	SMSA
Percent Age 50 and Over			
Murder . . . . .	-.40	-.39	-.43
Forcible Rape . . . . .	-.28	-.59	-.17
Aggravated Assault . . . . .	-.36	-.39	-.26
Robbery . . . . .	-.16	-.40	+.04
Burglary . . . . .	+.06	-.37	-.27
Larceny . . . . .	-.19	-.42	-.17
Auto Theft . . . . .	-.44	-.52	-.31
Total Offenses . . . . .	-.24	-.51	-.27
Percent Females in Labor Force			
Murder . . . . .	-.07	+.41	-.01
Forcible Rape . . . . .	-.21	+.38	-.20
Aggravated Assault . . . . .	-.04	+.38	-.12
Robbery . . . . .	-.16	-.05	-.18
Burglary . . . . .	+.15	+.09	-.12
Larceny . . . . .	-.06	+.12	-.07
Auto Theft . . . . .	-.10	+.24	-.03
Total Offenses . . . . .	+.01	+.20	-.11
Percent Owner-Occupied Housing			
Murder . . . . .	-.46	-.20	-.04
Forcible Rape . . . . .	-.15	-.27	+.10
Aggravated Assault . . . . .	-.39	-.19	-.03
Robbery . . . . .	-.24	-.02	+.04
Burglary . . . . .	-.02	.00	+.03
Larceny . . . . .	-.16	-.06	-.14
Auto Theft . . . . .	-.18	-.13	-.22
Total Offenses . . . . .	-.22	-.08	-.07

\* Italic numbers indicate the highest correlation coefficient (of .20 or above) among the three population areas for the correlation between a structural variable and a type of offense.

is most highly correlated (negatively) with murder, aggravated assault, robbery, and total offenses in rural areas, while percent owner-occupied housing is most highly correlated with forcible rape in urban areas and with auto theft in SMSA's.

The family structural variables may be regarded respectively as measures of (a) the tendency towards the preservation of the established order in an area (percent age 50 and over), (b) the extent to which traditional family patterns exist (percent females in labor force), and (c) the extent

to which the dominant middle class value system exercises control over an area population (percent owner-occupied housing). The existence of these qualities seems to be more important in relation to offense rates in rural and urban areas than in the larger urban centers—the SMSA's. It thus appears, as indicated by the area differentials in correlations, that the family structural variables are causatively related to crime rates in the rural and urban areas and, also, are determinants of the nature of law enforcement in these areas.

#### CONCLUSION

The findings on the structural correlates of offense rates demonstrate again that crime is a social phenomenon—a perspective that is basic to the sociological study of crime. In a departure from previous studies it was shown that structural characteristics operate differentially in relation to offenses according to three types of population areas (rural, urban, SMSA). Furthermore, it was found that rural and urban areas are more sensitive to structural variations in relation to crime rates than are the larger urban SMSA's. Also, offenses vary from one another in the extent to which they are correlated with structural characteristics, and structural characteristics differ from one another in the degree to which they are correlated with offenses.

A further extension was made by using a dual strategy in the analysis of the correlations between structural characteristics and offense rates. Structural characteristics were regarded as both generating sources of criminal behavior and action producing sources whereby behaviors are defined, reported, and recorded as criminal. Both the causative aspects and the differential law enforcement aspects of the relation of structural characteristics to crime rates according to population areas were considered within a single framework.

Differentials in the relation of offense rates to structural characteristics according to the population areas were understood in terms of differences in the scale of society as reflected in the various types of population areas (rural, urban, SMSA). It thus appears that structural characteristics are differentially related to offense rates because of variations in the concomitants of scale which include range and intensity of social relations, differentiation of function, dependency on the larger society, and complexity of organization. Since the SMSA represents the most advanced stage of

societal scale at this point in the history of Western civilization and since offense rates are least associated with structural characteristics in these large urban centers, the implication is that as (or if) the other population areas increase in scale in the future, crime rates are less likely to be associated with structural characteristics.<sup>23</sup>

It should be noted that in this study only ten population aggregate statistics were selected as measures of structural variables. The characteristics selected were chosen because they appeared to be the appropriate measures of basic structural variables. It should be recognized, however, that other structural characteristics could have been used. The research reported here by no means exhausts the possibilities for an analysis of the structural correlates of crime rates in the United States. In addition, with an increasing scale of society, other

<sup>23</sup> Offense rates are analyzed for social areas within a particular SMSA in Quinney, *Crime, Delinquency, and Social Areas*, 1 J. RES. CRIME & DELINQ. 149 (1964).

structural characteristics may become important in relation to crime rates.

A final point should be made regarding the structural correlates of offense rates. Because of the types of offenses used—those reported in the crime index of the *Uniform Crime Reports*—the structural variables demonstrate a relationship only to major conventional crimes. It remains problematic as to whether the same variables are related to such offenses as white collar crime, political offenses, organized crime, professional crime, and the minor petty offenses. Furthermore, the offenses used in this study occur primarily in the lower class. Thus, the structural correlates found are only for rates of lower class conventional crime. There is reason to believe, nevertheless, that other offense types also may be related to structural variables of area populations. What these variables are and how they are related to other offenses await the compilation of appropriate criminal and population statistics.