

**INSTITUTIONALIZING JUVENILES: AN ANALYSIS BY
SOCIAL DISORGANIZATION CONTROLLING FOR ARREST RATES**

by

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(ABSTRACT)

Ecological studies of crime explore how crime and delinquency are distributed within a geographical area. The most famous of these studies was done by Shaw and McKay (1942). The present study analyzes juvenile incarceration data by geographic location, measures of social disorganization, gender and race for the years 1993, 1994, and 1995 for each county and independent city in the Commonwealth of Virginia. Regression analysis indicated that a rural/urban difference does not exist for all incarceration categories used in the study. When the control measure of arrest rate was added to the regression, no rural/urban difference was found. The percent non-white yielded the only consistently significant variable related to incarceration rates, except female incarceration for which no independent variable was found to have a significant relationship.

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CHAPTER ONE

PROBLEM STATEMENT

Many ecological studies have been completed on juvenile crime. Ecological studies explore the distribution of delinquency rates across geographical areas. These studies indicate that the official rate of crime is inversely related to the distance of an area from the center of a city (Shaw and McKay 1969).

Continued ecological research is needed because of the constant and rapid change in the population of the United States. This increasing population may affect juvenile delinquency rates. Consequently, it seems prudent to explore the effect of population size on juvenile delinquency. Ecological studies of incarceration and crime are well suited to the purpose of studying population size. Ecological studies of crime can help us untangle the effect of gender and race on the social causes of, and responses to, crime.

This study will compare juvenile incarceration rates of rural and urban counties in the Commonwealth of Virginia. The research intends to help clarify the impact of place of residence on rates of institutionalized juveniles. The basic purpose is to examine the impact of geography and the measures of social disorganization on institutionalized populations of juveniles. The effects of geography and measures of social disorganization are further explored by race and gender.

The present study uses official data because of its availability and because the process of collecting the data is fairly consistent for each county and independent city in Virginia. When official statistics are used in research, many criticisms regarding the quality of the data are raised. Some critics of official data point to the hidden delinquency which these sources of data do not measure. Official data does not accurately represent the true volume of delinquency in the area that is being studied; self-reported delinquency data are routinely higher for the same area than official data reflect. The present study is

not concerned with hidden or unseen delinquency, but rather with incarceration rates. Arrest rates for each area will be used as a control.

The relationship between race and incarceration is complex. There is an over representation of non-whites incarcerated in proportion to their number in the general population. This over representation could be the result of many different social factors. For example, hidden racial bias by police and courts might be a factor.

There is also a relationship between gender and incarceration rates. Males are over represented in the incarceration population. There are many explanations for this, such as socialization practices for, and the differential treatment of, males and females.

The concept of social disorganization also is being examined to see what affect it has on an area's incarceration rate. Social disorganization is an abstract concept and because of this, social disorganization cannot be directly measured. Five proxies will be used to measure social disorganization: percent non-white, percent female-headed households, percent high school dropouts, percent of population below the poverty level, and percent unemployment. An area that has a high level of social disorganization will be expected to have a high level of incarceration. Incarceration rates are used as a measure of social reaction to the behaviors of both juveniles and police. Using arrest rate as a control provides a measure of behavior. Thus, rates of institutionalization are considered as consequences of behavior when arrest rates are used as controls in statistical analysis.

This study can contribute to understanding the ecological factors that are related to rates of juvenile incarceration. The findings of ecological research also can be used by professionals in other disciplines, such as urban planners, educators, and politicians.

CHAPTER TWO

LITERATURE REVIEW

There are many social factors that may affect the likelihood of juveniles committing crimes. One such factor is the population size of the juvenile's place of residence. Ecological studies of crime are done to explore the effects of population size on crime. For example, there are many studies which deal with urban-rural differences in crime and delinquency, such as the works by Gardner and Shoemaker (1989), Laub (1983), Carter (1982), and Lyerly and Skipper (1981).

An ecological approach to the study of crime can be defined in different ways and can include a variety of variables. One definition, which is simple and includes the general characteristics of an ecological study, is stated as follows:

Ecological Approach - systematic analysis of delinquency rates as these are distributed geographically within a city or locality. The distribution of rates is often mapped, spotted and correlated with other community characteristics, and the results are used to describe patterns of delinquency in a statistical fashion (Shoemaker 1996, 78).

One of the benchmark ecological studies was conducted by Shaw and McKay (1942). Their research started in the late 1920s and continued until the mid-1960s, focusing on males in the city of Chicago. They divided Chicago into zones, because they believed zones would show differences in rates more than would smaller units, such as streets (Voss and Petersen 1971, 81). Their research showed rates of delinquency were highest in the central business district and decreased outward to the suburbs and outlying

areas (Shaw and McKay 1942). Their studies focused on where the delinquents lived, not where they committed the crimes (Shaw and McKay 1942). This measurement was used because the area in which juveniles lived was thought to influence delinquent behavior.

For years it has been thought that juvenile delinquency was an urban phenomenon -- that urban juveniles committed more and more serious crime than juveniles in rural areas (Feld 1991). There is some evidence this is the case. Recently, evidence has emerged that living in a rural community decreases an individual's chances of being delinquent (Smith and Brame 1994, 624).

Official delinquency statistics indicate that an urban and rural difference is apparent. This difference between urban and rural areas is seen in the Uniform Crime Reports (UCR) and the national household victimization surveys (Weisheit, Falcone, and Wells 1996, 28-29). Studies have concluded that, when using official statistics, criminal activity is greater in urban areas and declines with a decrease in community population size (Lyerly and Skipper 1981; Gorden 1975). In 1994, the UCR reported that in Metropolitan Statistical Areas (MSA's) the crime rate was 5,894 per 100,000 persons, compared to only 2,034 per 100,000 persons in rural areas. For the year 1994, the crime rate in MSA's was over two and half times higher than for rural areas.

However, not everyone has found a preponderance of urban versus rural delinquency. Hindelang (1973), for example, concludes that there are higher rates of delinquency in rural areas than in urban areas. Even the UCR indicates that for the years

1968-72 and 1976-79, the percent increases in rural crime rates were higher than percent increases for urban crime rates (Carter 1982, 22-23).

Still others find no geographical differences in rates of delinquency. For example, Gorden (1975) states that the crime rate has little or no variation across the urban-rural continuum. Dentler and Monroe (1961) report that no significant difference is found in self-reported data between urban and rural areas. The consensus of research findings, however, is that rates of delinquency are higher in urban areas than in rural locations.

Many ecological studies have examined the relationship between crime and race. Most research shows that non-whites have higher rates of crime than do whites (LaFree 1995). Studies using official data have found that the best predictor of arrest, incarceration and then release is the individual's race (Dannefer and Schutt 1982). Krisberg and colleagues used official data to compare arrest rates to incarceration rates and found that race is a strong predictor of incarceration, with 5.1 white juveniles incarcerated per 100 arrests compared to 8.6 black juveniles incarcerated per 100 arrests. Thus, black juveniles had a 69 percent higher ratio of incarceration than white juveniles (Krisberg et. al. 1987).

Explaining the preponderance of non-whites in crime rates is difficult. There is evidence that some economic factors put the non-white juvenile at a disproportionate risk for crime. For example, blacks have higher rates of poverty that may account for crimes based on economic need. A second factor is differential law enforcement. Some argue that the over representation of non-whites is due to different treatment non-whites receive by police, the courts and criminal judges (Schuster 1981, 110). An additional source of

discrimination in the criminal justice process is a product of the conflict between the virtually powerless defendant and the dominant economic group (Jamieson and Blowers 1993, 243).

Another problem in understanding the relationship between race and crime is a mythological one. Race can be conceptualized in many different ways, and these different conceptualizations affect the results. For example, classifying race as white and non-white can give results that are different from race being classified as black, white, Hispanic, or Asian.

Some research compares delinquency by geography and race. In a self-reported study of urban and rural white males, rural males reported significantly less involvement in delinquency than urban males (Lyerly and Skipper 1981). In addition, Laub (1983) found that the rate of offending for both black males and females is greater than the rate for white males and females in both urban and rural areas.

Gender may be another factor which influences societal reactions. The concept of gender affecting juvenile crime has just started to be explored. Females have not been studied as a group for many reasons. One reason is that more males than females commit crime. Males are more likely than females to begin committing delinquent acts and are more likely to continue offending (Smith and Brame 1994, 621). For example, prison statistics show that 96 percent of inmates are male (Siegel and Senna 1994: 242).

Some hold that the gender differences in delinquency are stronger than are rural-urban differences (Carter 1982, 73). When exploring both gender and location, urban

males tend to be the most delinquent group, whereas rural females tend to be least delinquent (Carter 1982, 73). Gordon (1973) finds that a greater difference appears in the rates of delinquency between gender and race for the same location than between location for race and gender.

There also seems to be an interaction effect between race and gender. The rate of non-white females arrested is significantly out of proportion to their total population in the country (Mann 1984, 47). Once arrested, non-white females are much more likely to be convicted than are white females (Sutherland and Cressey 1978). However, both white and non-white girls are still likely to be arrested for traditionally "female" offenses.

The concept of social disorganization refers to a breakdown in conventional institutional controls, as well as informal social controls within a community or neighborhood (Shoemaker 1996, 77). The initial act of delinquency marks the failure of social controls to restrain unlawful conduct (Smith and Brame 1994, 609). All communities or areas produce controlling forces in their society, although each community or area may have different ways to do so. When a breakdown or absence of these controls occurs, delinquency has a chance to grow and prosper. Sampson and Laub (1994) state that as the ties that bind an individual to social institutions are loosened or blocked, the risk of crime and/or delinquency is increased (524). Criminal behavior increases when individuals are exposed to more social messages favoring criminal conduct than prosocial messages (Sutherland 1947). Further, delinquent behavior is facilitated by the absence of motivation to conform to the controls of conventional society (Kaplan and

Johnson 1991, 101). The present study will use five proxies to measure social disorganization: percent non-white, percent female-headed households, percent dropout, percent poverty, and percent unemployment.

The single parent family is a source of social disorganization. One family type receiving much attention in research today is the single parent-headed homes (mostly female). Juveniles whose families have been affected by divorce, separation, death or neglect display a higher degree of maladaptive attitudes and behaviors than juveniles from intact families (Rankin and Wells 1991, 171). A study by Sampson and Groves (1989) concludes that areas that have high levels of family disruption (single-parent homes) have high levels of delinquency. Single parents are not the cause of delinquency, but the lack of more than one supervising adult may give the juvenile more freedom and thus produce a higher risk of delinquency (McLanahan and Sandefur 1994, 2). According to Matsueda and Heimer (1987), single-parent families produce an excess of favorable definitions toward delinquency (836). In contrast, an increase in supervision and attachment by, and to, the family decreases delinquency (Sampson and Laub 1994, 531).

An over representation of non-whites is also seen among female-headed households. The percentage of families headed by women is 146 percent higher for blacks than for their white counterparts (Sampson 1987, 361). According to Sampson (1987), the structure of the family has the greatest effect on a black juvenile offender (364). However, Rankin and Wells (1991), state that the broken home has more of an effect on delinquency among whites than blacks (173).

Another aspect of female-headed households that links them to social disorganization is the fact that households of this type tend to be economically more unstable than those headed by two adults (Felson 1986, 113). Areas with high levels of female-headed households are thought to have less economic power and control over juveniles than areas with two-parent homes (McLanahan and Sandefur 1994, 137). Single-mother homes have less economic power and thus are at a greater risk of poverty.

Poverty is linked to many factors that increase the risk of delinquency. McLoyd (1990) found a link between poverty and parenting. Poverty and economic loss diminish the ability for supportive and consistent parenting (312) that could lead to and increase the chances of delinquency (Sampson and Laub 1994, 538). In a study by Johnstone (1978), it was found that the effect of the single-parent family on delinquency varied directly with the area's socioeconomic status. In areas with low socioeconomic status, the effect of the single parent family was outweighed by the effect of poverty.

The variable of race once again becomes a factor in that blacks represent a majority of the underprivileged class in American society. The black population is disproportionately concentrated at the bottom of the economic hierarchal structure; therefore, black juveniles do not see many legal alternatives in which to achieve economic success (Tatum 1996, 359). Sampson and Groves (1989) found that lower-class communities have fewer resources available to them to control juveniles. This lack of control then leads to an increase in juvenile delinquency.

Another socioeconomic factor that can be used to assess an area's social

disorganization is the unemployment rate. In a study by Allison (1972), the unemployment rate for cities of 25,000 or more accounted for 57 percent of the variance in the crime level for that locality. Danser and Laub (1981) also found a relationship between adult unemployment and the rate of juvenile crime. Another study found a direct relationship between juvenile crime and unemployment (Payne 1978, 81). Payne (1978) also found that this association between juvenile crime and unemployment was smaller in race-specific analysis than in non-race specific analysis (81). Tatum (1996) states that a direct relationship between race and unemployment occurs because the criminal behavior of blacks is a rational response to the present and future situation of intergenerational unemployment (359).

A study by Danser and Laub (1981) indicates that delinquency is not only affected by unemployment and race but by gender as well. It was found that white delinquency was positively associated with white adult male unemployment, but black delinquency was positively associated with black adult female unemployment. In direct contrast, an earlier study by Glaser and Kent (1959) concluded that juvenile crime was not directly related to unemployment but that it was negatively correlated with it.

Dropping out of school at a certain age is not a delinquent act, but the stigma or state of being a dropout can become a sign, indication, or condition of semi-delinquency (Cervants 1965). From a social disorganization standpoint, school is an entirely conventional institution and is a major source of bonding and a controlling force on the juvenile (Thornberry, Moore, and Christenson 1991, 207). Hirschi (1969) believes in the

social bonding power of the school. He wrote that a strong social bond to school is critical for inhibiting participation in delinquent behavior. When a juvenile drops out of school, she/he is at a disadvantage in the labor market and society. Adolescents who drop out of school become more vulnerable to being involved in delinquent activities (Figueira - McDonough 1993, 111). There is empirical evidence to support the controlling force of school on juvenile delinquency. For example, Thornberry, Moore, and Christenson (1991) found that juveniles who drop out have higher rates of delinquency than juveniles who stay in school and graduate (207). Elliott and Voss (1974) found that if one holds the number of delinquent acts constant, then juveniles who drop out have a higher rate of official action from police than do juveniles who have graduated (113). The delinquency rate for dropouts is dramatically higher than is the rate for graduates and ten times higher than the rate of the total juvenile population (Schreiber 1963).

Other studies have explored the social characteristics of dropouts. When juveniles live with just one parent during childhood, they are twice as likely to drop out of high school and become at greater risk for delinquency than those who lived with both parents (Haskell and Yablonsky 1970, 304). Further, dropouts are disproportionately from lower-class areas and minority groups (Elliott and Voss 1974, 129). The juvenile dropout is less likely to have employment and, therefore, is more likely to participate in delinquent behavior than those juveniles who have stayed in school (Haskell and Yablonsky 1970, 304). In a study by Figueira-McDonough (1993), it was found that socioeconomic characteristics are more important in predicting dropout rates than they are in predicting

delinquency (126).

There is a disproportionate number of non-whites who are unemployed, high school dropouts, live below the poverty level, and come from a female-headed household. Consequently, the percent of non-white population in a county or independent city will be used as a social disorganization variable in this analysis. Tatum (1996) found that counties with a large percentage of blacks in the population have a high black juvenile arrest rate.

The way in which society reacts to deviant behavior also can influence the incarceration rates of juveniles. Societal reaction does not create the deviant behavior but does produce a stigmatized status of the individual responsible for the deviant act (Goode 1981, 51). Official social reaction can set in progress a system that pulls the individual into future acts of deviance and future punishment for those acts (Phillips and Dinitz 1982, 267). Some believe that official reactions to deviance and contact with police not only fails to deter deviant acts, but actually increases the individual's exposure to some deviant subcultures (Keane, Gillis, and Hagan 1989, 333). In a study by Kaplan and Johnson (1991), it was reported that negative social sanctions not only did not deter deviant behavior, but appeared to facilitate the performance of such acts (119).

The way in which society reacts to deviant behavior can be affected by many things. The social characteristics of individuals can influence societal reaction to them (Phillips and Dinitz 1982, 268). Police behavior and society can influence societal reactions because they are part of the process that renders those actions deviant in the first place (Goode 1981, 51). Societal reaction can be influenced by individuals in power being

pressured to act; that may, in turn, influence them to respond to those previously stigmatized or those with the least resources (Phillips and Dinitz 1982, 277). Plato (1941) is quoted as saying, " justice is the interest of the stronger." Societal reaction to behavior can be manifested into many forms, such as incarceration.

HYPOTHESES

Based on this literature review this study will test five hypotheses:

- 1) Rural counties will have lower incarceration rates (total, white, non-white, male, and female) than urban counties and independent cities.
- 2) Using percent female-headed households as a proxy for social disorganization, counties and independent cities with high percentages of female-headed households will have higher incarceration rates.
- 3) Using percent poverty as a proxy for social disorganization, counties and independent cities with higher percentages of poverty will have higher incarceration rates.
- 4) Using percent non-white as a proxy for social disorganization, counties and independent cities with high percentages of non-whites will have higher incarceration rates.
- 5) Using percent dropout as a proxy for social disorganization, counties and independent cities with high percentages of dropouts will have higher incarceration rates.

CHAPTER THREE

METHODS

Three secondary data sets were used in the completion of this research project. One was data on juvenile incarceration, generated by the Department of Juvenile Justice for the Commonwealth of Virginia. This incarceration data were for the years 1993, 1994, and 1995. The incarceration data was divided into six categories: total, white, minority, unknown race, male, and female. The unknown race and minority categories were combined into a non-white category to give five incarceration categories. The second data set was juvenile arrests in the Commonwealth of Virginia for the years 1992, 1993, and 1994. This information was taken from Crime in Virginia¹. The year laps between the incarceration data set and the arrest data set are used to allow for the juvenile justice process to run its course; it can take many months for a juvenile who has been arrested to move through the adjudication and disposition stages of the juvenile justice system before the juvenile is incarcerated. The third data set was taken from the 1990 United States Census. This data set provided demographic information on the population of Virginia, specifically on the variables of female-headed households, unemployment, people living below the poverty line, and high school dropouts. All three data sets provided information by county or independent city for the Commonwealth of Virginia².

¹ Crime in Virginia, Compiled by Uniform Crime Reporting Section, Department of State Police, Years 1992, 1993, and 1994.

² No incarceration data were given for Fairfax, Paquason, and South Boston.

The following process was used to develop a three-year incarceration and arrest rate for each county and independent city in the study. First, two separate three-year averages were constructed using the raw scores from the incarceration and juvenile arrest data. The three-year incarceration average was constructed by hand for each category of incarceration. The raw score in 1993 for each category was added to the same category in 1994 and 1995 and then divided by three (incarceration category $(1993+1994+1995)/3 =$ average). The three-year arrest average was constructed in exactly the same manner as the three-year incarceration average (arrest $(1992+1993+1994)/3 =$ average).

From these three-year averages, a three-year rate was constructed for each incarceration category and the arrest data. This process was done by dividing the incarceration category average by the juvenile population for the matching county or independent city. The product of this process was then multiplied by 1000, to give a three year incarceration rate per 1000 (incarceration category average/juvenile population X 1000). The end product of this process gave five new variables: total incarceration rate, white incarceration rate, non-white incarceration rate, male incarceration rate, and female incarceration rate.

The same process was followed for the arrest data. The three-year arrest average for a county or independent city was divided by that county's or independent city's juvenile population (arrest average/juvenile population X 1000), to create one variable for each county or independent city, total arrest rate per 1000 juveniles.

The data taken from the Census for the social disorganization variables (percent

non-white, percent female-headed households, percent dropout, percent poverty, and percent unemployment) was turned into percentages for the population of each county and independent city. For example, percent female-headed households was constructed by dividing the number of female-headed households by the total population for that county or independent city and then multiplying by 100 (number of female-headed households/total population X 100). This procedure was followed for each of the social disorganization variables, for each county and independent city in the study.

The Census categorizes the population of an area as rural or urban. The criteria for determining rural or urban are provided by the Census ³. The rural population for each county and independent city was divided by the total population for that county or independent city and then multiplied by 100 (rural pop./ total pop. X 100). A county or independent city with a rural population of fifty (50) percent or over was classified as rural, and those whose percent rural population was under fifty percent was classified as urban. This resulted in a total of fifty (50) urban counties and independent cities and eighty-six (86) rural communities. The rural and urban variable was recorded as a dummy variable, where rural = 0 and urban = 1.

Descriptive statistics, means and standard deviations were calculated for all variables in the study; dependent, independent, and control. A breakdown of the urban variable into rural and urban produced a mean for each category within each variable. The

³ 1990 Census of Population and Housing, U.S. Department of Commerce, Economics and Statistical Administration Bureau of the Census, Guide Part B, pg. 16 - 18, Issued Jan. 1993.

mean difference was calculated for each variable.

A listwise correlation analysis was run on all the dependent variables (total incarceration rate, white incarceration rate, non-white incarceration rate, male incarceration rate, and female incarceration rate) and all the independent variables (rural/urban, percent dropout, percent poverty, percent female headed households, percent non-white, percent unemployment).

Five multiple regression models (1-5), were created using each of the different dependent variables:

Model 1 - total incarceration rate;

Model 2 - white incarceration rate;

Model 3 - non-white incarceration rate;

Model 4 - male incarceration rate;

Model 5 - female incarceration rate;

The dependent variables were regressed on the independent variables of rural/urban, percent female-headed households, percent non-white, percent unemployment, percent dropout, and percent poverty.

A new set of multiple regression models (6-10), were conducted using the same independent variables as previous, plus the addition of the control variable of arrest rate.

Model 6 - total incarceration rate with control variable;

Model 7 - white incarceration rate with control variable;

Model 8 - non-white incarceration rate with control variable;

Model 9 - male incarceration rate with control variable;

Model 10- female incarceration rate with control variable.

CHAPTER FOUR

RESULTS

Descriptive Statistics

The mean and standard deviation for each variable are shown in Table 1 (Appendix A). The data indicate that non-white incarceration is one and half times higher than white incarceration rate. Male incarceration rate is eight times higher than female incarceration rate. These results show that non-whites and males have the highest incarceration rates. The mean on **arrest rate** is twenty-three times higher than the total **incarceration rate** mean. The large difference between arrest rates and incarceration rate could be the result of many different factors. The larger arrest rate could be a true reflection of the amount of delinquency committed by juveniles in that area. The larger arrest rate could also be the product of discrimination placed on juveniles at the point of arrest, which could affect them throughout the judicial system. Of the social disorganization variables, percent dropout has the largest mean, around 25 percent.

Bivariate Analysis

Table 2 (Appendix A) shows the means for each variable by a rural and urban division. The table indicates that all variables have a higher mean in urban areas than in rural sites, except for percent dropout and percent poverty. All mean differences, except percent non-white, percent unemployment, and percent poverty, are statistically significant. Of the statistically significant mean differences only one, percent dropout, is positive. This indicates that percentage of dropouts in rural areas is significantly higher

than the dropout percentage in urban areas.

Correlation Analysis

The listwise zero order correlation matrix is shown in Table 3 (Appendix A). The data in this table indicates that the rural/urban variable has a significant positive relationship with all of the incarceration rates. This indicates that incarceration rates are significantly higher for urban areas.

The social disorganization variables are mixed in their relationship with each incarceration category. The percent dropout of a county or independent city is negatively and significantly correlated with the white incarceration rate, indicating that as the percentage of dropouts increases, the white incarceration rate also decreases. Percent poverty is significantly correlated with the total and non-white incarceration rates. These relationships are positive. This indicates that as the total and non-white incarceration rate of a county or independent city increases, the percentage of poverty in that area also increases. Percent poverty is also significantly correlated with all of the other social disorganization variables.

The percent non-white of a county or independent city is positively correlated with the total, non-white, male and female incarceration rates. As the percentage of non-whites in a county or independent city increases, so does the total, non-white, male and female incarceration rates. Percent non-white is negatively correlated with white incarceration rates, but this relationship is not significant.

All of the incarceration rates, except white, are significantly correlated with percent female-headed households. Female-headed households has the second highest correlation with the independent variables, behind urban. A county or independent city with a high percentage of female-headed households also has a higher rate of total, non-white, male, and female incarceration. The variable of percent unemployment is not significantly related to any of the incarceration categories. Also, this relationship is positive for all but one category of incarceration, the white incarceration rate.

Regression Analysis

Table 4 (Appendix A) displays the results of a regression analysis for model (1-5). Only two independent variables are significantly related to total incarceration rates, percent female-headed households and percent non-white. As the percent non-white and female-headed households increases, so does the total incarceration rate for an area. The findings of this regression analysis support the second and fourth hypotheses. All other variables in Model One are not significantly related to the total incarceration rate. These findings fail to support hypotheses one, three and five. The R square value is .352, which indicates that over 35 percent of the variance in the total incarceration rate is explained by the variables used in the regression.

As seen in Model Two, the percent of female-headed households and the percent non-white in a locality have a statistically significant effect upon the white incarceration rate. As the percentage of female-headed households increases, so does the white

incarceration rate. However, as the percent non-white increases, the white incarceration rate decreases. Thus, hypothesis four is not supported. Percent unemployment has a negative effect on the white incarceration rate but it is small. In addition, no significant rural/urban difference is found, which fails to support hypothesis one.

Model Three in Table 4 shows the results of a regression analysis for the non-white incarceration rate. Percent non-white is the only independent variable that is significantly associated with non-white incarceration rate, which supports hypothesis four. These findings fail to support hypothesis one. Even though the incarceration rate of non-whites will increase with urban locality, the relationship is not significant. Also, percent female-headed households is not significantly related to non-white incarceration; consequently, hypothesis two is rejected. In addition, percent poverty and percent dropout are not significantly related to non-white incarceration. Therefore, there is no support for hypotheses three and five. The R square value is .367, which indicates that over 36 percent of the variance in the non-white incarceration rate is explained by the variables used in the regression.

The results of Model Four are similar to those of Model Three. Percent non-white is significantly and positively associated with the male incarceration rate which supports hypothesis four. Hypothesis one, two, three, and five are not supported. The R square value is .358, which indicates that over 35 percent of the variance in the male incarceration rate is explained by the variables used in the regression.

The results of Model Five fail to support all hypotheses. The female incarceration

rate is not affected significantly by any of the independent variables. The female incarceration rate is negatively correlated with the percent dropout, percent non-white and percent unemployment variables, but none of these relationships are significant.

Regression Analysis with Arrest Rate as a Control

A second set of regression analysis (Models 6-10) were run that included the addition of the control variable, arrest rate (Table 5, Appendix A). The results in Model Six show that percent non-white, percent poverty, and arrest rate are all significantly associated with the total incarceration rate. The results support hypotheses three and four, as the percent non-white and percent poverty increases, so does the total incarceration rate. However no rural/urban difference was found, which fails to support hypothesis one. The R square value is .516, which indicates that over 51 percent of the variance in the total incarceration rate is explained by the variables used in the regression. This R square value indicates that with the addition of arrest rates, the value goes up over 15 points from the previous R square value.

Model Seven shows that only percent non-white is significantly related to white incarceration rate. Again, the relationship is negative, indicating that as the percent non-white of a county or independent city increases, the white incarceration rate will decrease. The arrest rate variable is not significantly related to white incarceration rates. In contrast to the model that does not control for arrest rates, the percent female headed households is not significantly related to white incarceration rates. Also, no rural/urban difference is

found, and these results fail to support all the hypotheses.

The regression analysis for Model Eight (Table 5) shows that percent non-white, percent poverty, and arrest rate have a significant effect on the non-white incarceration rate. As the percent non-white, percent poverty or the arrest rate increases in a county or independent city, the non-white incarceration rate also increases. These findings support hypotheses three and four. Again, no rural/urban difference is found, which fails to support hypothesis one. In addition, hypotheses two and five were not supported by this analysis. The R square value is .518, which indicates that over 51 percent of the variance in the non-white incarceration rate is explained by the variables used in the regression. This R square value indicates that with the addition of arrest rate the value goes up around 15 points.

Model Nine's regression analysis shows that percent non-white, percent poverty and arrest rate are significantly related to the male incarceration rate. The male incarceration rate increases as the percent non-white, percent poverty, and arrest rate of a county or independent city increases which supports hypotheses three and four. No rural/urban difference is found, which fails to support hypothesis one. In addition, percent female-headed household is not significantly related to the male incarceration rate, failing to support hypothesis two. This conclusion is similar to the findings of the first regression analysis. There is also no support for hypothesis five. The R square value is .533, which indicates that over 53 percent of the variance in the male incarceration rate is explained by the variables used in the regression. This R square value indicates that with the addition of

arrest rates the value went up over 18 points.

The results of the regression analysis for Model Ten are identical to those of Model Five. None of the variables, including the control variable of arrest rate, is significantly related to female incarceration rate. No support is found for any of the hypotheses.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

The results of this study indicate that at the bivariate and multivariate levels, a rural/urban difference for incarceration rates does not exist. Urban juveniles may have a higher rate of incarceration than do rural juveniles, but when arrest rate is controlled no significant rural/urban effect can be found. Percent non-white and percent poverty are the two variables which influence the likelihood of being incarcerated, not the size of the population.

This lack of a significant effect of rural and urban location on incarceration rates indicates that rural and urban areas are really not that different. The way society perceives the rural community is one of peace and neighborly ties. The urban community is stereotyped as one of decay and full of social ills. The findings of this study indicate that a juvenile's place of residence has no significant effect on the chances of being incarcerated. There is no difference between rural and urban societal reaction to the behavior of juveniles and police, thru incarceration.

The regression analysis provided results that indicate the percent non-white in a population is significantly related to all the incarceration rates, except female incarceration rates. As the percent non-white of a county or independent city increases, the white incarceration rate decreases. This could be the result of a differential reaction by society or law enforcement on non-whites. The general population can be more aware and pay closer attention to non-whites as their numbers in a community increase. This bias from

the community to concentrate or focus on non-whites could affect the arrest rate for non-whites in that area. The bias could be so strong that it affects the juvenile throughout the justice process, thus producing higher rates of non-white incarceration. This could be the product of an area's racial bias toward non-whites and that community's willingness to take formal actions against minorities. Percent non-white is significantly related to incarceration rates, as is percent poverty for the total, non-white, and male rates.

These results could also be the product of ethnic-heterogeneity, which is associated with crime because it decreases the power of residents to achieve consensus. With two or more groups in a society, what is done about crime can be slowed by social conflicts or miscommunication between groups (Sampson and Groves, 1989). Social or residential mobility of groups moving in and out of an area can also play a part. Mobility of a community's residents disrupts the social relation networks in that community (Kornhauser 1978). Residential mobility can operate much like a barrier to the development of the community's social bonds and network. So as non-whites are moving into or out of a community, they are being separated from the social network of the community.

Perhaps arrest is a strong form of formal social control. This formal control can influence the outcome of a juvenile's life more so than can an informal control. More research is needed not only on the social controls of juvenile delinquency, but also on what kind of controls are being used. Are these controls social, community, parental or peer controls? Of these controls which are formal and made for the overall control of society

and its residents, what by-products do these controls produce? Which of these controls are informal and are produced by some other organization or process in society? Once the type of control is determined, its affect on the juvenile population can be studied. With continuing research in this area, a more complete understanding of society's influence on its juveniles and all its residents can be known.

The social disorganization variable of poverty is significantly related to non-white and male incarceration rates even when arrest rates are controlled. The significance of this variable with non-whites could be the result of a social bias, not racial but economical. A larger percentage of the non-white population in the United States lives below the poverty line, as compared to the white population. Non-whites may perceive a greater opportunity to make money from illegal actions than from legal ones, they may also hold more respect for illegitimate occupations (Kaplan and Johnson 1991, 119). The wider the social distance between the upper class victims and the lower class offenders, the more likely the offender will be prosecuted, convicted, and seriously punished (Jamieson and Blowers 1993, 245). American society sees poverty as a social problem that is deviant, it is something that needs to be fixed. The controlling systems of society see poverty as the source of many social problems. This bias could lead to an increased arrest rate, which, as was explained earlier, could lead to larger incarceration rates. Another aspect of this economic bias is that with their diminished economic power, non-whites may have a limited number of alternatives in which to turn after arrest. White juveniles who are arrested may have several alternatives from which to chose after arrest, because of their

economic state. These juveniles may be placed in special programs or facilities that their parents can afford. The disadvantaged non-whites do not have this option available to them.

The social disorganization variables of percent dropout and percent poverty affect the arrest rate in different ways. The correlations (Table 3) indicate that percent dropout is significantly correlated with arrest rate, and is also significantly correlated with percent poverty. In the first regression analysis (Table 4) neither social disorganization variable is significantly related to any of the incarceration rates. With the addition of arrest rate to the regression (Table 5) percent poverty becomes significantly related to the total, non-white, and male incarceration rates.

The female incarceration rate is not significantly associated with any of the independent and control variables used in this study. Female juvenile crime and incarceration represent a very small proportion of the total rate for juveniles (Chesney-Lind and Sheldon 1992, 7-14, 141-142). With such a small percentage to work with, the results may not show the true effect of each variable. Additional studies of female juvenile delinquency are needed to determine the affects of varying factors.

An alternative view toward juvenile delinquency would suggest that different factors affect female juveniles. In this view males and females are different in the way society views each, treats each and reacts to each. Because of this different treatment, the effect on delinquency could be different for each. According to Bartusch and Matsueda (1996), juvenile justice officials seem impelled to respond more harshly to deviant

behaviors when committed by females. Parents also seem more willing to report their daughters to authorities for minor offenses than their sons (150). Exploring male and female delinquency by factors or variables that are related to male delinquency may not yield the true reasons for female delinquency. A closer examination of female juvenile delinquency is also needed to show what differences, if any, are apparent between male and female delinquency.

In today's society, a frame of mind still exists that males and females are different in what their needs are from society and what society should do for each. Historically, it was assumed that females were in the need of protection and guidance from certain aspects of society, and this assumption may still be present today (Chesney-Lind and Sheldon 1992, 12-15). The idea that females are different and do need this "extra" protection could result in females getting more informal controls placed on them. These informal controls will increase the control over a female's actions and will influence her to "right" her ways before formal official actions are taken.

As society changes, juvenile's lives will also change. Continued research on juveniles is needed because of this fact. New variables could be formed and new theories of juvenile crime could be developed through integrated theory. However, studies using old theories and variables must also be continued. As society changes, so may the effect of these "traditional" variables on delinquency. Old theories must be retested to see what aspects of society have changed. Consequently, ecological research, and research of all kinds, must be continued to examine its relationship to juvenile delinquency.

APPENDIX A