Tracking the Causes and Consequences of Racial Disparities in Imprisonment

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The project has two goals. First, it seeks to explain both the overall trend of rising imprisonment and rising racial disparities in imprisonment, and geographic and temporal differences in these trends. Official data sets on arrests, imprisonment, and social, economic, and demographic factors are merged to create a new longitudinal data set that permits the researchers to control for current and previous reported crimes and race-specific arrest rates as well as social factors in predicting imprisonment rates. Cross-sectionally, the most serious crime is found to account for very little of the racial disparity in prison admissions: differential arrest rates and differential prison/arrest ratios in drug offenses and property crimes account for the majority of imprisonment disparity. The research seeks to determine the factors that lead to high enforcement levels against African Americans for drug offenses and lower-level offenses, testing hypotheses that this enforcement arises as a reaction to prior elevated levels of serious violent crimes, to increasing in-migration or integration of minorities with whites, to exogenous macroeconomic or political factors that affect crime or policing, or to "shocks" such as drug panics. Secondly, it seeks to identify the consequences of high rates of imprisonment of African Americans, testing the hypotheses that, net of controls, black imprisonment rates adversely affects black economic well-being and family stability in a manner that indirectly contribute to increasing crime rates. These hypotheses are tested with a longitudinal analysis of a new county-level data set created by merging existing public data sets.

The research is guided by an integrated theoretical schema of the relation among crime, law enforcement, political processes, racial segregation and racial discrimination, and social and economic well-being. It recognizes that law enforcement is never a simple mechanical response to crime, but is always politically influenced. This research suggests ways in which political processes may respond to social, economic, and demographic factors as well as to crime and the internal logic of politics in influencing crime enforcement. It emphasizes that "crime" must not be viewed as a single entity, but as a set of types of crimes which have different kinds of relationships to social and economic factors, to political factors, and to law enforcement, and specifically problematizes the relationship between criminal justice responses to lower-level offenses and rates of serious crimes. It addresses the paradox that the size of the black population positively affects the level of police resources and white fear of crime, but per capita rates of black arrest and imprisonment are higher where blacks are a smaller proportion of the population. Finally, it treats race and racial segregation as central – but not static – features of the structure of society which interact with economic conditions, crime, and corrections.

Existing official data sets are processed to create a new longitudinal data set available suitable for addressing these and other related research questions. The new data set contains county-level data on race- and offense- specific arrest and incarceration rates, along with a wide variety of social, economic, and legal indicators. It is constructed for 1983-1997 by merging data from the National Corrections Reporting Program and the Uniform Crime Reports, along with other sources of data for law enforcement, corrections, social, economic, and demographic factors from the Census Bureau, the Bureau of Justice Statistics, and other sources. The result is a major new data set that will be an important part of the social science and crime research infrastructure.

Tracking the Causes and Consequences of Racial Disparities in Imprisonment

High incarceration rates of African Americans, and growing incarceration rates of Hispanics, American Indians, and even non-Hispanic whites, have become a major feature of life in the United States. In the mid-1970s, the US embarked on an unprecedented social experiment. After 200 years of near-stability, US imprisonment rates rose exponentially, with a higher growth coefficient for blacks off an initially-higher base, so the black-white disparity has been increasing. By 2000, the magnitude of black incarceration had become astronomical by any standard. The "lifetime expectancy" of spending time in prison is now estimated to be 29% for a young black man (Bureau of Justice Statistics,1999). Such high incarceration rates of young men must have major impacts on black women, black families, black children and black communities, not to mention the rising rate of incarceration of black women, most of them mothers. Two percent of US children now have an incarcerated parent (Austin et al. 2000). It is improbable that black communities could be better off under this level of incarceration than they would be with lower incarceration rates, even though black people are disproportionately the victims of black offenders. But the data do not exist that would permit an adequate assessment of these effects.

There are hot debates about the forces driving these growing imprisonment rates and racial disparities. Although national-level political decisions are clearly at the center of the process, the extent and speed of adoption of these trends at a local level varies and can shed light on the forces at work. Are racial disparities in arrest and imprisonment fundamentally a response to crime? Are they fundamentally a form of repression, a response to the urban insurrections of the late 1960s and a way of maintaining white dominance over the black population? A consequence of migration and age structure patterns? Or perhaps essentially an accident, an unintended effect of policies enacted for other reasons, or the result of diffusion processes? Past research on these topics has been hampered by inadequate data.

Criminology, political sociology, family sociology, stratification, and poverty studies often operate as disconnected disciplines, but understanding the ramifications of black imprisonment rates requires synthetic thinking and synthetic data that cross these sub-disciplinary boundaries. The entire system of economic well-being, family life, crime, enforcement, and punishment is a set of tightly-interconnected feedback loops, and it is extremely difficult to pull apart the different effects with cross-sectional data or a time series on a limited number of cases or time periods and an inadequately specified model. We propose to process and merge existing public data sets to create a longitudinal panel data file capable of identifying the magnitudes of these reciprocal effects.

The Magnitude of the problem

The United States now has the highest rate of incarceration in the world: 690 of 100,000, a rate that is four to six times that of most of the world's nations (Mauer 1999), and African Americans are imprisoned nationally at about seven times the rate for European Americans. Even this ratio is attenuated because it includes women and children. Imprisonment disparities are highest in the prison-prone ages, ranging from 8.8 to 9.5 for men between 18 and 30, and from 7.6 to 8.8 for women between 30 and 44; the disparity ratio for Hispanics is about 3.2 for both men and women (Bureau of Justice Statistics, Prisoners in 1999). These disparities translate into huge imprisonment rates, especially for young black men. The overall black male imprisonment rate in 1999 was 3408 (that is 3.4%), compared with 417 for white men and 1335 for Hispanic men. The highest rate in 1999 was 9.4% for black men aged 25-29, an astounding percentage to be imprisoned in a given year – and this does not even include the much larger proportion who are on in jail or on probation or parole. When those in jail are included, the total incarceration rate was 12.2% in 1996 for young men (Western and Pettit 2000). Bureau of Justice Statistics statisticians estimate that a third of the young black male population is under the supervision of the correctional system, and that the "lifetime expectancy" of spending time in prison is 29% for a young black man today.

Historical Trends in Imprisonment Rates

Racial disparities in imprisonment grew throughout the 20th century, from about 2.5 in 1926 to around 7. Langan (1991) attributes the rising disparity to black migration and high black imprisonment in northern states. Our regression analysis of state prison admissions 1926-1986 indicates that percentage black is a consistent negative predictor of black imprisonment rates, even when an earlier black imprisonment rate and the white imprisonment rate are controlled. However, prior to 1975, much of the growing disparity was due to declines in white imprisonment rates rather than a rise in black rates. White rate calculations over time may be distorted by changing practices in coding Hispanics as white and the proportion Hispanic in "white" figures, a complexity that is beyond the scope of this proposal. Between 1980 and 1999, the total incarceration rate rose 155 percent for whites, 240 percent for blacks, and 341 percent for Hispanics (Austin et al., 2000).

Both black and white imprisonment fluctuated around relatively low levels prior to 1975, but began growing exponentially about 1975. Just before the growth spurt, both black and white prison admission rates had fallen between 1960 and 1975 and, as figure 1 indicates, black imprisonment accelerated from the turning point much more rapidly than white imprisonment. The major policy shift arose as "law and order" became a political slogan in the wake of the turmoil of the 1960s. National legislation greatly increased the funding for police, and popular sentiment backed tough anti-crime policies. Civil insurrections were a impetus for greater police enforcement (Jackson 1989). Crime was high in the 1970s as well, as the baby boom generation was in the peak crime-generating years, although Mauer (1999) argues that the greater reporting levels that followed increased police funding made the rise in crime appear greater than it was. There were general declines in crime victimization for both blacks and whites after 1980, although there were high black homicide rates in the late 1980s while white homicide rates remained relatively stable (Sampson and Lauritsen 1997; Boggess and Bound 1997). Despite the decline in crime, imprisonment grew exponentially. The index crime rate, principally larceny/theft, rose modestly during the recession of the early 1990s (Boggess and Bound 1997), and then index crime declined in the 1990s, while imprisonment continued to grow. After 1980, the rise in imprisonment was fueled increasingly by drug offenses, which are not part of the crime index. The proportion of drug offenders in US prisons rose from 5.7% in 1979 to 21.5% in 1991 (Sampson and Lauritsen 1997) and there was a sharp increase in black, but not white, drug arrests 1986-1991 (Tonry 1997).

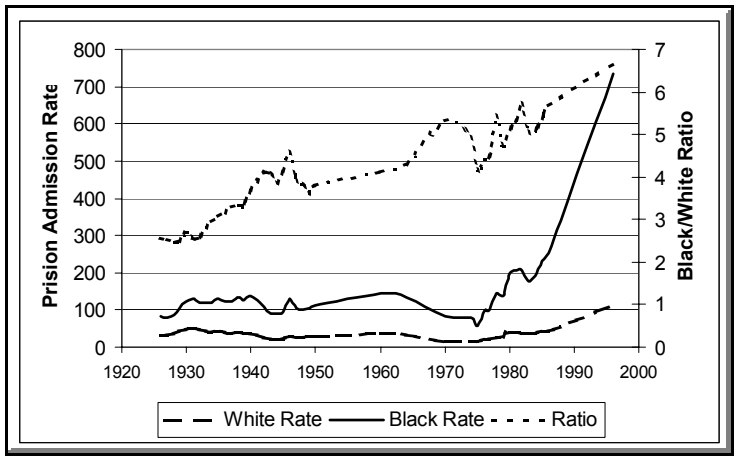

Figure 1. Prison admission rates per 100,000

Causes of Racial Disparities in Spiraling Imprisonment

Crime

Social scientists have long debated causes of the large racial disparity in imprisonment. Normative theories say that differences in imprisonment rates simply track differences in crime rates. An important early piece, Blumstein (1982), partitioned the imprisonment disparity for 1974 and 1979 into the proportion due to arrests and the proportion due to the ratio of imprisonment net of arrest, finding that 80% of the total disparity was due to arrests, but that arrests accounted for much less of the disparity for drug offenses and larceny/theft. A follow-up using 1991 data found that similar patterns by offense held, but that more inmates were imprisoned for drug offenses (Blumstein 1993). Other studies have employed variations on this methodology, including using multiplicative models with logarithmic transformations (Boggess and Bound 1997), disaggregating by geographic unit as well as offense (Crutchfield, Bridges, and Pitchford 1994), and examining counties within a single state (Austin and Allen 2000). Each finds lower percentages of the disparity explained by arrests and a higher percentage of drug offenses. Explained proportions are lower when prison admissions are used. A count of who is in prison at any given time yields a high proportion of people who have long sentences for serious crimes, but most people enter prison on short sentences for less serious crimes. (Lynch and Sabol 1997, among others, make this point). Annual prison admissions are more equivalent to annual arrest rates. Our decomposition of prison admissions in 1996 method found that 54% of the racial disparity was accounted for by arrests. We also summed across offenses, and found that only 2% of the disparity is due to homicide and 2% to sexual assault; even robbery, the serious crime with the largest racial disparity in arrests, accounts for only 11% of the disparity (7% due to arrest and 4% to the prison/arrest ratio). Assault accounts for another 9% (4% arrests, 5% p/a).The offenses fueling prison admission disparities are drug offenses, 39% (12% arrests, 27% p/a) and non-violent property offenses 21% (9% arrests, 12% p/a). We grouped murder and manslaughter together in this analysis, but Lynch and Sabol (1997) stress the importance of distinguishing murder from other homicides, because the imprisonment rate for manslaughter is quite low and discretionary; we will make this distinction in the proposed research.

Studies of sentencing reveal that legal factors such as the seriousness of the actual crime and prior criminal record account for most of the racial differences in sentencing, although there is usually some remaining "unexplained" racial difference (e.g. Chiricos 1991, Kramer and Steffensmeir 1993, Chiricos and Crawford 1995,

Jackson 1997, Gorton and Boies 1999, Steffensmeier and Demuth 2000, Austin et al. 2000). But "prior record" itself is subject to the large racial and class disparities in the policing of lesser offenses. Comparisons of UCR data and victimization surveys generally conclude that the UCR data do not distort class and race patterns for the most serious "common law" crimes of homicide, robbery, and rape (see e.g. Hindelang 1978; Hindelang, Hirschi, Weis 1979; Cohen and Land 1984; Elliott and Ageton 1980; O'Brien, Shichor, and Decker 1980; Bogges 1997). However, the arrest rates for less serious crimes, especially drug crimes, but also thefts, assaults, and public order crimes, are much more subject to policy choices about enforcement and policing practices. In fact, Sampson (1985) used the number of arrests per officer for relatively minor offenses as a proxy for aggressiveness of policing.

Detailed studies of drug enforcement reveal huge disparities in the probability of being arrested on drug charges net of actual drug use (e.g. Human Rights Watch 1996, Mauer 1997). Mauer and Huling (1995) stress that although black arrests for violent crimes are much higher than those for whites, the disproportion has remained constant for a long time, while the disproportion in drug arrests has been growing. Snyder (1999) reports that juvenile violent crime arrests peaked in about 1994 and has been declining, but there have been big increases not only in drug abuse arrests, but in simple assault and curfew violations."Drug sweeps," in which there are mass arrests of people in a particular area known for drug dealing, also result in charges for a wide variety of other offenses. It is also important to remember that all thefts count as index crimes, even shoplifting a pack of gum. In 1999, 52.5% of all index crimes were larceny/theft. Arrests for less serious offenses which do not, of themselves, usually lead to prison terms contribute to imprisonment disparities through prior records (Mauer and Huling 1995).

Policy choices and crime-reduction theories

Spiraling imprisonment rates are due to intentional policy changes designed to increase imprisonment. Those who support these policies do so because of cost-benefit analyses of the crime-reduction effects of imprisonment through incapacitation and deterrence (e.g. Levitt 1996). However, if imprisonment reduces crime and imprisonment is a response to crime, then the two should come into equilibrium at some steady state: exponential growth in imprisonment against modestly falling crime rates is not consistent with the theory. Two reports by the National Academy of Sciences have rejected incapacitation theory (Austin et al. 2000). Canela-Cacho, Blumstein, and Cohen (1997) argue there are diminishing returns to incarceration as less serious offenders are imprisoned and deterrence weakens as imprisonment becomes common. Blumstein (1998) says incapacitation theory fails to consider career termination after long sentences and criminogenic prison experiences, which are especially likely with drug offenders. A cost-benefit analysis by Piehl, Useem, and DiIulio (1999) supported the imprisonment of most offenders, but found that imprisonment of drug offenders was not cost effective. Lynch and Sabol (1997) argue that drug enforcement does not reduce crime because most drug dealing is due to economic motivations and most drug dealers have short careers, anyway.

An additional wrinkle is added by Miron (1999), who develops an economic model of dispute resolution to demonstrate why increased enforcement of drug laws increases violence by creating blacks markets that cannot rely on legal dispute resolution institutions. His empirical analysis shows that in the 20th century in the US, controlling for age composition, incarceration rate, economic conditions, gun availability, and the death penalty, federal funds expended on drug and alcohol prohibition efforts substantially raised the homicide rate 25-75% in the US over the past 100 years. He suggests that the degree of drug enforcement may influence the level of violence across locations. The rise in violence and organized crime was one reason for the repeal of alcohol prohibition, and Miron implies that the drug war itself may have been causative in the late-1980s rise in black homicides.

Variations in Race-Specific Incarceration Rates and Racial Disparities

A number of studies have attempted to identify the predictors of levels of imprisonment at the state or sub-state level from crime and other factors, including the percentage of the population that is black (e.g. Arvanites 1993, 1997, Arvanites and Asher 1998, Jacobs and Carmichael 2001). Positive correlations between percentage black and total imprisonment have been used to support "minority threat" or "black criminality" explanations, but there is an aggregation error. Because the black-white differentials in arrest and imprisonment are so high, percent black is nearly always a significant predictor of total imprisonment rates but, in fact, the black imprisonment rate is generally lower where the black population percentage is higher. (Jackson [1989] makes this point regarding city-level arrest rates.) The southern "black belt" has lower black incarceration rates than the north and west. Using log transformations and multiplicative models, Bridges and Crutchfield (1988) analyzed state-level black and white imprisonment rates in 1982, concluding that the percentage black reduces white imprisonment rates even more than black rates, thus creating enforcement regimes that are racially more equal. Our analysis of new prison admissions found different results: black rates are explained by white rates (a regime control, bivariate r^2=.3), percent black (negative) and black/white poverty ratio (total R^2=.65, .72 if log transformations are used). If white rates are not controlled, the only significant predictor of the black rate is the percentage black (negative, R^2=.28). Predicting white rates with no control for black rates, the strongest predictors are white unemployment (positive) and the percentage

urban (negative), R^2=.36. If a control for black prison admission rates is included, we just get the inverse of the black equation. Overall, there are three lessons: The predictors of the white and black imprisonment rates are not the same unless each is controlled for the other, controlling for white rates further specifies the predictors of the black rates, and log transformations appear to be preferable. There are too few degrees of freedom for state imprisonment rates to be explained by many more factors.

County-level studies also suggest the importance of population distributions and the value of further disaggregation. Jackson (1989) showed that the proportion black led to greater police expenditures in the 1970s, and provides detailed case studies which show that communities differed markedly in their social control responses. Bridges, Crutchfield and Simpson (1987) used multiplicative models for Washington counties 1980-1982, finding that nonwhites were more likely to be imprisoned in urbanized places with relatively large minority populations. However, only 37% of Washington's minorities were black in 1981 – 42% were Asian, and 21% American Indian. (Percentages calculated from the Census Bureau's population estimates for 1981.) Asians overall have lower arrest and imprisonment rates than whites, and American Indian rates are substantially lower than black. Blacks were probably more urbanized than Asians and American Indians, thus producing the result. Nevertheless, the county-level approach and the multiplicative models are worth emulating.

The negative relation between percent black and the black imprisonment and arrest rates holds up in Wisconsin counties. Milwaukee County, with 75% of the state's black population, had a black prison admission rate of 943 in 1996, lower than the state average of 1094. (The national black rate was 754.) The rates for the five other Wisconsin counties with have more than 1000 non-prisoner black residents range from 1380 to 2541. Arrest patterns are similar. The black adult total arrest rate in Dane County (4% black) in 1999 was 56,079 per 100,000, compared to 32,402 for Milwaukee County (26% black). (The black/white arrest ratio is 9.4 for Dane and 4.7 for Milwaukee.) Roscigno and Bruce (1995) similarly found that North Carolina counties with smaller black populations had higher rates of jailing blacks than did counties with larger black populations.

Conflict Models, Political Processes, and Ethnic Conflict in Law Enforcement

The imprisonment boom is not a direct result of crime, but of political decisions about how to respond to crime. Mauer (1999) argues that the 1970s watershed is due to a shift from indeterminate to determinate sentencing and a wave of mandatory minimum sentencing policies which began with New York's "Rockefeller Drug Laws" in 1973. Since then, penalties and racial disparities have continued to escalate, with a major push during the Reagan administration of the 1980s. To a political sociologist, the timing of the shift clearly points to racial politics: it began under Nixon who ran for president on a "law and order" platform that was a response to the race riots and anti-war protests of the late 1960s and was exacerbated in the era of race-coded politics of the 1980s.Within these broad political trends, however, particular states and particular localities within states have markedly different police enforcement and arrest and judicial sentencing practices. Prior research implicates race relations as a central factor in law enforcement. The Law Enforcement and Assistance Act (LEAA) was a response to the 1960s riots, to beef up police crowd control capacities, and cities with poor police-minority relations often used the funds to stock up on hardware (Jackson 1989). Jackson's analysis of police department expenditures in the 1970s showed that increases were positively correlated with the black percentage in the population, especially early in the decade. She views the size of the minority population in an ethnic conflict perspective, seeing the minority population as a threat to the majority's dominance, which leads to a sense of threat, a fear of crime, and a fear of loss of dominance which, in turn, lead to a social control response. Jackson also found that by 1980, the effect of percent Hispanic on law enforcement expenditures had grown dramatically, especially in the west. Greenberg, Kesslerand Loftin (1985) assessed the effect of crime on the number of police in cities in 1950, 1960, 1970, and 1980, concluding that racial composition affected the fear of crime and, thus, support for more police.

Structures of inequality and political power affect social control practices (Liska 1987, 1997). Although the poor are more often victimized, Cohen, Kluegel, and Land (1981) argue that, net of exposure to the risk of crime, the affluent are victimized more often, because they are the most attractive targets. This gives the affluent a particular interest in crime control. Jacobs and his colleagues have developed political models of crime control which emphasize inequality, but do not separate the races. In several studies with cross-sectional data from 1960 to1970, inequality predicted imprisonment for burglary and other property crimes, but not violent crime (Jacobs 1978, 1979b, 1981). The effect of inequality on police force size was weak in 1960 but strong in 1970 (Jacobs 1979c), while the number killed by police between 1960 and 1970 was explained by inequality, violent crime, and percentage black (Jacobs 1979a). Economic inequality, unmarried births, Republican political strength and being an election year affected US prison admissions 1950-1991 (Jacobs and Helms 1996), while police expenditures were most predicted by inequality measures sensitive to the proportion of affluent, and Republican political strength (Jacobs 1997). However, these results may be due to trend effects, since both inequality and unmarried births have been increasing since the mid-1970s, when imprisonment acceleration started, and the series ends before Clinton

took office in 1992.

The trade-offs between social welfare programs and crime control are discussed theoretically by Liska (1997), and research supports these patterns. Fording (2001) analyzed US trends 1960-1970, arguing that AFDC and incarceration are alternate modes of social control, and the choice between them is affected by the proportion of the population who are black, if they can vote. The trends of the 1980s and 1990s support the tradeoff: substantial welfare cuts and rising imprisonment. A series of articles report that levels of AFDC payments reduce homicide, burglary, property crime, and the effects of economic deprivation on crime (DeFronzo 1997, 1996a, b; DeFronzo and Hannon 1996; Hannon and DeFronzo 1998a, b).

US inequality appears to center on race more than class, although class is highly correlated with race: the black community with the highest economic level is still below the average for white communities (Sampson 1987). Liska (1982) showed that fear of crime is affected by percentage of minorities in a community, and Pager and Quillian (2001) show that fear of crime is affected by the percentage of black men in an area, after reported crime is controlled. Tonry's (1997) account of the late 1980s "war on drugs" argues that policy makers knew the "war" would have no effect on drug use and would be racially disparate, but chose to do it anyway because of the potential political benefits in announcing a policy that would be popular. Public support for anti-drug prohibitionist policies goes up as actual usage goes down. Public health data showed that drug use was already in a steep decline. The only serious drug abuse problem was showing up in emergency room admissions in poor areas, among the populations most likely to be missed in public health and opinion surveys. Blumstein (1997) shows that black but not white drug arrests soared in the late 1980s.

Comparative research indicates that ethnic or racial disparities in incarceration occur in many countries, with ratios comparable to those seen in the US, although the absolute rates are generally lower. (See the chapters in Tonry, ed, 1997.) For example, Australian Aborigines' incarceration rate of 881 is 12.2 times that of non-Aborigines, but about 40% of the US black rate (Broadhurst 1997 and Australian Bureau of Statistics 1994). However, Ontario, Canada has black and aboriginal incarceration rates higher than those in the US, although lower than some US states (Roberts and Doob 1997).

Federal funding, public opinion, and seizure laws all provide incentives to police departments to focus their enforcement efforts on drug offenses and poor blacks. Mast, Benson & Rasmussen (2000) found that police departments that could retain seized assets raised drug arrests as a proportion of total arrests by about 20% and drug arrest rates by about 18%. Drug investigation and arrests are much easier in poor minority neighborhoods where people congregate in the streets. It takes more investigation and effort to track the more hidden crimes of the affluent. This argument arose in our conversations with local Madison police and in conversations Mast et al. report. The Human Rights Watch's study of drug policing in Georgia (1996) concluded that police focused drug enforcement in poor black areas because it was easier, and condemned the practice as a human rights violation.

There are growing economic interests in prisons. Schlosser (1998) documents the role of private for-profit prisons and points to their support for "tough on crime" policies as a financial investment. Distressed white rural communities look to prisons as "economic development" resources to provide needed jobs (Beale 1996). Black people are arrested and imprisoned in cities and sent off to provide corrections jobs for rural whites. Businesses are increasingly using cheap prison labor as a way to compete in global markets (Leonhardt 2000).These political-economic forces that gain from imprisonment are part of the system affecting deprived black communities.

Segregation is a way of dealing with inequality that may help to explain the seeming paradox that areas with higher black populations spend more on police enforcement, but have lower per capita black arrest and imprisonment rates. Liska and Chamlin (1984) theorize how the percentage black affects arrests: it increases fear of crime, leads to larger police force and also pressure to arrest, thus raising arrest rates, but it also raises the statistical possibility of intra-racial rather than interracial crime, which is less threatening to the majority. Segregation is a form of social control, which reduces the chance of interracial crime and, thus, minority arrests. They found that both white and minority arrests for both personal and property crimes are lower the higher the segregation. White property arrests are in addition positively related to income inequality and negatively related to subsequent police size. Minority property and personal crime arrests show most of the same relations: positive with income inequality and negative with percent nonwhite; in addition, minority property arrests are negatively related to the percent poor, while minority personal arrests are positively related to subsequent police size. Messner and South (1986) used victimization data to assess intra- and interracial robbery rates in 25 cities and report that the relative sizes and residential segregation of racial groups was found to be more predictive than poverty or racial inequality for predicting robbery. These studies have sparked much of our thinking about the dynamics of politics and crime as populations mix and then resegregate.

The evidence is overwhelming that the spiraling imprisonment of African Americans is due largely to the political decisions and organizational incentives around the drug war. It is precisely a problem of externalities. The

people bearing the cost of the drug war are not the same people as those benefitting from it. This is ethnic politics. Nationally, the policies were put in place because the people advocating them expected to benefit from the policies, and the group who would be harmed were a politically-weak minority. There have been few studies of the local correlates of the drug war, beyond Mast et al.'s emphasis on seizure laws. However, prior research points to the likelihood that local racial politics will produce differing responses. In particular, the size of the black population tends to be an impetus to greater white fear of crime and greater police resources, at the same time the rate of black arrest and imprisonment tends to be higher where blacks are a smaller percentage of the population. It also seems likely that these effects will be most exacerbated where the black population is increasing, but we know of no prior research that has examined these dynamics over time.

There is also a need to investigate the link between drug crimes and property crimes. Baumer (1994) reports that city-level robbery rates are higher when the self-reported cocaine use of arrestees is higher, net of controls. There is evidence of property crime due to drug crimes (reviewed by Austin et al. 2000), and the imprisonment rates for the mildest property crime, larceny/theft, have also been rising. Liska and Chamlin (1984) argue that residential segregation by economic status and heavy-handed policing are alternate mechanisms for protecting the affluent from property crimes by the disadvantaged. Race is highly correlated with economic standing and thus racial segregation accomplishes income segregation. Fear of crime is a major reason for whites' self-segregation away from blacks, and for their support for heavy-handed law enforcement in the face of closer proximity to blacks. The drug war could be a proxy for a more diffuse concern with blacks as the source of crime. Although Liska argues that larger black populations reduce black per capita arrests through increasing the ratio of intra- to inter-racial crime, and such statistical possibilities must be controlled for, larger black populations are also a larger and thus politically more important fraction of the electorate, as well as a larger and more important part of the work force. As recent events in Florida dramatized, this political clout may be mediated by the extent to which felons are disenfranchised, but numbers still matter in any political process.

Arrest and Imprisonment as Repression

Human rights groups distinguish between arrest and imprisonment as tools of political repression, and arrest an imprisonment as punishment for crime. But the activities for which people are arrested in police states are always illegal in that state, and the boundary between political and nonpolitical arrests can blur. The arrest and imprisonment rates for African Americans in some locales are at levels that would be considered human rights violations in other contexts. Criminologists have long focused attention on arrests for index crimes, using them as a proxy for crime commission. But drug offenses are not index crimes, and yet they are driving prison admissions. Arrests for minor crimes can be viewed as a proxy for surveillance and, perhaps, repression. When the authorities are monitoring a population, they stop them often just to see what they are doing, and arrest them on petty offenses. In other countries, constant and visible policing is a way to intimidate a population politically. In the US, constant and visible policing is seen as a way to prevent crime among a black population that, it is assumed, would otherwise commit much more crime than it does. Tillman estimated that 2/3 of black men in California had been arrested at least once between the ages of 18 and 29, compared to 1/3 of white men (cited by Mauer and Huling 1995). Using Uniform Crime Report data from Wisconsin's Office of Justice Assistance, we found that the annual black adult arrest rates per 100,000 adult residents were 32,402 for Milwaukee County and 56,079 for Dane County – the equivalents of 32% an 56% in one year for both sexes and all ages over 17. White arrest rates were 5,969 and 6,904, respectively. Minor offenses, especially "other except traffic," disorderly conduct, larceny/theft, and non-aggravated assault are the bulk of these arrests. Of course some people are arrested multiple times, but arrest rates this high can only arise when populations are intensively policed. These huge arrest disparities play into Wisconsin's 20:1 disparity in imprisonment. Gross arrest rates including minor offenses are not generally published by race. To get a comparison, we divided the published national adult arrest totals for blacks and whites for 1999 by the national adult population figures, yielding arrest rates of 9175 for blacks and 3042 for whites. These total national rates are low because the national arrest totals have not been adjusted for under-reporting in many states; the FBI does not publish racial breakdowns of the populations in reporting agencies.

Racial disparities in arrests for serious violent crimes are as high or higher than those for most of the less serious crimes (except drug offenses), and some argue that the disparity in arrests for lesser offenses is appropriate as a policing response to the disparities in serious crimes. However, many more people are arrested for less serious crimes than for serious crimes. Many of these arrests for less serious offenses arise because people are stopped just to see if they are doing anything wrong. Studies of police stops without resulting charges also show large racial disparities. For example, Lambreth (1998) found that blacks were 18% of traffic violators on I-95 in Maryland but 79% of drivers stopped and searched; of those searched, 29 percent of whites and 28 percent of blacks were discovered to possess contraband. The effect high rates of less serious arrests is to bring many people under the supervision of the police who have not committed any serious crime.

Most of the 1960s riots were precipitated by charges of police brutality in a context of economic deprivation. Policing and black imprisonment accelerated in the 1970s, after the riots and the crest of the civil rights movement had passed, and has grown exponentially since then. The intense surveillance and high imprisonment rates in black communities that have come with the drug war seem likely to be an explanation for why steep welfare cuts and declining real wages of the lowest quintile have not led to rebellion. If this is not a product of a conscious political plan to repress African Americans, then we need to understand just how and why these repressive forces have spread without conscious intent. An investigation over time and across localities of the dynamics of police resources, reported crime, arrests, and imprisonment is needed to shed light on these processes. Arrests for lesser offenses are an important clue.

Thinking of arrest as repression also opens the door to considering what theories of repression have to say about the dynamics of crime control. Crime control theory is based on a cost-benefit model which supposes that enforcement reduces crime, but scholars of state repression have long known that repression is a two-edged sword: it suppresses rebellion, but it also increases hostility to the regime and enlarges the population willing to rebel. Once a state embarks on a repressive strategy, it has to keep it up, because any weakness will lead the pent-up resistance to explode. Youths and young adults who are stopped repeatedly and asked for ID and taken downtown for small infractions rarely exhibit an increased sense of the legitimacy of the political-economic system they live in. The criminology literature stresses the importance of intervention in breaking a cycle of juvenile delinquency and leading youths to desist from crime and adopt legitimate lifestyles before their crimes become serious (Sampson 1992), but it does not indicate that intense surveillance is a way to accomplish this aim. To the contrary, spending time in jail and prison has become a rite of passage for many youth, perhaps not entirely dissimilar in its meaning to the pride 1960s civil rights and anti-war activists took in having been arrested for the cause.

Deprivation, Families, Segregation and Crime as a System

The continuing high rates of African American arrests for drug offenses and imprisonments despite enormously high level of police enforcement calls into question the value of such enforcement policies when they demonstrably have not reduced the supply of drugs. But in addition, it forces the question: why do people keep getting caught selling drugs in the face of such repression? To address this question, we have to consider the interrelations between economic deprivation and crime and law enforcement.

That poorer individuals and poorer communities have higher crime rates is almost universally acknowledged, although there are significant debates about whether unemployment or low income and absolute or relative deprivation are most salient, and about the relative size of the economic effects versus other factors. In the interest of space, we will assume that the reviewers will stipulate to this claim and omit the literature review, although references are included in the bibliography. We will instead focus on the literature centering on black communities. Scholars are increasingly examining the interrelations among race, racial segregation, macroeconomic changes, family structure, and crime. In a recent theoretical model, Sampson and Wilson (1995) stress the importance of communities, and the ways in which residential segregation and residential inequality give rise to social isolation and ecological concentrations of truly disadvantaged, which in turn increases crime. The key linkages are: (1) racial segregation and isolation concentrate poverty,(2) economic deprivation, especially unemployment, reduces the pool of marriageable males and increases female headed households, (3) family disruption and concentrated poverty creates the conditions which foster crime, (4) crime destabilizes neighborhoods as those who can move out.

Segregation, Poverty, Crime

Many studies have focused on violent crime, especially homicide, and have found that it is concentrated in segregated poor black neighborhoods which lost an economic base with industrial restructuring (Shihadeh and Steffensmeier 1994; Shihadeh and Flynn 1996; Shihadeh and Maume 1997; Shihadeh and Ousey 1998; Elliott, Wilson, and Huizinga 1996; Lee 2000). Unfortunately, it is unclear whether the predictors of violent crime can generalize. It is possible that black violent crime is associated with segregation and isolation, while property crime is associated with proximity to the non-poor, who may have more worth stealing.

Crime and segregation are closely related. Morenoff and Sampson (1997) show how crime interacts with segregation, as crime triggers population declines in core inner-city neighborhoods, blacks fleeing the core poverty neighborhoods move into peripheral areas, and these areas experience both increased crime and black population gain, while whites fleeing crime can move into lower-crime areas. Shihadeh and Ousey (1997) account for the frequent finding that the degree of suburbanization of a city is positively related to the rate of serious crime in the central city by treating suburbanization as part of a broader metropolitan expansion process that isolates center-city black communities; they find that suburbanization is strongly related to the central-city rates of crime by blacks but not whites, and argue that suburbanization increases crime rate by isolating blacks.

Too close a focus on the impoverished inner-city neighborhoods may distract attention from some of the engines

of causation. Fear of crime and white (and middle class black) flight lead to concentrated black poverty and generate the downward-spiraling dynamics that have been so well documented in the past two decades. But these impoverished areas are losing population. Not only the well-off are moving out, but the poor, as they try their fortunes elsewhere, where the opportunities look better. Where are they going, and what is happening to them? Morenoff and Sampson (1997) show that, within the city, as they move into neighborhoods, the non-poor move out, so that the neighborhoods become poor again. But this is not the only process. Out in the suburbs, or in smaller cities some distance away, the poor are trying to make better lives for themselves among the non-poor, and small previously-white cities are experiencing "racial problems" and white flight to their suburbs.

Imprisonment data from Wisconsin counties suggest that these smaller communities where poverty is not concentrated are responding to the influx of newcomers with extremely high rates of arrest and imprisonment. A political model might view this as a rather direct form of ethnic conflict, a way of sending a message that the migrants are not welcome. But the migrants do bring with them higher crime rates, and the intense policing may be a response to a spike in serious crime rates. Aggressive policing may make it harder for them to establish legitimate means of support. To sort out these kinds of dynamics, it is necessary to follow communities across time at relatively short intervals. This line of argument would suggest that an area with a small black population would first experience an increase in the percentage black and the percentage poor as well as an increase in property crime, then an increase in imprisonment rates and heavy-handed policing of lesser offenses coupled with various affluent-flight strategies to reduce the exposure of the affluent to property crimes, then a growing concentration of poverty and a concomitant rise in violent crime.

Family Disruption and Delinquency

Economic deprivation increases family disruption which, in turn, increases crime. Sampson (1987) showed that effect of black adult male joblessness on black murder and robbery in US cities in 1980 was mediated through its effects on family disruption. Bennett and Fraser (2000) summarize recent research father absence and the effects of poverty in contributing to "street codes" which foster crime. The general argument is that single-parent households foster crime because of the parent's inability to provide adequate supervision. Single-parent homes are not the sole family problem implicated in crime. Hagan (1993) found that parental criminality in Britain was more important than parental unemployment in predicting adult crime and adult unemployment; embeddedness in delinquent networks was also an important factor. Segregation and the high rates of crime have amplifying effects so that even non-disrupted non-criminal families are affected by the context around them. Patillo's (1998) study of black middle class people finds that dense social networks facilitate control and reduce crime, but that minority networks include more criminals, which weakens the capacity of networks to inhibit criminal involvement, even outside the "concentrations of poverty." Alba, Logan, and Bellair (1994) show that segregation exacerbates crime, that blacks are more exposed than whites to crime in their places of residence, net of their own characteristics.

Despite these negative factors, it is very important to recognize that not all youths who commit delinquent acts, will end up as serious criminals. Based on data from London, UK, 1950-80, Hagan and Palloni (1990) stress labeling effects as a crucial factor in creating a "permanent class of criminals," as well as these intergenerational effects, community culture, and personal character. Sampson and Laub (1992) review a wide range of literature, concluding that although delinquency is a strong predictor of adult criminality, most delinquents do not become criminals, and stress the responses of school failure, labeling, and incarceration as crucial mediating factors.

Even though there are large racial disparities in the most serious violent crimes, the vast majority of black encounters with police and prison admissions are for property crimes, drug offenses, and public order offenses. The vast majority of juvenile delinquents and adult criminals never murder anyone, and never even commit a robbery or an aggravated assault. Focusing on murder and robbery because their arrest rates are plausible proxies for crime has diverted attention from understanding how concentrated poverty and family disruption affect the much more common crimes of drug sales and possession, theft, and getting into fights, how these common offenses relate to the more serious crimes, and how police responses mediate these effects. Some scholars argue that high arrest and imprisonment rates disorganize communities and increase crime in the long run (e.g. Clear 1996, Rose and Clear 1998, Rose et al. 2000).

Prison and Crime Affect Economic Well-Being and Family Disruption

As incarceration has exploded, scholars have paid growing attention to the effects of incarceration on communities (e.g. Rose et al. 2000, Rose and Clear 1998, Clear 1996). Over half of all prison inmates have children under 18, and 1.5 million children have a parent in prison (Hagan and Dinovitzer 1999), which is 2% of all children (Austin et al. 2000). Darity and Myers (1990) argue that homicide and incarceration account for much of the incidence of female headed households. Myers' (2000) analysis of Minnesota inmates found that blacks were much more likely than whites to leave dependents behind. Tonry (1995) argues that crime is a result of social

disorganization and adversity, while criminal justice policies cause such disorganization and adversity. Western and Beckett (1999) analyze the penal system as a labor market factor, and show that incarceration accounts for much of the difference between the US and Europe in unemployment rates. Western and Pettit (2000) show that much of the black/white earning gap is due to joblessness, and incarceration is a major factor in joblessness. Western and McLanahan (2000) argue from the "fragile families" project that incarceration and a history of past incarceration plays a major role in preventing fathers from living with their children. Mauer (1999) cites the literature showing the importance of marriage and a job in desisting from crime. Imprisonment reduces the future chances of both.

Cost/benefit calculations of the effect of crime enforcement ignore redistributive effects of crime. Some people benefit from crime, while others lose, just as some people benefit when oil or food prices are high. Drug addicts and those who prey on poor communities are probably net liabilities, but "Robin Hood" criminals who rob or sell drugs to the rich may provide alternate mechanisms for income transfers. Note that although classed as "violent,"robbery is fundamentally a property crime, and is often directed toward commercial establishments or the affluent. Hagan (1994, 1997) suggests that crime is a short-term adaptive form of recapitalization. With welfare payments declining and real wages dropping, one would expect to see socially-connected individuals seeking additional sources of income for their families. Studies indicate that much drug dealing and crime is a supplement to low-wage work (Reuter 1990, cited by Mauer and Huling 1995; Hargedorn 1994; Crutchfield and Pitchford 1997). Of course, there are costs of crime as an income source even when the targets are the affluent. Crime fuels loss of trust and social disorganization. Criminal activities can lead to violence and can make it harder to maintain legal employment. Arrest and incarceration affect not only the criminal, but family and associates. Overall, drug sales and property crimes may have mixed effects on poor communities, and it cannot be assumed *a priori* that all police enforcement is good for poor communities.

Although imprisoned offenders do not need to be fed and housed, and cannot commit crimes in the community, any legal or illegal income they were providing to others is lost. Imprisoning nonviolent offenders with ties to family, jobs, and education weakens their ties to legitimate institutions, reduces their future earning potential, and probably increases crime in the long run (Lynch and Sabol 1997). Prisoners' families also incur extra costs to maintain ties with the prisoner, including telephone bills which may be several hundred dollars a month, because all telephone contacts must be collect calls from the prison using contracted vendors who charge especially high rates. Apart from monetary costs, there is the loss of companionship for family members, a loss of parental contact for the offender's children, and a loss of association in the community.

In an unpublished conference paper, Myers (2000) reports on three analyses designed to test whether imprisonment destabilizes black families, and found no significant effects, but each has methodological flaws. The first uses total prison admissions (not race-specific) as the predictor of race-specific rates of female-headed families. The others assess the effects of mandatory minimums and sentencing guidelines on state-level rates, but our check shows that black imprisonment rates are not higher in states which have these policies. Thus the hypothesis of family disruption effects from imprisonment was not actually tested.

Age structure, migration as important control factors

Crime rates are much higher among males 15-25 than other groups, and young men 20-30 are disproportionately imprisoned. The age structure of a population alone accounts for a substantial share of the variation in crime rates. Nationally, the median age of black people in 1999 was 30.1, 6.5 years younger than the white median age of 36.6. Eleven percent of the black population was aged 18-24, versus only 9% of whites. However, the racial disparity in imprisonments rates is actually higher for men in their late twenties than for the total population, so it should not be assumed that population age structure controls will necessarily reduce racial disparities.

Migration is also important, especially when the migrants are poorer and ethnically different from the receiving community. The decline in white imprisonment rates 1926-1975 may be due part to the decline in European immigration (Gilbert 2001). Migration from the rural south into the urban north was associated with to a rise in the imprisonment of blacks (Langan 1991). Crutchfield, Geerken and Gove (1982) found that metropolitan in-migration was positively associated with crime in Washington counties. An unpublished internal police study from the early 1990s in Madison, Wisconsin, found that a disproportionate share of those arrested for serious crimes had been in the community less than two years. Migrants are most likely to be young adults, generally the same age group that is most crime-prone, so correct assessments of the effects of migration on crime should take age structure into account, and vice versa. Hagan and Palloni (1999) show that apparent high imprisonment rates for Mexican immigrants are because most are young men; adjusting for this, Mexican immigrants' imprisonment rates are similar to US citizens'. Unfortunately, direct measures of in- or out-migration to counties or even states by race, age, and sex are difficult to come by. Relevant Census data exist, but require and amount of processing that is beyond the scope of the present proposal. We will, however, control for changes in the race/sex/age mix of the population within geographic areas.

SYSTEM DYNAMICS

There are two reasons that, despite the complexity and difficulty of the analysis, the whole system of politics, crime, ethnic conflict, economic deprivation, family disruption, and imprisonment need to be studied together. The first is that the positive feedbacks in the system as a whole are the most reasonable explanation for spiraling imprisonment rates. Standard "rationalist" crime-control theories predict that crime and punishment would come into a steady-state equilibrium, while standard "deprivation causes crime" theories predict crime cycles associated with economic cycles, but neither can account for exponential growth in imprisonment as violent crime rates stabilized or declined. The second reason is simultaneity error. Because of these mutually causative relations, unbiased estimates of bivariate effects (e.g. the effect of imprisonment on family disruption) cannot be generated from simple cross-sectional data or simple time series data. Panel data with multiple observations over time on the same units of analysis is the most appropriate vehicle for identifying correct relationships in such contexts (Wooldridge 2000, Halaby and Wu 2001). Figure 2 is a synthetic model which, will guide the analysis in this project, although it is not possible to represent different kinds of crimes in this figure. (Apologies for small print. It was hard to fit it in at all!)

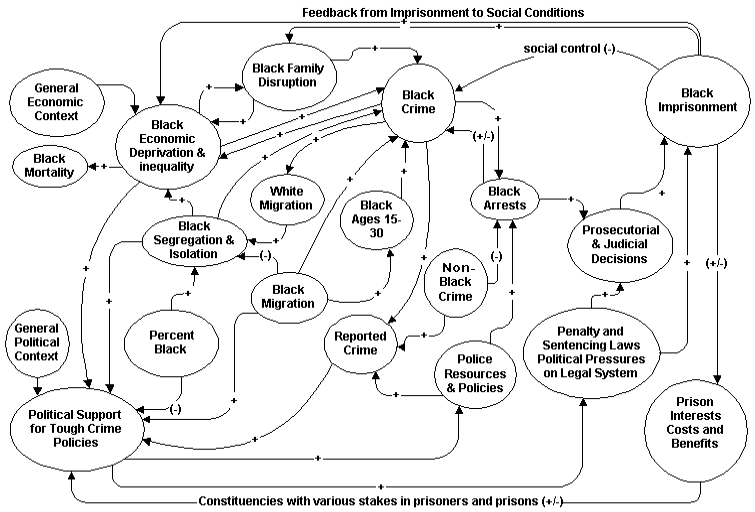

Figure 2. A Synthetic Model of the Dynamics of Black Imprisonment Rates

Methods

Our primary effort will be devoted to constructing data sets and merging them. The core of the data will be a merging of the Bureau of Justice Statistics' National Corrections Reporting Program (NCRP) annual files, the FBI's Uniform Crime Report Files, and the Census Bureau's annual race/sex/ethnicity population estimates. Data on demographic, social, political and economic factors will be merged in from other sources. Our coding plans are designed to maximize the flexibility and usefulness of the data for subsequent researchers.

Units of Analysis

Data files will be constructed with counties as the units of analysis, with codes provided to permit aggregation to SMSA's or states; we will also flag counties with too few black residents for analysis so they can be dropped or combined for racial comparisons. Counties are politically meaningful units, as imprisonment commitments take place at county courts; people are sentenced in the county in which they committed the crime, and arrests are made in the county in which the crime was committed. Smaller geographic units are preferable because they can provide more sensitive information and reduce offsetting disparities and usually find higher disparities than more aggregated data (Crutchfield, Bridges, and Pitchford 1993). Data on prison commitments is not recorded at any lower geographic level. The recent release by the ICPSR of the "crosstalk" file linking all the different systems of geocodes used in criminal justice data will facilitate county-level file mergers, greatly reducing the marginal programming cost of generating a county-level data file rather than a state-level file.

Of course, inferences from aggregate data on counties need to be made carefully, as differences among municipalities or neighborhoods within counties may distort county-level aggregates. For example, Shihadeh and Ousey (1997) report higher crime rates in metropolitan areas with higher suburbanization, but it is not the suburbs that account for these crime rates, but rather the inner city areas which are increasingly impoverished with suburbanization. Additionally, there is always a problem in calculating rates for crime data, because the persons arrested or imprisoned may not be residents of the county in which the crime takes place. This is also true, of course, for states, although the problem is not so acute except in the east where large metropolitan areas span several states. We cannot entirely measure this effect, but we can introduce controls for a county's being in an SMSA with a large black population in another county, and for the distance of a county from a large black population center, as factors that may affect calculations of imprisonment rates per numbers of black residents.

Data Files

NCRP. The NCRP files (available for 1983 on from ICPSR) are annual "transaction" files for every individual who entered or left prison, probation, or parole in the participating states (varying from 32 to 38 across the series).

The county of sentencing is a variable. Aggregate offense by race/ethnicity by sex counts will be generated for each county. Race/ethnicity categories will be: white non-Hispanic, black non-Hispanic, American Indian non-Hispanic, Asian non-Hispanic, "other" non-Hispanic, white Hispanic, black Hispanic, American Indian Hispanic, and all other Hispanics (including Asian and other). Our own work will focus on black-white comparisons, but these groupings will permit the data to be used for studies of Hispanic or American Indian incarceration rates, which are also substantially higher than those of white non-Hispanics, although substantially lower than those of blacks. We will count as admissions those entering with new sentences and those entering from probation revocations, but not parole revocations. Offense categories will be: murder, manslaughter, sexual assault (including rape and child abuse), aggravated assault, other assault, armed robbery, other robbery, arson, burglary, larceny/theft/fraud, illegal drug manufacture/sale, illegal drug intent to deliver, illegal drug possession, alcohol-related offenses (liquor law violations, drunk driving), other public order offenses (weapons charges, prostitution, disorderly conduct, vandalism, etc.), "other" offenses (an extremely diverse group of uncommon offenses, generally less serious) and derived offenses (bail jumping, escape, etc.). These groupings will permit imprisonment rates to be compared to arrest rates in the UCR. "Intent to deliver" is a manufacture/sale offense in the UCR, but our work in Wisconsin indicates that the majority of imprisonments for drug offenses are for "intent,"so maintaining data on the discretionary category of "intent" may be useful. Alcohol-related offenses are distinguished from other public order offenses because alcohol offenses are the only group for which whites are arrested and imprisoned at substantially higher rates than blacks. This will yield 2 x 9 x 17 = 306 counts per county. This level of specificity should provide sufficient detail for different kinds of analysis. To permit more focused calculation of imprisonment rates of the highest-risk populations, aggregate counts will also be generated for the sex/race/offense groups for a) persons who have not graduated from high school at the time of prison admission and b) persons aged 20-30. This will generate an additional 2 x 306 = 612 counts per county.

SMSA/year identifiers will be entered for those counties which are part of SMSAs, to facilitate aggregation to the SMSA when desired for analysis and to permit SMSA counties to be extracted and merged with arrest data (which is available only for counties in SMSAs). State codes will similarly permit aggregation to the state level when desired. Most of the programming work required to process this file involves defining the sex/race/offense groups, and the marginal cost of processing additional years is minimal. Variable names and the file structure will permit extraction of a subset of years or the averaging of prison admissions across several years. Files deposited for archiving will include population estimates to permit ready calculation of rates.

Over 95% of blacks and 88% whites live in states covered by the NCRP in 1996. As the table shows, states omitted from the NCRP in 1996 tended to have higher imprisonment rates for both blacks and whites and lower disparities, although the difference is significant only for the white imprisonment rate.

	Black Rate	White Rate	Disparity
In NCRP 1996	1573	187	9.6
Not in NCRP 1996	1693	242	7.8
Significance	NS	p=.025	NS

(Data source: The Bureau of Justice Statistic's Correctional Populations in the United States, 1996.) States not participating in the NCRP in 1996 included six western states (Alaska, Arizona, Idaho, Montana, New Mexico, Wyoming), four northeastern states (Connecticut, Delaware, Massachusetts, Rhode Island, Vermont), and two midwestern states (Indiana, Kansas).

Although most of the growth in imprisonment in the 1990s is due to longer lengths of stay in prison rather than new sentences (Austin et al. 2000), new prison admissions are more appropriate for comparisons with rates of offending and enforcement. Additionally, much of the research on the consequences of imprisonment suggests that going to prison at all has the largest marginal effect on outcomes.

Prison Census data giving annual totals of inmates in state prisons by race are available for all states across time. However, only the most recent years (since 1994) are available electronically; the rest will need to be entered manually from paper sources. These data do not contain offense breakdowns by race, but may be used to assess the time series differences between states in the NCRP and those not in the NCRP and to control for prison expansion prior to 1983. Appropriate annual state population estimates will be included in the file.

Uniform Crime Reports (1) County-level (and after 1993, state level) counts of crimes known to the police and arrests are available for download from the ICPSR for 1977-1998. ICPSR documentation explains how partial and missing data have been handled. These data contain no information on race. County FIPS codes are included. (2) A compilation of arrest data by race for SMSAs 1960-1997 is available from ICPSR. Records are the counts of numbers of adults or juveniles arrested of a given race for a given offense by a given police agency. (There is no breakdown by sex of arrestee within race, nor of more detailed age than juvenile vs. adult, nor of Hispanic ethnicity.)

Each agency is identified by its county as well as SMSA, so the data may be aggregated to the county level (but is restricted to counties which are part of SMSAs). Not all agencies reported every year and some agencies never report, although reporting is more consistent from large metropolitan agencies than small rural agencies. Thus, header files must be processed and compared across years to identify partial counts and non-reporting agencies. Estimation rules building upon those developed and documented by ICPSR will be used to impute missing data. These will include projecting from partial reporting by an agency, determining whether nearly all of a county's population has been accounted for in the populations of the agencies reporting from that county, and imputing an agency's arrest counts from prior and following years and other agencies' totals if an agency that normally reports is missing in one year's data. The county total of arrests across races by offense will be cross-checked against ICPSR's county aggregation (which gives no race breakdown). Variables will flag all imputed counts and data for a county will be coded as missing if there is insufficient data for a valid estimate. Arrests are loosely a proxy for crime for serious offenses, and more a measure of police enforcement intensity for less serious offenses. The racial composition of the arrested population is a crucial factor in determining imprisonment rates. The archived file will include county sums for the number of adults and juveniles of each race arrested for each of the offense categories, along with appropriate population estimates to permit the ready calculation of rates. As with the NCRP data, the marginal cost of processing all years between 1981 and 1998 is relatively small. If resources permit, the years 1960-1980 will be processed, as well. If it proves feasible within our cost constraints, we will also include separate arrest totals for central city police agencies within each SMSA.

Law Enforcement personnel will be compiled from the Criminal Justice Expenditure and Employment (CJEE) files available from ICPSR. The CJEE Extracts have been extracted from the Census Bureau's Annual Government Finance Survey and Annual Survey of Public Employment since 1982. The CJEE Survey collected detailed annual data for 1971 to 1979, and for 1985, 1988, and 1990, but has been discontinued. The CJEE Extracts data are similar to but not statistically comparable to the CJEE. These series indicate the number of full-time and part-time sworn law enforcement officers and provide algorithms for calculating the full-time equivalent staffing levels from expenditure data. Agency figures will be aggregated to provide county totals. Agency reports will be checked against UCR agencies and similar procedures will be used to identify missing reports and estimate or impute missing data in calculating county totals. The ratio of full-time equivalent personnel and sworn officers to the population will be calculated.

Corrections data will be compiled from various reports to identify prison overcrowding, prison capacity, and court orders to reduce crowding, as prison capacity may affect judicial decisions about new imprisonments where mandatory sentences are not in place. These will be state-level variables.

The **Law Enforcement Agency Identifiers Crosswalk** file, newly available from ICPSR, provides various geocodes for all police agencies so that the NCRP, UCR, law enforcement, and other data sets may be readily linked. This new resource will greatly reduce the time required to merge the NCRP and UCR data.

Population. Age/sex/race population estimates for counties are available in electronic form from ICPSR for 1970-1999. The estimates for the 1970s and 1980s have been revised to interpolate between the censuses. These estimates use 5-year age groupings. Because arrest statistics distinguish juveniles under 18 from adults 18 and over, we will also provide sex/race-specific estimates of persons aged 10-17. Institutions such as universities or military bases can change the racial composition of persons aged 18 and 19 relative to those aged 15- 17, which may have an impact on the calculation of race-specific juvenile and adult arrest rates. Counties with fewer than 1000 black residents will be flagged so they can be dropped or aggregated.

Prisons and other group quarters Because the Census enumerates prisoners in the county where they are imprisoned, prisons can distort the calculation of county-level arrest and imprisonment rates, particularly when prisons (whose inmates are predominantly black) are located in otherwise white counties. Thus we will use directories of prisons and census "group quarters" data to identify the locations of prisons and include within the each county-level record variables indicating the presence of a prison and (to the extent possible) its approximate size and racial composition. Large universities and military bases can also affect the age/race/sex structure of counties, so we will similarly use a variety of sources to identify and flag counties with such institutions and provide estimates of the size and sex/race/age composition of these special populations.

Social and economic indicators. There are no consistent annual series on race-specific measures of social and economic well-being at the county level. Data will be pieced together and merged in as available from a wide variety of sources. The 1980, 1990, and 2000 census summary files will be used to calculate race-specific marriage rates, rates of female-headed households, rates of children living with persons other than their parents, poverty rates, median incomes, and proportions within several income ranges (so within-race inequality can be assessed). Per capita income will be coded to avoid distortions by family size variaitons. Age/race-specific indicators of education will also be calculated, including the proportion of persons over 18 with less than a high school education, and the

proportion of persons over 25 with a college degree. **County and City Data Books** for1977, 1983, 1988, and 1994 contain a variety of social and economic indicators, mostly not race-specific, of the general well-being of the community. Farm and industry statistics can be used to flag rural and industrial areas. The annual March **Current Population Survey** collects information related to economic well-being, including employment status, wages, income transfers, and other sources of legitimate income. States are uniquely identified, as are some of the larger metropolitan areas. For 1991-93, for example, the 113 largest metropolitan statistical areas (CMSA's or MSA's), an additional 89 selected MSA's, 66 selected PMSA's, and 30 central cities in multi-central city MSA's or PMSA's are also uniquely identified. Within confidentiality restrictions, indicators are provided for MSA-PMSA/non-MSA-PMSA, central city/noncentral city, farm/nonfarm, and MSA/CMSA size. Race-specific economic indicators at the state level will be calculated from the CPS for all cases. In addition, MSA-level race-specific social and economic indicators will be included for those counties which are part of on an identified MSA. CPS data are, of course, sample data subject to sampling fluctuations, so analysis will generally use multi-year averages of these figures to damp out random variations.

Mortality. The Compressed Mortality Files available from the CDC provide county-level annual counts of deaths by race (white, black, other), sex, age group, and underlying cause; these files also include the appropriate population counts for the calculation of mortality rates. Infant mortality and adult mortality from illness will be calculated as indirect indicators of social and economic well-being. Mortality due to homicide and substance overdoses are alternate indicators of the extent to which these are problems in the community. Mortality due to suicide is an indicator of depression. Infant mortality statistics for counties are also available in the printed Vital Statistics Mortality Part B volumes.

Segregation The Lewis Mumford Center calculates and distributes summary measures of the degree of racial segregation in SMSA's for 1990 and 2000, with separate measures for central city and suburbs within the SMSA. These MSA-level measures will be included for those counties which are part of these MSA's.

Political Factors will be compiled from a variety of sources at the state, county, or MSA central city level. An index of citizens' political ideology has been calculated by William Berry et al. for 1960-1999 and is available through ICPSR. Handbooks of Black Elected Officials, and other political and economic almanacs provide information on large political or macro-economic factors at the state or local level.

Analysis

In year 2, we will begin preliminary analyses of the data, although merging and documenting these files so they can be available to others will continue to require a significant amount of the effort of the graduates assistants. Because these data have not received any prior analysis, much initial work will involve simply describing the patterns in the data. We expect that our initial efforts during the term of this proposal will be supplemented and superceded by ourselves and others in subsequent years. However, once the initial investment has been made in creating the data sets, the cost will be much lower for subsequent researchers to analyze them, or to merge them with new data from other sources.

The data will be a longitudinal panel with a large number of counties across approximately 17 years. Two general kinds of statistical models will be employed. The first are models of the general form $y_{it} = \beta_0 + \Sigma\beta_k x_{kti} + \Sigma\beta_m z_{m,t-d,i} + \Sigma\beta_n w_{ni} + \Sigma\beta_j v_{jt} + u_{it}$, where the x's are variables which are expected to affect the dependent variable simultaneously, the z's are variables which are expected to have lag effects after interval d, the w's are variables which are invariant across time for particular units, the v's are variables which vary across time but not between locales (e.g. the party of the president or the passage of particular federal legislation), and the u's are disturbances. When feedbacks of the hypothesized type are present, such models are subject to the problem of correlated disturbances which can generate biased estimates of the β's, but panel data which includes some variables that are outside the feedbacks provide the best information for estimating such models. Models of this form assess whether the levels of independent variables affect the dependent variable. The second general form are first difference models, in which all time-varying variables are changes between time periods, e.g. $y_{it} - y_{i,t-1}$. The difference scores are then used in the regressions. First difference models eliminate correlated disturbances due to persistent characteristics of the units of analysis (e.g. local culture) and focus attention of the effects of changes in independent variables on dependent variables, but cannot provide estimates of the effects of characteristics of units which do not vary across time, and are troubled by correlated disturbances if there are any lag effects of the dependent variable or if independent variables have longer-term lag effects. In most cases, variables will be log transformed to assess their elasticities. Hierarchical modeling techniques (such as those used by Elliott, Wilson, and Huizinga 1996) are available for factors which are nested (e.g. for independent variables measured at the state or SMSA level when running models on counties) . A standard set of tests and analytic devices common in econometrics, such as those outlined in Wooldridge (2000), Goldberger (1998) and Halaby and Wu (2001) will be employed in constructing, testing and validating these models, including detrending variables, two-stage least squares, tests for autocorrelation

and heteroskedasticity, analyses of residuals, and so forth.

Three basic kinds of analyses are needed: (1) the relations among drug offenses and other offenses, (2) the predictors of imprisonment rates, and (3) tests of the hypothesis that imprisonment rates harm black communities. These are listed in increasing order of difficulty.

(1) **The relationship of drug enforcement to other kinds of crime enforcement.** First, we will test a pair of hypotheses concerning the relationship between drug policing and violent crime. Miron's arguments predict that drug enforcement (i.e. drug arrests and drug imprisonments) will be followed by a rise in violent crime reported to the police, while the view that drug policing is a response to problems would imply that a rise in drug enforcement will be preceded by a rise in violent and property crimes. If we can get an independent indicator of other "drug problems," we would expect that also to predict an increase in drug enforcement. Second, we will assess the relationship among imprisonments for drug, violent, and property offenses: do they all tend to rise together, or does one kind tend to lead the others? Do locales vary in meaningful ways in the mix of offenses that are sent to prison. Third, what is the relationship between high rates of arrests for less serious offenses (e.g. disorderly conduct, simple assault, "other except traffic") and arrests and imprisonment for drug, violent, and property offenses? The social control hypothesis implies that such high rates of arrests for less serious crimes should depress the rates of more serious crimes in the future. The "drug war as repression" hypothesis predicts a positive correlation between drug arrests and minor arrests and no reduction in serious crime due to heavy policing, possibly accompanied by signs of resistence in the form of a rise in crime.

(2) **The correlates of law enforcement.** This set of analyses mostly involves testing what has been tested before, only using a broader set of data capable of greater sensitivity in testing and capable of detecting changes across time in the relationships among variables. Dependent variables will be arrests or imprisonments, either in total or disaggregated by offense. Independent variables will include time-varying measures of economic well-being, family disruption, political factors, prison crowding, police officers per capita, welfare expenditures. A focus on ethnic conflict and the contradictory relations between segregation and crime leads to an emphasis on population dynamics that has not been previously explored, suggesting the hypothesis that counties undergoing growth in their proportion black populations will be especially likely to embark on heavy drug enforcement and other policing of blacks, while serious violent crime is most pronounced in counties containing large impoverished segregated areas which are losing population.

(3) **Testing the hypothesis that prisons harm black communities.** It is difficult to get good annual time series of socioeconomic indicators at subnational levels. Initial tests of this hypothesis may have to be conducted using states as units of analysis and/or with gross comparisons between 1970, 1980, and 1990. We expect subsequent researchers will be able to build upon our initial investment in data construction to do it better. We predict that, with appropriate lags and net of controls, changes in imprisonment rates lead to changes in family disruption (female headed families, marriage rates, children living apart from parents, teenage births) and economic well-being (percentage in poverty, infant mortality). We also predict that high imprisonment rates will, after a lag, lead to a rise in juvenile and then adult violent crime, and to a rise in suicide (due to depression, a consequence of family disruption and economic stress). Even at the state level of aggregation, these are difficult hypotheses to test accurately, because people move around, and you cannot be sure that the characteristics of the population later in time are not distorted by selective migration. Even the removal of the prisoners themselves from the population distorts aggregate measures of community characteristics. Impoverished communities tend to have selective out-migration of those with positive traits such as ambition and education, while communities which are doing well economically tend to attract in-migration across the economic spectrum, but may see an increasing proportion of poor residents looking to better themselves. This proposal is already broad, and cannot begin to address issues of selective migration beyond being aware if it and controlling for changes in population characteristics and the total amount of net migration over time. However, we feel that getting a first preliminary test of this hypothesis will provide the information necessary for designing a better test in future research.

Overall, this project will provide an important data resource which, by its existence, will foster new and better research on the causes and consequences of racial disparities in arrests and imprisonment.

Results of Prior NSF Support

I. PI Pamela Oliver. SBR 95-11748, "Comparative Research on Selection Bias in Media Coverage of Protests and Demonstrations," 7/95 to 6/98 and SBR-9819884, "The Content and Timing of Media Coverage of Message Events: Cycles and Comparisons. 4/30/99 - 9/30/01 (Still in progress)

Publications: 1) "How Events Enter the Public Sphere: Conflict, Location and Sponsorship in Local Newspaper Coverage of Public Events" (Pamela Oliver and Daniel J. Myers). American Journal of Sociology 105 (1 July) 1999. Pp 38-87. 2) "Political Processes and Local Newspaper Coverage of Protest Events: From Selection Bias to Triadic

Interactions" (Pamela E. Oliver and Gregory M. Maney) American Journal of Sociology 106 (2 September) 2000: 463-505. 3) "Finding Event Records: Timing, Searching, Sources." (Gregory M. Maney and Pamela E. Oliver). Sociological Methods and Research 29 (November), 2001. *Manuscripts In Process*: 1) "Patterns of Access: Routinization of Activist-Reporter Contacts and Media Coverage of Protest Events." (Gregory M. Maney and Pamela E. Oliver.) 2) "Do Protests Increase the Newspaper Coverage of Issues?" (Lyn Macgregor, Pamela E. Oliver, and Kelley Strawn) 3) "An Event-History Analysis of Events and News Coverage of Events." (Kelley Strawn and Pamela Oliver) 4) "Detecting Bias in Newspaper Coverage of Protests: A Quantitative Content Analysis" (Pamela E.Oliver, Kelley Strawn, Gregory M. Maney) *Data Sets*. Data from this project are being cleaned and checked for correctness for deposit with the Data and Program Library Service of the University of Wisconsin-Madison, which catalogues data sets and can provide copies of the data to interested parties. Data include police and newspaper records for events and content analysis of stories about selected events. *Contributions to Education*. Four graduate students have been involved with this project over its course and have received training in data collection, data analysis, reviewing literature and writing papers. Nine undergraduates have worked on the project, receiving training in the retrieval and coding of textual materials.

II. PI Pamela Oliver. SBR 96-01409, 9/1/96 - 8/31/99, "Models of the Diffusion of Collective Action."

Publications. 1) "The Diffusion of Collective Violence: Infectiousness, Susceptibility, and Mass Media Networks." Daniel J. Myers. American Journal of Sociology, July 2000 Volume 106 no 1, pp. 173-208. 2) "Formal Models in the Study of Social Movements." (Pamela E. Oliver and Daniel J. Myers) Methods of Research in Social Movements, Bert Klandermans and Suzanne Staggenborg, editors. University of Minnesota Press. 3) "Diffusion Models of Cycles of Protest as a Theory of Social Movements." (Pamela E. Oliver and Daniel J. Myers.) Mobilization, forthcoming. 2) "Networks, Diffusion, and Cycles of Collective Action." (Pamela E. Oliver and Daniel J. Myers). Social Movement Analysis: The Network Perspective edited by Mario Diani and Doug McAdam. Oxford University Press. *Papers in Process*: 1) "The Opposing Forces Diffusion Model: The Initiation and Repression of Collective Violence." (Daniel J. Myers and Pamela E. Oliver) Manuscript is under review. *Contributions to Education*. This project was conducted in collaboration with an advanced graduate student who became an assistant professor over the course of the project; he received support for his doctoral research and training in the professional aspects of publication. We have collaborated on a pedagogical paper on modeling collective action, as listed above.