The Degree of Disadvantage: Incarceration and Racial Inequality in Education

Stephanie Ewert, Becky Pettit, and Bryan Sykes[1]

University of Washington

February 12, 2010

Word count: 5,888

The Degree of Disadvantage: Incarceration and Racial Inequality in Education

Abstract

Despite decades of educational progress, more than fifty years after Brown v. Board of education blacks still lag behind whites in high school graduation rates. The exact size of the racial gap in high school completion is a source of much scholarly and political debate and a growing body of research indicates that the graduation rates of white and minority students have not converged as is commonly thought (Heckman and LaFontaine forthcoming; Greene & Winters 2005; Orfield et al. 2004). While data from the Current Population Survey (CPS) suggest steady increases in the proportion of African Americans with high school diplomas – either through high school completion or equivalency degrees – over the past 3 decades, Common Core Data indicate substantially higher – and recent increases in – high school dropout especially among African Americans (Warren and Halpern-Manners forthcoming; Heckman and LaFontaine forthcoming). In this paper, we examine how the rise in incarceration – and its disproportionate concentration among low-skill, young, African American men – influences the estimation of racial inequality in educational attainment. We find that conventional data sources that exclude the incarcerated population underestimate the dropout rate among black men by as much as 40%. Repositories for high school dropouts—America's prisons and jails—obscure the degree of disadvantage faced by black men in the contemporary United States.

The Degree of Disadvantage

Despite decades of educational progress, more than fifty years after Brown v. Board of education blacks still lag behind whites in high school graduation rates. The exact size of the racial gap in high school completion is a source of much scholarly and political debate though a growing body of research indicates that graduation rates of white and minority students have not converged as is commonly thought (Heckman and LaFontaine forthcoming; Greene & Winters 2005; Orfield et al. 2004). Data from the Current Population Survey (CPS) shown in Figure 1 suggest steady declines in the proportion of African American men who fail to complete high school – either through school completion or equivalency degrees – over the past 3 decades. At the same time, Common Core Data indicate substantially higher – and recent increases in – high school dropout especially among African Americans (Warren and Halpern-Manners forthcoming; Heckman and LaFontaine forthcoming).

Research in the sociology of education has long viewed high school graduation – and educational transitions more generally – as an important indicator of social and economic status. Post-WWII expansion of higher education has been linked to widening educational opportunities and increased social mobility through educational attainment (Blau and Duncan 1967; Raftery and Hout 1993). At the same time, however, research suggests that the educational system reproduces social inequality through both cultural and structural mechanisms (Bowles and Gintis 1974; Lucas 2001; Willis 1977; Lareau 2002). Tracking and within-school interactions can reinforce the effects of social background on educational attainment (Lucas 1999; Bowles and Gintis 1974).

In this paper we examine how the measurement of educational attainment – and racial inequality therein – is influenced by growth in the prison system over the last 30 years.

Conventional data sources including the CPS used to measure the educational attainment of the population employ probability-based sampling of individuals living in households. Institutionalized persons including prison and jail inmates are categorically excluded from household-based surveys. At the same time, contact with the criminal justice system is concentrated among low-skill minorities and spending time in prison or jail is associated with low levels of educational attainment and there is growing concern that sampling bias may compromise estimates of the educational attainment of certain social and demographic groups (Heckman and LaFontaine forthcoming). While conventional data sources indicate declining racial inequality in high school completion, growth in the prison system may conceal the extent to which the educational system reproduces inequality.

More than two decades ago Darity (1980) argued that the exclusion of the unemployed population from estimates of wages overstated the relative economic standing of blacks and created an illusion of black economic progress. More recent research has argued that high rates of incarceration lead to the exclusion of socially marginal groups from household-based surveys including the CPS. The exclusion of prison and jail inmates from conventional data sources has been shown to influence the measurement of racial inequality in employment (Welch 1990; Western and Pettit 2000), wages (Western and Pettit 2005), and general estimates of voter turnout (McDonald and Popkin 2001). We investigate how the exclusion of prison and jail inmates from the calculation of educational attainment influences the measurement of the relative high school graduation rates of blacks and, possibly, obscures accounts of black educational progress.

Incarceration and Educational Inequality

When statistics on the size of the prison population were first recorded in 1925, 79 of every 100,000 Americans were held in federal or state prisons (Sourcebook of Criminal Justice Statistics 2008). Long-term stability in the imprisonment rate prompted some prominent criminologists to claim the existence of a `natural' or stable incarceration rate (Blumstein and Cohen 1973). Theories of stable incarceration rates were upended during the prison expansion that began in the mid-1970s. Between 1975 and 2009 the U.S. imprisonment rate grew at an average annual pace of 4.7%, a stunning increase considering the imprisonment rate adjusts for population growth over the period. By 2008, 2.3 million people were institutionalized in American correctional facilities (West and Sabol 2009).

The risks of spending time in prison are not uniformly distributed across the population and inmates represent a particularly disadvantaged segment of the American population. One in one hundred American adults is housed behind bars, yet one in nine African American men is incarcerated, and over one in three young, black, male high school dropouts is in prison or jail on any given day (PEW 2008; Western and Pettit forthcoming). Disproportionately male, black, and low-skill, inmates and former inmates are less likely than otherwise similar disadvantaged men to live in settled households and hold down steady legitimate jobs. Even their institutionalization involves a segment of the state cut off from usual methods of social accounting: Inmates are categorically excluded from surveys that sample from the population of individuals living in households.

Decades of prison growth coupled with high concentrations of incarceration among low-skill black men may have important consequences for the measurement of racial inequalities in educational attainment. Some scholars assert that the CPS provides a reasonable approximation of educational distributions of the general population (e.g., Goldin and Katz 2008). However,

the systematic and categorical exclusion of inmates from the CPS has been shown to distort statistics on racial inequality in education (Heckman and LaFontaine forthcoming). Heckman and LaFontaine observe: "The exclusion of prisoners plays only a small role overall, but is important when computing race and gender differentials in graduation," (p. 7).

Our research builds on these insights to examine overtime trends in the sample selection effects associated with penal growth. We also aim to situate the sample selection effects of prison growth in relation to contemporary debates about the role of the educational system itself in ameliorating or sustaining social inequality.

Education and Social Reproduction

Research in social stratification has long questioned whether post WWII expansion of the educational system – and higher education in particular – has egalitarian or reproductive effects. Blau and Duncan (1967) established that educational attainment is an important path to social mobility and their research shows that educational attainment has large and significant effects on occupational mobility net of social background.

More recently, though in a similar vein, Raftery and Hout (1993) claim that educational expansion enhances educational chances of formerly disadvantaged classes, thereby providing a path toward upward mobility. According to Raftery and Hout (1993) education leads to social mobility mainly by dissolving selection effects: more educational opportunities enable more students – including students from disadvantaged backgrounds – to pursue further education. Numerous studies have found evidence of the mobility-enhancing effects of educational expansion in the U.S. and other countries (Hanley 2001; Shavit and Blossfeld 1993; Hout, Raftery, and Bell 1993).

Data from the CPS are consistent with the claim that educational expansion has fuelled declines in racial inequality in education. The educational attainment measure on the March CPS indicates whether an individual has failed to complete high school or acquire a GED. While this is technically not a measure of high school dropout, we use the term high school dropout to indicate failure to complete high school or acquire a GED by the time of the survey. In 1980, at the start of the time series in Figure 1, 11.2% of non-Hispanic white men between 20-34 had not completed high school or a GED. By the end of the series in 2008, the number of high school dropouts in this group had fallen to 7.2 percent. Among non-Hispanic black men in the same age group, the high school dropout rate fell from 24.8% to 13.5 percent over the same period resulting in a 53% decline in the racial gap in high school dropout over the period.[2] We focus on the black-white graduation gap given the extraordinarily high incarceration rates experienced by blacks and the concentration of low skill, young black men in American prisons in jails.

An alternative view, however, suggests that the educational system reproduces social inequality. According to this line of reasoning, schools socialize and prepare students to assume their position in the class structure through a variety of mechanisms (Bowles and Gintis 1976; Willis 1977; Lucas 2001; Lareau 2003; Kozol 1991). Early work by Bowles and Gintis (1976) and Willis (1977) contended that schools reflect the occupational structure and expectations found in society. Lareau (2003) has recently extended this paradigm to examine how parenting styles of middle and working class families intersect with the educational system to engender educational inequalities. By teaching their children how to interact and reason with authority figures, middle class parents instill and reinforce skills that provide the foundation for future

---

[2] All analyses were also conducted for women and Hispanics. Those results are available from the authors upon request.

success. Teachers and individuals in positions of authority and power later reward (for middle class children) and devalue (for working class children) these reasoning and interactional skills.

Lucas' work emphasizes how tracking systems reinforce social inequality by establishing qualitative distinctions within high schools (2001). Although tracking practices purport to assign students to instructional groups based on ability, assignment is not usually based solely on actual ability level (Hallinan 1994; Page 1991). Rather, tracking segregates students by social and economic characteristics in such a way that low-income and minority students are disproportionately assigned to lower tracks (Gamoran et al. 1995; Hallinan 1994). Students placed in low-ability groups then receive an inferior quantity and quality of instruction compared to those in higher-track groups (Gamoran et al. 1995; Hallinan 1994). Therefore, tracking enables socio-economically advantaged students to secure a qualitatively better education (Lucas 2001).

Inequalities in school funding have also been key to explaining how schools concentrate disadvantage and reproduce inequality. Kozol (1991) documented "savage inequalities" between inner-city schools attended primarily by low-income minorities, and more affluent suburban schools. Kozol (1991) examined differences in per pupil expenditures, available resources, and experience levels of teachers. He contends that under-resourced schools in poor urban areas leave the students who attend them – often disadvantaged minorities – ill-prepared to pursue higher education or high-wage jobs.

The education system thus potentially reproduces inequality through a variety of mechanisms, including socialization processes, tracking, and funding levels. Socio-economically advantaged students benefit from these mechanisms and secure more successful educational outcomes. In contrast, the same mechanisms impede the academic success of socio-

economically disadvantaged students and minorities by limiting the quality and quantity of education they receive. The repercussions of these divergent educational outcomes are great given the association between educational attainment and numerous life outcomes, including occupational attainment, income, child bearing, health, likelihood of receiving public assistance, and likelihood of contact with the criminal justice system (Swanson and Chaplin 2003, Warren and Halpern-Manners, forthcoming; Child Trends Data Bank).

There is a strong and durable link between educational attainment and contact with the criminal justice system. Decades of criminological research has established a link between education, employment opportunities, and criminal involvement (Lochner and Moretti 2004; Crutchfield and Pitchford 1997; Crutchfield 1989). More recently research has documented the growing concentration of incarceration among high school dropouts (Pettit and Western 2004; Western 2006). Over two-thirds of young black high school dropouts can expect to serve time in a state or federal prison (Western and Pettit forthcoming) and incarceration has become a normative life event within certain socio-demographic groups.

Arum and LaFree (2008) show that increased investments in educational resources at the state level, measured as student-teacher ratios, are associated with lower risks of incarceration. They find a similar negative relationship between educational resources and the likelihood of incarceration at the school level. Therefore, investments in education can decrease the long-term costs of adult imprisonment (Arum and Beattie 1999).

There is growing speculation that the education-incarceration link has increased over time as the prison system has expanded and states spend more money on corrections. Across states, spending on corrections has grown while spending on education has lagged further behind

(Pew 2008). Balanced budget mandates often mean that increases in state spending on corrections leaves less money available for education (Pew 2008).

Estimating Educational Inequalities

There is an on-going and extensive scholarly debate over the data and measures used to calculate high school graduation and dropout rates. Scholars and policy makers have considered the implications of using data that exclude private school students, differences in the classification of GED recipients, and the effects of migration and grade retention (Swanson and Chaplin 2003; Warren and Halpern-Manners 2007; Warren 2005; Orfield et al. 2004; Warren and Halpern-Manners, forthcoming; Goldin and Katz 2008; Heckman and LaFontaine forthcoming).

Surveys commonly used to gauge the educational attainment of the population, including the CPS, use a sampling frame that draws respondents from those persons living in households. A non-institutionalized household-based sample categorically excludes people housed in institutions including people in the military or in prison. While researchers have noted the potential importance of this sample bias, few have investigated the issue in greater detail (cf. Heckman and LaFontaine forthcoming; Warren and Halpern-Manners forthcoming). Heckman and LaFontaine (forthcoming) conclude that the exclusion of the military population does not affect estimates of high school graduation given the small proportion of the population enlisted. In addition, the exclusion of prison and jail inmates has little effect on overall graduation rates. However, they note that the exclusion of prison and jail inmates from CPS data *is* consequential for estimating race and gender gaps in graduation rates (Heckman and LaFontaine forthcoming).

While recent research has made important strides in documenting the implications of high rates of incarceration for the measurement of educational inequalities, more attention is needed

to understand how and with what effect sample bias has affected the construction of estimates of high school completion over time. Specifically, we argue for the inclusion of the incarcerated population when calculating estimates of educational attainment and suggest that failing to do so not only underestimates the extent of racial inequality in high school graduation but also obscures the role educational institutions play in the production and maintenance of social inequality.

Over the past several decades, as the prison system has grown, spending time in prison has become concentrated among those with low levels of education. While 1 in 10 white male dropouts can expect to serve time in a state or federal correctional facility in his lifetime, nearly 60 percent of black male dropouts are imprisoned at some point in their lives (Pettit and Western 2004). At the same time, our national data systems, and the social facts they produce, are structured around a kind of domestic life and one which categorically excludes inmates housed in correctional institutions. In this paper we examine whether and how the growth of incarceration, the concentration of low-skill inmates in prison and jail, and the systematic exclusion of inmates from national survey data used to estimate the educational attainment of the population influences estimates of racial inequality in measures of high school dropout.

Data and Method

In order to estimate the effect of imprisonment on the educational attainment of men in the U.S., we construct a weighted average of the proportion of the population without a high school diploma or general equivalency degree (GED) by using data from different sources that include information on the educational attainment of the non-institutionalized and institutionalized populations.

We estimate the educational attainment of the non-institutionalized population using data from the March CPS. The March CPS collects data, annually, on a sample of 50,000-60,000 Americans living in households. The data includes measures of sex, age, race, ethnicity, and an indicator of whether an individual has completed high school or received a general equivalency degree. Figure 1 shows the trend in high school dropout using the CPS data.

Estimates of the educational distribution of the prison and jail population are generated from aggregate data on penal populations weighted by survey data available from periodically conducted Surveys of Inmates. Aggregated data on the size of the penal population are available by facility type, not for specific sex, race/ethnicity, age, and education groups. Microdata from correctional surveys are used to estimate proportions of inmates within sex, race/ethnic, age, and education groups. Surveys used include the Survey of Inmates of Local Jails (1973, 1978, 1983, 1989, 1996, 2002), the Survey of Inmates of State Correctional Facilities (1974, 1979, 1986, 1991, 1997, 2004), and the Survey of Inmates of Federal Correctional Facilities (1991, 1997, 2004). We linearly interpolate between survey years within facility type in order to construct annual graduation rates.

Table 1 shows the basic demographic characteristics of inmates in 1980 and 2008 using this estimation method. In 1980 the prison and jail population was 94.7% male and had a mean age of 29.4. While blacks were significantly over-represented in the prison and jail population, there were slightly more whites behind bars. Just over half of all inmates had less than a high school diploma. By 2008, the incarcerated population included more women and the mean age of inmates was nearly 5 years higher than in 1980. By 2008, African Americans represented the largest share of inmates though Hispanics saw sizable increases in their share of the incarcerated population over the period since 1980. Perhaps most striking is that while the educational levels

12

of the non-institutionalized population saw significant increases since 1980, inmates were – on average – less well educated in 2008 than in 1980. By 2008, 55.7% of all inmates had less than a high school diploma.

Insert Table 1 About Here

We focus our attention on how incarceration influences estimates of educational attainment among non-Hispanic white and non-Hispanic black men in the age group 20-34. To do so, we first we calculate the proportion of the non-institutionalized and institutionalized populations with high school diplomas or GED certificates within race, gender, and age groups. For example, using data from the March CPS we estimate the proportion of non-institutionalized non-Hispanic white men age 20-34 that has completed high school. We construct similar estimates of high school completion within race, gender, and age groups for the institutionalized population by pooling estimates from surveys of federal, state, and local inmates weighted in proportion to their contribution to the size of the inmate population. We combine these data to construct an adjusted total population mean (or pooled mean). We then compare adjusted and unadjusted high school dropout rates over time.

Finally, we use regression analysis to empirically examine the effects of race and time on the magnitude of the adjustment to the high school dropout rate after incorporating the educational attainment of incarcerated men. We regress race and time on the difference between the adjusted and unadjusted high school dropout rates to test whether the effect of excluding prisoners on estimated high school dropout rates varies by race. The model also includes an interaction of race and time to test if the consequence of the exclusion of inmates for racial inequalities in the dropout rate has grown (or been reduced) over time.

Results

Table 2 shows that by 2008, 52.7% of white and 61.8% of black male inmates age 20-34 had dropped out of high school and had not received a GED. These numbers dwarf rates of high school failure in the non-institutionalized population as estimated by the CPS and confirm the extent of educational disadvantage shown among the inmate population in Table 1. Furthermore, the results show that the educational attainment levels of inmates have decreased over the past few decades as the prison population has expanded. In 2008, the inmate population had significantly lower levels of educational attainment than those incarcerated in 1980. Overall, Table 2 highlights high levels of high school dropout among inmates in both racial groups, but high school dropout rates are even higher among incarcerated black men than white men.

Insert Table 2 About Here

Figure 2 shows high school dropout rates estimated using the CPS and *adjusted* dropout rates that include information about the prison and jail population. Low levels of educational attainment among prison and jail inmates leads to higher adjusted dropout rates for both whites and blacks than conventional statistics using the CPS would imply. In other words, measures of the high school graduation that exclude inmates consistently underestimate high school dropout or overestimate the educational attainment levels of the population.

Insert Figure 2 About Here

The effect of excluding inmates on estimates of graduation rates has grown over time as the prison and jail population has expanded. In 1980, the exclusion of inmates from estimates of the high school dropout rate led to a 2.7 percent difference in the estimate of high school dropout rates for young white men and a 9.3 percent difference for young black men. Table 3 shows that by 2008, conventional data sources that exclude the incarcerated population underestimate the dropout rate among young white men by 11 percent. Among young black men the dropout rate

is underestimated by as much as 40 percent. These estimates represent stark differences from their 1980 level, with incarceration increasing estimated dropout rates by a factor of four among whites and blacks by 2008.

Insert Table 3 About Here

Differences in the size of the adjustment over time and by race suggest that conventional data sources that exclude the incarcerated population not only underestimate the high school dropout rate, but also underestimate racial inequality in educational outcomes. Data from the CPS imply that the black-white gap in high school completion either through formal schooling or a GED has narrowed from 13.6 to 6.3 percentage points between 1980 and 2008. Including inmates, we find little improvement in the black-white gap in high school for the last 20 years. Estimates suggest that the gap in high school completion has hovered close to its current level of 11 percentage points for most of the past 20 years.

Insert Figure 3 About Here

Figure 3 plots the size of the adjustment to the racial gap in high school dropout between 1980 and 2008 with confidence intervals around the estimated selection effect. The figure clearly indicates that prison growth has contributed to large, growing, and statistically significant adjustments to estimates of racial inequality in the high school dropout rate. In recent years, the selection effect has been as large as 110 percent. In 2008, the selection effect attributable to the exclusion of prison and jail inmates from the CPS was 4.7 percentage points. The sample selection effects of incarceration suggest that reliance on the CPS underestimates racial inequality in the high school dropout rate by 75 percent in 2008

Changes in the magnitude of selection effects over time can be estimated by a regression that expresses the adjustment to the estimation of high school dropout rates as a function of race.

For each race group (indicated by dummy variables), we estimate the size of the adjustment for each year. The model is fitted with a least squares regression and the basic model is augmented with year interactions to study whether race differences in the size of the selection adjustment have increased over time. We include Hispanics in the model, but only report results for whites and blacks.

Table 4 reports results for the interaction model. The main effects show variation in the size of the adjustment over time and by race. The positive effect for year indicates that the size of the adjustment has grown over time, even net of race. The sample selection effects of prison and jail have grown substantially since 1980 for all race groups. Furthermore, the positive effect for black indicates that the adjustment is consistently larger for blacks than for whites in all years (whites are the reference group).

The changing size of the adjustment by race over time are described by the interaction term. Sample selection effects by race changed significantly over time. Through the 1980s, 1990s, and 2000s, the gap in the size of the adjustment widened between whites and blacks. While a race gap in the size of the adjustment exists in all years, it has grown significantly over time. In sum, the sample selection effects of prison and jail generally increased for all race groups, but racial inequality in the size of the adjustment grew over time as well.

Results confirm that the exclusion of inmates – who are disproportionately male, black, and report low levels of education – from conventional estimates of the educational distribution of the population contribute to a large and growing sample selection bias. The bias induced by penal growth not only influences the establishment of basic social facts, but potentially obscures our understanding of alternative explanations for the persistence of racial inequality within education and other important social institutions.

Insert Table 4 About Here

Discussion and Conclusion

National estimates of the educational attainment of the population – and racial inequality within it – are fundamentally obscured by the sample selection effects induced by decades of penal expansion and race and class inequality in incarceration rates. The growing concentration of incarceration among low-skill men leads to underestimates of high school dropout in all racial groups. Including inmates in estimates of the high school dropout rate suggests that conventional estimates of the high school dropout rate underestimate the high school dropout rate among young white men by 11 percent and among young black men by as much as 40 percent.

Including inmates in estimates of educational attainment imply that black men have experienced no improvement in high school completion rates since the early 1990s. Illusions of black educational progress, however, have been sustained by reliance on data sources that categorically exclude prison and jail inmates from estimates of the educational attainment of the population. Just as Darity (1980) documented how the exclusion of the unemployed from calculations of wages overestimated the wages of blacks, underestimated the racial wage gap and obscured the extent of racial inequality in the labor market, we find the exclusion of inmates from conventional data sources obfuscates the magnitude of racial inequality in educational attainment.

These findings have both methodological and theoretical implications. Methodologically, this research calls into question the reliance on sample surveys of households to make generalizations about the American population and offers a method for combining data on subgroups of the population to generate more reliable population-level estimates. Recent research has suggested that the Current Population Survey is the 'gold standard' for estimating

17

educational attainment of the population (Goldin and Katz 2008) and trends in educational attainment generated by the CPS are commonly used by researchers and policymakers to make claims about the state of education in the U.S. and to allocate public resources toward educational programs and objectives. However, the CPS' reliance on a household sampling frame limits its generalizability in an era of mass incarceration.

While scholars have raised concerns about coverage bias in the CPS and its effects on measures of educational attainment, ours is the first study to systematically document how sample selection bias associated with the categorical exclusion of inmates from the Current Population Survey influences accounts of educational attainment and the racial gap in high school dropout rates. Researchers have noted the potential importance of this sample bias, yet to our knowledge few have investigated the issue in great detail (cf. Heckman and LaFontaine forthcoming; Warren and Halpern-Manners, forthcoming).

The theoretical implications of our study are equally profound. Research has debated the mobility enhancing or inequality reproducing effects of educational expansion since WWII (Blau and Duncan 1967; Bowles and Gintis 1974). If inequality in educational attainment had declined in recent years, such trends would suggest that education offers a path to social mobility for disadvantaged groups. However, this study shows that black men have experienced no improvement in high school completion rates since the early 1990s and that sizable racial inequality in educational attainment among men remains. Such findings call into question egalitarian effects of the educational system and suggest that schools play a role in reproducing racial inequality in educational attainment.

The consequences of continued racial inequality in educational attainment are noteworthy given the association between education and incarceration. The education system contributes to

particularly high dropout rates for black men, who then face a high risk of incarceration. As a result, incarceration has become a normative life course event for low-skill black men. Ironically, the link between the education and penal systems obscures the inequality reproducing effects of the education system; the groups most poorly served by the education system with the lowest levels of educational attainment (especially black male dropouts) are highly likely to be incarcerated and excluded from probability-based samples of households commonly used to estimate educational attainment.

The collection process for much social science data systematically undersamples disadvantaged groups through a sampling mechanism that preferences living in settled households. Low-skill black men – who are more likely to be institutionalized than individuals in other social and demographic groups – are underrepresented in conventional data sources through their categorical and systematic exclusion from probability-based samples drawn from households. The sample selection effects of imprisonment have become so large in recent years as to fundamentally obscure the construction of social statistics and racial inequality therein. The prison system must be considered in the construction of accounts of educational inequalities and the factors thought to produce them. The prison system represents an institution that not only obscures but also concentrates disadvantage among poor blacks living in inner city neighborhoods. As a repository for America's high school dropouts, the penal system conceals and concentrates disadvantage.

References

Arum, Richard and Irenee Beattie. 1999. "High School Experience and the Risk of Adult Incarceration." *Crimonology*, 37:515-540.

Arum, Richard and Gary LaFree. 2008. "Educational Attainment, Teacher-Student Ratios, and the Risk of Adult Incarceration Among U.S. Birth Cohorts Since 1910." *Sociology of Education*, 81:397-421.

Blau, Peter and Otis Dudley Duncan. 1967. *The American Occupational Structure*. NY: Wiley.

Blumstein, Alfred and Jacqueline Cohen. 1973. "A Theory of the Stability of Punishment." Journal of Criminal Law and Criminology 64:198-206.

Bowles, Samuel and Herbert Gintis. 1976. *Schooling in Capitalist America*. NY: Basic.

Child Trends. 2003. *High School Dropout Rates: The Gap Narrows Between Blacks and Whites*. Washington, DC: Child Trends. Retrieved June 23, 2009 from http://www.childtrendsdatabank.org/indicators/1HighSchoolDropout.cfm

Crutchfield, Robert. 1989. "Labor Stratification and Violent Crime," Social Forces, 68 (2): 489 – 512.

Crutchfield, Robert and Susan Pitchford. 1997. "Work and Crime: The Effects of Labor Stratification on Criminality." Social Forces 76(1): 93-118.

Darity, William. 1980. "Illusions of Black Economic Progress." *The Review of Black Political Economy*, 10:153-168.

Ensminger, Margaret and Anita Slusarcick. 1992. Paths to High School Graduation and Dropout: A Longitudinal Study of a First-Grade Cohort." *Sociology of Education*, 65:95-113.

Gamoran, Adam, Marin Nystrand, Mark Berends, and Paul LePore. 1995. "An Organizational Analysis of the Effects of Ability Grouping." *American Educational Research Journal*, 32:687-715.

Goldin, Claudia and Lawrence Katz. 2008. *The Race Between Education and Technology*. Cambridge: Harvard University Press.

Greene, Jay and Marcus Winters. 2002. *High School Graduation Rates in the United States*. New York: Center for Civic Innovation, Manhattan Institute.

Hallinan, Maureen. 1994. "Tracking: From Theory to Practice." *Sociology of Education*, 67:79-84.

Hanley, Eric. 2001. "Centrally Administered Mobility Reconsidered: The Political Dimension of Educational Stratification in State-Socialist Czechoslovakia." *Sociology of Education*, 74:25-43.

Hout, Michael, Adrian Rafter, and Eleanor Bell. 1993. "Making the Grade: Educational Stratification in the U.S." P. 25-50 in *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*, Yossi Shavit and Hans-Peter Blossfeld (eds), Boulder: Westview.

Heckman, James and Paul LaFontaine. 2010. "The American High School Graduation Rate: Trends and Levels." Forthcoming, Review of Economics and Statistics.

Kozol, Jonathan. 1991. *Savage Inequalities: Children in America's Schools*. NY: Crown.

Lareau, Annette. 2003. *Unequal Childhoods: Class, Race, and Family Life.* Berkeley: University of California Press.

Lochner, Lance and Enrico Moretti. 2004. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports." American Economic Review, 94(1): 155-189.

Lucas, Samuel. 1999. Tracking Inequality: Stratification and Mobility in American High

Schools. NY: Teachers College Press, Columbia University

Lucas, Samuel. 2001. "Effectively Maintained Inequality: Education Transitions, Track Mobility, and Social Background Effects." *American Journal of Sociology*, 106:1642-1690.

Mare, Robert and Christopher Winship. 1984. "The Paradox of Lessening Racial Inequality and Joblessness Among Black Youth: Enrollment, Enlistment, and Employment, 1964-1981." *American Sociological Review*, 49:39-55.

Orfield, Gary, Daniel Losen, Johanna Wald, and Christopher Swanson. 2004. "Losing Our Future: How Minority Youth Are Being Left Behind by the Graduation Rate Crisis." Cambridge, MA: The Civil Rights Project at Harvard University, the Urban Institute, Advocates for Children of New York, and The Civil Society Institute.

Page, Reba. 1991. *Lower Track Classrooms: A Curricular and Cultural Perspective*. NY: Teachers College Press.

Pettit, Becky and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review*, 69:151-169.

Pew Center on the States. 2008. "One in 100: Behind Bars in America 2008."

Raftery, Adrian and Michael Hout. 1993. "Maximally Maintained Inequality: Expansion, Reform, and Opportunity in Irish Education, 1921-75." *Sociology of Education*, 66:41-62.

Shavit, Yossi and Hans-Peter Blossfeld. 1993. *Persistent Inequality: Changing Educational Attainment in Thirteen Countries*. Boulder: Westview.

Sourcebook of Criminal Justice Statistics. 2008. http://www.albany.edu/sourcebook/pdf/t6282006.pdf accessed on 8/13/2009.Swanson,

Christopher and Duncan Chaplin. 2003. "Counting High School Graduates when Graduates Count: Measuring Graduation Rates under the High Stakes of NCLB." Washington, DC: Education Policy Center, Urban Institute.

Warren, John. 2005. "State-Level High School Completion Rates: Concepts, Measures, and Trends." *Education Policy Analysis Archives*, 13:1-38.

Warren, John and Andrew Halpern-Manners. Forthcoming. "Measuring High School Graduation Rates at the State Level: What Difference Does Methodology Make?" *Sociological Methods Research*. Available online July 2009.

----- . 2007. "Is the Glass Emptying or Filling Up? Reconciling Divergent Trends in High School Completion and Dropout." *Educational Researcher*, 36:335-343.

West, Heather and William Sabol. 2009. Prison Inmates at Midyear 2008 - Statistical Tables. Washington, D.C.: U.S. Department of Justice Office of Justice Programs. NCJ 225619.

Western, Bruce. 2006. Punishment and Inequality in America. New York: Russell Sage Foundation Press.

Western, Bruce and Becky Pettit. 2000. "Incarceration and Racial Inequality in Men's Employment." *Industrial and Labor Relations Review*, 54:3-16.

-----. 2005. "Black-White Wage Inequality, Employment Rates, and Incarceration." *American Journal of Sociology*, 111:553-578.

-----.forthcoming.

Willis, Paul. 1977. *Learning to Labor: How Working Class Kids Get Working Class Jobs*. NY: Columbia University Press.

Wilson, William Julius. 1987. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press.

Table 1. Demographic Characteristics of Inmates in Local, State, and Federal Correctional Facilities.

	1980	2008
Male	94.7	91.5
Age in Years	29.4	34.3
N-H White	42.9	35.0
N-H Black	42.5	41.4
Hispanic	12.3	18.7
Other Race	2.2	4.8
Less Than High School	51.0	55.7
High School/GED	34.6	31.4
Some College	14.4	12.9

Table 2. Educational Distribution of Inmate Population, Men 20-34.

	1980		2008	
	N-H White	N-H Black	N-H White	N-H Black
LTHS	40.7	52.7	52.7	61.8
HS/GED	43.2	34.3	35.5	30.6
Some College	16.1	13.1	11.8	7.7

Table 3. Unadjusted and Adjusted Percentages of Men Failing to Complete High School in the United States, Age 20-34 by Race and Year.

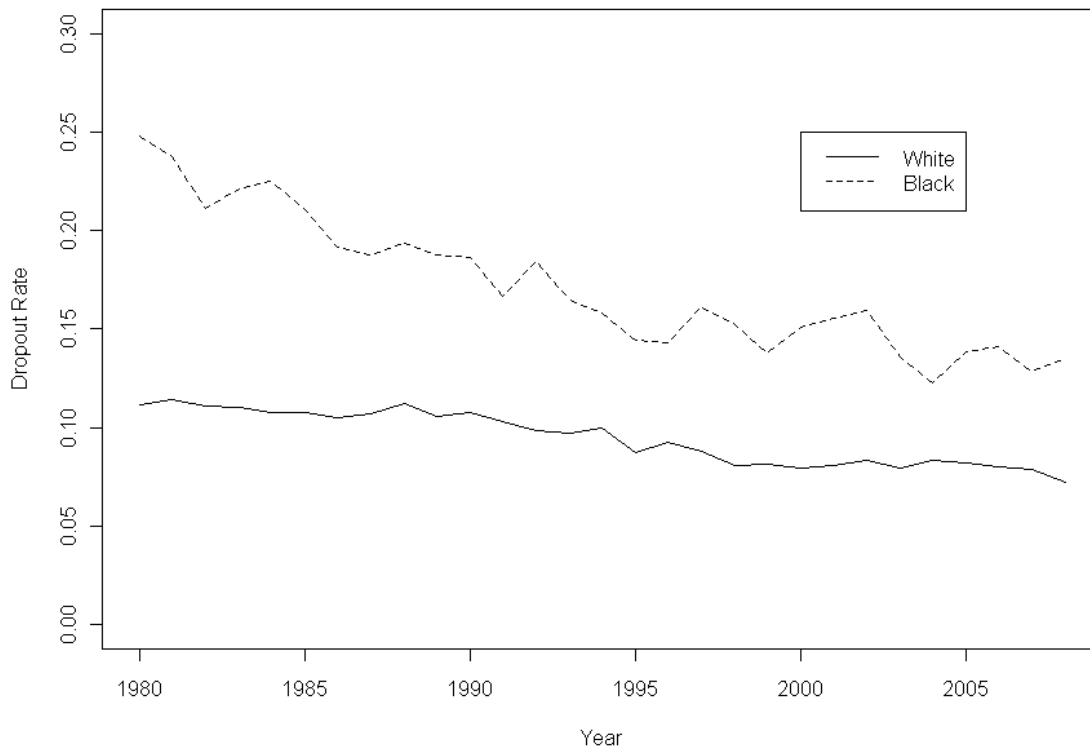|	1980			2008		
	Unadjusted	Adjusted	% Selection	Unadjusted	Adjusted	% Selection
N-H Whites	11.2	11.5	2.7	7.2	8.0	11.1
N-H Blacks	24.8	27.1	9.3	13.5	19.0	40.7
Black-White Gap	13.6	15.6	14.7	6.3	11.0	74.6

Table 4. Regression of Incarceration Adjustment to High School Dropout Rate, Men 20-34, 1980-2008

|	Coefficient	S.E.	
Year	0.015	0.002	*
N-H Black	1.879	0.163	*
Year*Black	0.091	0.010	*
Constant	0.268	0.036	*
R-squared	0.9542		
N	87		

* p < .05

Non-Hispanic Whites are the reference category. Hispanics are included in this analysis but omitted from presentation.

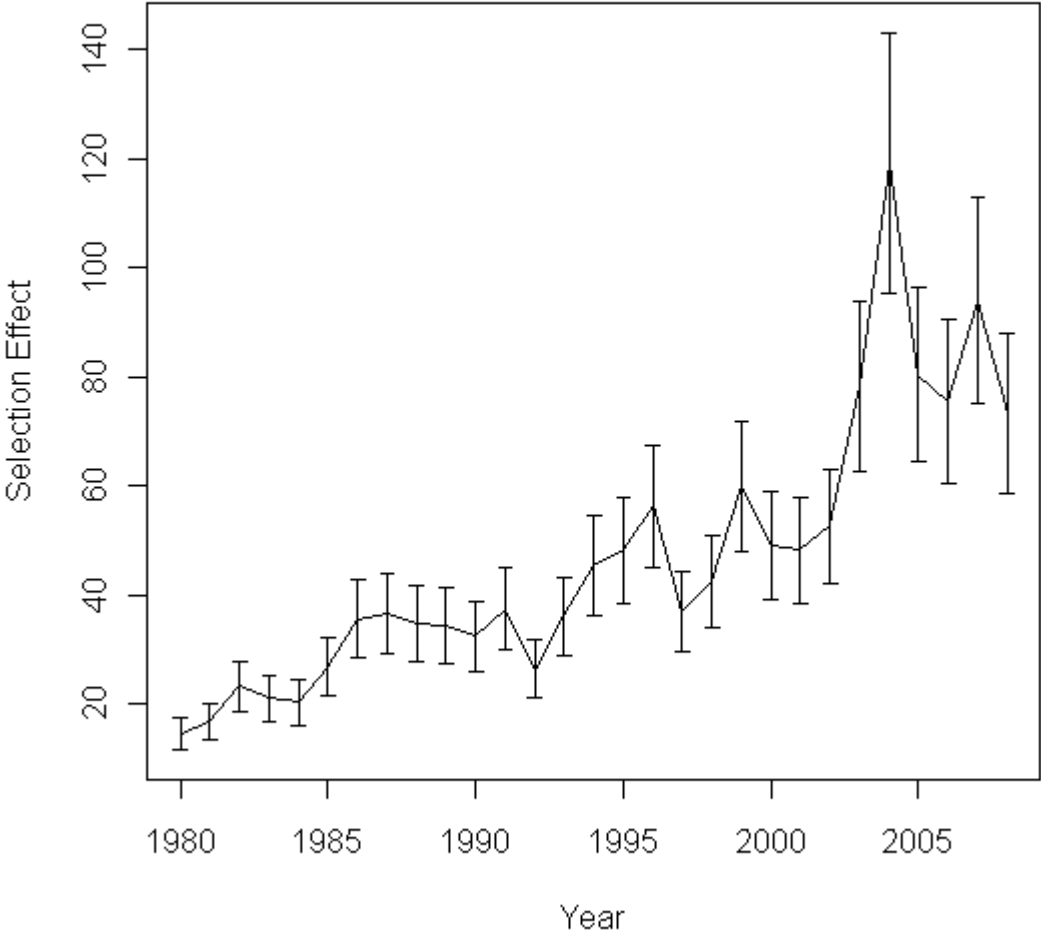Figure 1. High School Dropout Rates, Men 20-34.

Source: Author's calculations using the March Current Population Survey 1980-2008.

Figure 2. Adjusted High School Dropout Rates, Men 20-34.
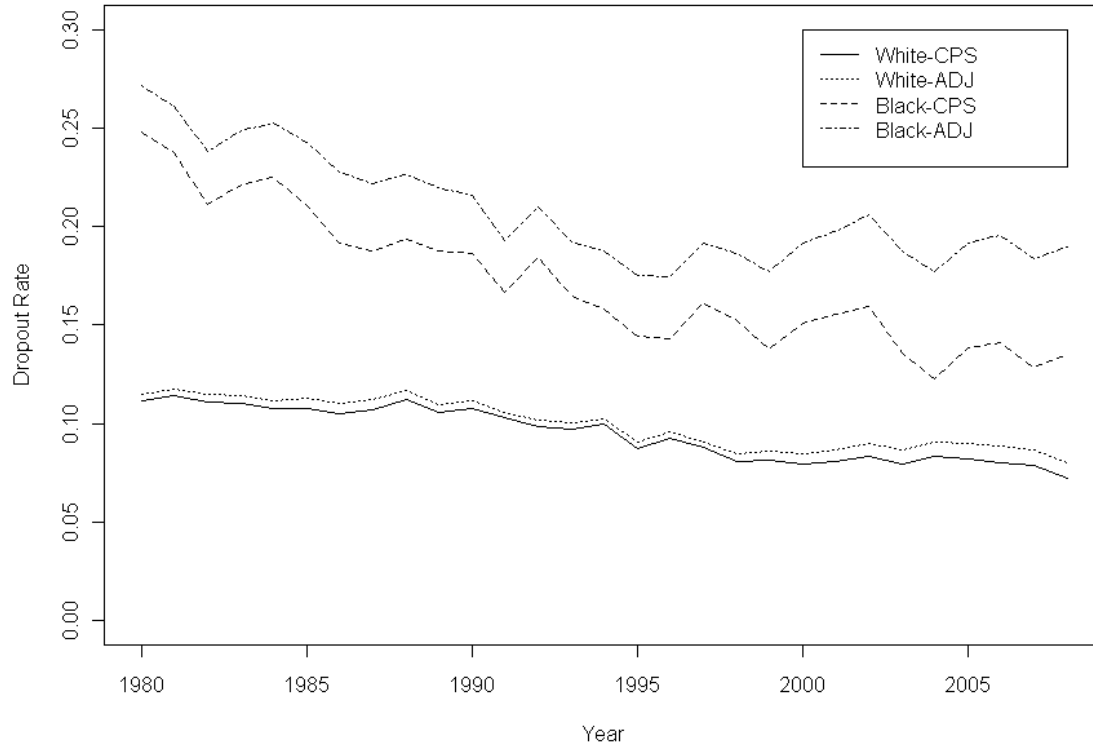
Source: Author's calculations using the March Current Population Survey 1980-2008.

Figure 3. Difference in the Adjusted and Unadjusted Dropout Rates between Black and White Men 20-34.

Source: Author's calculations using the March Current Population Survey 1980-2008.