



N-1 Kinds of Freedom

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Abstract

While current research has established and explored the existing racial disparity in the US penal system, it focuses exclusively on the period from the late 1960s to the present. We seek to explore whether or not this disparity existed in the American South following Reconstruction. In particular, we examine the relative incarceration rates within the context of the political economy existing at this period. Using the census IPUMS data, we establish and examine this racial disparity at the aggregate level. Furthermore, the state of Alabama is investigated at the county level to explore factors influencing incarceration. Most notably, we analyze paternalism as an explanation for some of the variation in incarceration.

I. INTRODUCTION

Almost one in ten African-American men between the ages 20-39 were institutionalized on any given day in 2010¹, and in 2008 young black men were at least six times more likely to be incarcerated than young white men². Yet according to a prominent sociologist, “The predominance of blacks behind bars is not a long-standing pattern but a novel and recent phenomenon³.” Although it is true that the incarceration rate and the proportion of African Americans has increased dramatically since the 1970s, it is not at all clear that enduring racial disparities did not exist prior to this era.

Indeed, Muller details racial inequality in incarceration dating back to the late 19th century⁴, a disparity which has been neglected by most scholars. In his study, he ties a portion of the increase in racial inequality in northern and southern states to African-American migration to the North. We extend Muller’s argument by establishing a racial disparity in incarceration dating back to 1850, and we further explore the topic by investigating some potential factors influencing incarceration in the American South following Reconstruction. One hypothesis we test is that paternalism played a role in reducing the rate of black incarceration. Beyond establishing the presence of a disparity, a major theme is to understand African-American incarceration in the context of discrimination and disenfranchisement.

Using samples from the Integrated Public Use Microdata Series (IPUMS)⁵, we reconstruct the incarceration rates of both the white and African-American populations both regionally and nationally across the years 1850 through 1960. This data allows us to gauge rates of incarceration through multiple states for which data is otherwise unavailable. In addition to this data, we also employ observations from an index of case files of inmates held at the United States Penitentiary located in Atlanta, Georgia from its opening in 1902 to 1921⁶. This data furnishes us with the opportunity to perform an analysis on differences in term lengths among prisoners according to race.

Beyond this analysis, we focus extensively on Alabama between 1890 and 1910⁷. We use annual prison reports to examine incarceration rates in comparison with other prevailing economic factors influencing the South during this time. We restrict our analysis to the stated period in order to avoid confounding effects of the Great Migration. In this data set, we are able to connect each race-specified inmate to the county in which he was convicted and sentenced, allowing us to reconstruct the landscape of incarceration for each year.

We have also compiled information concerning the racial decomposition of each county within Alabama during the relevant time period as well as the prevailing agricultural structure. We use the percentage of tenant farmers to capture the agricultural composition per county. This variable also captures the level of paternalism per county as a higher percentage of tenant farmers would indicate a higher level of paternalistic relationships between white and African-American farmers. All of this data is combined into a panel data set, which we analyze to elucidate the influence paternalism had on African-American incarceration rates. In cases where the percentage of tenant farmers is unavailable we utilize the percent black of each county to handle levels of paternalism. Before pursuing this analysis, we briefly describe the historical background of the Southern penal system.

In the 1820s, two major penal systems emerged in the United States: the Separate System and the Congregate System—respectively also known as the Pennsylvania and Auburn Systems. Both systems required inmates to be housed in individual cells, but the latter allowed inmates to leave their cells during meals and work. Despite the additional amount of freedom prisoners experienced with the Congregate System, inmates were not allowed to speak or interact with one another. Throughout the 19th century, the Separate and Congregate Systems developed and became the two most popular prison systems in the North, while the development of prison systems in the South lagged behind due to the turmoil of the Civil War. The economic burden placed on the South following the war hindered a proper organization of the penal system; citizens were more concerned with rebuilding their homes and communities than establishing prisons as a place for moral reform. Instead of adopting a system of one man to a cell, the South capitalized on combined group efforts, such as chain gangs, to produce an excess labor force.

The expansion of the United States penal system coincided with the rise of paternalism in the American South. By paternalism we mean an implicit contract through which workers exchanged faithful labor for non-market goods and services, such as protection from violence. After Reconstruction, southern states experienced steady increases in their incarcerated populations. At this time, the penal system had not yet been differentiated as we know it today. That is, prisons existing at this time did not distinguish or accommodate the mentally ill, juvenile delinquents, or races of prisoners. The Georgia Prison Commission, however, sought to create a system differentiated by offense type, age, and later, race. In a 1918 annual report, the Commission recommended that the system address “a condition

that should not exist in our State, and that is the sending of a large number of those addicted to the use of narcotic drugs to the State Farm under the technical charge of vagrancy...as many of these men are not criminals and should not be branded as such⁸.” However, it was not until 1916 that Georgia created a boys’ reformatory and provided specialized care for the criminally insane although such recommendations had been made to the state prison commission as early as 1909. Thus, before this date, all prisoners regardless of race, age, offense or mental health were kept together. Eventually, Jim Crow reached the southern penal system and prisoners were segregated by race. However, the state judiciary had not created favorable conditions for African Americans and the poor long before the segregation of prisons.

The early penal system of the South also strived to be self-sustaining, triggering the creation of the convict-lease system. The convict lease system leased prisoners out to counties within the state as labor for a variety of public works projects. By 1910, only 11 of the 146 counties of Georgia did not use convict labor for development⁸. Within the system, State Farms, workshops, and manual training were established to help generate external revenue for the prison and promote reform. Unfortunately, however, the condition of many convict work camps made it difficult to encourage rehabilitation of prisoners. Even compared to the imperfect conditions of prisons in the North, the conditions exhibited in convict work camps of the South were deplorable. One historian writes, “While the northern prisoner may have grown pale and anemic gazing through the bars in the pale dusk of towering cell blocks, his southern brother dragged his chains through long years of hard labor, driven by brutal physical torture, oftentimes to his grave⁹.” Prisoners in the convict lease system were shown little respect as they were simply valued for their ability to generate wealth for the state.

In Georgia, early implementations of the convict lease system date back to 1868, and in 1876 a permanent policy was created in which 1,100 convicts were distributed among three different leasing companies on twenty-year contracts, with each company agreeing to pay the state \$25,000 a year for labor. In Alabama, the convict lease system was not as easily adopted, but in 1880 legislation sanctioned policy to allow its use⁹.

The parallels between the convict lease system and slavery are striking. Prisoners were sold, and even auctioned off, to the lessee with the highest bid. After being leased, prisoners experienced harsh living conditions and crude treatment. Typically, living conditions were described as being rampant with disease and scarce of food and water. One particular

convict camp in Florida was notorious for its extremely morbid living conditions, and was aptly referred to as the “American Siberia⁹.” After observing and operating the camp for 14 years, the Captain of the camp, J.C. Powell, recounts memories from his personal experience:

When deaths occurred, as they did quite frequently, the remains were wrapped in a blanket and buried in a shallow trench that barely covered the remains from the air. Some horrible stories, too revolting to repeat in detail, are told of graves desecrated by domestic animals, and there was no record kept of the dead or those who escaped¹⁰.

Powell also mentions in his memoir that almost the entire convict population was black. Although whites have also been recorded entering the convict lease system, it is conspicuous that convict labor was being used as a form of racial discrimination. Unfortunately, it is difficult to test this hypothesis directly as data is scarce concerning the inflow and outflow of prisoners in the convict lease system. Nevertheless, the convict lease system offers a background against which we can view the Southern penal system.

In the next section, we establish the existence of a racial disparity in incarceration rates (Sec. II). Before exploring reasons affecting this difference between white and black populations, we investigate differences within the incarcerated population itself, particularly inequalities in sentence lengths (Sec. III). We then explain variations in incarceration rates (Sec. IV), where we explore the state of Alabama. Finally we provide a summary of our investigation and recommendations for future study (Sec. V).

II. ESTABLISHING A RACIAL DISPARITY IN INCARCERATION RATES

We shall define the black incarceration rate as the number of black prisoners in a region divided by the black population of that region, reported either per 10,000 or 100,000 individuals depending on the context; the white incarceration rate is similarly defined. For our purposes, the term *racial disparity* concerning incarceration is the black incarceration rate divided by the white incarceration rate. As incarceration rates provide insight in *absolute* terms, racial disparity equips us with a *relative* measure. In a world of total socioeconomic equality, one would expect the racial disparity to equal one, i.e. the same proportions of individuals from both populations would be imprisoned. A racial disparity greater than one

Region	Division	States
Northeast	New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
	Middle Atlantic	New Jersey, New York, Pennsylvania
Midwest	East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
	West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South	South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
	East South Central	Alabama, Kentucky, Mississippi, Tennessee
	West South Central	Arkansas, Louisiana, Oklahoma, Texas
West	Mountain Division	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
	Pacific	Alaska, California, Hawaii, Oregon, Washington

TABLE I. Summarizes the regions, their divisions, and the states comprising those divisions as defined by IPUMS. Some of these states do not factor much into the analysis (e.g., Alaska and Hawaii); we still include everything for completeness.

is indicative of a disparity that disfavors African Americans. The opposite is true if this metric is less than one.

Census microdata concerning the distribution of the prison and non-prison population is available through the IPUMS for every year from 1850 to 1960, with the exception of 1890 for which we interpolated the census data. This allows us to reconstruct the landscape of incarceration during this stretch of time both on a regional and national scale. Table I summarizes the regions we consider as well as the states comprising each region.

Our goal in using the IPUMS data is twofold. First, we want to establish incarceration rates of the white and black populations. Once these incarceration rates are established, we can demonstrate, either positively or negatively, the existence of a racial disparity. Secondly, we want to observe variation in incarceration rates over time both statewide and nationwide.

To accomplish these goals, we look at 1% IPUMS samples, which feature the group-

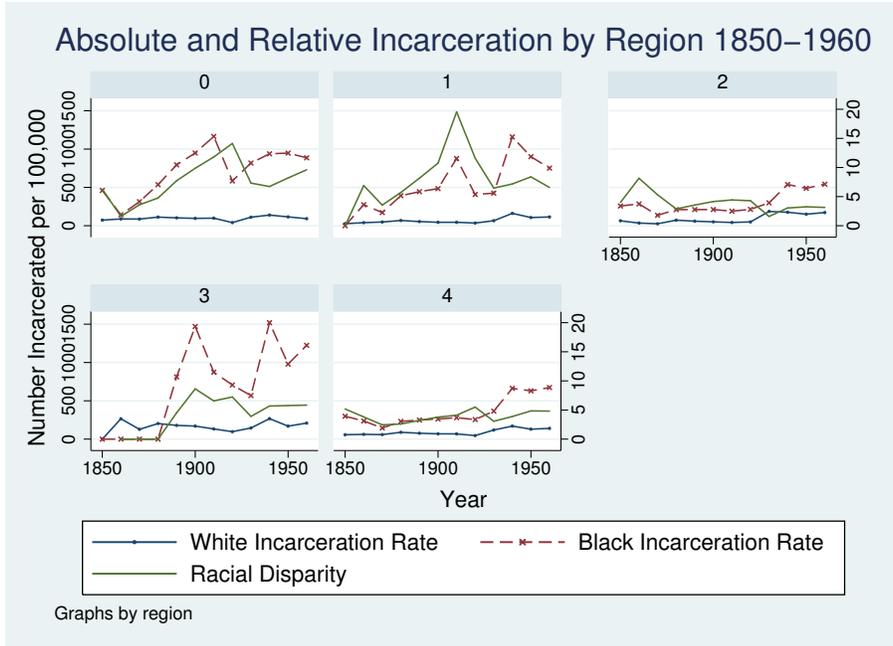


FIG. 1. Captures the variation in incarceration over time for each region considered, and the entire United States. The four regions given in Table I are labeled 0 through 3, while the results at the national level are labeled by 4. Carefully note that the left-hand y-axis in each graph measures the number incarcerated per 100,000 people in the population of the respective racial group in that region, while the right-hand y-axis measures the relative incarceration rate, i.e. the ratio of the black incarceration rate to the white incarceration rate; the scales on these two axes are vastly different.

quarters type and the race of each household for all of the years of interest. We focus only on the white and black entries in the samples. We further restrict our sample by concentrating only on individuals who were housed in the following types of group quarters, as delineated by IPUMS: correctional, federal or state correctional, prison, penitentiary, local correction, or jail. By weighting each household appropriately, we are able to reconstruct the number of prisoners and the total population for each race; dividing the two and multiplying by 100,000 gives us the incarceration rate for each population, from which we can then obtain the racial disparity. Fig. 1 summarizes the results of performing this ritual across years for each of the four regions and for the whole country.

Evidently, there was indeed a racial disparity in incarceration throughout most of American history. This is true on a regional and a national level. Moreover, the data indicates that

the black incarceration rate was typically between five and ten times higher than the white incarceration rate. For the North and Midwest Regions, there was a period following 1910 in which the racial disparity jumped to between 15 and 20. This is precisely what Muller found, and he traced the origins of this spike to African-American migration. Interestingly, this increase deflates for a period just before the 1960s. This phenomenon may be why criminologists had not appreciated the gap in incarceration prior to the 1970s. It is also possible that it was not explored because at the national level the racial disparity appears more innocuous and stable than it does regionally.

Unlike in the North and Midwest regions, the racial disparity in the South slightly *decreases* over time but still persists across time in the sample. So while all of the other regions and the nation as a whole experience increasing levels of disparity, the situation seems to have slightly improved in the South. Again, out migration offers one explanation. Later we investigate effects paternalism may have had in ameliorating black incarceration.

In Figs. 2, 3, and 4 we map the incarceration rates per 100,000 individuals of each state for both races on a color gradient to depict both the magnitude of incarceration as well as the evolution in incarceration at the turn of the century. Because the West was not fully settled at these times, we are primarily interested in the Eastern half of the United States.

By comparing the magnitudes of the incarceration rates between races we can roughly gauge the large gap that existed in white and black incarceration. Most notably, the most severe range of white incarceration in each map corresponds with the lowest or middle-level ranges of black incarceration rates. That is, low to moderate levels of African-American incarceration were equivalent to the harshest levels of white incarceration around the beginning of the 19th century. There was not just a racial disparity at this time: incarceration existed on entirely different orders for the two populations.

Fig. 2 provides a cross section of state-level incarceration in 1890. Relative to the North, black incarceration was mild in the South following Reconstruction. In absolute terms, of course, the black incarceration rate was still high compared to the white incarceration rate, but it was certainly at lower levels than it was in the North. The discovery of this phenomenon is not novel. In fact, it is partly this asymmetry in black incarceration rates between the North and South after the Civil War that motivated Muller's paper. He found that part of the reason for the increasing racial disparity was due to migrants from the South leaving an area with relatively low black incarceration and relocating to regions with

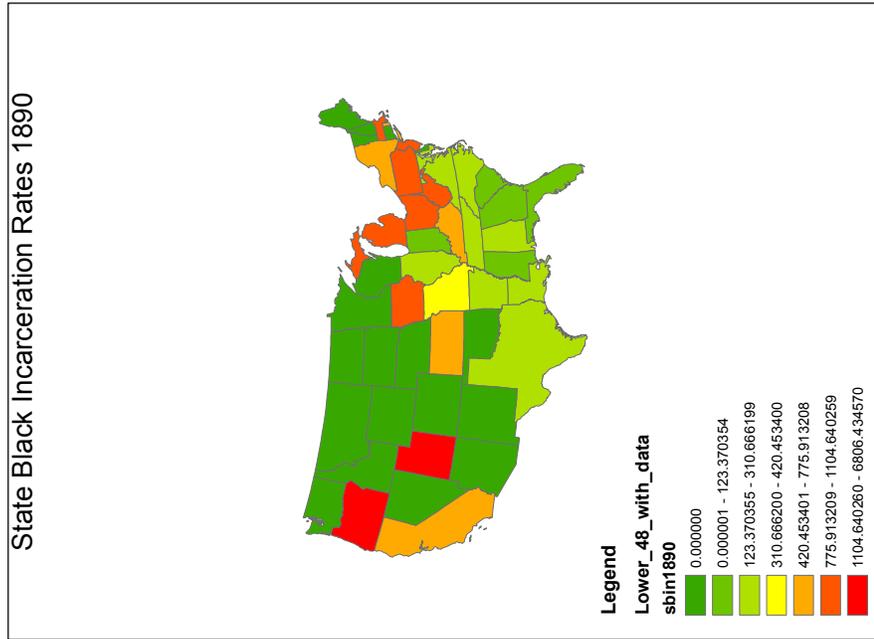
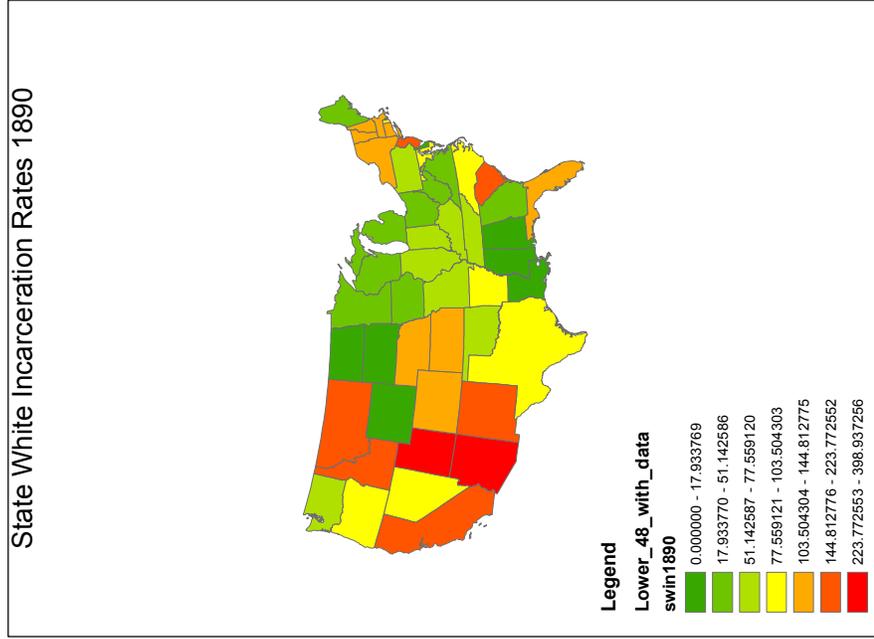


FIG. 2. State level black and white incarceration rates in the year 1890.

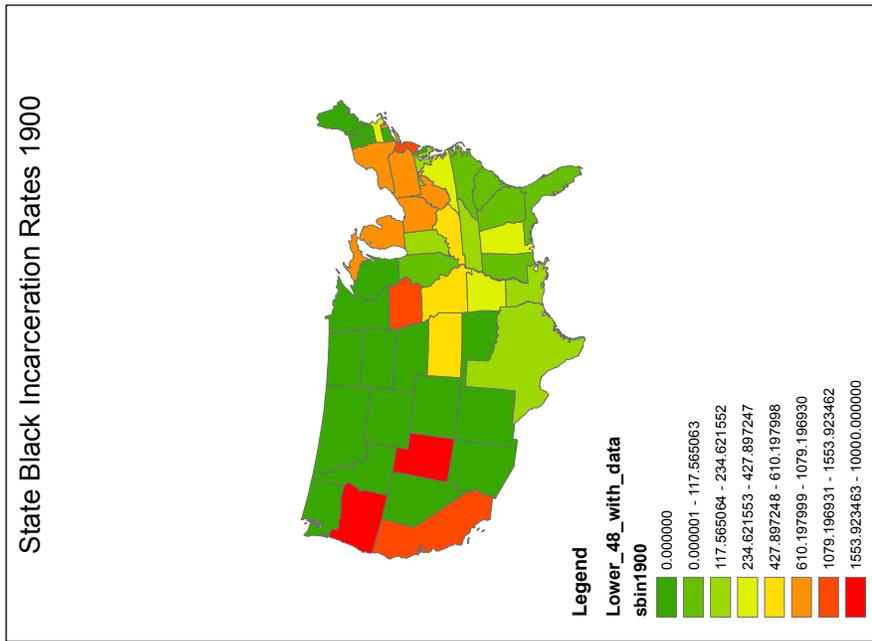
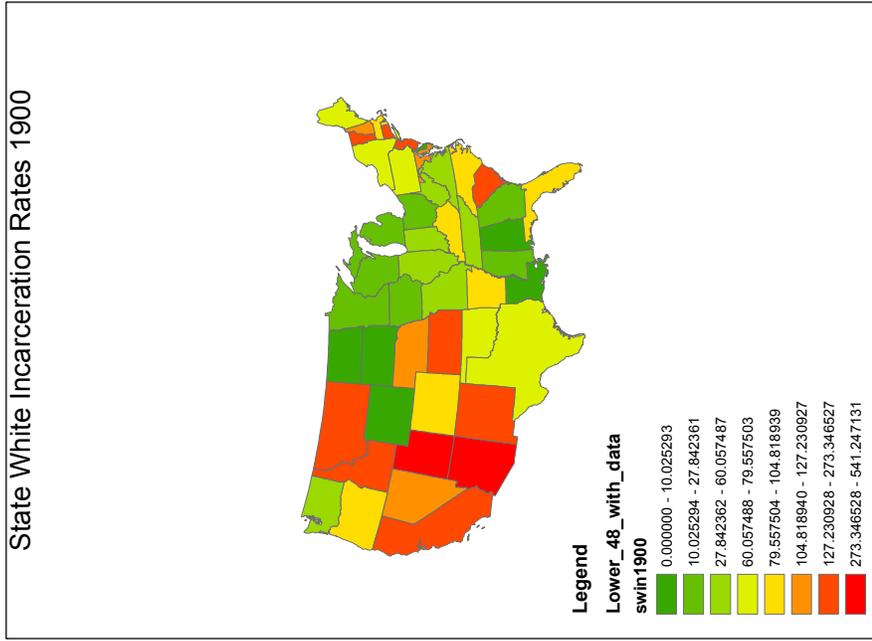


FIG. 3. State level black and white incarceration rates in the year 1900.

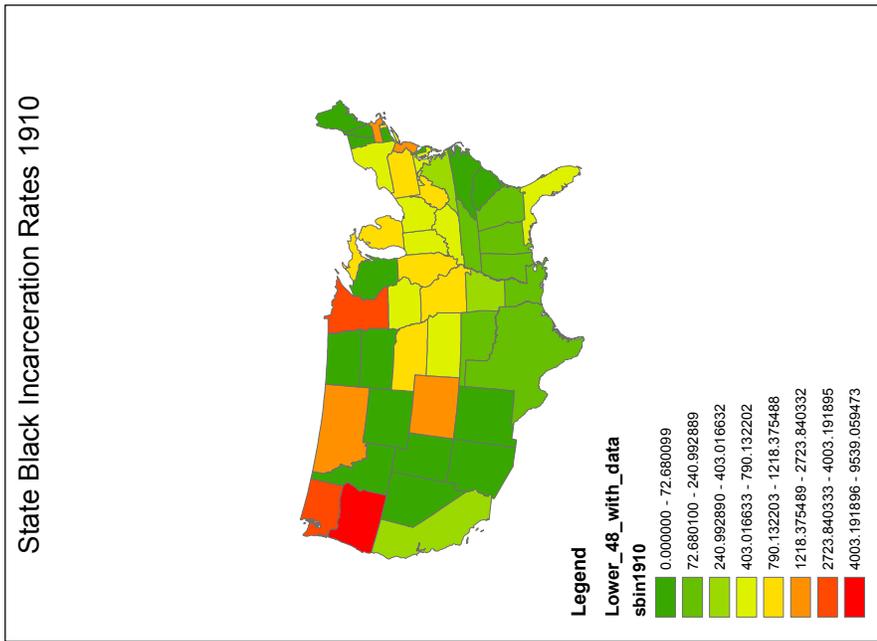
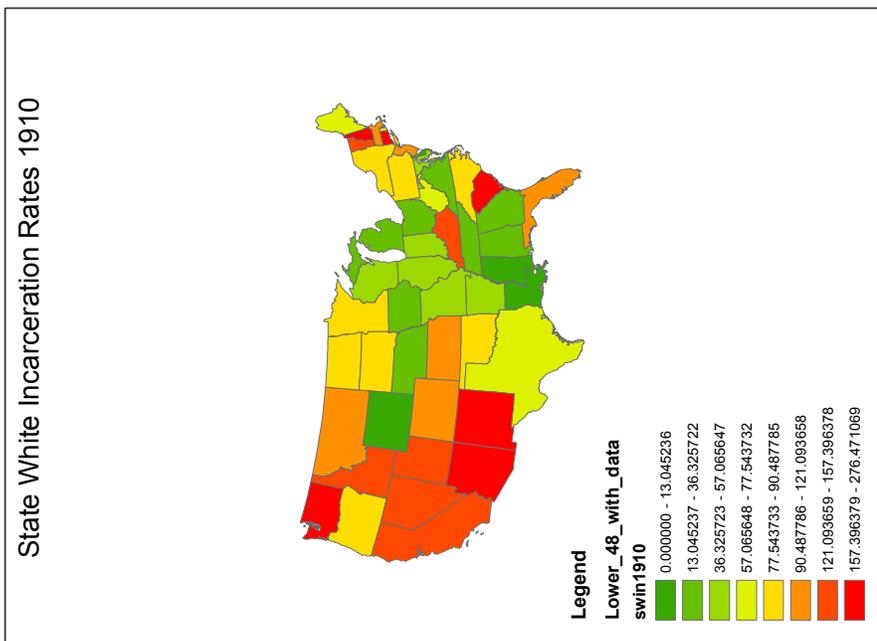


FIG. 4. State level black and white incarceration rates in the year 1910.

higher incarceration. Quantitatively, he found that this explains 29% of the increase in the disparity in the North and the South.

We also observe homogeneity in rates of black incarceration in the North and South, separately. We obviously should not expect the North and South to be similar, but it is remarkable how uniform these regions are internally. Besides numerical differences in population between the regions, two explanations behind the differences between the North and South are their presence of foreign-born whites and their industrial and agricultural structures. The former can explain both the larger black incarceration rate in the North as well as provide some insight concerning the degree of homogeneity in the North. The latter, namely the prevalence of farming, can be used to elucidate similarities in black incarceration in the South.

As Muller explores in his paper, increasing rates of African-American migration to the North could have accelerated the black incarceration rate due to increasing discrimination tied to the influx of the African-American population. Specifically, he considers some of the threat models developed by Hubert Blalock¹¹, whereby groups comprising a minority of a population face increasing discrimination as their share of the population increases, until a certain threshold is reached. This was particularly evident in the North where European immigrants strove to establish themselves socially and economically, and thus directed their efforts at reducing competition from African-American migrants¹²¹³¹⁴¹⁵. Although we do not quantitatively measure this, the figures presented here offer support of Muller's findings. We observe both higher levels of black incarceration in this region and uniformity in the magnitude of incarceration. Part of the uniformity can be explained by the threat models advocated in that disenfranchisement resulting from populations attempting to maintain power should occur, by and large, systematically so that there are no major exceptions and a blanket result follows.

Of course, one of the largest differences between the North and South was that the South's economy was primarily driven by agriculture. The clear distinction between the South as a rural setting as opposed to the North as an industrial setting suggests one of many reasons why the North and South fared so differently in terms of black incarceration. Race relations in the South were very different because many landowners relied on African Americans for their labor supply. Although there was a wide variety of labor contracts, race relations throughout the South were partly a byproduct of common, similar circumstances, some of

which extended back before the abolition of slavery. Again, we do not provide a quantitative analysis of how this explains the homogeneity observed in South black incarceration, but simply suggest it as a possible explanation.

Although we do not attempt to explain differences in black incarceration between the North and South, nor do we attempt to explain the homogeneity evidenced in the heat maps discussed above, we do pursue some of the factors influencing black incarceration, particularly the role played by paternalism in Southern agricultural practices. This could shed light on the questions raised above, but the main reason in investigating factors such as this is to better understand race relations and discrimination in the South and how black incarceration emerged.

III. DISCRIMINATION WITHIN THE PRISON POPULATION

We now concern ourselves with some of the ways race was reflected within the penal system. We focus on the US Penitentiary, located in Atlanta, Georgia, for the years 1902 to 1921. The data includes robust racial information in which the race of each convict is detailed for more than 14,000 observations. The specified races include white, black, Indian (Native American), Mexican (Latino), Chinese, Japanese, and Korean. We create a single category of Asian convicts by summing the totals for Chinese, Japanese, and Korean, as these observations are few in the sample.

Our primary purpose in analyzing this data set is to observe any differential treatment of prisoners according to race. *Treatment* can be depicted by different term lengths awarded to prisoners of different races. The US Penitentiary data allows us to investigate term lengths by computing the difference between the provided release date and incarceration date. The expected length of imprisonment, given the race of each inmate, can then be calculated from the sample by regressing the term length on the categorical race variables. The results are presented in Table II. Although we do not specifically focus on this in our analysis, we have included all race specifications in the table for completeness. The coefficient on *White* gives the base case for term length, against which all other term lengths are to be compared. Specifically, in this sample whites serve about 1.7 years on average while blacks serve about 2.2 ($=1.7+0.5$) years on average.

We see, then, that black inmates in the sample do indeed serve longer terms than whites

	White	Black	Indian (Native American)	Mexican (Latino)	Asian
Coefficient	1.706627***	.5081695***	1.381609***	-.5148277***	-.215601
Std. Error	(.0209133)	(.061949)	(.3735439)	(.0768833)	.1488457
N obs.	10258	3535	87	66	65

TABLE II. This shows the results of running a regression of term length in years on the categorical variables of race, thus providing us with the expected time served given a person’s race. In the first row we report the coefficient on the indicator variable for each racial group, with White being the baseline specification. Beneath these results we give the robust standard errors of the regression, with *, **, and *** denoting results significant at 10%, 5%, and 1% significance, respectively. In the last line of the table, we give the total number of prisoners who fall into that racial group in the entire data set, i.e. across all years in the sample.

by about half a year, and this difference is statistically significant. Although one might be quick to classify this observation as discrimination, we must be careful in interpreting this result for several reasons. First, there are multiple factors that influence the length of time a person remains in prison. Most prominent is the length of the sentence given to the inmate in court at the time of conviction. Another component, however, is the behavior of each inmate while in the penitentiary. Discrimination can occur on each of these levels. For example, judges may award longer sentences to black convicts, and prison guards and administrators may exhibit preferential treatment towards whites. Unfortunately, both aspects potentially confound our results. In particular, we cannot control for the behavior of each inmate. Moreover, we are not controlling for the types of crimes committed by each inmate, the most important determinant of sentence length. While the severity of crimes is controlled for to some extent by the nature of analyzing data within this single, medium-security penitentiary, the threat of bias is large.

Although the data analyzed above does not include information concerning the crime leading to conviction, the Ancestry.com database from which we extracted the original sample does provide this information individually for each inmate. For the year 1910, we selected 195 prisoners, proceeding alphabetically by name so as to randomize the process, and recorded race, crime type, and sentence length. In this new sample, we observe 42 different crimes, not all of which are committed by both races. To facilitate the analysis, we consider

TABLE III. Mutually Committed Crimes in the US Penitentiary Sample in 1910

Mail Fraud	Violating Revenue Act	Violating Postal Laws
Breaking & Entering	Robbery	Housebreaking & Larceny
Counterfeiting	Forgery	Embezzlement
Stealing	Illicit Distilling	Retailing Liquor
	Larceny	

only the 13 crimes that were mutually committed between races and we list them in Table III.

To some extent it is difficult to see what delineates one category from another. For example, larceny appears in two ways: housebreaking & larceny and simply larceny. Larceny broadly defined means the theft of personal property. Larceny and robbery differ in that larceny does not involve the use of force on the criminal's part and typically the crime is committed outside of the victim's home. For cases in which the theft does take place inside a home, it is considered housebreaking & larceny¹⁶.

The second grouping (2) and (2)' of Table II gives information on the average length of time served broken down by race and crime, allowing us to directly compare time served between races for each crime. This information was obtained by regressing term length on race, types of mutually committed crimes, and interactions on race and crime, thus giving the expected value of term length given race and crime committed. The row labelled (2) tells us the expected term length for a white prisoner who committed one of the 13 crimes, with mail fraud representing the constant in the table. For example, on average whites served 1.4 years for committing mail fraud (the constant) and 2.5 (=1.4+1.1) for committing larceny (column 12). In the second row (2)' of this grouping, we report the average term lengths served by blacks for these crimes. In particular, for committing mail fraud blacks served an average of 1.2 (=1.4-.2) years (note that the black coefficient represents the incremental time served for blacks who committed mail fraud).

The coefficients in row (2)' report the interaction between indicators on race and crime. This enables a comparison between times served for blacks relative to whites for each of the crimes listed in the table. If the sign of the interaction coefficient is negative, this indicates that blacks in the sample served shorter sentences for that crime on average, while

a positive coefficient implies that blacks served longer than whites for that crime. Out of the 13 categories, only four of the interaction coefficients are statistically significantly different from zero, meaning that only four of the crimes listed have average term lengths that are statistically different between races. Housebreaking & larceny and forgery both have positive coefficients, expressing that blacks served average term lengths greater than those served by whites. For stealing and larceny, however, the interaction coefficients are negative, so that blacks served less time than whites for these crimes. Thus, a direct comparison does little to produce a definitive answer in terms of discrimination by term length. It shows that it depends to a large extent on the type of crime committed. It is therefore necessary to control for crime explicitly.

This can be achieved by regressing term length on race and indicators on crime, i.e. estimating the model

$$Termlength_i = \beta_{Black}Black_i + Crimes_i'\beta + \varepsilon_i, \quad (1)$$

where $Black_i = 1$ if the inmate is black (and zero otherwise) and $Crimes_i$ is a vector of indicator variables for the mutually committed crimes in the sample. By estimating this simple model, we can determine the incremental difference in term length for a black inmate, holding constant the crime committed. In particular, β_{Black} tells us how much longer blacks were serving relative to whites. Row (1) of Table II presents the results of performing the estimate and reports the coefficient β_{Black} to be slightly positive but not statistically significant. Its sign suggests that blacks were serving slightly longer terms than whites were, but we cannot conclude with confidence that this was indeed the case. Therefore, according to this sample, there is no evidence of discrimination according to term length.

Overall this analysis suggests that blacks were not being discriminated against in this penitentiary by serving longer terms. It does not appear that either differential sentences or partial judgment of behavior within the prison were used as a means of discriminating against African Americans. To be sure, this investigation is concerned with only one prison, but nevertheless it provides a negative result in proving differential treatment among its population according to race.

	Const	Black	1	2	3	4	5	6	7	8	9	10	11	12
(1) Coefficient	1.3793***	.0944	-.4123***	.3264	.2366	1.751***	.0786	1.946***	-.0983	-.2271	.5495	-.5196***	-.0218	.0023
Std. Error	(.135)	(.238)	(.146)	(.283)	(.457)	(.662)	(.248)	(.537)	(.266)	(.282)	(.549)	(.144)	(.201)	(.518)
N obs. = 141														
$R^2 = 0.3169$														

(2) Coefficient	1.444***		-.4829***	.4444*	-.1778	1.441**	-.6111***	1.965***	-.4444*	-.3444	.7222	-.5662***	-.1528	1.056***
Std. Error	(.152)		(.182)	(.252)	(.383)	(.718)	(.152)	(.614)	(.242)	(.369)	(.629)	(.174)	(.275)	(.152)
N obs.	15		13	3	5	8	1	22	4	5	5	13	2	1
(2)' Int. Coeff		-.2152	.3251	.0347	1.532	.9465	1.090***	-.6938	.8153*	.4486	-1.118*	.1704	.5069	-1.368***
Std. Error		(.236)	(.278)	(.475)	(1.187)	(1.582)	(.246)	(.962)	(.477)	(.587)	(.654)	(.251)	(.328)	(.245)
N obs.		4	7	6	2	5	4	2	5	3	1	2	1	2

TABLE IV. Regression results on term length and crime. The crime codes are as follows: (Base) Mail Fraud, (1) Violating Revenue Act, (2) Violating Postal Laws, (3) Breaking and Entering, (4) Robbery, (5) Housebreaking and Larceny, (6) Counterfeiting, (7) Forgery, (8) Embezzlement, (9) Stealing, (10) Illicit Distilling, (11) Retailing Liquor, (12) Larceny. The first grouping (1) gives results on determining the expected term length given race, holding crime constant (see Eq. (1)). The number of observations and the R^2 of the regression are reported beneath the estimates on the coefficients. The first row of the second grouping (2) reports the coefficients on categorical indicators for each crime that was committed by both races in the sample. The second row (2)' gives the interaction of the race indicator with the crime variables. Note that Mail Fraud is the base specification. Beneath each are reported the heteroskedastic-robust standard errors and the number of observations of that crime for the given race. The designations of *, **, *** indicate results that are significant at the 10%, 5%, and 1% levels, respectively.

IV. FACTORS OF INCARCERATION

Following the abolition of slavery and the Civil War, planters and landowners strove to secure a dependable labor force. By offering informal benefits, employers could secure labor from planting till harvest. These informal benefits ranged from social intervention on behalf of the employee to protection from racially motivated violence. Eventually it evolved to a commercial level, and often landowners who functioned as protectors would represent their workers' primary point of contact with the outside world.

Alston and Ferrie explore the role paternalism played in Southern agriculture following Reconstruction and trace its effects in inhibiting the expansion of welfare programs in the United States¹⁷. In their paper, they also remark that one of the causes of the adoption of paternalism was for protection from “capricious judgements of a racial legal system.” However, their analysis is not specifically concerned with this aspect of paternalism. It is not clear precisely what impact, if any, these measures of paternalism had on blacks and poor whites facing the penal system. Therefore, we investigate the hypothesis that paternalism had an effect on variations in incarceration in the South.

A. Alabama

1. *Constructing the County-Level Data*

Our paternalism analysis is concerned with county-level prison data in the state of Alabama for the years 1890-1910. The data for Alabama⁷ allows us to reconstruct the prison population according to race and county of conviction. For some observations, we do not have information regarding county of conviction or race for every inmate. The first limitation cannot be overcome in any reasonable manner since the number of inmates for each year is at most on the order of one thousand while there are on the order of one hundred counties, and some counties produce only a handful of prisoners. Attempting to restore information on the county of conviction could lead to spurious results at the county-level.

However, for missing reports on race we can obtain a reasonable reconstruction by assigning race to inmates for whom race was not specified at a rate in accord with the prevailing proportion of black and white prisoners. A quick analysis of the data reveals that the proportion of inmates who are black remains relatively constant at about 80 percent. That is,

four out of every five prisoners in the Alabama prison system during this time period are black. Using this, we can assign race to those race-unspecified prisoners. This can be done in two ways: assign race randomly using a pseudo-random number generator at a rate of .8 for blacks, or simply enumerate four out of every five prisoners to be black and the fifth be white. We choose to do the latter for reproducibility and to avoid the spikes that arise from the nature of random assignment.

We only perform this reconstruction at the state level, however, because for only a few counties are there enough observations to obtain a faithful reproduction of the number incarcerated. For each county, we directly use the number of prisoners of each race contained in the indexes to compute the black and white incarceration rates. For this study, we compute incarceration rates per 10,000 individuals because the populations of each county are on this order.

Our analysis is also based on census data concerning race, urbanization, and agriculture. The 1910 census contains a supplement for the state of Alabama¹⁸ that provides county-level information on the total population, the black population, and the white population for the years 1910, 1900, and 1890. For the years 1900 and 1910, it also contains data on the percentage of the population living in places with 2,500 residents or more as well as the percentage of all farmers who were classified as tenant farmers. To obtain data on intercensal years, we linearly interpolate. The combination of this data set with the prison data set provides us with a well-balanced panel which we will use in the analysis to follow.

2. Incarceration: Statewide and at the County Level

Fig. 6 illustrates the variation in racial disparity over time at the state level in Alabama. A comparison with Fig. 5 allows us to see that it is black incarceration—not white incarceration—that is the primary driver of racial disparity in Alabama during this time period. In particular, the large spike in racial disparity that occurs in 1893 coincides with the increase in incarceration for both races in that year. However, the increase in the black incarceration rate far surpasses that in the white population. Moreover, the trough that occurs just prior to 1905 in the relative incarceration rate corresponds with a decrease in the black incarceration rate in that year. Across all years in the data the white incarceration rate remains relatively stable, while the black incarceration rate fluctuates.

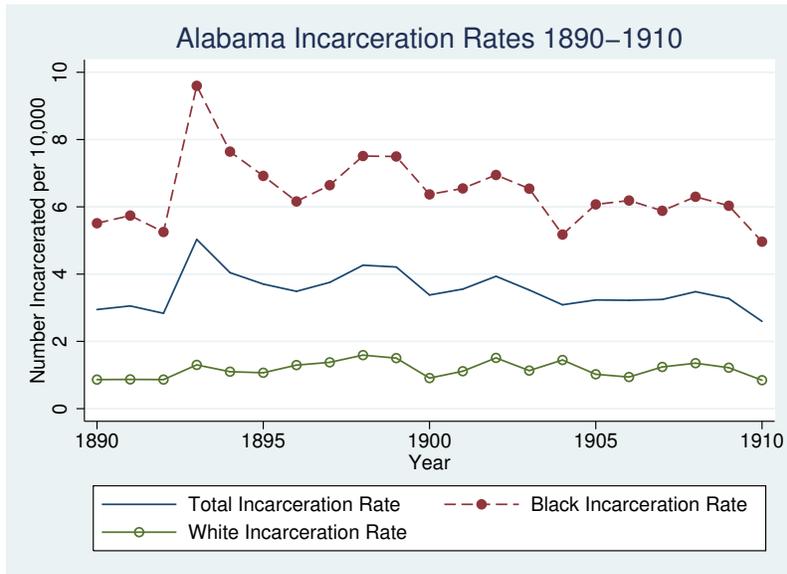


FIG. 5. Depicts incarceration rates for the entire state of Alabama for the entire population, the white population, and the black population.

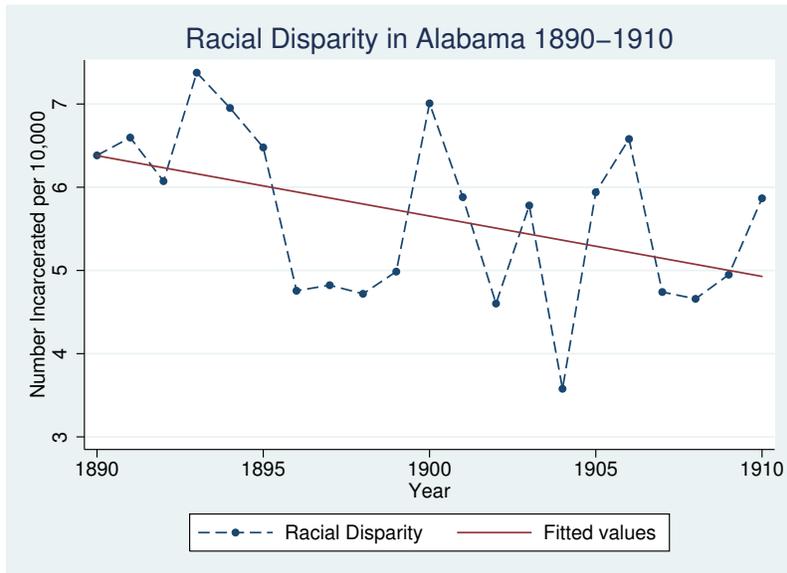


FIG. 6. Shows the evolution of racial disparity in the state of Alabama.

Fig. 6 also depicts the trend in racial disparity in the state of Alabama for this time period. It appears that racial disparity in incarceration *decreases*. This is consistent with our findings in Fig. 1 where we observed that the disparity slightly decreased in the South over time despite its rapid increase in other areas of the United States. We are unable to

properly explain this downward trend quantitatively, but we can suggest one possibility at the state level. Incarceration may prove to be incomparable between races as time progresses due to expansions of prison labor and lease systems. In some cases, African Americans who are partaking in such penal programs may appear absent in the data collected and indexed in the database. If this were indeed true—that African Americans were still present in the penal system but were being awarded punishments that made them appear absent as convicts—then we would be underestimating the racial disparity as this practice became more prevalent. In any case, there was still a persistent disparity in incarceration during this period.

There is more to be said at the county level in the State of Alabama. As the discussion above indicates, the racial disparity in incarceration rate is driven primarily by variations in the black incarceration rate. Because of this, we look at a number of variables in the state of Alabama that can explain the variations we see in the black incarceration rate.

It is widely regarded that paternalism was highly correlated with the percent black of a county. Therefore to capture paternalism’s influence on incarceration we use the percentage of a county’s population that is black as an explanatory variable in our regression model. Counties differ in more ways than just their black population, and by investigating county and time fixed effects models we can control for some of the unobservable factors that can influence the black incarceration rate. Specifically, we consider the model

$$blackincrate_{it} = \beta_1 pctblack_{it} + \alpha_i + \lambda_t + \varepsilon_{it}, \quad (2)$$

where i indexes the county and t indexes the year.

The county fixed effects contained in α_i capture unobserved variations between the counties that do not vary appreciably over time. Contained in these fixed effects are county “culture,” prevailing sentiments each county harbors against the black population. Such relations can stem from the pre-Civil War era and persist through this time period. These relations could be manifestations of white animus towards blacks that may not be the same in every county, most notably in cases where paternalism holds sway and when landowners have an economic incentive to disregard any persisting animus. On the other hand, the white population in some counties may see the black population as a threat, and in an attempt to retain dominance they may pursue black incarceration as yet another means of disenfranchisement. It is impossible to directly measure prevailing levels of animus within a county,

so we rely on the county-specific intercepts contained in α_i to expose these differences.

The time fixed effects λ_t have a similar interpretation, but measure unobserved variables that are constant across the counties but vary over time. The most prominent time fixed effects that can occur in this sample involve laws passed at the state level that effect all counties equally. For example, Alabama passed a voting poll tax in 1902 and a literacy test in 1903¹⁹. Such laws would impact black voting, and hence any resulting imprisonment, similarly in all counties.

In addition, black incarceration can be a reflection of overall criminality in a county. We therefore extend the specification in Eq. (2) to include the white incarceration rate:

$$\begin{aligned} blackincrate_{it} = & \beta_1 pctblack_{it} + \beta_2 whiteincrate_{it} + \beta_3 pctblack_{it} \times whiteincrate_{it} \\ & + \alpha_i + \lambda_t + \varepsilon_{it} . \end{aligned} \tag{3}$$

Here we have included an interaction in this regression to see how varying levels of white incarceration are reflected among differing levels of the black population. For instance, we can ask how decreases in the black population of a county will influence black incarceration, holding constant the proportion of convictions among the white population. We concern ourselves with decreases in the black population because this reflects decreasing levels of paternalism in a county. Ignoring the effects of intercepts, a negative coefficient on this interaction would be indicative of positive effects of paternalism or the possibility of white mobilization to exert dominance by seeking imprisonment in areas with few African Americans. This specification also stems from the idea of measuring a disparity in incarceration between the white and black populations.

Another concern, however, is the effect of urbanization and agriculture on incarceration. To control for these factors, we specialize to the years 1900 through 1910 for which we have data on the percent urban as well as the percent tenant farmers, as described in the previous section. We then update the model in Eq. (3) to include these variables by running the same fixed effects regression but with terms linear in percent urban and percent tenant farmers included.

The primary motivation for including percent tenant farmers is that it provides more insight concerning paternalism's role. In particular, as the proportion of farmers in a county who are tenant croppers increases, white rural elites would have the potential to play a larger role than in counties where there are very few tenant farmers. Although with tenant

farming white landowners may have lower supervision costs associated with maintaining a faithful labor force²⁰, so that the incentive to offer paternalistic benefits may be lower than in cases where laborers are engaged in wage contracts, this still provides a good proxy for paternalism. If paternalism did indeed play a role in ameliorating black incarceration, we would expect that in counties with a greater percentage of tenant farmers, the black incarceration rate would be relatively lower. That is, the percent tenant farmers should enter into the model with a negative coefficient.

Table V presents the results of estimating all of these models. The first four columns in the table represent variations on the base specification in Eq. (2). Specifically, we first estimate the impact of percent black on the black incarceration rate in the absence of year or county fixed effects. According to this estimate, an increase in the proportion of the black population of a given county is associated with a *decrease* in the black incarceration rate. Little change occurs when we perform these estimates with time fixed effects included (column (1)''). However, column (1)' includes county fixed effects and boasts a coefficient that is significantly different in magnitude (but with the same sign) as those seen in the previous two models. This indicates that much of the variation in black incarceration can be traced back to diversity among the counties as described earlier. Finally, we include both time and county fixed effects in column (1)'''. We note that in each of these estimates the coefficient on the percent black of each county in each year is negative and is statistically significantly different from zero at the 5% level.

The sign of these coefficients supports the hypothesis that paternalism had a positive impact on black incarceration. That is, because levels of paternalism are tied to percent black, a negative coefficient indicates that in areas in which paternalism was more prevalent *fewer* blacks were convicted of crimes, proportional to population totals.

Our analysis is also concerned with the quantitative impact paternalism may have had in helping protect African Americans from incarceration, and the estimates we have obtained express to some extent how effective rural elites may have been in this practice. According to the predictions in column (1)''', to decrease the black incarceration rate by one individual per 10,000, we must relocate to a county with a percent black that is about four percentage points higher. In addition, we can gauge the relative impact of a change in percent black by noting that an increase of one standard deviation in the percent black of a county ($s = 25.037$) decreases the black incarceration rate ($s = 20.824$) by about one third of a standard

TABLE V. Alabama Panel Regressions.

	(1)	(1)'	(1)''	(1)'''	(2)	(3)	(4)
pctblack	-.07597** (.03420074)	-.37882** (.14807)	-.07556** (.03074)	-.27096** (.13054)	-.14426 (.13586)	-.02099 (.01827)	.15720 (.25311)
whiteincrate					7.475 (4.906)		1.031 (.9240)
pctblack×whiteincrate					-.11170 (.07730)		-.01061 (.012769)
pcturban						.0663** (.0285)	-.1552 (.1386)
pcttenant						-.0319 (.0316)	-.0480 (.1824)
const	8.674*** (1.903)	28.730*** (9.106)	7.250*** (1.371)	20.573** (8.075)	12.219 (8.785)	6.728*** (1.444)	-1.664 (11.329)
Years	1890-1910	1890-1910	1890-1910	1890-1910	1890-1910	1900-1910	1900-10
County Effects?	No	Yes	No	Yes	Yes	No	Yes
Time Effects?	No	No	Yes	Yes	Yes	Yes	Yes
Clustered Std. Errors?	No	Yes	Yes	Yes	Yes	Yes	Yes
N obs.	1386	1386	1386	1386	1386	693	693
R^2	0.0083	0.0574	0.0327	0.0814	0.1140	0.0502	0.1558

These regressions were estimated using the Alabama panel data set at the county level described in the text. The variations on Model 1 arise from Eq. (2), while Model 2 is described by Eq (3).

The third model only considers 1900-1910 and the additional variables of percent urban and percent tenant farmers. We consider time fixed effects only because its results are similar both in magnitude and in significance to the estimate in which no fixed effects are included, and the situation in which only county fixed effects are included yields results similar to those shown in Model 4 where these variables are included along with others as well as both time and county fixed effects. All standard errors are reported in parenthesis and are clustered according to county, except for the first variation of Model 1 which uses the usual heteroskedastic-robust standard errors. Results that are significant at the 10%,5%, and 1% levels are marked *, **, and ***.

deviation, which is a significant sociological effect in this context.

We now turn to our most robust specification, namely the one that accounts for percent tenant farmers in the time period from 1900 to 1910, whose estimates are reported in columns (3) and (4). In column (3) we show the effects of percent urban and percent tenant farmers where time fixed effects are included but county fixed effects are not; the results with the inclusion of both fixed effects are very similar to those given in column (4). Because the model in column (4) is the most inclusive, we shall examine its results exclusively.

Recalling our earlier discussion on percent black, in this case its sign is *positive*, which appears to strongly contradict our earlier findings. However, this estimate is not statistically significant and its 95% confidence interval includes negative values. In effect, we do not have a contradiction, but this does weaken our previous conclusions. More revealing is the coefficient for the percentage of tenant farmers. Although we estimate that it is negative as theory would suggest, it is insignificant in magnitude and is not statistically distinguishable from zero. This suggests that the role of paternalism was minimal, at best. According to this model, the data do not support the hypothesis that landowners had much of an impact on black incarceration by providing protection from an unfair legal system.

V. CONCLUSION

Taken together, our analysis depicts an intricate landscape of incarceration in the United States following the Civil War. Much like today, we find there existed a gap in incarceration between the white and African American populations dating back to the Civil War. The disparity in incarceration has persisted chronically since then and has only increased rampantly in recent decades. In addition, the North and South fared very differently in terms of the black incarceration rate, with the former region experiencing relatively high levels of black incarceration. Our data expands on the work done by Muller discussed earlier and supports his findings, although we do not re-perform a quantitative investigation of his results here.

We also investigate the possibility that blacks may have faced discrimination within the United States penal system itself. Our analysis on data collected from the US Penitentiary in Atlanta, Georgia at the beginning of the 19th century does not suggest that African Americans were victims of discrimination at the hands of the legal system. This is not to say that African Americans were not discriminated against in terms of arrests or accusations

which would lead to convictions; our data provides no such insight. Instead, because we focused on the length of time served among black and white inmates, we can only conclude that, controlling for crime, there is no evidence that blacks had longer term lengths. Once more, we cannot comment on personal treatment that may have differed between blacks and whites, such as preferential treatment by prison staff or harsher conditions experienced by blacks. Additional research on this matter with more data is warranted to provide a more robust answer.

Finally, we explore the role paternalism may have played in shaping black incarceration in the South following the end of slavery. Theory would suggest that at the hands of a racial legal system, paternalism may have had a positive effect on black incarceration (i.e., it was associated with lower levels of black incarceration). Although preliminary results involving the effects of percent black in each county seem to indicate that paternalism was influencing black incarceration, these effects were removed once we made a more robust specification involving the percentage of tenant farmers. Therefore, for the data collected in Alabama, we do not find evidence favoring paternalism as a prominent factor in explaining variations in black incarceration.

Further investigation could be done on some of the influences on incarceration. As noted earlier, quantitative work applying models of threat like those developed by Blalock would be one avenue. Indeed, some of our results concerning how incarceration varied between counties with differing levels of percent black may hint at this mechanism. However, this is a far from adequate measure of the white population using incarceration as one way of marginalizing the black population in areas where whites had a numerical majority. Much more straightforward would be an investigation of incarceration being used as another mode of voting disenfranchisement. Similar research has been done concerning lynching and formal methods of disenfranchisement following Reconstruction²¹.

Understanding the existence and the sources of disparity in incarceration cannot explain the continued levels of disparity we see today, but they can allow us to better understand race relations, particularly in the criminal justice system, the United States currently experiences. In any case, it appears that following the abolition of slavery, African Americans were faced with yet another burden. Despite the new freedoms with which they were endowed, they

lost one at the hands of the American penal system.

- ¹ Neal, Derek and Armin Rick. 2014. "The Prison Boom and the Lack of Black Progress after Smith and Welch." NBER Working Paper No. 20283. July 2014
- ² Pettit, Becky. *Invisible Men: Mass Incarceration and the Myth of Black Progress*. New York: Russell Sage Foundation, 2012.
- ³ Wacquant, Loïc. 2002, p. 43. "From Slavery to Mass Incarceration." *New Left Review* 13:41-60.
- ⁴ Muller, Christopher. "Northward Migration and the Rise of Racial Disparity in American Incarceration, 1880-1950." *American Journal of Sociology*, Vol. 118, No.2 (September 2012), pp. 281-326.
- ⁵ Steven Ruggles, J. Trent Alexander, Katie Genadek, Ronald Goeken, Matthew B. Schroeder, and Matthew Sobek. *Integrated Public Use Microdata Series: Version 5.0* [Machine-readable database]. Mineapolis: University of Minnesota, 2010.
- ⁶ Ancestry.com. *Atlanta, Georgia, U.S. Penitentiary, Prisoner Index, ca. 1880-1922* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2009.
- ⁷ Ancestry.com. *Alabama, Convict Records, 1886-1952* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2011.
- ⁸ Prison Commission of Georgia. *Annual Report of the Prison Commission of Georgia*. Atlanta, State of Georgia. 1910-1920 (Serial Set) Retrieved from <http://catalog.hathitrust.org/api/volumes/oclc/11763249.html>
- ⁹ McKelvey, Blake. 1903. *American Prisons: A Study in American Social History Prior to 1915*. Chicago, Ill.: The University of Chicago Press, 1936. pp. 25-201.
- ¹⁰ Powell, J.C. *The American Siberia: Or, Fourteen Years' Experience in a Southern Convict Camp*. Chicago: H.J. Smith & Co., 1891, pp. 9.
- ¹¹ Blalock, Hubert M., Jr. 1967. *Toward a Theory of Minority-Group Relations*. New York: Wiley.
- ¹² Roediger, David R. 1991. *The Wages of Whiteness: Race and the Making of the American Working Class*. New York: Verso.
- ¹³ Ignatiev, Noel. 1995. *How the Irish Became White*. New York: Routledge.
- ¹⁴ Jacobson, Matthew Frye. 1999. *Whiteness of a Different Color: European Immigrants and the Alchemy of Race*. Cambridge, mass.: Harvard University Press.

- ¹⁵ Guterl, Matthew Pratt. 2001. *The Color of Race in America, 1900-1940*. Cambridge, Mass.: Harvard University Press.
- ¹⁶ "Definition of Larceny - FindLaw." *Findlaw*. N.p., n.d. Web. 11 Dec. 2014.
- ¹⁷ Alston, Lee J and Ferrie, Joseph P, 1993. "Paternalism in Agricultural Labor Contracts in the U.S. South: Implications for the Growth of the Welfare State," *American Economic Review*, American Economic Association, vol. 83(4), pages 852-76, September.
- ¹⁸ *Thirteenth Census of the United States: Alabama Supplement*.
- ¹⁹ *Literacy Requirement & Poll Tax-Revised Alabama State Constitution Adopted 1901*.
- ²⁰ Alston, Lee J and Higgs, Robert, 1982. "Contractual Mix in Southern Agriculture since the Civil War: Facts, Hypotheses and Tests," *The Journal of Economic History*, Economic History Association, vol. 42(2), pp. 327-353.
- ²¹ Jones, Daniel, Werner Troesken, and Randall Walsh. "A Poll Tax by any Other Name: Formal and Informal Methods of Voter Suppression in the Post-Reconstruction South."