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The Cumulative Costs of Racism and the Bill for Black Reparations

William Darity Jr., A. Kirsten Mullen, and Marvin Slaughter

A core contribution of economic historians is to bring quantitative estimates to their topics. With respect to American slavery and its ongoing legacy of racial oppression, the concreteness of numerical estimates plays an additional role. The arguments over payment of reparations to Black descendants of American slaves have many dimensions, but one key requirement of any plan for reparative justice is determination of an appropriate dollar amount. Measures can be partitioned into two broad categories: 1) those based upon itemization of the costs to the victims or gains to the perpetrators from specific atrocities; and 2) those based upon estimates of the combined global effects of the atrocities on living descendants of those persons enslaved in the United States.

The first approach requires identification of a comprehensive list of relevant atrocities and injustices, assigning a dollar value to each, and adding them to arrive at an amount for the reparations bill. In the first main section of the paper, we provide examples of the itemization strategy: the wage costs to the enslaved of bondage; the gains to the perpetrators of slavery; the lives taken by White terrorists in post-Civil War massacres and lynching during Reconstruction and legal segregation; the

■ *William Darity Jr. is the Samuel DuBois Cook Distinguished Professor of Public Policy, Sanford School of Public Policy, Duke University, Durham, North Carolina. A. Kirsten Mullen is a folklorist and the founder of Artefactual, an arts-consulting practice, and Carolina Circuit Writers, a literary consortium that brings expressive writers of color to the Carolinas. Marvin Slaughter is the Interim Director of the African American Leadership and Policy Institute, a community-based research and advocacy organization concerned with collective uplift of Black communities. Darity is the corresponding author at william.darity@duke.edu.*

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property destroyed and seized by White terrorists during the massacres; discrimination in the provision of the homebuying supports from the Federal Housing Administration and the Servicemen's Readjustment Bill of 1944 (commonly known as "the G.I. Bill"); and racial discrimination in employment.

The second approach, to which we turn in the next main section of the paper, requires use of quantitative indicators of the global effects of the impact on the victimized community of a trajectory of injustices. We focus on two global indicators: the present value of providing 40 acres of land to freed slaves in 1865 and the current wealth gap between Black and White Americans.

At the outset, we must say we prefer the second approach, specifically using the Black–White wealth gap as the appropriate gauge for the size of the reparations bill. Not only is full enumeration of all the pertinent atrocities a major challenge, marshalling the data needed to assign a numerical value to each is daunting at best and impossible at worst. A more efficient method is to use a summary measure, like the racial wealth gap, to arrive at the total due.

Moreover, although the amount associated with the itemization method likely will be greater than the bill for reparations based upon the current Black–White wealth gap, all atrocities on an itemized ledger are not applicable to living descendants of the enslaved. In fact, it is hard to justify paying those living today for the harms directly inflicted upon their ancestors, particularly enslavement itself. It is legitimate to pay them for ongoing consequences of the harms that limit their lives in the present moment.

In what follows, at several points, we will make compound interest calculations to generate present value estimates of the costs imposed on African Americans by slavery and subsequent acts of oppression. The choice of interest rate for compounding exercises is somewhat arbitrary. In this essay, we opt to use the two interest rates utilized in Craemer et al.'s (2020) extended analysis of the costs of slavery to the enslaved (discussed further in the next section): 3 and 6 percent. A 3 percent nominal rate approximates a risk-free rate over time; a 6 percent rate can be considered an adjustment that takes into account nominal growth in GDP over time. In addition, the 6 percent rate has historical resonance: it was the "interest rate specified in the sales contract between Georgetown University and the Louisiana purchaser of 272 enslaved people in 1838" (Craemer et al. 2020, p. 219).[1]

For those interested in a full presentation of the arguments for a policy of paying reparations to the Black descendants of African slaves, two of the authors of the article have published *From Here to Equality: Reparations for Black Americans in the Twenty-First Century* (Darity and Mullen 2020). Indeed, the final chapter of that book presents a detailed plan of redress for the 40 million Black American descendants

[1] Some studies in this literature also include estimates using a 9 percent interest rate, which corresponds roughly to the average nominal rate of return on financial assets on the Standard & Poor's 500 from 1880 to the present (Webster 2021). Use of the 6 percent rate compounded over long spans, compared to a 3 percent rate, leads to explosive increases in present value estimates. We do not report the results of using a 9 percent rate, which leads to even more enormous estimates.

of slavery in the United States. However, whether one agrees with a policy of reparations or not, concrete quantitative estimates of the costs of American slavery and racial suppression to those who were enslaved and oppressed should be a central part of our understanding of US history.

Itemizing Some Costs of Slavery and Racial Oppression

Measuring Costs of Slavery

Enslavement of Africans—both those who were brought here by absolute coercion and their descendants born into slavery—was an organic part of the American republic inaugurated with the Declaration of Independence in 1776. In this subsection, we present four different routes for measurement of the costs of American slavery: unpaid wages to the enslaved, financial gains to the slaveholders, the monetary price the enslaved had to pay to purchase their own freedom, and the contribution of American slavery to the nation's economic development. Table 1 provides a summary of the present value estimates calculated at each of the interest rates.

The first procedure considered for calculating the cost of enslavement to those held in bondage is to use the wage rates paid to free laborers at the time. Of course, because the enslaved population was forced to migrate, in the absence of slavery they would not have been present in the United States in the same numbers. Therefore, in the absence of slavery, the wage rate for free labor, presumably, would have been higher (Darity 1990). However, in lieu of an estimated shadow wage in a hypothetical America *without* slavery, use of the actual prevailing wage rate for hired labor during the same interval provides a cautious estimate of the wage costs of slavery to the enslaved.[2]

Craemer (2015) uses this approach: that is, based on estimates of the hourly wage rate in each of the years 1776–1860 and estimates of the hours worked by enslaved people, he calculates total wages lost over the interval. Thus, the implicit counterfactual here is that slavery would have been abolished as part of the formation of the United States in 1776, so that slaves and their descendants would have become free labor. Due to uncertainty over the exact size of the enslaved population during the course of the Civil War—it was customary for the enslaved to liberate themselves from the plantations and farms and to join the Union army when it passed through

[2] Craemer et al. (2020, p. 229–30) point out that had slavery been abolished in 1776, perhaps wages of free labor would not have shifted much: "At least in theory, the addition of freed enslaved laborers might not have exerted a net effect on wages, as it would have increased not only the supply of labor but also, in rough proportion, the demand for free labor by former slave owners." They conclude, "These countervailing forces might have left the prices for labor in the free labor market roughly unaffected justifying the use of free market hourly compensation records to estimate the earning potential of the enslaved, had they been free laborers at the time." Nevertheless, they view the superior "counterfactual [as] what the wage rate would have been for an African who migrated freely to the American colonies in a world without American slavery. In that world, voluntary African immigrants would have found higher wages due to a greater labor shortage." With this counterfactual, using the prevailing wage for free labor is, necessarily, a "conservative" strategy.

Table 1
Comparison of the Measures of the Cost of Slavery

Measure	*3 percent interest compounded to the present (2021 dollars)*	*6 percent interest compounded to the present (2021 dollars)*
Missing wages 12-hour estimate	$8.46 trillion	$860.2 trillion
Missing wages 24-hour estimate	$14.2 trillion	$7 quadrillion
Asset value of the enslaved	$466.5 billion	$47.5 trillion
Expense of self-purchase (price of freedom)	$559 billion	$56.9 trillion
Contribution to American economic development (1839)	$33.4 billion	$6.2 trillion
Contribution to American economic development (1859)	$72.9 billion	$105 trillion

Source: Various studies discussed in the text.

their area (Du Bois 1935, p. 55–83)—Craemer (2015) stops the calculation in 1860 rather than 1865, which means that his estimate is biased downward.

Under Craemer's (2015) first scenario, missing wages are computed on the basis of a 12-hour work day, putting to work all enslaved persons five years of age or older. In his initial work of gathering historical data for wages for free labor, drawn primarily from Officer and Williamson (2022), Craemer uses a 3 percent interest rate to estimate the bill for outstanding wages projected up through 2009. Calculating the sum of the present value of each year's unpaid labor at 3 percent interest rate yields an estimate of $8.46 trillion by 2021. At 6 percent, the present value exceeds $860 trillion.

Craemer's (2015) second scenario is based upon recognition that the entire day of every day of the week for the enslaved, regardless of their age, constituted theft of their time. Here, Craemer estimates the bill for outstanding wages by imputing the free labor market wage to the full 24 hour day, 365 days a year, for all persons enslaved. The 2009 present value Craemer computes, at a 3 percent interest rate, is $14.2 trillion. Use of a 6 percent interest rate for calculation of the present value yields a stunning total of $7 *quadrillion*.

An alternative to the wage-based strategy is to estimate benefits to the slaveholders of the ownership of human property. A monetary value of Black subjugation can be calculated by treating prevailing sales prices for enslaved human beings as capturing the discounted present value of the net expected stream of income generated for the slave owner. This strategy was undertaken by Ransom and Sutch (1990), Neal (1990), and Marketti (1990) in putting forward their respective calculations of "the present value of past exploitation." Their estimates range from a low of $17.4 billion (Ransom and Sutch 1990) to a high of $4.7 trillion in 1983 US dollars.

A second approach is to calculate the asset value of the enslaved population to the slaveholders. On December 31, 1860, upon his exit from Congress in anticipation of his state's secession from the Union, Louisiana Senator Judah P. Benjamin (1860) estimated that enslaved people had a value of $4 billion to their owners.[3] The present value of that sum is $466.5 billion at 3 percent interest and $47.5 trillion at 6 percent interest.

Given the presence of 4 million enslaved persons, Benjamin's estimate corresponds to an average valuation in 1860 of $1,000. This estimate enables us to us a third approach, calculating the price an individual had to pay to obtain freedom in 1860 dollars.

Prior to the Civil War, the most common way for a slave to obtain freedom was by self-purchase—buying one's way to emancipation (Alchin 2018). While many enslaved people sought to run away, *successful* escape was difficult because of the specialized teams of "slave catchers" and the presence of federal laws requiring the return of enslaved people to their owners.[4] Owner-based manumission or legal manumission was quite rare. With the arrival of the Civil War, contributing directly to the Union war effort became an effective way of gaining mass emancipation. By the end of the Civil War, 180,000 Black men served in the Union army—about 10 percent of the military personnel.

Enslaved persons did have a variety of ways to accumulate the funds to buy freedom (Alchin 2018). There were sometimes opportunities to work for pay for the owner or for someone else on Sundays, the ostensible day of rest. In some sectors, forestry and mining in particular, there may have been opportunities for piece rate compensation if the enslaved person met more than their quota. Occasionally there were bonuses at harvest time. If an enslaved person had a garden plot, there might be opportunities to sell some of their produce.

The most important avenue for obtaining the funds to buy freedom was the leasing or "hiring out system," where an enslaved person might be permitted to keep a portion of the money. This was more of an option for enslaved persons who were skilled craftsmen. At times, they might even have had the "privilege" of hiring themselves out, depending upon the degree of leverage their unique skills afforded. Of course, because of the imbalance in power, the enslaved person seeking to buy freedom was reliant on the owner to honor the deal.

The price of freedom generally was 20 percent greater than the market price for an enslaved person (Cole 2005). Therefore, in 1860 an enslaved person would have had to meet an average price of $1,200. The emancipation value of the 4 million persons enslaved in 1860 would have been $4.8 billion at the going rate for buying freedom. The present value would amount to $559 billion at 3 percent and $56.9 trillion at 6 percent.

A final way of measuring the cost of the atrocity of slavery is to estimate the contribution that enslaved labor made to American economic development. Stelzner and Beckert (2021) offer a comprehensive attempt to arrive at such a calculation. Due to

[3] Benjamin (1860), who served in three different capacities in Confederate cabinet, including Secretary of War, said "our slaves … directly and indirectly involve a value of four thousand million dollars." Louisiana's official secession from the United States took place on January 26, 1861.

[4] Nordmann, Christopher A. 2009. "Runaway Slaves." Encyclopedia of Alabama. http://encyclopediaofalabama.org/article/h-2125.

data limitations, the authors only are able to calculate the contribution of enslaved labor to national output in two specific years: 1839 and 1859. By totaling the effect of slave production at the regional level, Stelzner and Beckert (2021, p. 19, table 2) arrive at measures of the contribution to national output. Slave-grown cotton in the Southern states was so dominant that the produce of enslaved laborers generated about half of the output in the region.

Stelzner and Becker (2021) conclude that enslaved labor in the United States was responsible for 18.7 to 24.3 percent of commodity output growth during the two-decade interval between 1839 and 1859. In both years, slave production contributed to at least 15 percent of total national output. Present value calculations using the lower bounds on Stelzner and Becket's estimates of the contribution to national output by enslaved persons place the numbers at $33.4 billion (using a 3 percent rate) and $6.2 trillion (6 percent) for 1839. A similar calculation for 1859 results in estimates of $72.9 billion (3 percent) and $105 trillion (6 percent). Again, these estimates account for only *two years* out of the full span of American slavery.[5]

However, by deriving only the *direct* effects of reliance on slave labor in each region, the authors undervalue the full contribution made by enslaved workers. For example, they assign a value of zero to output attributable to slave labor in New England because there were no enslaved workers in those states in 1839 and 1859. However, the textile sector in New England produced 70–75 percent of the nation's cloth between 1831 and 1860 (Temin 1999, p. 50), and its critical raw material was slave-grown cotton from the US South. The Stelzner-Beckert approach does not take into account extra-regional backward nor forward linkages (Hirschman 1958).

All of the methods discussed here share a common shortcoming: by focusing on lost wages, values from a slaveholder's perspective, or output produced by slave labor, none of them consider in a direct way the full costs of conditions of enslavement, like suffering violence, brutality, and loss of freedom.[6] In that sense, all of these methods result in downward-biased estimates of the costs of slavery to the enslaved.

Measuring Costs of Post–Civil War Massacres, Murders, and Excess Mortality

Between the end of the Civil War and the 1940s, approximately 100 White massacres directed against Black communities took place (for a list, see Table 2). In 1919 alone, for example, upwards of 35 of these assaults took place in locations

[5] Gavin Wright's contribution to this symposium minimizes the impact of slavery on American economic development. However, he does not directly address Stelzner and Beckert's (2021) analysis, nor does he consider Hirschman's (1958) "backward and forward linkages" extending from the slave plantation sector. Wright does say explicitly that his conclusion does not affect the case for Black reparations.

[6] Craemer et al. (2020) offer illustrations of the monetary costs of the denial of freedom based on compensation awarded to Japanese-Americans subjected to mass incarceration during World War II and for the Americans held hostage in Iran for 444 days starting in November 1979. These estimates are extremely different. Under the Civil Liberties Act of 1988, each survivor of the "internment" was given a letter of apology and $20,000, which amounted to 76 cents per hour of confinement (in 1988 currency). In contrast, the Justice for United States Victims of State Sponsored Terrorism Act of 2015, amended in 2021, specifies $10,000 per day of captivity for the hostages, which implies an hourly rate of approximately *$416 per hour* in 2021 dollars.

Table 2
List of Documented Massacres and Instances of Mob Violence Perpetrated Against Black Individuals, 1863–1950

Year	*Locations*
1863	Detroit, MI
	New York, NY
1866	Memphis, TN
	New Orleans, LA
1868	St. Bernard Parish, LA
	Opolousas, LA
	Albany, GA
1870	Eutaw, AL
1871	Meridian, MS
1873	Colfax, LA
1874	Coushatta, LA
	Vicksburg, MS
	Barbour County, AL
1875	Clinton, MS
1876	Charleston, SC
	Ellenton, SC
	Hamburg, SC
1887	Thibodeaux, LA
1888	Danville, VA
	Fort Bend, TX
1891	Omaha, NB
1896	Polk County, AR
1898	Phoenix, SC
	Wilmington, NC
1900	New Orleans, LA
1901	Pierce City, MO
1903	Evansville, IL
	Whitesboro, TX
1908	Springfield, IL
1910	Little Rock, AK
	New York, NY
	Norfolk, VA
	Shreveport, LA
	Slocum, TX
	Uvalda, GA
1912	Forsyth County, GA
	Oscarville, GA
1917	Chester, PA
	East St. Louis, IL
	Houston, TX
1919	Austin, TX
	Baltimore, MD
	Bisbee, AZ
	Blakeley, GA
	Bogalusa, LA
	Cadwell, GA
	Charleston, SC
	Chicago, IL
	Corbin, KY
	Dublin, GA
	Elaine, AK
	Ellisville, MS
	Garfield Park, IN
	Hattiesburg, MS
	Hubbard, OH
	Jacksonville, FL
	Jenkins County, GA
	Knoxville, TN
	Lexington, NE
	Longview, TX
	Memphis, TN
	Millen, GA
	Montgomery, AL
	Morgan County, WV
	New London, CT
	Norfolk, VA
	Orono, ME
	Omaha, NE
	Philadelphia, PA
	Putnam County, GA
	Syracuse, NY
	Texarkana, TX
	Vicksburg, MS
	Washington, DC
	Wilmington, DE
1920	Hurtsboro, AL
	Ocoee, FL
1921	Denton, TX
	Tulsa, OK
1922	Perry, FL
1923	Catcher, AK
	Rosewood, FL
1926	Benson, AL
	Susanna, AL
1943	Beaumont, TX
	Detroit, MI
	Los Angeles, CA
	Mobile, AL
1946	Chicago, IL
	Columbia, TN
1947	Chicago, IL
1948	Vanport, OR
1949	Peekskill, NY
	Washington, DC

Sources: Compiled by the authors as noted in Darity and Mullen (2020, p. 216–17, 374–75 n. 37–42); Haynes (1919); Black Past (2022); Rucker and Upton (2006); Voogd (2008).

as far-flung as Omaha, Nebraska; Chicago, Illinois; Elaine, Arkansas; Austin, Texas; Wilmington, Delaware; and Bisbee, Arizona. The bloodshed of that year was so extensive that civil rights activist and composer James Weldon Johnson dubbed the period the Red Summer.[7] In these riots and massacres, Black people often were murdered or injured and their property routinely was taken by the White attackers.

Due to the general devaluation of Black lives and the political and financial objectives of the White mobs, there was little concern with establishing precise numbers of Blacks killed during the course of the massacres. In the White riot in Atlanta in 1906, for example, estimates of the number of Black deaths range from 10 to 100; the estimates for the 1917 East St. Louis massacre range wildly from 40 to 200 deaths; and to

[7] Sources Select Resources. "Red Summer of 1919." SOURCES. https://www.sources.com/SSR/Docs/SSRW-Red_Summer_of_1919.htm.

this day the total number of Black deaths at the notorious 1921 massacre in Tulsa, Oklahoma, sometimes estimated at 300, remains unknown (Bentley-Edwards et al. 2018).

Robert Smalls, a Black Civil War hero and South Carolina congressman (from 1875 to 1887), asserted that 53,000 Blacks had been killed by White terrorists from the end of the Civil War through the rest of the nineteenth century. For many years this figure was viewed as exaggerated, but more recent scholarship suggests that Smalls was roughly correct (Egerton 2018). This would have meant about 1,750 murders per annum in the late nineteenth century, or about five Blacks killed by Whites on a daily basis (Darity and Mullen 2020, p. 166). The most recent estimates of Black deaths on the twentieth century lynching trail amount to about 1,500 (Cook, Logan, and Parman 2018; Fox 2020).

A more comprehensive measure of Black deaths is provided by the estimates of excess all-causes Black mortality generated by public health demographers. Benjamins et al. (2021) find between 2016 and 2018, the all-causes Black death rate was 24 percent higher than the White death rate in the nation's 30 largest cities by population size. This implies 74,402 excess Black deaths in those metropolitan areas during that period alone. Their procedure could be extended nationwide for all years in which vital statistics of a reasonable quality are available.[8]

In placing a monetary value on lives lost, a common approach is to compute what is known as the "value of a statistical life." The value of a statistical life seeks to establish the monetary value of incremental reductions in the likelihood of personal safety risk, in particular premature death, based on empirical estimates of how people actually react when confronted with consumer or workplace choices that involve different levels of risk of death. The value of a statistical life has become a widely used instrument in cost-benefit analyses of proposed government regulations by the Environment Protection Agency, the US Department of Transportation, and other agencies. Today the value used by a number of public agencies approaches $10 million per person (Kniesner and Viscusi 2019).

Using only the Black excess mortality figure for larger metropolitan areas for 2016–2018, multiplied by the current value of a statistical life, yields a total of $724 billion. In theory, such a calculation could be extended back in time. But there are data limitations blocking sound estimates of total Black mortality, a necessary prelude to calculation of excess Black mortality, especially prior to the 1940s. As Ewbank (1987) writes:

[8] Wrigley-Field (2020) turns the excess mortality computation on its head and asks how many more White deaths would have to occur to reach the *lowest* recorded incidence of deaths among Black Americans. She concludes: "For hypothetical White age-adjusted mortality to equal the lowest recorded Black age-adjusted mortality, about 400,000 to 420,000 excess White deaths are needed [per annum]. For White life expectancy in 2020 [the pandemic year alone] to fall to the level of the best-recorded Black life expectancy would require an estimated 700,000 to 1 million excess White deaths … The low-end estimate of about 400,000 excess White deaths is about 5.7 times the current confirmed COVID-19 deaths among Whites, representing an 18 percent increase in White mortality from prepandemic levels. For comparison, this estimate implies that, to reach the best-ever prepandemic Black mortality rates, the full US White population would need to experience a level of excess mortality comparable to 90 percent of the official COVID-19 death rate (for all racial groups) in New York City to date."

> There are several reasons why it is difficult to document mortality trends among American Blacks. First, registration of deaths did not begin in the United States until late in the nineteenth century and even then it was limited to a few states. It was not until 1933 that the whole of the continental United States was included in the national Death Registration Area (DRA). Second, the states which started registration systems first were northeastern states. The data on the White population in these states has often been used as a rough approximation of the whole country, but the Blacks in these states are not representative of all Blacks. In 1900 the death registration area included 26 percent of the total population, but only 4.4 percent of the Black population. More than 90 percent of the Blacks in the DRA lived in urban areas while only 23 percent of all Blacks were urban. Third, although Blacks and Whites were theoretically covered by the same data collection systems after the Civil War, the data for Blacks were generally less reliable than those for Whites.

Although vital statistics data on mortality by race for the period before World War II are not fully reliable, the existing numbers can be used to develop rough estimates of excess mortality. A reasonable—and conservative—measure of the Black death rate during this period is 1.6 times the White rate (SoRelle 2000). In 1930, the total US Black population was about 12 million people; the corresponding number of excess deaths would have been about 72,000, or a monetary equivalent of $720 billion in present value. A similar calculation would have to be performed year by year and the estimates summed to arrive at an approximation of the total monetary value of Black excess mortality.

Measuring Costs of Stolen Property

White terrorist attacks on Black communities in the closing decades of the nineteenth century and the opening decades of the twentieth century were often accompanied by destruction and appropriation of Black property by the mobsters. For many of the White riots, it is very difficult to estimate these costs of property damage.

However, the survivors of the 1921 Tulsa massacre did file insurance claims—albeit unsuccessfully—making it possible to construct a rough estimate of property lost due to the destruction of the Greenwood area of that city (Messer, Shriver, and Adams 2018; Canales and Elder 2021). The sum of the insurance claims filed immediately after the massacre amounted to $1.8 million. Compounding the present at 3 and 6 percent leads to present value estimates of the damages of $34.6 million and $611 million respectively. But Tulsa is an unusual case where researchers can access the insurance claims.[9]

By using data collected on site soon after the event by the courageous anti-lynching activist, Ida B. Wells-Barnett (1920), Logan and Darity (2020) were able

[9] Buck Colbert Franklin (1997), the attorney who narrowly survived the massacre and filed insurance claims and lawsuits on behalf of Black Tulsans, was the father of John Hope Franklin, the famed late African American historian.

to calculate a present value estimate of property losses for Black residents of tiny Elaine, Arkansas. In a massacre where an estimated 300 Black people were killed, Logan and Darity (2020) conclude that about $10 million in property was taken from the town's Black citizens.

Approximately 1,000 Black people were rendered homeless by the 1919 Chicago massacre (Mitchell 2019), data that affords a lower bound estimate of property lost during that White riot. If six persons lived in the average home, then about 165 homes were destroyed. If the average price of a home in Chicago was $5,000 at the time, lost Black property amounted to about $830,000 in value. Compounded to the present, at 3 percent the value destroyed would amount to $16.9 million; at 6 percent, $316 million.

In cases where Whites appropriated Black-owned properties, arriving at proper estimates of lost wealth requires access to detailed information about deeds of sale and transfer of ownership as well as information about the race of the buyer and seller. This task is demanding. Even with good access to official records of property sales, severe difficulties can arise, including the trustworthiness of the documents. The example of property sales after the massacre that took place in Ocoee, Florida, in 1920 illustrates the scope of the challenge.

The state of Florida was the site of a series of the most violent reactions of white supremacists to efforts of Black citizens to participate in the electoral process and to evidence of Black economic prosperity (Ortiz 2006; Dunn 2013). Perhaps the most brutal of the assaults took place in Ocoee, Florida, on Election Day, November 2, 1920, after Black residents attempted to vote. Like virtually all White massacres, the exact number of Black people killed is not known, but estimates generally run in the vicinity of 50 deaths.

The trigger for the White riot in Ocoee was the particular efforts of Moses (Mose) Norman to cast his ballot. Rebuffed at the polling place, he and other Black voters were told to get documentation of their eligibility to vote from notary public, R.C. Bigelow, who just happened to be out of town on election day, "on a fishing trip" (Zinn Education Project). Bigelow later figured prominently as the individual who notarized a number of the deeds transferring Black properties to Whites, after the massacre, at fire sale prices. Norman was persistent (as described by the Zinn Education Project):

> With little other option, most [Blacks seeking to vote] returned to their homes without casting their ballots. Mose Norman would not be so easily deterred. After being turned away that morning in his Ocoee precinct, he rode to Orlando to seek the council of Judge Cheney. The attorney instructed him to write down the names of any African-Americans who were not permitted to vote and also the names of the poll workers who had denied their Constitutional right. Cheney said a lawsuit against the County could be brought to contest this violation.
>
> Norman returned to Ocoee with these instructions, along with a handful of Black citizens again seeking to vote; as you can imagine, things did not go well.

> After again being forcibly turned away, he demanded the poll workers names and exclaimed: "We will vote, by God!"
>
> The response by the Klan was a massacre.

July Perry's home was the site where the White mob believed Moses Norman had sought refuge after recognizing his life was in danger. Perry, "a farmer and labor broker who dared register fellow Blacks to vote" (Hudek 2020), "lived [with his family] on a large estate that included their home and several barns and outbuildings" (Byrne 2014). Norman and his wife, Elisa, were described as "[living] a little more lavishly, enjoying the fruits of the years of hard work farming the 100-acre family orange grove. He drove around the brick-paved streets of downtown in a fancy six-cylinder Columbia convertible with white sidewall tires, silver spokes, and elegant 'storm curtains' instead of side windows" (Byrne 2014). Folk history has it that at one point, before the massacre, Norman was offered $10,000 for his orange groves, an offer he declined (Byrne 2014).

A third wheel among prominent and prosperous Black residents of Ocoee was Valentine Hightower, also the owner of substantial tracts of land, who apparently was less demonstrative about his economic success (Byrne 2014):

> Unlike his two friends, Valentine Hightower had a much more low-key personality. He knew well the dangers "negroes" opened up for themselves when they got too "uppity" in the still very white supremacist society of the time. He and his wife Jane lived a modest lifestyle and raised their kids to mainly keep to themselves. They answered politely when spoken to and preferred not to draw too much attention to themselves.
>
> "My father was kind of humble," Hightower's son Armstrong recalled many decades later, "He didn't take no chances on nothing."

July Perry was the first victim of the mob, captured and lynched after the terrorists were unable to find Moses Norman on Perry's property. Norman, himself, fled Ocoee and may have left the state of Florida, ultimately settling in New York. Valentine Hightower and his family "relocated" to Florida's Dade County.

What happened to their property was representative of the aftermath of many white supremacist uprisings. Bluford Sims, a former Confederate officer from Tennessee and one of the major actors in the riot, arranged to be named executor of Perry's estate and sold off the property at a significant economic gain with the provision that the property never be sold to another Black person (Fussell 2016; Bracy 2019).[10] A search of the records of deeds for Orange County, Florida, where

[10] There has been a movement to change the name of Bluford Avenue in Ocoee, named after Sims, to July Perry Avenue.

Ocoee is located, does not provide evidence that Sims purchased the properties from Perry's survivors, who were driven out of the town.[11]

On the other hand, there is evidence of a formal transfer of property from Norman and Hightower to White ownership. On February 28, 1923, the records indicate that Moses Norman and his wife Eliza, in conjunction with Valentine Hightower and his wife Jane, sold a property to I.C. Bobo for $10. On the deed of sale, Moses Norman's attestation to his agreement to the sale was verified by a notary public in New York, Joseph L. Pritchard, where Norman, presumably, had taken refuge. The Hightowers sold another property to I.C. Bobo for only $1 on January 26, 1923. We were unable to find any additional evidence confirming Norman's presence in the state of New York after the massacre. We even remain uncertain about the validity of the signatures of the Black property sellers on the deeds of sale, particularly since it may have been quite dangerous for them to return to Orange County to sign over the properties in person.

Using the census records of Black ("negro" or "colored") residents of Ocoee in 1920 provided in Appendix A of a report by the Office of Program Policy Analysis and Government Accountability (2019) of the state of Florida, it is possible to identify cases where a Black owner is making a "sale" to a White buyer. The property transfers accompanied the permanent exit from Ocoee of many Black survivors of the White terrorist attack. After the massacre, in the climate of coerced sales, our search of the property deeds from that time find that the going price seems to have been $10, regardless of the size and the structures on the property, as shown in Table 3.

As one example, Jackson and Annie Hamiter appear to have received a more reasonable price of $200 from notary R.E. Bigelow for a property sold on April 20, 1925, but they also had a succession of four sales between 1922 and 1925 at the $10 rate. Mrs. Hamiter penned a letter that set the context for the property sales that followed at injuriously low prices (as quoted in McLeod and Dickinson 2001):

> On the north side of town all the homes and some of the people were burned, one man was shot and killed and carried to the county seat and hung up as lynched. … The people on the south of town are being threatened that they must sell out and leave or they will be shot and burned as the others have been. … It seems to have been a prearranged affair to kill and drive the colored people from their homes as they were getting more prosperous than the White folks.

According to the 1920 US Census, 255 Blacks lived in Ocoee, Florida. The US Census of 1930 counted two remaining Blacks in Ocoee in that year, with the number decreasing to zero between 1940 and 1970.

[11] The authors want to express their gratitude to Pamela Schwartz at the Orange County Regional History Center and Paul Ortiz, professor of history at the University of Florida, for clarifications about the information contained in the records of deeds.

Table 3
Cross-Referenced List of Black Landowners in Ocoee, FL, Approximate Property Size, and Valuation

Last Name (Alternate Spelling)	*First Name (Alternate Spelling)*	*Property Size (Acres Rounded to Nearest Whole Number)*	*Purchase Value (Year)*	*Sale Value (Year)*
Anderson	Garfield	79	Federal Land Grant	$100 (1922)
Battsey(Betsey)	Randolph (Randall D, R.D.)	1	$25 (1899)	* All holdings sold together for $10
Battsey(Betsey)	Randolph (Randall D, R.D.)	3	$60 (1906)	* All holdings sold together for $10
Battsey(Betsey)	Annie	1	$25 (1908)	* All holdings sold together for $10
Blackshear	Martin	1	$10 (1908)	$10 (1921)
Blackshear	Martin	6	$50 (1915)	$25 (1920)
Blue	Sanborn (Sanders, Sanderson, Sanborri Blue)	3	$250 (1920)	$750 (1920)
Thomas	Dennis	5	$100 (1897)	$1,000 (1920)
Dighs	Edward	79	$500 (1919)	No recorded deed of sale
Edwards	John (Joe)	5	$150 (1914)	$10 (1921)
Frank(s)	Daniel (D.R.)	20	$50 (1911)	No recorded deed of sale
Green	Sally (Sallie)	3	$54 (1916)	$10 (1923)
Hamriton (Hamiter)	Jackson (Jack, J.H.)	1	$25 (1905)	$10 (1924)
Hamriton (Hamiter)	Jackson (Jack, J.H.)	1	$450 (1920)	$10 (1925)
Hightower	Valentine (V.T.)	52	unknown**	$10 (1926)
Hightower	Valentine (V.T.)	2	$50 (1912)	$1 (1923)
Johnson (Sr.)	Stephen (Steve)	6	$50 (1913)	$10 (1922)
Lynch	Richard	3	$90 (1898)	$1 (1921)
Lynch	Richard	1	$25 (1905)	$10 (1925)
Mcras (McRhea, McRae)	William (W.M.)	1	$75 (1919)	$450 (1920)
Moore	Rocky	X	X	X
Nelson	Stephen	X	X	X
Penger (Penzer)	Perry F (Kerry)	X	X	X
Perry	Julius (July, J.P.)	5	$100 (1890)	No recorded deed of sale
Perry	Julius (July, J.P.)	1	$125 (1907)	No recorded deed of sale
Stater	Victoria	X	X	X
Surrency	Jessie (J.C.)	3	$45 (1915)	$100 (1920)
Warren (Warron)	Wade	X	X	X

Source: Compiled by the authors from data obtained from Office of the Comptroller, Orange County, Florida (https://or.occompt.com/recorder/eagleweb/docSearch.jsp).

Despite having access to records of ownership changes that took place in Ocoee, Florida, after the White riot, it remains difficult to gauge the full loss in wealth to Black residents. It is difficult to determine what the properties were worth at the times of the post-massacre sales. Tax appraisals do not correspond neatly to the sizes of the lots that were purchased for $1 and $10 by Whites. However, Table 1 shows that in those instances where there were recorded deeds of sale, sales prices for Black-owned properties were generally far below the earlier purchase price, regardless of the size of the lot.

The partial evidence that is available makes clear that property losses and forced sales were common results of the approximately 100 massacres, but, for most, systematic records are not available. This is another instance in which calculation of the total cost for a particular item on the redress docket may be intractable.

Measuring Redress for Twentieth-Century Discrimination in Homeownership

Today, there is both a racial gap in rates of homeownership—73 percent for Whites versus 45 percent for Blacks—and also a racial gap in the equity values associated with White- and Black-owned homes. Zillow listing prices indicate that a home in a neighborhood with no Black residents has a median value of $341,000. In contrast, homes in neighborhoods with a majority of Black residents have a median value of $184,000; these differences persist independent of the structural characteristics of the home (Perry, Rothwell, and Harshberger 2018). The average level of equity Whites hold in their homes is $216,000; for Blacks, the average level is $94,000 (Ross 2020).

Several mechanisms denied Blacks access to home ownership in the early part of the twentieth century, which, in turn, denied Blacks access to the benefits of appreciation in home equity gained by Whites throughout the latter half of the twentieth century. Restrictive covenants in property deeds blocked the sale of property to Blacks (and others). The Federal Housing Administration, established in 1934, formed a public-private partnership with local bank mortgage lending and openly practiced "redlining," which involved not supporting loans to geographic areas with minority population, thus limiting Black homebuying opportunities (Rothstein 2017). Nevertheless, perhaps the single biggest factor leading to the sharp divide in Black and White wealth associated with homeownership was the Servicemen's Readjustment Act of 1944, commonly known as the G.I. Bill.

The G.I. Bill may have been the most powerful twentieth century vehicle for upward mobility enacted by the US government (Blakemore 2021). The legislation provided support for veterans seeking higher education and vocational training, to purchase farms or start businesses, and unemployment relief. The most important element of the G.I. Bill for wealth-building and entry into the middle class were the homebuying subsidies and low- to zero-interest mortgage loans (Thompson 2019).

But the application of the law was decidedly inequitable, lifting millions of White World War II veterans to the "middle class," while leaving many Black veterans behind (Katznelson 2005). Government sanctioned residential segregation limited the locations where Black veterans could buy homes—most notorious, perhaps, was their exclusion from multiple Levittown developments (Rothstein 2017).

In addition to restrictions on their ability to use mortgage support from the federal government, Black veterans had limited access to the homeownership benefits of the G.I. Bill in the first place. In 1947, only two of the 3,200 Veterans Administration guaranteed home loans for veterans in 13 Mississippi towns and cities went to Black veterans, in a state where close to 40 percent of the returning veterans were Black; in New York and New Jersey, less than 100 out of 67,000 mortgage loans went to Black veterans (Levinson 2020). By 1956, the final year of the first G.I. Bill, 4.3 million home loans amounting to $33 billion had been distributed to World War II veterans, overwhelmingly and disproportionately White (Blakemore 2021).[12]

Although the administration of G.I. Bill educational benefits does not appear to have been as inequitable as the provision of the homeownership benefits, discriminatory disparities also were associated with this component of the legislation (Turner and Bound 2003).

The language of the G.I. Bill was race-neutral, but its execution was not. To gain support for the legislation from Southern Democrats, the administration of the G.I. Bill had to be conducted on a decentralized basis by placing control over the program in the hands of state and local authorities. To construct a measure of the magnitude of resources denied Black veterans, it would be necessary to model not just Black veterans who were denied benefits, but also those who did not apply in the expectation of being rejected. Thus, estimates could be generated of the lost income due to the inability of Black veterans to pursue the full range of educational opportunities promised by the law and wealth lost due to exclusion from buying homes in neighborhoods where properties underwent markedly greater appreciation rates than those in predominantly Black neighborhoods.

Measuring the Black–White Gap in Wage Costs

In a contribution to Richard America's edited volume, *The Wealth of Races*, Chachere and Udinsky (1990) provided a method for calculating the costs to Black Americans of labor market discrimination from employment discrimination during the 40-year interval 1929–1969. They worked with the assumption that 40 percent of the racial income differential was attributable to labor market discrimination and reached a calculation of the accumulated benefits to Whites of $1.6 trillion by the mid-1980s. Projecting their estimate forward in the decades since then, the corresponding value would be $4.6 trillion (using a 3 percent interest rate) or $13 trillion (6 percent).[13]

[12] Eden (2021) argues that the difference in nominal monetary outlays per Black and White veteran was not significant, but the use of a cash-equivalent measure of their impact indicates substantial discriminatory effects to the disadvantage of Black veterans.

[13] Swinton (1990) modified the Chachere and Udinsky (1990) estimate by subtracting total government expenditures on social safety net programs, including Social Security, Medicare, Medicaid, and unemployment insurance. Swinton's calculation was a response to the claim often made by anti-reparationists that Blacks already have received restitution in the form of social transfer programs. This claim seems shaky. After all, the majority of funds from social transfer programs since the 1960s did not go exclusively to Black Americans; indeed, for a full 30 years after the onset of the New Deal project, Black Americans,

In what follows, we sketch an alternative strategy for calculating the wage loss to Black Americans from the inherited legacy of past racial discrimination, including not just discrimination by employers but also the broader forms of structural racism that have constrained educational and occupational choices for Blacks. Our estimate consists of two major components: a reduction in wages and a greater likelihood of being unemployed for Black workers. We apply this approach to 2019 data to arrive at a rough estimate of the impact of labor market discrimination on lost income for Black employees and potential employees.

The median hourly wage for White workers was $21.32 in 2019 (Gould 2020, table 3). The full difference in median Black and White hourly wages was $5.20: $21.32 minus $16.12. Suppose Black workers are assumed to have lost, conservatively, 5 percent of their earnings due to employment discrimination. Then the hourly wage loss for each Black worker was $1.06.

If we assume the typical full-time worker was paid for 48 weeks, five days a week, for an eight-hour workday, total annual hours would have been 1,920. If there were about 20 million Black labor force participants with a 6.1 percent annual unemployment rate, 18.6 million Black Americans received pay over the course of the year for 35.7 billion hours of work. The difference in the Black and White unemployment rates in 2019 can provide one gauge of the number of Black hours of work lost due to discrimination. The unemployment rate for Whites in 2019 was 3.3 percent. Subtracting 3.3 percent from 6.1 percent leaves a gap of 2.8 percent. Multiplying 20 million by 2.8 percent yields 360,000 Black Americans subjected to *excess unemployment*. Then, multiplying 360,000 persons by 1,920 annual hours leads to a total of 691.2 million hours of work lost due to structural racism.

Combining both the lower wage for employed Blacks and the loss of hours due to the higher unemployment rate for Blacks leads to an estimate of an aggregate loss of $38.6 billion in earnings in 2019 for Black workers. This would amount to an average loss of $1,930 per Black labor force participant in 2019 alone.

This estimate is necessarily very rough: for example, it ignores racial differences in discouraged unemployment, typically more of a burden for Black workers. This estimation procedure also does not adjust for racial differences in part-time work when the employee desires longer hours. Still, to the extent that annual calculations of this type can be made for each year from the end of slavery to the present, and then compounding past dollar values to the present, this estimation provides an avenue to arrive at an extensive measure of the cost in wages of structural racism to its victims. However, the data issues here are substantial: for example, 1948 was the first year that the US Bureau of Labor Statistics collected data by race on unemployment.

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de facto, were excluded from most benefits of social transfer programs (Katznelson 2005). Nevertheless, Swinton deducted the total cost of social safety net funding between 1929 and 1969 from the Chachere and Undinsky and still arrived at a net $500 billion gain for Whites from labor market discrimination against Blacks measured in 1985 dollars. This, in turn, would amount to $1.4 trillion (using a 3 percent rate) or $4.1 trillion (6 percent) by 2021.

Unified Measures of the Costs of Slavery and Oppression

The itemization approach has the advantage of making the atrocities committed against African Americans concrete. But in many cases, the information simply is not available to construct all of these measures; in others, there will be overlap between different measures. Here we propose a more compact and efficient method for estimation of the invoice for reparations. We discuss two approaches: 1) calculate the present value of a debt that has remained unpaid for more than 155 years, and 2) utilize the Black–White wealth gap as an indicator of the long-term effects of racial injustices.

The Unpaid Debt

Even prior to the end of the Civil War, a series of "experiments" had been conducted with land settlement and independent farming among the formerly enslaved who joined the Union forces as they moved through the south. These experiments had been highly successful in demonstrating the freedmen's skill and productivity in agriculture; after all, they had been the direct producers of the crops of plantation-based agriculture. The most notable of these was the project undertaken at Port Royal, South Carolina. However, via a variety of machinations, the land was procured by Northern speculators by outbidding the freedmen at auctions with their far greater resources (Franke 2019).

In January 1865, General William T. Sherman issued Special Field Orders No. 15, designating 5.3 million acres stretching from the Sea Islands of South Carolina to northern Florida bordered by the St. Johns River, to be settled by land grants of 40 acres to freed slaves. However, after 40,000 of the formerly enslaved had settled on 400,000 acres allotted under Sherman's order, President Andrew Johnson ended the project and restored the land to the former slaveholders (Darity and Mullen 2020, p. 156–59).

The Freedmen's Bureau Acts of 1865 and 1866 also included provisions for land distribution to the formerly enslaved, but these provisions were implemented tepidly at best. The Southern Homestead Act enacted in 1866 explicitly designated the freedmen as beneficiaries of the land patents allotted under the legislation, but the law, which specified 46 million acres of land in Alabama, Arkansas, Florida, Louisiana, and Mississippi be distributed to the freedmen and White Unionists at below market prices, was left to local administration, largely managed by the former Confederates. The law was terminated in 1876. An estimated 4,000 to 5,500 Blacks received federal patents from the Southern Homestead Act before its close, out of four million freedmen (Darity and Mullen 2020, p. 37). Southern historian Walter Fleming (1906), who can reasonably be treated as a hostile commentator on the merits of Black Reconstruction, nevertheless concluded that Black "expectations" of land grants "were justified by the policies of the government and the actions of its agents" (p. 721). But the promise was unfulfilled.

What would have been the value of such land? Consider a back-of-the-envelope estimate predicated on the 40-acre allotments being made, on average, to four-person households. Since there were 4 million freedmen, the total promised allocation would have been about 40 million acres. An average land price of $10 per acre in 1865 (Mittal and Power 2000) implies that the projected land distribution would have been worth $400 million—for perspective, about 10 percent of the value that these human beings were worth to their owners during the period of slavery. The present value of $400 million in 1865 compounded to the present at 3 percent interest is $40.2 billion and at 6 percent interest is $3.5 trillion. Under the conditions of the Homestead Act of 1862, 1.5 million White families ultimately each received 160-acre land grants in the western territories—four times the size of what was promised but not delivered to Black families.

While the average annual rate of real estate appreciation runs in the zone of 3 to 5 percent (Yale 2021), many of the Sea Island properties in the South Carolina that were to have gone to the freedman have experienced appreciation rates in the vicinity of 5 and 6 percent. White land speculators bought many of these properties in the 1860s at less than $1 per acre.

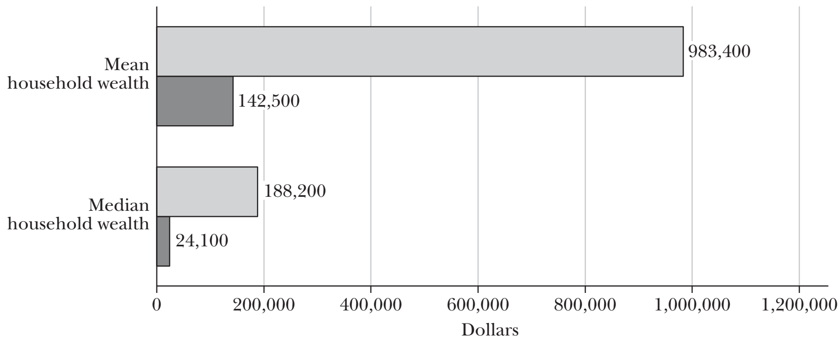
In 2011, former South Carolina governor and Senator Mark Sanford, whose family had been the most recent buyers of a certain plantation, placed it under a conservation easement valued at $2.5 million (Franke 2019, p. 74–76). Sanford described the property as having been restored to its original status as a "family farm," eliciting the following stinging comment from Katherine Franke (2019, p. 76): "Mark Sanford's use of the term 'family farm' has such a quaint ring to it, erasing entirely the history of enslavement and failure to make good on the promise of land-based reparations for the people who had been enslaved by the Chisolm family." Franke describes a number of other properties that were originally designated for freedman, then scooped up by Northern investors, and eventually became estates bought and sold by the rich. Black Americans were deprived of a possible avenue to intergenerational wealth when they were denied the 40-acre land grants.

The Modern Racial Wealth Gap

In discussions of paying reparations, a common question is the extent to which it is appropriate to compensate living African Americans for long-ago harms inflicted upon their ancestors. To assess the contemporary consequences for living African Americans of the atrocities experienced by their ancestors, we believe that the current Black–White disparity in wealth is the best single economic indicator of the *cumulative, intergenerational* impact of White racism over time. Blocked opportunities for Black wealth accumulation are transmitted to current generations via sharply reduced transfers of resources from parents and grandparents to children and grandchildren relative to the transfers made in White families (Darity and Mullen 2020, p. 30–37).

According to the 2019 Survey of Consumer Finances conducted by the Federal Reserve, the Black–White difference in household net worth at $164,100 at the median and at $840,900 at the mean, as shown in Figure 1 (Bhutta et al. 2020). The average White household consists of 2.36 persons while the average Black household consists of 2.46 persons; the per capita difference is about $67,200 at

Figure 1
Two Views of the Black–White Wealth Gap



Source: Bhutta et al. (2020).

the median and about $358,300 at the mean. There are approximately 40 million African Americans who are descendants of persons enslaved in the United States (or descendants of the freedmen), out of a total of 45 million Black Americans. Therefore, the sum of the Black–White wealth gap across households would be $2.7 trillion if evaluated at the median, and $14.3 trillion if evaluated at the mean.

Most discussions of economic inequality tend to focus on the median, because the middle values in a distribution, uncontaminated by outliers, are assumed to be more representative of the typical experience of members of each group. But in this case, we contend that the mean gap is more relevant. The ferocious degree of concentration of wealth in the United States means that 97 percent of the wealth held by all White Americans is possessed by White households with a net worth greater than the median White household. Thus, a focus on the median, rather than the mean, takes virtually all White wealth out of consideration for equality (Darity, Addo, and Smith 2020, p. 499).[14]

However, while we view the $14.3 trillion estimate of what is required to close the Black–White wealth gap at the mean as the single-most appropriate measure of the cumulative and intergenerational impact of White racism on current descendants of slaves, we also view it as a minimum estimate.[15] After all, the Black–White wealth gap results from past experience, but living Black Americans continue to experience

[14] Furthermore, the gap at the mean is not solely due to the presence of a small number of extraordinarily rich White billionaires. One-quarter of White households have a median net worth in excess of $1 million, a circumstance that is true for only 4 percent of Black households (Darity, Addo, and Smith 2020, p. 498). In addition, members of the White working class have two to three times the wealth than members of the Black professional managerial class (Addo and Darity 2021, p. 182).
[15] For example, Tasseli McKay (forthcoming) constructs specific estimates of the costs of excess incarceration on Black Americans, costs that may be added above and beyond closing the racial wealth gap. However, the financial effects of past over-incarceration also may be embedded, in part, in the Black–White wealth differential itself.

excess mortality, as well as discrimination in employment, credit markets, and the criminal justice system.

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References

Addo, Fenaba, and William Darity Jr. 2021. "Disparate Recoveries: Wealth, Race, and the Working Class after the Great Recession." *ANNALS of the American Academy of Political and Social Science* 695 (1): 173–92.

Albright, Alex, Jeremy A. Cook, James J. Feigenbaum, Laura Kincaide, Jason Long, and Nathan Nunn. 2021. "After the Burning: The Economic Effects of the 1921 Tulsa Race Massacre." NBER Working Paper 28985.

Alchin, Linda. 2018. "Buying Freedom from Slavery." American-Historama.org. https://www.american-historama.org/1790-1800-new-nation/buying-freedom-from-slavery.htm.

Benjamin, Judah Philip. 1860. "You Never Can Subjugate Us." Speech, US Senate, December 31, 1860. http://civilwarcauses.org/judah.htm.

Benjamins, Maureen R., Abigail Silva, Nazia S. Saiyed, and Fernando G. De Maio. 2021. "Comparison of All-Cause Mortality Rates and Inequities Between Black and White Populations across the 30 Most Populous US Cities." *JAMA Network Open* 4 (1).

Bentley-Edwards, Keisha L., Malik Chaka Edwards, Cynthia Neal Spence, William Darity Jr., Darrick Hamilton and Jasson Perez. 2018. "How Does It Feel to Be a Problem? The Missing Kerner Commission Report." *Russell Sage Foundation Journal of the Social Sciences* 4 (6): 20–40.

Chachere, Bernadette, and Gerald Udinsky. 1990. "An Illustrative Estimate of the Present Value of the Benefits from Racial Discrimination 1929–1969." In *The Wealth of Races: The Present Value of Benefits from Past Injustices,* edited by Richard F. America, 163–8. Westport CT: Greenwood Press.

Bhutta, Neil, Andrew C. Chang, Lisa J. Dettling, and Joanne W. Hsu. 2020. "Disparities in Wealth by Race and Ethnicity in the 2019 Survey of Consumer Finances." Washington: Board of Governors of the Federal Reserve System.

Black Past. 2022. "Racial Violence in the United States Since 1526." https://www.blackpast.org/special-features/racial-violence-united-states-1660/.

Blakemore, Erin. 2021. "How the GI Bill's Promise Was Denied to a Million Black WWII Veterans." *History*, April 20. https://www.history.com/news/gi-bill-black-wwii-veterans-benefits.

Bracy, Randolph. 2019. "Ocoee Needs Alternative to Divisive Founders' Day." *Orlando Sentinel*, October 18. https://www.orlandosentinel.com/opinion/guest-commentary/os-op-randolph-bracy-july-perry-ocoee-20191018-r55k4qzbr5b3xm2ez53ybl6wcu-story.html.

Byrne, Jason. 2014. "Ocoee on Fire: The 1920 Election Day Massacre." *Medium*, November 23. https://medium.com/florida-history/ocoee-on-fire-the-1920-election-day-massacre-38adbda9666e.

Canales, Manuel, and Scott Elder. 2021. "A Lasting Destruction." *National Geographic*, June, 70–71.

Cole, Shawn. 2005. "Capitalism and Freedom: Manumissions and the Slave Market in Louisiana, 1725–1820." *Journal of Economic History* 65 (4): 1008–27.

Cook, Lisa D., Trevon D. Logan, and John M. Parman. 2018. "Racial Segregation and Southern Lynching." *Social Science History* 42 (4): 635–75.

Craemer, Thomas. 2015. "Estimating Slavery Reparations. Present Value Comparisons of Historical Multigenerational Reparations Policies." *Social Science Quarterly* 96 (2): 639–55.

Craemer, Thomas, Trevor Smith, Brianna Harrison, Trevon Logan, Wesley Bellamy, and William Darity Jr. 2020. "Wealth Implications of Slavery and Racial Discrimination for African American Descendants of the Enslaved." *Review of Black Political Economy* 47 (3): 218–54.

Darity, William, Jr. 1990. "Forty Acres and a Mule: Placing a Price Tag on Oppression." In *The Wealth of Races: The Present Value of Benefits from Past Injustices*, edited by Richard F. America, 1–14. New York: Greenwood Press.

Darity, William, Jr. 2021. "Why Reparations Are Needed to Close the Racial Wealth Gap." *New York Times*, September 24. https://www.nytimes.com/2021/09/24/business/reparations-wealth-gap.html.

Darity, William, Jr., Fenaba R. Addo, and Imari Z. Smith. 2020. "A Subaltern Middle Class: The Case of the Missing 'Black Bourgeoisie' in America." *Contemporary Economic Policy* 39 (3): 494–502.

Darity, William, Jr., and A. Kirsten Mullen. 2020. *From Here to Equality: Reparations for Black Americans in the Twenty-First Century*. Chapel Hill: University of North Carolina Press.

Du Bois, W.E.B. 1998. *Black Reconstruction in America, 1860–1880*. New York: Free Press (1935).

Dunn, Marvin. 2013. *The Beast in Florida: A History of Anti-Black Violence*. Gainesville: University Press of Florida.

Eden, Maya. 2021. "Qualifiying Racial Discrimination in the 1944 G.I. Bill." Unpublished.

Egerton, Douglas. 2018. "Terrorized African Americans Found Their Champion in Civil War Hero Robert Smalls." *Smithsonian Magazine*, September. https://www.smithsonianmag.com/history/terrorized-african-americans-champion-civil-war-hero-robert-smalls-180970031/.

Ewbank, Douglas. 1987. "History of Black Mortality and Health before 1940." Milbank Quarterly 65 (S): S100–128.

Fleming, Walter. 1906. "Forty Acres and a Mule." *North American Review* 182 (594): 721–37.

Fox, Alex. 2020. "Nearly 2,000 Black Americans Were Lynched During Reconstruction" *Smithsonian Magazine*, June 18. https://www.smithsonianmag.com/smart-news/nearly-2000-black-americans-were-lynched-during-reconstruction-180975120/

Franke, Katherine. 2019. *Repair: Redeeming the Promise of Abolition*. Chicago: Haymarket Books.

Franklin, Buck Colbert. 1997. *My Life and an Era: The Autobiography of Buck Colbert Franklin*, edited by John Hope Franklin and John Whittington Franklin. Baton Rouge: LSU Press.

Friedman, M. 2019. "The Inflation Calculator." https://westegg.com/inflation/.

Fussell, Melissa. 2016. "Dead Men Bring No Claims: How Taking Claims Can Provide Redress for Real Property Owning Victims of Jim Crow Race Riots." *William and Mary Law Review* 57 (5) 1922–56.

Georgetown Slavery Archive. 1838. Articles of agreement between Thomas F. Mulledy, of Georgetown, District of Columbia, of one part, and Jesse Beatty and Henry Johnson, of the State of Louisiana, of the other part. June 19, 1838. Box 40, File 10, Item 3a-h, Maryland Province Archives, Booth Family Center for Special Collections, Georgetown University.

Gould, Elise. 2020. *State of Working America Wages 2019*. Washington, D.C.: Economic Policy Institute.

Haynes, George Edmund. 1919. "For Action on Race Riot Peril." *New York Times*, October 5. https://timesmachine.nytimes.com/timesmachine/1919/10/05/106999010.html?action=click&contentCollection=Archives&module=ArticleEndCTA&region=ArchiveBody&pgtype=article&pageNumber=112.

Hirschman, Albert O. 1958. *The Strategy of Economic Development*. New Haven: Yale University Press.

Hudek, Stephen. 2020. "Story of Ocoee Massacre Finally Being Told—100 Years After It Happened." *Orlando Sentinel*, October 29. https://www.orlandosentinel.com/news/ocoee-massacre/os-ne-ocoee-what-happened-20201029-n3k7lqdbafg5re3qwxq2g3wnve-htmlstory.html.

Katznelson, Ira. 2005. *When Affirmative Action Was White: An Untold History of Racial Inequality in Twentieth-Century America*. New York: W.W. Norton.

Kniesner, Thomas J., and W. Kip Viscusi. 2019. "The Value of a Statistical Life." Vanderbilt Law Research Paper 19–15.

Logan, Trevon and William Darity Jr. 2020. "Look What Has Been Taken from Black Americans." *Bloomberg*, September 21. https://www.bloomberg.com/opinion/articles/2020-09-21/calculating-reparations-look-what-s-been-taken-from-black-americans.

Levinson, Robert. 2020. "Many Black World War II Veterans Were Denied Their G.I. Bill Benefits. Time to Fix That." *War on the Rocks*, September 11. https://warontherocks.com/2020/09/many-black-world-war-ii-veterans-were-denied-their-gi-bill-benefits-time-to-fix-that/.

Marketti, James. 1990. "Estimated Present Value of Income Diverted from Slavery." In *The Wealth of Races:*

The Present Value of Benefits from Past Injustices, edited by Robert F. America, 107–24. Westport CT: Greenwood Press.

Max, Wendy, Dorothy P. Rice, Hai-Yen Sung, and Martha Michel. *Valuing Human Life: Estimating the Present Value of Lifetime Earnings, 2000.* San Francisco: Center for Tobacco Control Research and Education.

McKay, Tasseli. Forthcoming. *Stolen Wealth, Hidden Power: The Case for Reparations for Mass Incarceration.* Berkeley: University of California Press.

McLeod, Michael, and Joy Wallace Dickinson. 2001. "Ocoee Race Riot Scars Generation." *Orlando Sentinel*, February 6. https://www.orlandosentinel.com/news/os-xpm-2001-02-05-0102050189-story.html.

Merrefield, Clark. 2020. "The 1921 Tulsa Race Massacre and the Financial Fallout." *Harvard Gazette*, June 18. https://news.harvard.edu/gazette/story/2020/06/the-1921-tulsa-race-massacre-and-its-enduring-financial-fallout/.

Messer, Chris M., Thomas E. Shriver, and Alison E. Adams. 2018. "The Destruction of Black Wall Street: Tulsa's 1921 Riot and the Eradication of Accumulated Wealth." *American Journal of Economics and Sociology* 77 (3–4): 789–819.

Mitchell, Mary. 2019. "A Century of Progress, But Still an 'Invisible Divide'." *Chicago Sun-Times*, July 26. https://chicago.suntimes.com/columnists/2019/7/26/8931814/chicago-beaches-segregation-1919-riot.

Mittal, Anuradha, and Joan Powell. 2000. "The Last Plantation" *Food First* 6 (1): 1–8.

Mueller, Jennifer Catherine. 2013. "The Social Reproduction of Systemic Racial Inequality." Phd diss. Texas A&M University.

National Humanities Center Resource Toolbox. 2008. "On Buying One's Freedom: Selections From 18th- and 19th-Century Slave Narratives." *The Making of African American Identity: Volume 1, 1500–1865,* http://nationalhumanitiescenter.org/pds/maai/emancipation/text1/buyingfreedom.pdf.

Neal, Larry. 1990. "A Calculation and a Comparison of the Benefits of Slavery and an Analysis of Who Benefits." In *The Wealth of Races: The Present Value of Benefits from Past Injustices*, edited by Richard F. America, 91–106. Westport: Greenwood Press.

New York Daily Tribune. 1865. "Newspaper Account of a Meeting between Black Religious Leaders and Union Military Authorities." February 13, 1865. Freedmen and Southern Society Project. http://www.freedmen.umd.edu/savmtg.htm.

Office of Program Policy Analysis and Government Accountability. 2019. *Ocoee Election Day Violence—November 1920.* Tallahassee: Office of Program Policy Analysis and Government Accountability 19–15.

Officer, Lawrence H., and Samuel H. Williamson. 2022. "Annual Wages in the United States Unskilled Labor and Manufacturing Workers, 1774–Present." Measuring Worth. http://www.measuringworth.com/uswage/.

Ortiz, Paul. 2006. *Emancipation Betrayed: The Hidden History of Black Organizing and White Violence in Florida from Reconstruction to the Bloody Election of 1920.* Berkeley: University of California Press.

Perry, Andre, Jonathan Rothwell, and David Harshbarger. 2018. *The Devaluation of Assets in Black Neighborhoods: The Case of Residential Property.* Washington, DC: Brookings Metropolitan Policy Program.

Ransom, Roger L. and Richard Sutch. 1990. "Who Pays Slavery?" In *The Wealth of Races: The Present Value of Benefits from Past Injustices*, edited by Richard F. America, 31–54. Westport CT: Greenwood Press.

Ross, Jenna. 2020. "The Racial Wealth Gap in America: Asset Types Held by Race." *Visual Capitalist*, June 12. https://www.visualcapitalist.com/racial-wealth-gap/.

Rothstein, Richard. 2017. *The Color of Law: A Forgotten History of How Our Government Segregated America.* New York: W.W. Norton.

Rucker, Walter C., and James N. Upton, eds. 2006. *Encyclopedia of American Race Riots*, Vol. 1 and 2, Westport: Greenwood Publishing.

Schober, Daniel J., Bijou R. Hunt, Maureen R. Benjamins, Nazia S. Saiyed, Abigail Silva, Fernando G. De Maio, and Sharon M. Homan. 2021. "Homicide Mortality Inequities in the 30 Biggest Cities in the U.S." *American Journal of Preventive Medicine* 60 (3): 327–34.

GBD. 2019. Police Violence US Subnational Collaborators. 2021. "Fatal Police Violence by Race and State in the USA, 1980–2019: A Network Meta-Regression." *Lancet* 398 (10307): 1239–1255.

Shanks, Trina Williams. 2000. "The Homestead Act: A Major Asset-Building Policy in American History." Washington University Center for Social Development Working Paper 00-9.

SoRelle, Ruth. 2000. "Gap Between Death Rates for Blacks and Whites Remains as Large as in 1950." *Circulation* 101 (12).

Sources Select Resources. "Red Summer of 1919." SOURCES. https://www.sources.com/SSR/Docs/SSRW-Red_Summer_of_1919.htm.

Stelzner, Mark, and Sven Beckert. 2021. "The Contribution of Enslaved Workers to Output and Growth in the Antebellum United States." Washington Center for Equitable Growth Working Paper 062421.

Swinton, David H. 1990. "Racial Inequality and Reparations." In *The Wealth of Races: The Present Value of Benefits from Past Injustices*, edited by Richard F. America, 153–162. Westport CT: Greenwood Press.

Temin, Peter. 1999. "The Industrialization of New England: 1830–1880." NBER Historical Paper 114.

Thompson, Jeffrey. 2019. "The GI Bill Should've Been Race Neutral, Politicos Made Sure It Wasn't." *Military Times*, November 9. https://www.militarytimes.com/military-honor/salute-veterans/2019/11/10/the-gi-bill-shouldve-been-race-neutral-politicos-made-sure-it-wasnt/.

Turner, Sarah, and John Bound. 2003. "Closing the Gap or Widening the Divide: The Effects of the G.I. Bill and World War II on the Educational Outcomes of Black Americans." *Journal of Economic History* (63) 1: 145–77.

Voogd, Jan. 2008. *Race Riots and Resistance: The Red Summer of 1919*. Lausanne: Peter Lang.

Webster, Ian. 2021. "Stock Market Returns Since 1880," S&P 500 Data. https://www.officialdata.org/us/stocks/s-p-500/1880.

Wells-Barnett, Ida B. 1920. *The Arkansas Race Riot*. Northern Illinois University Digital Library. https://digital.lib.niu.edu/islandora/object/niu-gildedage%3A24320.

Williamson, Samuel H., and Louis P. Cain. 2022. "Measuring Slavery in 2020 Dollars." Measuring Worth. https://www.measuringworth.com/slavery.php.

Wrigley-Field, Elizabeth. 2020. "US Racial Inequality May Be as Deadly as COVID-19." *Proceedings of the National Academy of Sciences* 117 (36): 28154–56.

Yale, Aly J. 2021. "What Is Real Estate Appreciation?" Millionacres, May 13. https://www.millionacres.com/real-estate-market/what-is-real-estate-appreciation/.

Zinn Education Project. 2022. "Nov. 2, 1920: The Ocoee Massacre." Teaching People's History. https://www.zinnedproject.org/news/tdih/ocoee-massacre/.