CAMBRIDGE
UNIVERSITY PRESS

Economic History Association

The Value of Freedom
Author(s): Kenneth Ng and Nancy Virts
Source: *The Journal of Economic History*, Vol. 49, No. 4 (Dec., 1989), pp. 958-965
Published by: Cambridge University Press on behalf of the Economic History Association
Stable URL: http://www.jstor.org/stable/2122746
Accessed: 19/08/2010 18:15

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at http://www.jstor.org/page/info/about/policies/terms.jsp. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Please contact the publisher regarding any further use of this work. Publisher contact information may be obtained at http://www.jstor.org/action/showPublisher?publisherCode=cup.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Cambridge University Press and *Economic History Association* are collaborating with JSTOR to digitize, preserve and extend access to *The Journal of Economic History*.

STOR®
http://www.jstor.org

The Value of Freedom

KENNETH NG AND NANCY VIRTS

The effect of emancipation on black living standards is one of the central questions in black economic history. This note presents new estimates of black income in 1880 and the value of increased black consumption of leisure. Compared with existing estimates of the value of consumption as slaves, our figures indicate that the increase in black income from emancipation was nearly double that estimated by previous researchers.[1]

Blacks were compelled to work long hours as slaves. Profit-maximizing slaveowners forced slaves to work until the marginal revenue product of labor was equal to the marginal cost of maintaining a slave as a productive asset. The slaveowner provided subsistence to the slave and expropriated the remaining product of the slave's labor. The marginal utility of the slave's leisure did not enter into the work effort decision. After emancipation the decision of free blacks to work was determined not only by the marginal revenue product of labor and marginal cost of maintaining long-term health, but also by the marginal utility of leisure. As a result of this additional influence on the work effort decision, blacks chose to work fewer hours as free men than they were forced to work as slaves.

The increased consumption of leisure must be taken into account in order to gauge fully the value of freedom. One way to do this is to estimate it as the increase in leisure times the forgone wage rate. This measure has limitations that are discussed below, but when combined with the increase in money income that occurred after emancipation it gives a more complete measure of the value of freedom.[2] Table 1 summarizes our estimates of the yearly value of emancipation and compares them with those of Roger Ransom and Richard Sutch.

The higher value of emancipation that we estimate is derived from two sources. First, our estimate of the money income of blacks after emancipation is 13 percent higher and is caused by two factors. One, we compute income for all black tenants regardless of the size of the farm they operated, and two, we use a different weighting scheme to estimate average income from county-level estimates. Second, our estimates of the value of leisure are higher because we value increments of leisure at the observed market wage. Our estimate is roughly twice that of Ransom and Sutch, and when combined with the new figure for the money income of blacks it yields an annual value of freedom for an average black family of $44 to $49.

The Journal of Economic History, Vol. XLIX, No. 4 (Dec. 1989). © The Economic History Association. All rights reserved. ISSN 0022-0507.

The authors are Assistant Professors of Economics, California State University at Northridge, Northridge, CA 91330.

We would like to thank William Brown, Stanley Engerman, Shawn Kantor, Kenneth Sokoloff, and Adam Gifford for comments and suggestions. A longer version of this note, containing greater detail about our calculations, is available from the authors.

[1] See Roger L. Ransom and Richard Sutch, *One Kind of Freedom: The Economic Consequences of Emancipation* (New York, 1977), chap. 1.

[2] The market wage rate, used to measure the value of leisure, reflects the value to individuals on the margin, so only the last increment of leisure taken is valued correctly. Given that blacks reduced their work effort significantly from the levels extracted by slaveowners, the wage rate underestimates the value of leisure to blacks. This measure also excludes the utility derived from nonpecuniary sources such as the ability to choose a consumption bundle, free speech, the freedom to choose marriage partners, the right to vote, and the pure joy of freedom. Measuring these items is difficult because there are no quantitative measures of the degree to which they were achieved by blacks. Valuing them is nearly impossible because they were not traded in markets. For both these reasons the measured value of freedom is a lower-bound estimate.

TABLE 1
YEARLY VALUE OF FREEDOM PER CAPITA
(1879 Prices)

		Ng and Virts	
	Ransom and Sutch	Improved Residual Method	Direct Observation of Wages
Money Income in 1859	$27.66	$27.66	$27.66
Money Income in 1879	$35.59	$40.24	$40.24
Value of Leisure	$13.75–$21.00	$14.82–$23.44	$31.01–$36.78
Value of Freedom	$22.05–$29.01	$27.40–$36.02	$43.59–$49.36
Increase in Income	78–105%	99–130%	158–178%

Notes: See the text for an explanation of the improved residual method and a derivation of the 1879 money income and the value of leisure. The value of freedom is computed by subtracting the 1859 money income from the 1879 income and adding the value of leisure. The percentage increase in income is computed by dividing the value of freedom by the money income in 1859.
Source: Money income for 1859 is from Roger L. Ransom and Richard Sutch, *One Kind of Freedom: The Economic Consequences of Emancipation* (New York, 1977), p. 7.

MEASURING INCREASES IN MONEY INCOME

To estimate the value of income earned by blacks after emancipation we use data from the Ransom and Sutch sample from the Census of Agriculture for 1880.[3] This sample is the largest and best data source on postbellum southern agriculture, but has drawbacks for estimating black income. One is that it contains no information on the income of urban blacks or income levels of blacks employed in agriculture as wage laborers.[4] As a result, our income estimate is limited to blacks who were tenant farmers, either sharecroppers or renters. The method we use for estimating tenant income is similar to that used by Ransom and Sutch, but because our interest is in estimating the average black family's gains from emancipation, not just the impact on the bottom of the income distribution, our estimate is based on the earnings of all black tenants regardless of the size of farm they operated.[5] We include black tenants from all cotton-producing counties in the sample, not just the subset of the sample examined by Ransom and Sutch.[6]

Unfortunately, the sample contains no direct information on the income of farm operators, so the income must be estimated using information on the value of output and the cost of purchased inputs for each farm. A major difficulty in estimating the costs is that there is no direct information on rents actually paid or other terms of the rental contract. To estimate rent we assume each farmer made a standard type of contract,

[3] The sample of farms was taken from the manuscript schedules of the Census of Agriculture for 1880 and is described in Ransom and Sutch, *One Kind of Freedom*.

[4] Robert Higgs estimates that 13 percent of blacks lived in urban areas in 1870. See Robert Higgs, *Competition and Coercion: Blacks in the American Economy, 1865–1914* (Cambridge, 1977), pp. 32–35. Black wage workers also made up a significant fraction of the agricultural labor force.

[5] See Ransom and Sutch, *One Kind of Freedom*, appendix G, for a description of the sample. Their procedure for estimating income is described in appendix A, where they report estimates of black income based on black tenants operating small farms. On pp. 6–7 they report only the income of black sharecroppers. They estimate family income earned by black tenants operating farms with 50 acres or less in crops and 26 weeks or less of hired labor in the subset of their sample that they refer to as the "Cotton South."

[6] See Nancy Virts, "Estimating the Importance of the Plantation System to Southern Agriculture in 1880," this JOURNAL, 47 (Dec. 1987), pp. 984–88.

although the literature indicates that there was considerable variation in the amount of rent and in other terms of the contract.[7]

For farms identified as rented for a share of the crop, we assume they were operated according to a standard sharecropper's contract, under which the landowner supplied land, farming implements, working stock, and housing to the tenant in exchange for a rent of one-half the value of the crop. The operator and his family supplied labor. We estimate the rent as one-half the value of output reported in the census minus the value added from pork production and the value of garden produce.[8] Income is equal to the value of output plus the value of housing services minus the estimated rent and one-half the cost of fertilizer and wages paid.[9]

Other farmers rented land for a fixed amount. Estimating the amount they paid is difficult because there was no standard fixed rent contract equivalent to the standard share contract. Ransom and Sutch assumed that the value of the rent paid must have been roughly equal to that paid by sharecroppers and therefore used the standard sharecropper contract to estimate income on all tenant farms. This introduces a bias, however, because operators renting for a fixed rent provided their own working stock and farming implements while sharecroppers supplied only labor. A competitive market implies that rents between different forms of tenure will be equal only when operators are supplying the same inputs, so fixed renters more likely paid rent equal to that of share tenants. Accordingly, we estimate the value of rent paid by fixed rent tenants as equal to the sum of one-fourth the value of cotton and one-third the value of corn they produced.[10] Since renters owned their working stock and implements, the feed requirements for those animals as well as depreciation of implements were also deducted from the value of output.[11]

Our evidence covers 1,465 black tenant farms of all sizes from the 58 cotton-producing counties in the Ransom and Sutch sample.[12] The 582 renters had an unweighted average income of $239, the 883 sharecroppers reported one of $212. The raw average income for all tenants was $223. Since these counties were not sampled at the same rate, a weighted average was calculated to better estimate the true income.[13]

[7] See Lee J. Alston and Robert Higgs, "Contractual Mix in Southern Agriculture since the Civil War: Facts, Hypotheses, and Tests," this JOURNAL, 42 (June 1982), pp. 328–30; and Ransom and Sutch, *One Kind of Freedom*, p. 89.

[8] The value added from pork production and the value of garden produce are estimated by the same method used by Ransom and Sutch, *One Kind of Freedom*, pp. 214–16.

[9] The assumption that all share farms were sharecropped leads to an overestimate of rent on those farms where the operator supplied his own working stock and farming implements. These share tenants usually paid a rent of one-fourth of the cotton and one-third of the grain grown on the farm. The census made no distinction between the two forms of tenure in 1880, so the number of share tenants and sharecroppers is not known. Although it is thought that a majority of these tenants were sharecroppers, all contemporary descriptions of southern agriculture mention share tenants as a significant class of tenants. This bias in the rental estimates is offset in part because neither the value of corn fed to the animals nor the depreciation of farm implements is deducted from income as it should have been for those farms where the operator owned his own working stock and implements.

[10] The census reported the number of 400-pound bales of cotton and bushels of corn grown on each farm. We assume a price of 9.5 cents a pound for cotton and 62.3 cents a bushel for corn. See Ransom and Sutch, *One Kind of Freedom*, p. 167.

[11] We assume a 15 percent depreciation rate and feed requirements of 30 bushels of corn per mule and 35 bushels of corn per ox or horse. See Ransom and Sutch, *One Kind of Freedom*, pp. 208, 248.

[12] We eliminate farms with inadequate wage data and those farms without information on the value of output.

[13] Weighted averages were constructed by first estimating average county income. County income was computed by taking a weighted average of sharecropper and sharerenter income, where the weights were the proportion of croppers and renters in the Ransom and Sutch sample for

Moreover, county averages were in some cases based on a small number of observations and in others the few black farms sampled were quite large, with high per capita incomes and large numbers of blacks employed as wage laborers. We exclude those counties which had a sample size of less than 10 observations, reducing the sample size from 1,465 to 1,381.[14] The weighted average family income is $233, which implies a per capita income of $40.24 in 1879 dollars. These figures are 13 percent higher than Ransom and Sutch's estimate for black sharecroppers on small family farms, 42 percent higher than the average value of slave income on large plantations, and 57 percent higher than the average value of slave income on all farms.[15]

THE VALUE OF LEISURE

After emancipation blacks allocated their time between labor and leisure to maximize their own satisfaction. Since under slavery the labor-leisure decision was made by the slaveowner to maximize his income, it is not surprising that free blacks chose to work fewer hours for wages than they were forced to work as slaves. According to Ransom and Sutch, the average number of labor hours per capita dropped from between 2,052 and 1,552 hours under slavery to between 1,524 and 1,009 after emancipation.[16] We estimate a slightly bigger decrease to between 1,503 to 994 hours in 1880, a decline of 27 to 36 percent.[17]

Economic theory suggests that the value of this increased leisure can be estimated by using the market wage rate. Because of the form of contract used by tenants, it is difficult to measure the hourly wage earned directly. One approach is to estimate the implicit wage earned by dividing the estimate of per capita income by the average

---

each county. State income figures were computed as a weighted average of the county income estimates, where the weights were each county's share of the total population of all counties sampled in each state. Finally, average income was computed by taking the weighted average of the state figures, where the weights were the share of each state in total southern population.

[14] With the inclusion of those counties with samples of fewer than 10 farms the average family income was $358.

[15] See Ransom and Sutch, *One Kind of Freedom*, appendix A, for their estimates.

[16] The size of this decrease has generated some controversy. See Claudia Goldin, "N Kinds of Freedom," *Explorations in Economic History*, 16 (Jan. 1979), p. 11; and Gavin Wright, "Freedom and Southern Economy," *Explorations in Economic History*, 16 (Jan. 1979), p. 95. However, the average number of hours worked per capita for 1860 is significantly lower than the average number of hours worked on the slave plantations examined by John Olson, cited in Robert Fogel and Stanley Engerman, "Explaining the Relative Efficiency of Agriculture in the Antebellum South," *American Economic Review*, 67 (June 1977), p. 287. Most of the decrease in hours worked per capita in 1880 is due to the lower participation of women and children in the labor force. The labor force participation rates reported by Ransom and Sutch are based on the number of blacks reporting agricultural occupations to the census enumerators. While there is evidence that enumerators were less likely to report white females and children as employed on family farms, this problem was much less common for blacks. The decrease in participation rates that Ransom and Sutch found is consistent with anecdotal accounts from the period. There is little hard evidence to suggest that this estimate of labor hours in 1880 is biased downward.

[17] The hours worked by women and children have been converted to male equivalent hours by multiplying by their relative productivity. To compute an average amount of labor per capita, the estimated labor hours for each type of worker was multiplied by the share of the black population in that age group. Although we use the same methodology as Ransom and Sutch, we get different results for two reasons. When calculating the average labor hours in 1880 we use the population weights for 1880, not 1860 as Ransom and Sutch did. The population weights we use for 1860 are also slightly different than those used by Ransom and Sutch, but the reason for the difference remains unclear.

number of male-equivalent labor hours worked. Our 1880 estimates of per capita income and number of hours worked imply a wage rate for adult male labor of between 2.7 and 4.2 cents per hour as compared to 2.3 and 3.5 cents calculated by Ransom and Sutch.

Another approach is to use the wage rate observed in the market for agricultural wage workers to measure opportunity costs. As long as wage work was available to tenants and their families as an additional source of income, the wage rate observed in the day labor market reflects the opportunity cost of leisure and can be used to value leisure. There is some controversy over the extent to which this was the case.[18] However, there are numerous references to the practice of tenants or their families hiring themselves out as day laborers either to their own landlords to do extra work on his land or to help other tenants on their crops.[19] In some cases cash payment for extra work was part of the rental agreement.[20] Tenants often would not perform maintenance tasks such as ditching and fencing without extra compensation.[21] Even if most workers chose to be tenants rather than wage workers, to the extent that the markets for tenants and wage labor were competitive, hourly compensation should have been the same for each after adjusting for differences in risk and investment made by the worker. Estimates of the wages earned by agricultural laborers indicate higher opportunity costs of leisure than was revealed by the implicit wage. An average daily wage rate of 79 cents was computed from figures in the 1882 agriculture commissioner's report.[22] Assuming the laborer worked 12 to 14 hours a day, the wage rate of 79 cents implies an opportunity cost of leisure on the margin of 5.6 to 6.6 cents per hour, well above the wage implicit in the per capita income estimates.[23]

The value of leisure implied by these different wage rates and our estimate of the reduction in hours worked is shown in Table 1. Using the implicit hourly wage, our estimate is still nearly 10 percent higher than that reported by Ransom and Sutch, even though our estimate of the hours worked is about 7 percent lower. The estimate made using the reported wage rates of agricultural workers is about double the value reported by Ransom and Sutch.

There are two reasons why the wage rate for day laborers is the better measure of the

[18] See Gavin Wright, *Old South, New South: Revolutions in the Southern Economy since the Civil War* (New York, 1986), chaps. 3 and 4. Wright suggests that the demand for seasonal labor was limited to harvest time, when tenants were so occupied with their own crops that they could not hire out.

[19] References to the practice of tenants or their families hiring themselves out as day laborers include Eugene Hilgard, *Report on Cotton Production in the United States* (Washington, DC, 1884), pp. 517, 521; C. O. Brannen, "Relation of Land Tenure to Plantation Organization," *USDA Bulletin No. 1269* (Oct. 1924), pp. 22–25; and E. L. Langsford and B. H. Thibodeaux, "Plantation Organization and Operation in the Yazoo Mississippi Delta Areas," *USDA Technical Bulletin No. 682* (May 1939), p. 23. Brannen's study of plantations in 1920 found that hiring extra wage labor from plantation tenants and their families was more common than hiring extra labor from other towns. Since the costs of transporting labor were higher in 1880 than in 1920, it seems likely that it was even more common to hire extra labor from tenants or their families in 1880. Langsford and Thibodeaux reported that in the Mississippi Delta area it was common practice to limit the size of tenant farms to allow the tenant and his family time to work on the landowner's farm for wages.

[20] Joseph Reid, "Sharecropping as an Understandable Market Response: The Post-bellum South," this JOURNAL, 33 (Mar. 1973), pp. 106–30, for a summary of the variation in terms of contracts and side payments.

[21] For examples of contracts which make provision for extra work, see Reid, "Sharecropping," pp. 116–19, 128–30. See also Higgs, *Competition and Coercion*, p. 49.

[22] We assumed workers received the harvest wage 30 percent of the time. The average wage for each state was weighted by its share of the South's black population to compute the southern average. Wage rates are from *Report of the Commissioner of Agriculture 1882* (Washington, DC, 1883), p. 644. Population shares are computed from *Compendium of the Tenth Census*, table 23.

[23] See Ransom and Sutch, *One Kind of Freedom*, p. 233.

opportunity cost of leisure. First, the day wage represents the opportunity cost of incremental units of leisure on the margin. The day wage is what blacks actually could have earned if they decided to give up days of leisure. The wage earned under a year-long sharecropper's contract was not available if a worker was already sharecropping or sharerenting. Second, the estimated day wage is a directly observed price, and much higher levels of confidence must be attached to it compared to a wage computed indirectly from data on the production process.

It is difficult to understand how a difference between the hourly wage earned by day laborers and the implied wage earned by sharecroppers and sharerenters could persist. Since wage workers usually did not have annual contracts, some of the difference between the wage rate of sharecroppers and wage workers could have been compensation for the risk of unemployment.[24] However, with a daily wage rate for hired labor almost twice that being earned by sharecroppers, the incentive for sharecroppers to abandon their crop during harvest season and work as day laborers would have been very high, especially if the tenant had already received substantial advances from the landlord. Although it was not unknown for a tenant to abandon the crop before harvest, most contemporary accounts suggest that the problem was much less severe in 1880 than it had been shortly after the Civil War.[25] Unless the worker expected to earn a higher income if he stayed on as a tenant, it is not clear why he would choose to do so if he had the option of leaving and finding employment as a wage worker, which he probably could at harvest time. The large difference between observed market wages and estimated wages of tenants cannot be explained by the census year having been an unexpectedly bad year for farming. The real value of crop output per capita was higher both in 1879 and 1880 than it had been in previous years.[26]

The most likely possibility is that the difference between the implicit wage of tenants and the observed wage reflects a premium paid to wage laborers to work at a more intense pace. According to anecdotal accounts of the labor market after emancipation, free blacks preferred not to work as wage laborers because the gang system was too similar to what it had been under slavery. Although most of these accounts do not specify exactly which aspects of wage work were objectionable, it seems likely that the pace of work demanded was more intense and closer to what had been demanded of slaves than the work effort of tenant farmers, who were supervised much less closely. If this were the case, then the observed wage rate of laborers would be a better measure of the value of leisure than the estimated tenant wage because it includes both the value of working fewer hours and the value of working at a lower intensity than occurred under slavery.[27]

Another likely source of the difference is that we have underestimated tenant income. The standard contract that we assumed prevailed throughout the region ignored the possibility that the tenant earned any income from working as a wage laborer. A farm management study done in Georgia in 1918 found that tenants in one Georgia county worked an average of 13.3 days as wage laborers. If tenants in 1880 had worked the

[24] This suggestion is due to an anonymous referee.

[25] It has been suggested that the move to sharecropping from wage labor was motivated in part by the planters' desire to have a dependable source of harvest labor. Since sharecroppers received their payment after the harvest, they would be less likely to leave. Given the fact, however, that sharecroppers often received advances and wage workers often were not paid all their earnings until the end of the year, the actual timing of payments was not that different between the two forms of payment. If sharecroppers were less likely to leave before the end of the contract, it must have been because they had more to lose.

[26] Ransom and Sutch, *One Kind of Freedom*, p. 259.

[27] As this discussion makes clear, our measures of the value of leisure have been based on the assumption that the only source of gain was from working fewer hours. It is also possible that slaves worked both more hours and more intensely than free blacks.

same number of days, then income per capita would have been 4 to 5 percent higher.[28] Joseph Reid reports a sharecropping contract in 1877 that involved a side payment of $30 for extra work to be done on the farm.[29] If we have underestimated tenant income, the implicit wage would place too low a value on leisure and the observed wages would provide a more accurate value.[30]

It seems likely that the observed difference in estimated and observed wages is due to an underestimate of tenant income and the higher intensity of work demanded of day laborers. Therefore, we believe that the estimates using the observed market wage for agricultural labor give the better measure of the value of leisure.

WELFARE GAINS FROM EMANCIPATION

Emancipation increased the income blacks earned or chose not to earn over their lifetime. Since emancipation was a one-time event which yielded a flow of income, it is appropriate to measure its present value. We calculate the present value of emancipation for a typical black freed by the Emancipation Proclamation using a two-step procedure. Present values are computed for each age/sex group for which life expectancy data are available, based on the yearly increase in income of 158 to 178 percent. This adjusts the present-value estimate of the welfare gains for the limited number of years that older individuals could expect to enjoy the benefits of freedom. Second, the present value for a typical black at the time of emancipation is taken as a weighted average of the present value of emancipation for each sex/age group, where the weights are the share of each group in the population.[31] We estimate that the present value of freedom for the average freed black was equal to a lump-sum payment of between 26 and 30 times his average yearly income. For a black in 1860 this implies a payment of $4,466.[32] Using more recent figures, that same equivalent proportional lump-sum payment invested at 10 percent could provide an average black family with an annual income of $43,000 to $74,000.[33]

Emancipation yielded welfare gains for all blacks born afterward, not just those freed by the proclamation. We calculate that the lower-bound estimate of the present value of free participation in labor markets for those born after the Civil War was equivalent to a lump-sum cash payment of 28 to 31 times the average annual income of a slave; slightly larger than that of all individuals alive in 1869.

The magnitude of the welfare gain to emancipation can be placed in perspective by comparing it to the economic growth that has taken place in the United States. From

[28] E. S. Haskell, "A Farm Management Survey in Brooks County, Georgia," *USDA Bulletin No. 648* (May 1, 1918), p. 16.

[29] Reid, "Sharecropping," p. 116.

[30] It is also possible that the difference between the estimated wage of tenants and the observed wage of agricultural laborers is that the wage rates reported to the commissioner of agriculture were unreasonably high. Although this may have been the case, there is no known reason why systematically throughout the South wages paid should have been overreported. The data from later years are comparable to those reported in 1879.

[31] The present value is calculated using an interest rate of 5 percent. The number of individuals of given age and sex in an average family is from *Historical Statistics of the United States*, series B 84–91 and series A 71–85.

[32] The payment is computed using black income in 1860 from Table 1.

[33] The higher estimate was computed by multiplying the 1984 average family income of $26,433 times the present value of emancipation given in the text. The lower estimate was computed using the 1984 average black family income of $15,432. Family income data are from *Historical Statistics of the United States*, series G 147 and 149.

1860 to 1970 per capita income grew at an average of roughly 1.5 percent per year.[34] At that rate it would take roughly 70 years to produce our maximum value of freedom, a 180 percent increase in per capita income. Therefore, emancipation could be considered, in percentage terms, as equivalent to the growth in per capita income which occurred from 1880 to 1950.

CONCLUSION

In an ideal world one would measure the welfare gains from all changes resulting from emancipation. Much of the literature on black living conditions in the late nineteenth century argue that political power, legal equality, and living conditions, broadly defined, changed little after emancipation. Blacks, although no longer slaves, still did not receive equal protection under the law or exercise an equal voice in political affairs, and they experienced periodic episodes of racially motivated violence. Our measured value of emancipation would be equivalent to measuring the total welfare gains under the extreme assumption that blacks experienced no change in political or legal power and that racially motivated violence did not change. Further, our measure values increased leisure at its value in exchange, not its value to the individual. The value of freedom estimated here should be considered a lower bound of the welfare gains blacks received from being freed.

Our results show that emancipation was a significant source of welfare gains for blacks. Only the increases in per capita income created by economic growth over a century rank with emancipation as a source of income growth for blacks. Average material income for black tenants in 1879 was 45 percent higher than the average income of slaves in 1859. As large as these gains in material income were, they were small compared to gains in welfare due to increased leisure. Our estimates of the value of increased leisure are between \$44 and \$50 per capita. Even if income growth for southern blacks had been close to the national average, it would have taken three-quarters of a century to achieve an increase in welfare comparable to this partial measure of the gains to emancipation. It seems unlikely that any other government action in U.S. history has had a larger positive effect on the welfare of a particular group than the Civil War did on black welfare.

[34] See Lance E. Davis, et al., *American Economic Growth: An Economist's History of the United States* (New York, 1972), p. 40.