Differences in Wealth, Education, and History

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1 **Differences in Wealth, Education, and History**

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10 ABSTRACT An understanding of the freedoms (or the lack of freedoms) and their economic consequences on early black

11 Americans provides an informative understanding to the freedoms (or the lack of freedoms), and their economic consequences on

12 other, modern ethnic groups. James Curtis Jr (2017) investigates the link between the social asymmetry and economic asymmetry

13 among early blacks and whites in the United States of America. For the empirical study, James Curtis Jr (2017) uses cross-

14 sectional variables from the Integrated Public Use Microdata Sample (IPUMS), developed informative conditional ratios, and

15 employed least squares statistical analyses.

16

17 FINDINGS This study finds that economic differences among ethnic groups, as measured by differences between early blacks and

18 whites, are intertwined with asymmetrical freedoms, leading to statistically insignificant returns to education, as measured by literacy.

19 One might conclude that the individual's basic protection of life, liberty, and the pursuit of happiness must proceed any expectations

20 of measured returns to schooling, particularly among individuals in disenfranchised groups. Furthermore, one might propose

21 education policy such that modern higher education investment programs prioritize education entrepreneurs and/or

22 state/social planners with academic research familiarity of differences in wealth.

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29

INTRODUCTION

32

33   Curtis Jr (2012) stated

34   The debate over market/individual regulation and freedom dates as far back as religious Holy documents, such as
35   The Holy Bible. The Old Testament of The Holy Bible tells of Moses detailing the Ten Commandments, in
36   Exodus 20:2-17. The Ten Commandments are God's basic instruction to his people. The Ten Commandments are seen
37   as the paraphrased *controls* of individuals in markets and society, for those moved by Old Testament Biblical doctrine.
38   One might interpret the New Testament of The Holy Bible as expressing a more *free* form of living, for instance, in
39   passages such as Philippians 4:6-7, "Be careful for nothing; but in everything by prayer and supplication with thanksgiving
40   let your requests be made known unto God. And the peace of God, which passeth all understanding,
41   shall keep your hearts and minds through Christ Jesus" (KJV The Holy Bible, p. 263), and
42   Philippians 4:13, I can do "all things" through Christ Jesus who strengthens (KJV The Holy Bible, p. 263).
43

44   Similarly, the debate of more regulation or relative freedom of immigrants has moved backed into the spotlight of
45   America, at the start of 21st century, with large masses of Latino/Latina Americans migrating from Central America and
46   South America to North America. Joseph Ferrie (1999) thoroughly documented the mid-19th century wave of
47   immigrants to the United States of America from Europe. But before the Latino/Latina American immigration discussion
48   commenced and before the European American immigration wave of the mid 19th century, the regulation and freedom
49   of black Americans was central to the governance issue of the United States of America. In many ways, a clear
50   understanding of the freedoms (or the lack of freedoms) and their economic consequences on early black Americans
51   provides an understanding to the freedoms (or the lack of freedoms), and their economic consequences on other, modern
52   ethnic groups.
53

54   The experience of blacks in America can be divided into three separate discussions, the experience of: (*i*) free blacks
55   prior to the Civil War, (*ii*) slaves prior to emancipation and (*iii*) the experiences of all blacks after the Civil War. But the
56   socioeconomic experiences of the latter two are linked to that of the former:
57

58   ...In other words, the day after a slave is emancipated from an intergenerational experience of enslavement, what does
59   that ex-slave do? What are his or her goals? Does the slave have a contemporaneous objective to supply labor and
60   consume necessary commodities in a manner that highly discounts the future in order to survive on a day to day basis at
61   the expense of future consumption, or does the slave have an intertemporal objective to store material possessions in a
62   manner that minimizes current consumption, possibly below subsistence, in order to provide a better experience for his or
63   her children? Prior to southern emancipation, some blacks were able to ponder on the same decisions.
64

65   Therefore, this paper focuses on the plight of the average antebellum free black American, which, in hindsight, illuminated
66   the path of the average black American, after emancipation, as well as Americans of other ethnicities over time."
67

68   **Outline**

69

70   I present *the methods of economic analysis, results, and conclusions* from comparing the economic experiences of white Americans

71   and ex-slaves to free black Americans **1850-1870**. Through these analyses, I intend to uncover the portion of the ethnic

72   experience explained by institutional barriers and the portion of their experience explained by available socioeconomic choices,

73   particularly, as it relates to education or literacy. This paper will provide one of the first comprehensive, synthesized analyses of the

74   demographic, economic, education, and legal freedom experiences of free Black Americans, most who are ex-slaves, compared to

75   whites in the United States of America.

76

77

78   **Economic Theory: The Economic Expectations before Investigating Evidence in the Data**
79

80   <u>The Study of Wealth</u>. Wealth is the accumulation of material resources that have market value for current or future consumption.

81   Furthermore, savings, initial wealth and the compounded rate of return on the invested savings and initial wealth determine wealth.

82   The following section describes universal and group-based expectations, based on economic theory, in the areas of economic

83   growth (including wealth, property and savings), economic inequality, and comparative economic outcomes. Wealth, property, and

84   measures of classical economic choice characteristic will be employed to measure outcomes, compared to expectations.

85

86   <u>Economic Growth and the Parabolic Property Ownership Expectations</u>. To analyze the relationship between age and property, I

87   employ methods developed by Lee Soltow (**1975**). He expected the old to hold more property than the young : He found that

88   plots of individuals holding property across age groups shows a "very rapid rise in the probability of ownership in the first **10** years

89   of adulthood with a tapering affect appearing thereafter" (Soltow, p.**28**). He suggests that this concavity was affected by the

90   income and savings decisions and distribution of the population.

91

92 Soltow used estimates of non-property-holders to develop a parabolic model of property holding over different age rages. This

93 theoretical parabolic behavior is based on an assumption that proportion of non-property-holders is fixed across age groups.

94 Soltow expects that **79.3** percent of thirty year-olds who did not hold property in their twenties will not hold property for the

95 same reason as the **79.3** percent who did not hold property when they were in their twenties:

96 "The .793 is a quantification of the importance of all those characteristics inhibiting ownership, such as lack of
97 knowledge of available land or credit, inability to speak or write English or possibly read any other language, unwillingness
98 to accept the obligations of ownership, inability to save because of low income or high consumption, legarthy because of
99 sickness or poor health, and so on. If quantification of .79 were to operate for the group from age **30** to **39**, one would
100 expect the .793 of the property-less at age **30** to remain property-less. Thus, $1-(.793)^2$ would own property in the
101 **30-39** group" (Soltow, **1972**, p.**30**).
102
103 "The strength of America's system, as seen by nineteenth century writer, was that an individual had the opportunity to
104 improve his position over time. This opportunity meant that he was not placed in a fixed position in society. He might
105 have had to work hard, but he could expect betterment in his wealth status. We can capture this phenomenon by
106 studying the participation rate (proportion of men who held property) of peoples of different ages in a given year. Sure
107 this rate, as measured by (real estate holding) or (total estate holding) must be higher for the old than for the young....If
108 the majority of individuals in the economy are to experience betterment in economic position during their lifetimes, more
109 and more should rise above the level of being poor, above some minimum wealth amount" (p.**27**).
110

111 <u>Economic Growth and the Linear Growth in Wealth Expectations</u>. To analyze the relationship between age and wealth, I employ

112 additional methods that were first employed by Soltow (**1975**). He plotted age-wealth coordinates and expected a positive

113 relationship: "Material betterment dominated the economic thinking men. Those with wealth expected to have more each year as

114 they grew older; accumulation was a sign or index of recognition of an individual's past economic activities. Wealth mirrors the past

115 better than income since the pleasures of past consumption may be forgotten. It is only saving from past income that is now

116 reflected in one's wealth" (Soltow, **1975**, p.**69**).

117

118 Soltow did, in fact, observe a linear relationship between estate values and age. The parabolic effect of age on property holding was

119 not present when observing average wealth at different ages. "The group average rises strongly from **20-29** to **30-39** and then

120 has its greatest thrust in going from **30-39** to the **40-49** group. The average tapers off but continues to rise rather surprisingly

121 into old age. There is certainly no strong parabolic effect, as can be seen in...the proportion of men with property" (p.**70**). He also

122 suggested that the stability of the **1850** pattern was "proof that the age patterns were established decades before the **1850** and

123 the concepts of economic betterment must have been pervasive" (Soltow, **1975**, pp.**74-75**).

124

125 Economic Growth and the Savings Rate Expectations. Finally, I use the method proposed by Soltow (**1975**) to analyze savings

126 using wealth annualized at each age. Soltow used the differences in wealth at each age to observe the continuity of savings that

127 continued through old ages.Furthermore, Soltow found the average annual savings rate was about **5** percent. This was obtained by

128 [1] averaging the increase in wealth per age groups **20-69** or **90** percent of the adult male population

129 {(**582+804+311+303**)/4 =**500**}, [2] annualizing the average increase per age group or decade {**500/10=50**}, and [3]

130 dividing the average annual increase in wealth by the average wealth in **1850** {**50/1001=.05**}. Note that this finding of **5**

131 percent is the average for individuals. Since households possess more wealth than individuals, this rate is expected to much be

132 smaller in the forthcoming empirical analysis. "The difference between in wealth levels from one year to the next gives an index of

133 saving for a year" (pp.**71-72**).

134

135 Classical Characteristic Premium Expectations. *Schooling.* Jacob Mincer (**1974**) described a direct relationship between schooling

136 and earnings:

137   "it is equally correct to say that the distribution of earnings is determined by the distribution of accumulated human capital
138   and of rates of return to human capital investment or that the distribution of earnings is determined by the distribution of
139   ability and opportunity. Or, putting it in a causal hierarchy, the distribution of accumulated human capital is a proximate
140   determinant of the distribution of earnings, and is treated that way in this study. In turn, ability and opportunity determine
141   the distribution of human capital. (Mincer **1974**, p.**138**)"
142

143 *Skill.* Classical economic theory suggests workers are paid their additions to production. This produces an expectation of higher

144 wages for higher skilled workers and lower wages for lower skilled workers. Holding constant the intertemporal rate of return to

145   saved wages, holding constant differences in initial wealth, and holding constant the number of working hours (see James Curtis Jr,

146   December 2002), it is reasonable expect higher wealth among higher skilled employees.

147   <u>Convergence to Equality Expectations</u>. To measure economic inequality and compare differences in economic outcomes, I analyze

148   differences in differences in mean wealth between blacks and whites, and property ownership between blacks and whites. The

149   following ratios measure differences in wealth and differences in property ownership among two comparison groups to obtain

150   comparative returns to classical characteristic choices. Foremost, the **comparative wealth ratio** is

151

152   Equation 1.1 $$[W_{X\,J\,T}/W_{X\,J'\,T}] \,/\, [W_{X'\,J\,T}/W_{X'\,J'\,T}] \geq 1$$

153   Equation 1.1' $$[W_{X\,J\,T}/W_{X\,J'\,T}] \,/\, [W_{X'\,J\,T}/W_{X'\,J'\,T}] \leq 1$$

154

155   where $W_{X\,J\,T}$ is the mean wealth of the members of group J who made investment X at time T.

156

157   The comparative wealth ratio ignores differences in wealth levels and measures the return to classical characteristic choices among

158   groups. For instance, the ratio measures the schooling premium for blacks relative to the schooling premium for whites. If the ratio

159   is less than one, then blacks with many years of schooling may have lower levels of wealth relative to whites with proportional years

160   of schooling, and, thus, the returns to schooling among whites outpace the returns to schooling among blacks, in terms of wealth.

161

162   Similarly, the **comparative property ownership ratio** is

163

164   Equation 1.2 $$[Q_{XJT}/Q_{XJ'T}] \,/\, [Q_{X'JT}/Q_{X'J'T}] \geq 1$$

165   Equation 1.2' $$[Q_{XJT}/Q_{XJ'T}] \,/\, [Q_{X'JT}/Q_{X'J'T}] \leq 1$$

166

167   where Q_{XJT} is the percentage of the members of group J who own property and made investment X at time T.

168

169   The comparative property ownership ratio can be interpreted the same as the comparative wealth ratio. The comparative property

170   ownership ratio measures the impact of classical characteristics on property ownership of group J to the impact of classical

171   characteristics of property ownership of group J'. For instance, the ratio measures the schooling premium of blacks relative to the

172   whites. If the ratio is less than one, then blacks with many years of schooling may own less property relative to whites with

173   proportional years of property, and, thus, the returns to schooling among whites with many years of schooling outpace the returns

174   to schooling among blacks with proportional years of schooling, in terms of property ownership.

175

176   <u>Motivations for Multivariate Analysis</u>. To observe of combined effect of laws, demography and economic geography of the

177   economic outcomes of whites and blacks, I employed standard minimization of the sum of squared errors and conducted non-linear

178   multivariate analysis on the logarithmic total wealth of whites and blacks in **1860** and **1870**. Previous papers provide theoretical

179   motivation for econometric modeling choices, which are similar to this presentation. Logarithmic wealth is regressed against proxy

180   variables for earnings and savings, proxy variables for initial wealth, and household formation variables. Including slave state-free

181   state residency variables and regional residency variables could lead to multicolinearity, due to possible endogeneity. The directions

182   of the predictions of estimated coefficients, which are statistically significant at a **95** percent level of significance, were summarized

183   in the results section.

184

185

RESULTS

187

188 **The Mid-19th Century Age and Property Profiles of Whites and Free Blacks in the United States of America**

189

190 In 1850, Table 8ab-1 shows that between 35.8 – 67.1 percent of whites were real estate property holders across different

191 age groups while only 14.3 – 28.0 percent of free blacks were real estate property holders across age groups.

192
193
194 **Table 8ab-1. Real Estate Property-Holding Patterns by Age Group and Race, 1850-1860**
195
196

| Age Group | 1850 Real Estate Holders | | | | | | | 1860-1850 |
| | Whites | | | Free Blacks | | | White-Free Black | |
	Actual	Theoretical	Difference	Actual	Theoretical	Difference	Difference	Difference
20-29	0.358	0.358	-	0.163	0.163	-		
30-39	0.512	0.588	(0.076)	0.151	0.300	(0.149)	0.073	(0.009)
40-49	0.586	0.735	(0.149)	0.195	0.414	(0.218)	0.070	(0.046)
50-59	0.630	0.830	(0.200)	0.280	0.509	(0.229)	0.029	0.014
60-69	0.671	0.891	(0.220)	0.258	0.589	(0.332)	0.112	(0.044)
70-79	0.609	0.930	(0.321)	0.222	0.656	(0.434)	0.113	0.066
80-89	0.460	0.955	(0.495)	0.143	0.712	(0.570)	0.075	0.055

| | 1860 Real Estate Holders | | | | | | | |
| | Whites | | | Free Blacks | | | White-Free Black | |
Age Group	Actual	Theoretical	Difference	Actual	Theoretical	Difference	Difference	
20-29	0.369	0.369	-	0.175	0.175	-		
30-39	0.531	0.602	(0.071)	0.185	0.319	(0.134)	0.064	
40-49	0.632	0.749	(0.117)	0.297	0.438	(0.141)	0.024	
50-59	0.696	0.842	(0.146)	0.347	0.536	(0.190)	0.044	
60-69	0.725	0.900	(0.175)	0.375	0.617	(0.242)	0.068	
70-79	0.681	0.937	(0.256)	0.250	0.684	(0.434)	0.179	
80-89	0.684	0.960	(0.276)	0.333	0.739	(0.406)	0.130	

219 **Source:** Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

220

221 The proportion grew to 36.9 – 72.5 percent for whites and 17.5-37.5 percent for free blacks in 1860. Furthermore, when

222 comparing actual to fixed proportions among free blacks and whites, the actual white proportion of property-holders across age

223   groups was closer to the white fixed or theoretical proportions in **1850** and **1860**. This suggests that the events which prevent

224   holding property across age groups were relatively more fixed for whites than free blacks. Instead, enforcement of laws that reduced

225   the rights of free blacks, such as the Fugitive Slave Act, had a direct impact on the capacity of the average free black to hold

226   property, producing relatively more random patterns of holding property across all ages. When comparing white−free black

227   differences in **1850** and **1860**, Table **7**a shows that white−free black differences fell for younger members of the age distribution

228   but grew for the older members of the distribution.

229

230   **The Mid−19th Century Age and Wealth Profiles of Whites and Blacks in the United States of America**
231

232   Figures **3**.a.−**3**.f. are plots of the age−wealth profiles by race, year and cross section. Figure **3**b plots total wealth and shows the

233   least amount of dissaving occurring among whites.

234
235
236

Figures 3.a.–3.f. Age-Wealth Profiles of Whites and Blacks, 1850 through 1870
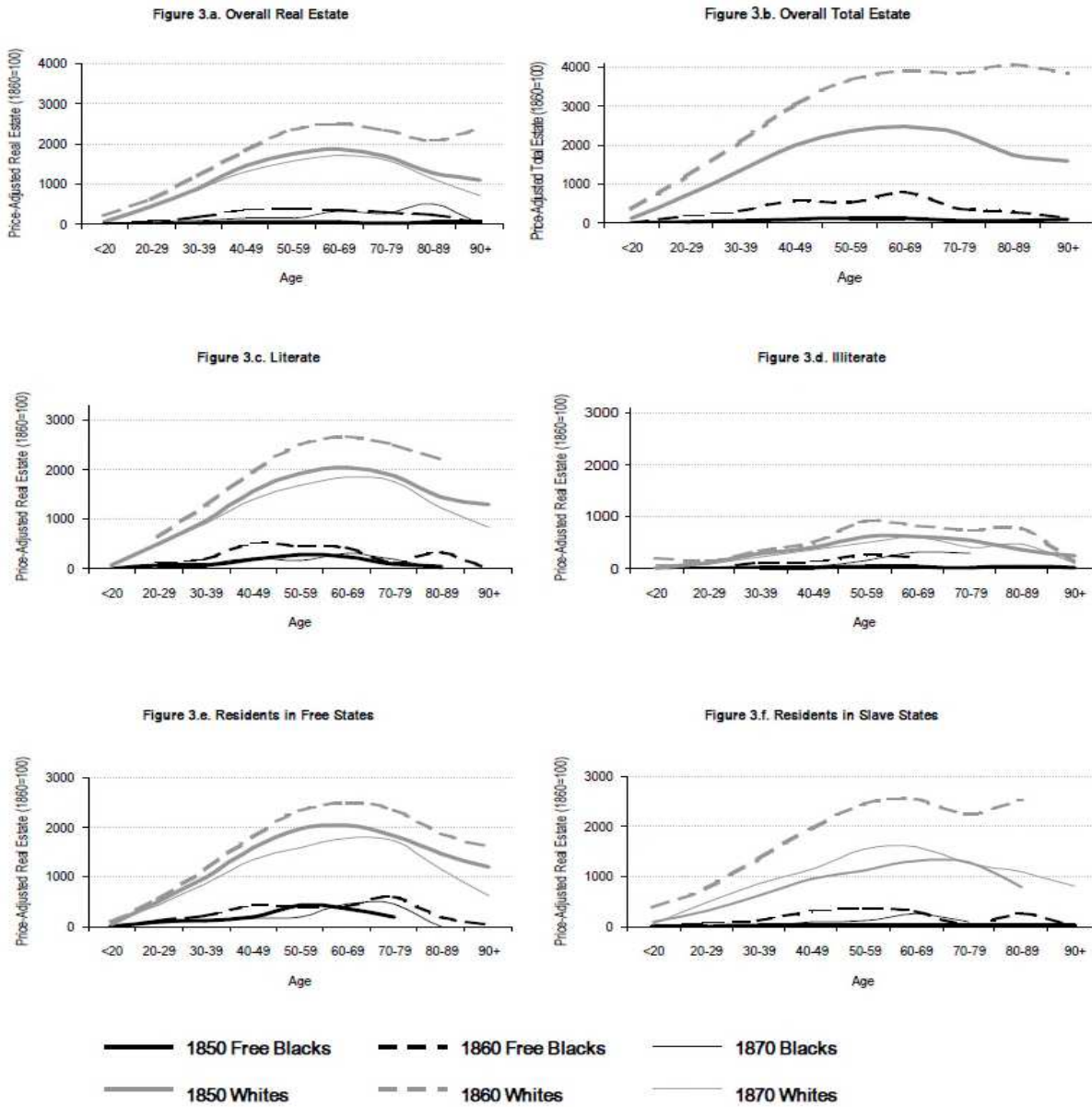
Figure 3.a. Overall Real Estate

Figure 3.b. Overall Total Estate

Figure 3.c. Literate

Figure 3.d. Illiterate

Figure 3.e. Residents in Free States

Figure 3.f. Residents in Slave States

| 1850 Free Blacks | 1860 Free Blacks | 1870 Blacks |
| 1850 Whites | 1860 Whites | 1870 Whites |

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

273   However, when comparing to blacks and the real estate wealth of whites and blacks, dissaving is definite reality at older ages[20].

274   [20] Masson (1986), Mirer (1979) and Shorrocks (1975) found cross-sectional age-wealth profiles that were concave only

275   when they did not control for factors such as cohort and mortality differences.

276

277   Furthermore, the difference between black and white age-wealth profiles is quite dramatic: The distance between black and white

278   profiles tends to peak in the fifties. Finally, Figures 3c-f show that the dominant wealth possession of whites remained across time,

279   education and region.

280

281   These profiles are preliminary evidence that making choices to improve education and social surrounding did not provide a clear

282   wealth reward. The local definition of free black rights had diluted any attempts to make individual economic gains.

283

284   **The Mid 19th Century Savings of Whites and Free Blacks in the United States of America**

285

286   Table 8c shows that white households (3.6 percent) saved less real estate wealth, annually, than free black households (3.8

287   percent) in 1850.

288

289

Table 8c-1. Wealth Accumulation Patterns by Age Group and Race, 1850-1860

Age Group	1850 Real Estate Wealth				1860 Real Estate Wealth				1860 Total Wealth			
	Whites		Free Blacks		Whites		Free Blacks		Whites		Free Blacks	
	Average	Change	Average	Change	Average	Change	Average	Change	Average	Change	Average	Change
20-29	515		49		726		90		1,476		169	
30-39	1,043	528	79	30	1,480	754	146	56	2,619	1,144	275	105
40-49	1,792	750	134	55	2,519	1,039	312	166	4,430	1,811	449	175
50-59	2,273	480	370	236	3,417	897	416	104	5,625	1,194	581	132
60-69	2,675	402	336	(34)	3,432	15	342	(74)	5,475	(150)	1,165	583
70-79	2,403	(272)	1,021	685	3,600	168	158	(184)	6,178	704	236	(929)
80-89	3,228	825	498	(523)	3,718	118	360	203	6,612	434	392	156
20-69 Average		540		72		676		63		1,000		249
Overall Average		1,486		189		2,050		286		3,556		501
Savings Rate		3.6%		3.8%		3.3%		2.2%		2.8%		5.0%

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

But by 1860, free black households (2.2 percent) saved less real estate wealth than white households (3.3 percent). This result is

picking up the economic push effects of enhanced enforcement of controversial fugitive slave laws. But, in terms of total wealth,

free black households (5.0 percent) were saving more than whites in 1860 (2.8). This is both attributed to the low level of

wealth in free blacks started from and possibly the desire for descendents to have an enriched economic experience.

The Mid 19th Century Schooling and Wealth of Whites and Blacks in the United States of America

Jacob Mincer (1974) described a direct relationship between schooling and earnings. When comparing the real estate wealth of

literate and illiterate free blacks, literate free blacks outperformed illiterate free blacks. These results held when comparing

differences in other and total forms of wealth among literate and illiterate free blacks. Table 8a-2 shows that literate free blacks

possessed $520 in nominal total wealth in 1860 prior to emancipation.

Table 8a-2. Mid 19th Century Schooling and Mean Wealth of Whites and Blacks

Literate	Overall			Free Blacks		All Blacks	Whites		
	1850	1860	1870	1850	1860	1870	1850	1860	1870
Real Estate Wealth	1,030	1,568	1,872	133	316	206	1,042	1,597	1,953
Other Wealth		1,001	753		204	98		1,019	785
Total Wealth		2,569	2,625		520	304		2,616	2,737
Price-Adjusted (1860=100)									
Real Estate Wealth	1,142	1,616	1,265	149	325	135	1,155	1,646	1,320
Other Wealth		1,062	504		209	64		1,081	525
Total Wealth		2,678	1,769		534	199		2,727	1,845
Sample	31,393	47,808	62,284	406	992	2,761	30,987	46,745	59,401
Illiterate	1850	1860	1870	1850	1860	1870	1850	1860	1870
Real Estate Wealth	263	412	212	93	151	31	282	458	586
Other Wealth		295	105		121	41		324	236
Total Wealth		708	317		273	72		782	823
Price-Adjusted (1860=100)									
Real Estate Wealth	296	436	143	105	160	20	317	483	398
Other Wealth		320	70		133	26		352	159
Total Wealth		756	213		293	46		836	556
Sample	3,709	5,251	24,073	365	710	16,175	3,344	4,497	7,855

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This was higher than the $273 possessed by illiterate free blacks. Note that literate free blacks were equally likely as illiterate free

blacks to hold real estate or other forms of property. However, literate blacks had 19.9 percent (520/2616) of literate white

total wealth while illiterate free blacks had 34.9 percent (273/782) of illiterate white wealth in 1860. These results may imply

that the penalty for illiteracy was so severe that the wealth of illiterate whites was relatively closer to wealth of illiterate free blacks

than wealth among literate free blacks and whites. This is accredited to a nineteenth century racial asymmetrical skill-bias in favor

literate whites: Free blacks and whites were proportionately penalized but not proportionately rewarded for education. Furthermore,

359   when we ignore differences in wealth levels among free blacks and whites, literacy did not provide free blacks an advantage relative

360   to whites.

361

362   Overall, investing time and resources in education does not guarantee economic equality if factors such as initial resources vastly

363   differ. These results also imply that illiteracy penalized free blacks in manner similar to whites more than literacy benefited free

364   blacks relative to whites. This analysis directly links the asymmetrical enforcement of federal statutes by states, which affect the

365   rights of free blacks, to asymmetrical wealth returns to the optimal wealth generating characteristics, such as literacy.

366

367   *The Mid 19th Century Schooling and Real Estate of Blacks: A Comparison of Black Americans over Time*

368

369   Real estate wealth differences favored literate blacks before and after emancipation. Table 8a-2 shows that literate free blacks

370   possessed nominal real estate wealth amounts of $133 in 1850 and $316 in 1860. This was higher than the $93 possessed

371   by illiterate free blacks in 1850 and $151 possessed by illiterate free blacks in 1860. Table 8a also shows that the literate-

372   illiterate ratio of average real estate wealth among free blacks grew from 1.3 in 1850 and 2.0 in 1860. This may be preliminary

373   evidence of a growing penalty for illiteracy. Literate free blacks were also more likely to hold real estate property than illiterate free

374   blacks even then proportion of literate free black property holders remained constant. Table 8b-2 shows that 20 percent of

375   literate free blacks in 1850 and 25 percent of literate free blacks in 1860 owned positive amounts of real estate wealth.

376

Table 8b-2. Mid 19th Century Schooling and Mean Property Ownership of Whites and Blacks

	Overall			Free Blacks		All Blacks	Whites		
Literate	1850	1860	1870	1850	1860	1870	1850	1860	1870
Real Property Holders	0.54	0.56	0.54	0.20	0.25	0.15	0.54	0.57	0.56
Other Property Holders		0.81	0.70		0.54	0.28		0.81	0.72
Real or Other Property Holders		0.84	0.75		0.58	0.32		0.84	0.77
Sample	31,393	47,808	62,284	406	992	2,761	30,987	46,745	59,401
Illiterate	1850	1860	1870	1850	1860	1870	1850	1860	1870
Real Property Holders	0.36	0.36	0.17	0.18	0.23	0.05	0.38	0.39	0.41
Other Property Holders		0.72	0.31		0.56	0.20		0.75	0.55
Real or Other Property Holders		0.75	0.35		0.60	0.22		0.77	0.62
Sample	3,709	5,251	24,073	365	710	16,175	3,344	4,497	7,855

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This was greater than the 18 percent of illiterate free blacks in 1850 and 23 percent of illiterate free blacks in 1860 that

possessed positive amounts of real estate wealth. Table 8c shows that the ratio of literate free black real estate holders (per

hundred literate free blacks) to the number of illiterate free black real estate holders (per hundred illiterate free blacks) remained

constant at 1.1 in 1850 and 1860.

By 1870, the return to literacy among blacks grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate average

real estate wealth for all blacks—which includes ex-slaves who held little or no real estate property—grew to 6.8.

Table 8c-2. Mid 19th Century Comparative Wealth Ratios and Comparative Property Ownership Ratios of

Whites and Blacks, Based on Schooling

	All Blacks			Whites			Black-White Ratio		
	1850	1860	1870	1850	1860	1870	1850	1860	1870
i) Literate/Illiterate Mean Wealth Ratio									
Real Estate	1.4	2.0	6.8	3.6	3.4	3.3	0.4	0.6	2.0
Other		1.6	2.4		3.1	3.3		0.5	0.7
Total		1.8	4.3		3.3	3.3		0.6	1.3
ii) Literate/Illiterate Mean Property-Holding Ratio									
Real Estate	1.1	1.1	2.7	1.4	1.5	1.4	0.8	0.7	2.0
Other		1.0	1.4		1.1	1.3		0.9	1.1
Total		1.0	1.5		1.1	1.3		0.9	1.2

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

This implies that, on average, literate ex-slaves possessed seven dollars for every dollar of real estate wealth owned by an illiterate

ex-slave. Yet the relative sample sizes suggest that approximately one in seven (2761/18936) blacks were able to take

advantage of the large literacy premium in 1870. Slave owner discouragement of educating slaves caused illiterate ex-slaves to be

severely handicapped in the wealth accumulation process.

Similarly, Table 8c-2 shows that the ratio of literate black real estate holders (per hundred literate blacks) to illiterate blacks real

estate property holders (per hundred illiterate blacks) was 2.7—for every illiterate black real estate holder (per hundred illiterate

blacks), there were three literate black real estate holders (per hundred literate blacks).

432

433   When comparing average real estate wealth of free blacks to the average real estate wealth of whites by literacy before

434   emancipation, illiterate white wealth was closer to illiterate free black wealth than literate black wealth to literate white wealth. Using

435   wealth means in Table 8a-2, literate free blacks had 12.8 percent (133/1042) of the average real estate wealth among literate

436   whites in 1850 and grew to 19.8 percent (316/1597) of the average real estate wealth among literate whites in 1860. But

437   illiterate free blacks had 33.0 percent (93/282) of the average real estate wealth among illiterate whites in 1850 and 1860

438   (151/458). The penalty for illiteracy in the nineteenth century caused illiterate whites and blacks to have a relatively closer

439   economic experience than literates. This is quite similar to a skill-biased economy that rewards college education and penalizes high

440   school drop-outs discussed in the 1980's by Juhn, Murphy and Pierce (1991) but with a caveat: the nineteenth century skill bias

441   was racially asymmetrical in favor of whites.

442

443   The relatively closer economic experience of free black and white illiterates was observed when analyzing the proportion of free

444   black real estate holders relative to white real estate holders. The ratio of literate free black real estate holders (per hundred literate

445   free blacks) to literate white real estate holders (per hundred literate whites) was approximately 1:3 (0.20 : 0.54) in 1850 and

446   2:5 (0.25 : 0.57) in 1860. Among illiterates, the ratio rose to approximately 1:2 (0.18 : 0.38) in 1850 and 6:10 (0.23 :

447   0.39) in 1860.

448

449   By 1870, the ratio of black to white average real estate wealth and property holders fell significantly with the inclusion of ex-

450   slaves in the sample but a distinct literacy advantage emerged. Using wealth means from Table 8a-2, 1870 literate blacks held

451   10.5 percent (206/1953) of the real estate wealth of literate whites while illiterate blacks held 5.3 percent (31/586) of the

452   real estate wealth of illiterate whites. Similarly, using the percentage of property holders in Table 8b-2, the ratio of literate black

453   real estate property holders (per hundred literate blacks) to literate white property holders (per hundred literate whites) was

454   approximately 1:4 (0.15 : 0.56). Among illiterates, the ratio was approximately 1:8 (0.05 : 0.41) in 1870. A relative racially

455   symmetrical literacy advantage was after emancipation even though literate blacks still possessed real estate wealth that was

456   significantly below literate whites.

457

458   Using the *comparative wealth ratio* for real estate wealth, we can ignore the absolute differences in black and white real estate

459   wealth and ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table 8c was less than one in

460   1850 (0.4) and 1860 (0.6), whites obtained higher return to literacy than free blacks. In 1870, the ratio in Table 8c-2 grew

461   to 2.0 which implies that blacks receive a higher return literacy in the presence wealth constraints than whites. This may suggest

462   that (i) higher skilled occupations that pay higher wages and (ii) higher yield investment opportunities that are normally available to

463   more educated individuals were not made available to blacks until their rights were more fully enforced, such as those provided by

464   federal government after 1865.

465

466   Similar results were obtained using the *comparative property ownership ratio* for real estate property in Table 8c-2. Since the

467   statistic was below one in 1850 (0.8) and 1860 (0.7), whites obtained higher return to literacy than free blacks. The statistic

468   grew to 2.0 in 1870, again, suggesting a dramatic growth in the literacy premium for blacks once individual rights were protected

469   under the force of law.

470

471

472   *The Mid 19th Century Schooling and Other Wealth of Blacks: A Comparison of Black Americans over Time*

473

474   Literate blacks also had nominal advantages but relative disadvantages in terms of other measures of wealth before and after

475   emancipation. Table 8a-2 shows that literate free blacks possessed $204 in nominal other wealth in 1860 prior to

476   emancipation. This was higher than the $121 possessed by illiterate free blacks. Thus, free blacks in free states possessed 160

477   percent of other forms of wealth owned by illiterate free blacks. However, literate free blacks were approximately equally as likely as

478   illiterate free blacks to hold other forms of property. Table 8b-2 shows that 54 percent of literate free blacks that possessed

479   positive amounts of other wealth in 1860. This was only slightly lower than the 56 percent of illiterate free blacks that possessed

480   positive amounts of other wealth in 1860.

481

482   The combinations of these results suggests illiterate free blacks per hundred are equally as likely to hold other forms property but

483   the literate free blacks use their enhanced knowledge to grow the value of their property larger than the value of illiterate property.

484   By 1870, the return to literacy grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate other forms of wealth for

485   all blacks—which includes ex-slaves who held little or no real estate property—grew to 2.4. This implies that literate ex-slaves

486   possessed two dollars for every dollar of wealth owned by an illiterate ex-slave. Similarly, Table 8c shows that the ratio of literate

487   black property holders (per hundred literate blacks) to illiterate property holders (per hundred illiterate blacks) was 1.4.

488

489   *The Mid 19th Century Schooling and Real Estate: A Comparison of White and Black Americans over Time*

490

491   The closer economic experiences of illiterate blacks and whites persisted when comparing other wealth of blacks to the other wealth

492   of whites before and after emancipation. Using wealth means in Table 8a-2, literate blacks had 20.0 percent (204/1019) of

493   literate white other wealth in 1860 and 12.5 percent (98/785) of literate white wealth in 1870. However, illiterate free blacks

494   had **37.3** percent **(121/324)** of illiterate white wealth in **1860** and **17.6** percent **(41/236)** of illiterate white wealth in

495   **1870**.

496

497   These results confirm a penalty for illiteracy was so severe that the other forms of wealth of illiterate whites was relatively closer to

498   wealth of illiterate blacks than blacks and whites who could read and write. This may also explain the closer experience of illiterate

499   property holders when analyzing the proportion of blacks holding other forms of property relative to whites holding other forms of

500   property. The ratio of literate blacks (per hundred literate blacks) to literate whites (per hundred literate whites) with other forms of

501   property was approximately **2:3 (0.54 : 0.81)** in **1860** and **1:3 (0.28 : 0.72)** and **1870**. Among illiterates the ratio rose to

502   approximately **3:4 (0.56 : 0.75)** in **1860** and **1:3 (0.20 : 0.55)** in **1870**.

503

504   Using the *comparative wealth ratio* for other forms of wealth, we can ignore the absolute differences in black and white wealth and

505   ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table **8c-2** was less than one in **1860**

506   **(0.5)** and **1870 (0.7)**, whites obtained higher returns to literacy than blacks. Similar results were obtained using the *comparative*

507   *property ownership ratio* for other forms of property. Since the ratio reported in Table **8c-2** was less than one in **1860 (0.9)**

508   and approximately equal to one in **1870 (1.1)**, whites obtained higher or equal returns to literacy than blacks before and after

509   emancipation.

510

511

512   *The Mid 19th Century Schooling and Total Wealth of Blacks: A Comparison of Black Americans over Time*

513

514   When summing up real estate and other forms of wealth, empirical results show that literate blacks were better off before and after

515   emancipation. Table 8a-2 shows that literate free blacks possessed $520 in nominal total wealth in 1860 prior to emancipation.

516   This was higher than the $273 possessed by illiterate free blacks. However, literate free blacks were equally likely as illiterate free

517   blacks to hold real estate or other forms of property. Table 8b-2 shows that 58 percent of literate free blacks that possessed

518   positive amounts of total wealth in 1860. This was only slightly lower than the 60 percent of illiterate free blacks that possessed

519   positive amounts of total wealth in 1860. The combination of these results suggests illiterate free blacks are about equally as likely

520   to hold property but the literate free blacks use their knowledge to grow the value of their property larger than illiterate property.

521   By 1870, the return to literacy grew dramatically. Table 8c-2 shows that the ratio of literate to illiterate real estate wealth for all

522   blacks—which includes ex-slaves who held little or no real estate property—grew to 4.3. This implies that literate ex-slaves

523   possessed four dollars for every dollar of total wealth owned by an illiterate ex-slave. Similarly, Table 8c-2 shows that the ratio of

524   literate black total property holders (per hundred literate blacks) to illiterate black total property holders (per hundred illiterate

525   blacks) was 1.5—for every literate free black real estate holder, there were two illiterate free black real estate holders.

526

527   *The Mid 19th Century Schooling and Total Wealth: A Comparison of White and Black Americans over Time*

528

529   The closer economic experiences of illiterate blacks and whites persisted even when comparing total wealth of blacks to the total

530   wealth of whites before, but reversed after emancipation. Using wealth means in Table 8a-2, literate blacks had 19.9 percent

531   (520/2616) of literate white total wealth while illiterate free blacks had 34.9 percent (273/782) of illiterate white wealth in

532   1860. By 1870, things had reversed such that literate free blacks had 11.1 percent (304/2737) of literate white wealth while

533   illiterate free blacks had 8.7 percent (72/832) of illiterate white wealth. These results may imply that the penalty for illiteracy was

534   so severe that the wealth of illiterate whites was relatively closer to wealth of illiterate blacks than blacks and whites who could read

535   and write before emancipation, but legal enforcement of rights improved the returns to literacy after emancipation.

536

537   Similarly, this illiteracy penalty was observed when analyzing the proportion of blacks holding property relative to whites. The ratio

538   of literate blacks (per hundred literate blacks) to literate whites (per hundred literate whites) with property was approximately 2:3

539   (0.58 : 0.84) the ratio rose to approximately 3:4 (0.60 : 0.77) among illiterates in 1860. By 1870, the literate ratio of 2:5

540   (0.32 : 0.77) exceeded the illiterate ratio of 1:3 (0.22 : 0.62) in 1870.

541

542   Using the *comparative wealth ratio* for other forms of wealth, we can ignore the absolute differences in black and white wealth and

543   ascertain the literacy advantages in the presence of wealth constraints. Since the ratio in Table 8c-2 was less than one in 1860

544   (0.6) and 1870 (1.3), whites obtained higher returns to literacy than free blacks before emancipation and literate ex-slave

545   obtained a higher return to literacy than ex-slaves. Again, the penalty for illiteracy was so severe that the wealth of illiterate whites

546   was relatively closer to wealth of illiterate blacks than blacks and whites who could read and write before emancipation, but legal

547   enforcement rights improved the returns to literacy after emancipation. Similar results were obtained using the *comparative property*

548   *ownership ratio* for other forms of property. Since the ratio reported in Table 8c-2 was less than one in 1860 (0.9) and greater

549   than one in 1870 (1.2), whites obtained higher returns to literacy than blacks before emancipation and reversed after

550   emancipation.

551

552   Once the equal enforcement of laws began to converge more rapidly, with the mass emancipation of Southern slaves, some blacks,

553   with schooling advantages, observed returns to schooling, in the black community, that were greater than the returns to schooling of

554   whites, with schooling advantages in the white community. This schooling premium advantage observed after the emancipation of

555   slaves was, in part, due to combining blacks with longer histories of emancipation, and with maximum free market experiences, and

556   the plurality of blacks with shorter histories of emancipation, and with minimum free market experiences. This uncompensated

557 change in social standing may be preliminary evidence of the sources of greater inequality and skewed media documentations of

558 social unrest observed among disenfranchised groups throughout history.

559

560 **Non-Linear Least Squares Multivariate Analysis of Logarithmic Total Wealth of Whites and Blacks in 1860 and 1870**

561

562 Table 13 shows logarithmic wealth is regressed against proxy variables for earnings and savings, proxy variables for initial wealth, and

563 household formation variables. Results, which had a 95 percent level of significance, are summarized below.

564

565 Savings and Schooling. *Savings*. Results show higher, statistically significant, diminishing increases in wealth savings with age among

566 whites, compared to blacks, in 1860 and 1870. *Schooling*. Similarly, results show higher returns to schooling, for whites relative

567 to blacks, in 1860 and 1870, holding all other variables constant; however, these results were not statistically significant for free

568 blacks in 1860.

569

570

Table 13. OLS Estimates Based on Log Real Total Wealth by Race, 1860–70

Race:	Whites				Blacks			
Year:	1860		1870		1860		1870	
OLS Regression with:	Slave State	Region	Slave State	Region	Slave State	Region	Slave State	Region
Constant	1.14	1.01	0.13	(0.18)	2.30	2.61	1.89	2.22
Literacy	1.02	1.02	1.14	1.12	0.25	0.21	0.34	0.35
Slave State	0.18		(0.97)		0.01		(1.38)	
Migrated to the Region	(0.50)	(0.66)	(0.34)	(0.50)	0.39	0.26	0.26	0.21
Rural	0.82	0.73	0.71	0.58	0.26	0.30	0.17	0.17
Age	0.14	0.14	0.18	0.18	0.09	0.09	0.04	0.04
Age Squared	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of Children	(0.03)	(0.04)	(0.02)	(0.03)	0.01	0.00	0.03	0.03
Number of Household Members	0.11	0.11	0.10	0.10	0.05	0.04	0.05	0.06
Married	0.24	0.19	0.02	0.02	0.48	0.47	0.33	0.34
Occupational Skill								
Unskilled	(2.86)	(2.79)	(2.71)	(2.66)	(2.93)	(2.86)	(1.64)	(1.64)
Skilled	(1.72)	(1.64)	(1.97)	(1.88)	(2.18)	(2.13)	(0.95)	(0.95)
White Collar	(0.05)	(0.01)	(0.11)	(0.08)	(0.91)	(0.97)	0.45	0.46
Student/Retired	(0.10)	(0.09)	0.32	0.32	(5.51)	(5.63)	(1.34)	(1.34)
Other Skill	(2.37)	(2.36)	(2.76)	(2.71)	(3.20)	(3.22)	(1.73)	(1.73)
Region								
MidAtlantic		0.05		0.14		(0.39)		(0.50)
Midwest		0.44		0.59		(0.06)		(0.25)
Southeast		0.29		(0.68)		(0.43)		(1.73)
South Central		0.68		(0.48)		0.65		(1.68)
West		(0.30)		0.09		(1.20)		(0.18)

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS; Dependent variable is natural log of total wealth adjusted for regional prices; Estimated parameters in bold are statistically significant with a 95 percent level of confidence. Farmers and Northeast are the excluded variables.

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786

THE APPENDIX

788

789   Several anecdotal studies on free blacks in the labor market show that the poor legal and social conditions made it difficult for free

790   blacks to be economically competitive. For instance, free blacks had to compete with slaves, whites and immigrants for employment.

791   "The preference of employers for white or slave labor forced free Negroes to underbid whites and work on the same
792   terms as slaves. By accepting lower wages and longer hours, many free Negroes found employment, but they aroused the
793   ire of white workingmen, who complained that free Negroes depressed their standard of living" (Berlin, p.229).
794   Immigration put free Negroes in the same position: "The influx of Irish and German workers...speeded the exclusion of
795   Negro freeman from many occupations. The competition free Negro workers faced from newly arrived immigrants in
796   Baltimore was a typical example of how white immigrants limited the free Negro's opportunities" (p.231).
797

798   They tended to earn wages and income that were much less than whites. One local study shows that: "Racial prejudice relegated

799   many free Negro workers to the meanest drudgery at the lowest pay...Even at these low levels of employment, free Negroes were

800   often paid less than whites. The standard wage for day laborers in the Norfolk shipyards (for example) was one dollar, but free

801   Negro workers rarely earned more than seventy-five cents a day" (Berlin, p.227).

802

803   But studying racial differences in factor market supply decisions and prices, as reflected in the literature on labor supply, wages and

804   income, presents only a subset of the factors that determine the accumulation and storage of assets over the lifetime of black and

805   white households. Therefore, this study will focus on differences in wealth between blacks and whites in the middle of the 19th

806   Century.

807

808

809   **Related Studies: A Review of the Literature on the Study of Free Blacks**

810

811   The source of antebellum free black–white wealth differences has not studied. Researchers (e.g., Bodenhorn (1999), Eggert

812   (1997), Hershberg (1997), Berlin (1974), Litwick (1961), Jackson (1939), and DuBois (1899)) and Philadelphia

813   abolitionist society studies in 1849 and 1838 attempted to address free black–white wealth differences often using a piece–mill

814   approach. Foremost, Leon Litwick (1961) and Ira Berlin (1979) provided a historical account for experience of northern and

815   southern free blacks, respectively. After surveying past research efforts, compiling county records and compiling census manuscripts,

816   Berlin found that free blacks in several states possessed more property over time. But these results are obscured by the aggregate

817   measures of wealth. For instance, he found that the aggregate wealth of free blacks living in fifteen counties in Georgia nearly

818   doubled between 1850 and 1860. But we do not know why their wealth increased because correlations with explanatory

819   variables were not calculated.

820

821   Luther Jackson (1939) also analyzed the property and real estate wealth of free blacks in the South. He used tax books, deeds,

822   orders, legislative petitions, agricultural manuscripts and census manuscripts from Virginia to show that the amount of property held

823   by free blacks in 1830 tripled by 1860. Even though Jackson provided a brief statistical analysis, the inference of his study is

824   limited to Virginia and he did not employ methods to explain what drove his observations.

825

826   Bodenhorn (1999a) used 1860 US census data to analyze southern wealth differences among darker and lighter free blacks.

827   Based on censored quantile regression results using data from Maryland, Virginia, North Carolina, Kentucky and Louisiana, mulattos

828   had wealth advantage to darker free blacks. Similarly, Bodenhorn (1999b) employs data stature of darker and lighter free blacks.

829   He also found that mulattos had an advantage to darker free blacks when analyzing stature data from Virginia. While Bodenhorn did

830   employed modern statistical analyses, inference from this study is limited to several states.

831

832   Some research has also been conducted on free black wealth in localities within Pennsylvania. Gerald Eggert (1997) linked US Census

833   records of blacks in Harrisburg, Pennsylvania from 1850-60 to estimate property values of free blacks. He found stagnant wealth

834   among a large percentage of the population but growth among those who did not migrate. However, his study did not compare results

835   to migrants and was limited to one locality. Theodore Hershberg (1997) employed abolition society data on the socioeconomic

836   conditions of free blacks in Philadelphia to show that real and personal wealth fell ten percent between 1838 and 1847.

837

838   Similarly, W. E. B. Dubois (1899) used these records and tax receipts to show that free blacks in Philadelphia often held less

839   property than whites. However, Hershberg and Dubois do not use the analytical tools needed to fully explain their results. Their

840   studies lack a full description of the data collection procedures in their research. To analyze the link between these social conditions

841   and economic outcomes of free blacks, I employ wealth and cross-sectional variables from the 1850, 1860 and 1870

842   Integrated Public Use Microdata Samples (IPUMS).

843   **Descriptive Statistics: An Analysis of the IPUMS Data Employed for the Study of the Economic Condition of Free**

844   **Blacks in United States of America, Compared to Ex-slaves and White Americans**

845
846
847   This study uses data from the Integrated Public Use Microdata Sample (IPUMS). IPUMS data are based on national representative

848   samples and supplemental over-samples of minorities from the population schedules of the US census manuscripts. The US

849   conducted its first census in 1790 and its first modern census in 1850. By 1850, the census had improved such that we can

850   now investigate the past with new insights. Modern census data is a rich set of cross-sectional, individual-level data on American

851   families and individuals.

852   Magnuson (1995a) and Steckel (1991) recommend that researchers pay careful attention to enumeration the
853   procedures before investigating this data. Magnuson reports that the U.S. Census is not a "pure reflection of general
854   societal trends"(p. 11). The census is composed of questions, which have and have not persisted over time. Between
855   1790 and 1840, the unit of enumeration was the household, based on given set of characteristics, i.e. Colored-Male-
856   Over Age 16. The 1850 U.S. Census was considered the first modern Census when the unit was changed to the
857   individual. Magnuson also noted that a proposed slave schedule would have collected extensive information on the
858   ancestors of modern-day African Americas. In 1840, Congress formed the Census Board that unsuccessfully
859   recommended a slave schedule for the 1850 U.S. Census--which would have included the names of slaves, birthplace
860   of slaves and number of children (Magnuson 1995a, p.19).
861
862   Steckel reminds us that the original purpose of the US census was for taxa tion and US House of Representatives
863   appropriations. However, a "growing desire for statistical information, curiosity about society, and heightened interest in
864   international and regional comparisons led to expanded collection by the federal census" (Steckel 1991, pp.582-83).
865   Steckel suggested that the likelihood of error increases as early census data is more disaggregated. He noted that under-
866   enumeration, over-enumeration and misreporting are errors that affect the quality of census data and led to the creation
867   of the Census Bureau. Some of these errors may be attributed to the poor training of early enumerators and lower quality
868   of early census administration. He found that larger households, lower-educated persons and persons with poor English-
869   language skills tended to be omitted from the census. Steckel (1991) provided several examples of underenumeration in
870   census data collected on blacks. He recommended using census comparisons, census matching, and consistency checks to
871   evaluate errors and improve the quality of samples from the early census.
872

873   This study analyzes US census samples from the 1850-70. These census manuscripts contain responses to important

874   socioeconomic inquiries including age, sex, color, marriage status, literacy, whether the individual attended school during the year,

875   occupation, state or country of birth, value of real estate, and value of personal estate (1860 and 1870 only).

876　Real estate value was enumerated based on guidelines specified in the Circular to Marshals. It specified that "under
877　heading **8** insert the value of real estate owned by each individual enumerated. You are to obtain the value of real estate
878　by inquiry of each individual who was supposed to own real estate, be the same located where it may, and insert the
879　amount in dollars. No abatement of the value is to be made on account of any lien or encumbrance thereon in the nature
880　of debt" (Magnuson **1995**b, p**347**) Personal estate value was also enumerated based on guidelines that specified
881　"Personal estate is to be inclusive of all bonds, stocks, mortgages, notes, live stock, plate, jewels, or furniture, but exclusive
882　of wearing apparel" (p.**349**)
883

884　Economists have conducted an extensive amount of research based on national samples from the early US census manuscripts (see

885　e.g. Ferrie **1999**, **1994**; Steckel **1990**; Becker and Tomes **1986** and Soltow **1975**, **1972**). The sample studied in this paper

886　was restricted to heads of households. Investigating the wealth from a random sample of household heads is more productive than

887　investigating a random sample of individuals. Wealth is often used to purchase durable goods and durables are more likely to benefit

888　the entire household rather than one individual in a household. Furthermore, census enumerators tended to sum up the wealth of a

889　household and report it under the head of household. The final sample includes a **1-in-100** random sample from the **1850-70**

890　censes and supplemental samples of **1-in-50** blacks in **1860** and **1870**. The racial breakdown of the pooled sample is **21,416**

891　blacks and **154,569** whites.

892　　Prior to **1865**, blacks were not only stratified by skin color--black and mulatto--but they also functioned based on
893　　heterogeneous legal rights. Blacks were either bounded in slavery or free, contingent on appropriate documentation. The
894　　**1850** and **1860** IPUMS samples only include free blacks. As reported earlier, no detailed individual-level data is
895　　available on slaves. Thus, averages of wealth and property holding in the descriptive statistics were weighted based on (*i*)
896　　the size of the free black population relative to slave population in **1850** and **1860** and (*ii*) the assumption that slaves
897　　had no personal and real estate. Blacks were **15.7** percent of the US population in **1850** and **14.2** percent of the
898　　population in **1860** (Cramer **1997**). But free blacks represented **11.9** percent and **11.0** percent of the black
899　　population, respectively. The unweighted averages in **1850** and **1860** represent the experience of (*i*) the average free
900　　black and (*ii*) the average black if slaves were freed earlier.
901
902　　The decade before the Civil War was a ripe environment for economic prosperity. Thomas Weiss (**1992**) found that
903　　Gross Domestic Product (GDP) grew by **1.96** percent between **1850** and **1860**--higher than any other decade in the
904　　pre-war era. He suggested that although perishable output and shelter were the primary components of the gain, residual
905　　output also increased significantly. The residual was "the portion of output beyond apparent basic necessities...this was the
906　　output needed for industrialization, and of course provided as well the discretionary items that are the fruits of economic
907　　progress. In this light, Americans were advancing in style" (Gallman, p.**30**).
908

909

910

Macroeconomic Factors Impacting the Experience of Free Blacks in the United States of America

912

913 The decade immediately before the Civil War was a ripe environment for economic prosperity among free blacks.

914   "The industrial revolution in the United States was well underway by the 1850's but the end points of the time period
915   were not marked by unusual prosperity or depression. Gold discoveries and growing agricultural exports to Europe
916   contributed to economic growth from the late 1840's to the middle of the decade. The upswinght was halted by the
917   Panic of 1857, a financial convolution from which recovery was substantially complete by 1860" (Steckel 1990,
918   p.374).

919

920 After making state-level adjustments to agricultural labor force, Weiss (1992) found the growth of Gross Domestic Product (GDP)

921 was higher in the decade before the Civil War than any other decade in the period. Table 7b shows that perishable output and

922 shelter were the primary components of the gain. But the residual increased significantly. The residual was "the portion output

923 beyond apparent basic necessities...this was the output needed for industrialization, and of course provided as well the discretionary

924 items that are the fruits of economic progress. In this light, Americans were advancing in style" (Galman, p.30).

925
926 **Table 7a. Average Annualized Rates of Growth of Per Capita Gross Domestic Product and Components (1840 Prices)**
927

Decade	Growth in GDP	Perishable Output	Non-Perishable Output			
			Shelter	Home Manufacturing	Farm Improvements	Residual
1800-10	0.52	0.24	0.53	-0.03	1.80	1.16
1810-20	0.27	0.00	0.83	-0.01	-0.63	0.85
1820-30	0.72	0.23	2.16	-0.16	-1.01	1.65
1830-40	1.15	0.22	2.20	-0.46	-0.70	2.74
1840-50	0.93	0.44	-0.75	0.42	0.81	2.02
1850-60	1.96	1.58	0.96	-0.41	-2.12	3.10

936
937   **Source:** Information collected and compiled by James Curtis Jr (2002) from Gallman (p. 31)
938

939

The Descriptive Statistics of the IPUMS Data Employed to Study Free Blacks in the United States of America

941   Tables **7**b-**1**, **7**c-**2** and **7**d-**3** describe the means of the variables in the IPUMS sample:

Table 7b-1. The Sample Means of the IPUMS Data, 1850 through 1870

Race:	Black					White			Overall		
Year:	1850		1860		1870	1850	1860	1870	1850	1860	1870
	Free	All	Free	All	All						
Wealth Variables											
Personal Estate			208	(23)	53		1,404	1,112		1,363	880
Real Estate	171	(20)	277	(30)	71	1,336	1,975	2,436	1,311	1,916	1,919
Total Estate			484	(53)	124		3,379	3,548		3,280	2,799
Price-Adjusted Personal Estate			215	(24)	34		1,506	741		1,462	586
Price-Adjusted Real Estate	189	(22)	286	(31)	47	1,486	2,050	1,643	1,458	1,990	1,294
Price-Adjusted Total Estate			501	(55)	81		3,556	2,384		3,452	1,880
Personal Estate > 0			0.551	(0.061)	0.211		0.811	0.703		0.801	0.595
Real Estate > 0	0.194	(0.023)	0.245	(0.027)	0.067	0.531	0.557	0.546	0.524	0.546	0.441
Total Estate > 0			0.585	(0.064)	0.235		0.838	0.758		0.829	0.643
Farm ownership	0.114	(0.014)	0.119	(0.013)	0.194	0.506	0.445	0.410	0.498	0.434	0.363
Wealth Ratio (to Whites)											
Personal Estate			0.148	(0.016)	0.048					0.97	0.79
Real Estate	0.128	(0.015)	0.140	(0.015)	0.029				0.98	0.97	0.79
Total Estate			0.143	(0.016)	0.035					0.97	0.79
Price-Adjusted Personal Estate			0.143	(0.016)	0.046					0.97	0.79
Price-Adjusted Real Estate	0.127	(0.015)	0.139	(0.015)	0.029				0.98	0.97	0.79
Price-Adjusted Total Estate			0.141	(0.015)	0.034					0.97	0.79
Personal Estate > 0			0.679	(0.075)	0.300					0.99	0.85
Real Estate > 0	0.366	(0.043)	0.440	(0.048)	0.122				0.99	0.98	0.81
Total Estate > 0			0.698	(0.077)	0.310					0.99	0.85
Farm ownership	0.225	(0.027)	0.267	(0.029)	0.473				0.98	0.98	0.88
Race Variables											
Black	1.000		1.000		1.000	-	-	-	0.022	0.032	0.217
Black	0.677		0.635		0.881	-	-	-	0.015	0.020	0.191
Mulatto	0.323		0.365		0.119	-	-	-	0.007	0.012	0.026
White	-		-		-	1.000	1.000	1.000	0.978	0.966	0.781
Other	-		-		-	-	-	-	-	0.002	0.002
Chinese	-		-		-	-	-	-	-	0.001	0.001
Indian	-		-		-	-	-	-	-	0.001	0.001
Schooling Variables											
Literacy	0.527		0.583		0.146	0.903	0.913	0.885	0.895	0.902	0.724
Occupation Variables											
Labor Force Participation	0.656		0.823		0.890	0.873	0.910	0.887	0.868	0.907	0.888
Unskilled	0.371		0.509		0.705	0.100	0.146	0.230	0.106	0.158	0.333
Skilled	0.166		0.191		0.071	0.218	0.233	0.227	0.217	0.232	0.193
White-Collar	0.018		0.019		0.009	0.085	0.107	0.119	0.083	0.104	0.095
Farmer	0.107		0.112		0.187	0.475	0.431	0.395	0.467	0.420	0.349
Student or Retired	-		0.001		0.000	0.000	0.002	0.009	0.000	0.002	0.007
Other	0.338		0.167		0.027	0.122	0.082	0.020	0.127	0.085	0.022

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

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Table 7b-2. The Sample Means of the IPUMS Data, 1850 through 1870

Race:	Free Blacks			Whites			Overall		
Year:	1850	1860	1870	1850	1860	1870	1850	1860	1870
Demographic Variables									
Male	0.750	0.727	0.820	0.910	0.908	0.893	0.907	0.902	0.877
Number of persons in the household	4.581	4.684	4.705	5.532	5.267	5.166	5.511	5.247	5.064
Number of families in the household	1.295	1.263	1.194	1.382	1.354	1.371	1.380	1.352	1.335
Married	0.639	0.613	0.716	0.830	0.822	0.818	0.826	0.814	0.794
Number of children > 0	0.688	0.715	0.746	0.818	0.810	0.804	0.815	0.806	0.790
Number of children	2.023	2.117	2.233	2.819	2.619	2.504	2.802	2.600	2.442
Number of children under 5 years old	0.589	0.553	0.682	0.752	0.750	0.662	0.748	0.742	0.665
Youngest child	4.916	5.675	4.413	5.239	5.173	5.750	5.232	5.187	5.452
Oldest child	9.366	10.521	9.462	11.372	10.852	11.317	11.328	10.834	10.899
Age	42.450	42.890	39.839	41.525	41.384	42.806	41.546	41.424	42.146
< 20 years old	0.009	0.007	0.018	0.003	0.004	0.004	0.003	0.004	0.007
20-29 years old	0.182	0.176	0.258	0.197	0.195	0.172	0.197	0.194	0.191
30-39 years old	0.274	0.254	0.248	0.301	0.304	0.276	0.300	0.302	0.270
40-49 years old	0.225	0.244	0.214	0.231	0.233	0.243	0.231	0.233	0.236
50-59 years old	0.171	0.170	0.146	0.149	0.151	0.172	0.149	0.151	0.166
60-69 years old	0.085	0.093	0.080	0.082	0.080	0.093	0.082	0.080	0.090
70-79 years old	0.035	0.035	0.026	0.029	0.027	0.033	0.029	0.028	0.032
80-89 years old	0.009	0.018	0.007	0.007	0.006	0.006	0.007	0.006	0.006
90+ years old	0.009	0.004	0.003	0.001	0.001	0.000	0.001	0.001	0.001
Region Variables									
Rural	0.621	0.615	0.863	0.802	0.753	0.718	0.798	0.749	0.749
Metropolitan area	0.224	0.258	0.066	0.122	0.172	0.196	0.125	0.175	0.168
Slave state	0.528	0.525	0.908	0.286	0.255	0.249	0.291	0.263	0.391
Northeast	0.054	0.050	0.006	0.145	0.121	0.106	0.143	0.118	0.084
Mid-Atlantic	0.304	0.253	0.033	0.293	0.276	0.252	0.293	0.275	0.204
Midwest	0.113	0.153	0.052	0.263	0.320	0.361	0.260	0.314	0.294
Southeast	0.493	0.474	0.747	0.256	0.215	0.208	0.261	0.223	0.324
Southwest	0.035	0.050	0.161	0.031	0.040	0.041	0.031	0.040	0.067
West	0.001	0.019	0.002	0.012	0.028	0.032	0.012	0.030	0.027
Moved to Northeast	0.023	0.023	0.003	0.023	0.029	0.031	0.023	0.029	0.025
Moved to Mid-Atlantic	0.097	0.079	0.012	0.106	0.117	0.109	0.106	0.116	0.088
Moved to Midwest	0.102	0.118	0.037	0.210	0.244	0.251	0.208	0.239	0.204
Moved to Southwest	0.010	0.013	0.102	0.026	0.033	0.033	0.026	0.033	0.048
Moved to Southeast	0.006	0.006	0.006	0.025	0.026	0.027	0.025	0.025	0.023
Moved to West	0.001	0.016	0.002	0.009	0.025	0.029	0.009	0.025	0.024
Stayed in Northeast	0.031	0.028	0.003	0.123	0.092	0.075	0.121	0.089	0.059
Stayed in Mid-Atlantic	0.207	0.174	0.021	0.187	0.158	0.144	0.188	0.158	0.117
Stayed in Midwest	0.010	0.035	0.015	0.053	0.076	0.110	0.052	0.075	0.090
Stayed in Southwest	0.025	0.038	0.058	0.005	0.006	0.008	0.005	0.007	0.019
Stayed in Southeast	0.486	0.469	0.741	0.230	0.190	0.180	0.236	0.198	0.302
Stayed in West	-	0.002	0.000	0.004	0.004	0.003	0.004	0.005	0.003

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

Race:	Free Blacks			Whites			Overall		
Year:	1850	1860	1870	1850	1860	1870	1850	1860	1870
Region Variables (continued)									
Migrated to a different state	0.340	0.343	0.359	0.545	0.594	0.597	0.540	0.586	0.546
Migrated to a different region	0.241	0.255	0.162	0.398	0.474	0.479	0.395	0.467	0.411
Born in Northeast	0.035	0.038	0.004	0.174	0.134	0.108	0.171	0.130	0.085
Born in Mid-Atlantic	0.225	0.197	0.024	0.266	0.242	0.223	0.265	0.240	0.179
Birn in Midwest	0.012	0.037	0.020	0.058	0.084	0.120	0.057	0.083	0.099
Born in Southeast	0.682	0.669	0.886	0.325	0.274	0.254	0.333	0.286	0.391
Born in Southwest	0.026	0.041	0.063	0.005	0.007	0.009	0.006	0.008	0.021
Born in West	-	0.002	0.000	0.004	0.004	0.003	0.004	0.005	0.003
Born in other US Territory	0.001	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000
Born in foreign country	0.019	0.015	0.002	0.168	0.256	0.282	0.165	0.248	0.222
Price Index									
Regional Price Index	88.45	93.53	158.32	90.15	97.46	149.86	90.11	97.34	151.69
Number of Observations	773	1,703	18,940	34,671	51,776	68,122	35,444	53,594	87,227

Source: Information collected, calculated and compiled by James Curtis Jr (2002); IPUMS

Five years after emancipation, blacks made gains in the total wealth. Total wealth includes the value of personal and other wealth.

The value of southern total estate was inflated by the value of slaves. Slave owners included the value of slaves in their personal

estate.

On average, the value of black total wealth, adjusted by regional prices, was $124 in 1870 while whites held $3,548 in total

estate. Total estate wealth grew by 47 percent between 1860 and 1870 among blacks while white total estate wealth fell 33

percent between 1860 and 1870. See the empirical results section for a complete discussion of black-white wealth differences.

1079   Black-white differences in schooling and employment were also quite large in 1870. 14.6 percent of the black population was

1080   literate while 88.5 percent of the white population could read and write. While 89 percent of both, blacks and whites, were

1081   employed, occupation concentrations were different. In 1870, 70.5 percent of blacks had unskilled jobs, compared to 23 percent

1082   of whites. In contrast, 18.8 percent of blacks were either white-collar workers or farmers, compared to 53.8 percent of whites.

1083   White occupational concentrations changed quite dramatically between 1850 and 1870. The portion of white unskilled
1084   workers grew 46.2 percent between 1850 and 1860 and 57.3 percent between 1860 and 1870 while the portion
1085   of white-collar worker grew less dramatically during this period. The portion of white-collar workers grew 25.8 percent
1086   between 1850 and 1860 and 12.1 percent between 1860 and 1870. Simultaneously, the portion of white farmers
1087   fell 9.3 percent between 1850 and 1860 and 8.4 percent between 1860 and 1870. Naturally, this coincided with a
1088   continual decline in farm ownership among whites over the twenty-year period.
1089

1090   Blacks and whites were also different demographically in 1870. 18 percent of black households had female heads while only10.7

1091   percent of white households had female heads. Similarly, only 71.6 percent of black household heads were married while 81.8

1092   percent of white household heads were married. White households also had more residents, including children. Furthermore, the

1093   average age of the white household head, youngest child and oldest child is older than the average ages of the black household

1094   head, youngest child and oldest child, respectively. White demographics gradually changed over the twenty-year period. The number

1095   of persons in a household, number households with children and number of children all fell. Simultaneously, the number of white

1096   male and white married household heads fell. Among free blacks, the proportion that was male and married also fell between

1097   1850 and 1860.

1098

1099   Regional differences were also quite large in 1870. The only dramatic regional differences among whites prior to 1870 were

1100   changes in the western and foreign-born population. 12 percent of whites lived in west in 1850. This portion of the population

1101   grew by 129 percent between 1850 and 1860 and 12 percent between 1860 and 1870. Additionally, Joseph Ferrie reports

1102   that the portion of white foreign-born population grew by 52 percent between 1850 and 1860 and 10 percent between

1103   1860 and 1870 (1999). 1850 and 1860 free blacks were regionally different than whites and all blacks in 1870. Only

1104   one-in-two free blacks lived in slave states, with the remaining plurality living in the Mid-Atlantic. More than one-in-three free

1105 blacks lived in urban areas between 1850 and 1860—significantly larger than whites and all blacks in 1870. One-in-three free

1106 blacks were also born outside of the southeast region in 1850 and 1860. Furthermore, 34 percent of free blacks migrated to a

1107 different state in 1850 and 1860 and over seventy percent of these migrants migrated to a new region. Only one-in-four whites

1108 lived in former slave states while nine out of ten blacks lived in former slave states. As a result blacks were more likely to live in

1109 rural areas than blacks (86.3 percent of blacks to 71.8 percent of whites). This occurred because whites were more regionally

1110 mobile than blacks. 35.9 percent of blacks migrated from their birth state and 45 percent these migrants reside in a new region.

1111 However, 59.7 percent of whites migrated from their birth state and 80 percent of these migrants changed regions. The key

1112 regional difference may be that only 11.4 percent of blacks were born outside the Southeast while the largest birth segment among

1113 whites was foreign-born (28.2 percent). Joseph Ferrie conducts a thorough analysis of the immigrant experience during this

1114 period (1999).

1115

1116 Five years after emancipation, blacks, on average, held $71 in real estate wealth while whites held $2,437. These estimates are

1117 consistent with the estimates of Soltow (1972; 1975). Although Soltow (1972) only collected a sample of 393 non-whites in

1118 1870, he found their average wealth was $73, compared to $2,661 among whites. Soltow (1975) found similar differences in

1119 free black and white wealth using a sample of 151 blacks. He conducted one of the first in-depth studies of mid-nineteenth

1120 century wealth accumulation patterns using the census population schedules. Note that these schedules were originally are stored on

1121 microfilms. He spun the microfilm half-turns to collect random, cross-sectional samples from 1850-1870. He found that

1122 average black wealth in 1870 was $74 while average white wealth in $2,691.

1123

1124 Given that blacks held only 2.9 percent of the average white real estate wealth in 1870--up from the 1.5 percent in 1850

1125 and 1860, the fact that the growth of real estate wealth favored blacks over this time period may not be surprising. Among blacks,

1126 average real estate wealth, adjusted by regional prices, grew by 28 percent between 1850 and 1860 and 33 percent between

1127 1860 and 1870. Among whites, price adjusted real estate wealth also grew by 28 percent between 1850 and 1860 but fell

1128   by 25 percent between 1860 and 1870. This white wealth recession was primarily due to the losses incurred by the southern

1129   whites after the Civil War.

1130

1131   Property-holding patterns were similar to real estate wealth patterns. Only 6.7 percent of blacks in 1870 held property (or a

1132   positive value of real estate wealth) while 54.6 percent of whites held property in 1870. The growth in black property-holders

1133   outpaced the growth of black real estate wealth. Blacks property holders grew 17 percent between 1850 and 1860 and 148

1134   percent between 1860 and 1870. Among whites, property holders grew by five percent between 1850 and 1860 and fell two

1135   percent between 1860 and 1870. Overall, the ratio of black to white property holders was 12.2 percent in 1870, up from 4.3

1136   percent in 1850 and 4.8 percent in 1860.

1137

1138   Blacks made similar gains in the total estate. Total estate includes the value of personal estate and real estate. The value of southern

1139   total estate was inflated by the value of slaves. Slave owners included the value of slaves in their personal estate. On average, the

1140   value of black total estate wealth, adjusted by regional prices, was $124 in 1870 while whites held $3,548 in total estate. Total

1141   estate wealth grew by 47 percent between 1860 and 1870 among blacks while white total estate wealth fell 33 percent

1142   between 1860 and 1870. Black total estate holders (or blacks possessing a positive value of total estate wealth) grew by 265

1143   percent to 23.5 percent in 1870 while white total estate holders fell by 9.6 percent to 75.8 percent in 1870. Overall, the ratio

1144   of black to white total estate wealth was 3.5 percent while the ratio of black to white total estate holders was 31 percent in 1870.

1145   These descriptive statistics document the general improvements in the condition of the average black relative to the average white

1146   after the abolition of slavery.

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