

A Time (Not) Apart: A Lesson in Economic History from Cotton Picking Books

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Abstract

I use the individual-level records from my own family in rural Mississippi to estimate the agricultural productivity of African Americans in manual cotton picking nearly a century after Emancipation, 1952-1965. On average, the Logan children were more than 95% as productive as enslaved children from the same region in the late antebellum era, 1850-1860. Gender differences in productivity were smaller than among enslaved children and disappeared by late pubescence. Additional qualitative evidence answers questions about agricultural productivity that cannot be derived from the quantitative data. For example, the method of cotton picking was not the gang-labor system described by some economic historians, but an independent process. The qualitative evidence also shows that economic roles were deeply intertwined with racial identity.

JEL classifications: B4, I1, J1, N3, N9, Z1 Keywords: Race, Economic History, Methodology

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"I am not ashamed of my grandparents for having been slaves. I am ashamed for having at one time been ashamed."

- Ralph W. Ellison, *Invisible Man*, 1952

1 Introduction

Economists analyze race as a category as opposed to a social or historical experience. There are many justifications for this that are well articulated in the economics literature. Categories are relatively easy to define, theorize, and manipulate in empirical work. Experiences are not. There is also the problem of drawing conclusions from experiences. While the plural of anecdote is not evidence, personal experiences are not anecdotes, they are *facts*. Sometimes uncomfortable or painful, but facts nonetheless. African American agents in economic history lack these experiences and are curiously raceless. They bring no unique cultural, behavioral, sociological, or historical factors into their decision making process.¹ This certainly cannot be true— if it were the need to analyze race would be moot.² Incorporating such experiences into the traditional microeconomic toolkit, however, is complicated. Perhaps economists shy away from nuanced analysis of race because our disciplinary history of dealing with the concept is rather embarrassing (Hoffman 1896). But we must continue to try— the contextual approach is economic history's comparative advantage (Solow 1985). African American economic history must advance a more nuanced appreciation of the experience of race in American history to fully describe and explain America's complex racial history.

This point goes to the heart of the epistemology of African American economic history. We cannot, and should not, practice a color-blind economic history. African American economic history must include an appreciation of the distinct and persistent nature of the oral tradition, folklore, and social norms of African American people— the fullness of the African American experience (Levine 1977). When we do not, we are not doing such history correctly. At a minimum, the failure to incorporate

¹I have been guilty of such work— see Logan (2009). Tobin (1951) is an early counter-example from mid-century macroeconomics which incorporated a nuanced approach to the savings intentions of African American households.

²More recently, Dunn and Logan (2014) have found persistent differences in the rate of intransitive preferences by race. If a basic assumption of the rational choice model is violated more or less for certain racial groups, the applicability of the rational preference relation may be inappropriate in both historical and contemporary contexts.

such experiences implicitly assumes that they are unimportant, which leads us down a path that ends in an economics of race that is fundamentally schizophrenic. Unfortunately, quantitative data is not a solution to this problem. The high empirical standards of contemporary economic history could be inappropriately applied to the subject of race. The implicit claims of the objectivity of quantitative data do not always hold up against the racial stain of American history.³ The reliance on quantitative data also limits the questions we ask about the relationship between America's racial and economic history.

I believe that qualitative empirical evidence is the missing element of African American economic history. Rather than supplementary, qualitative evidence should be a primary source of empirical evidence in African American economic history. (This may be true for all economic history, but my focus here is African American economic history.) Doing so may resolve several persistent problems in the field— the omissions and incompleteness of quantitative data, the lack of accuracy in the data we do have, and the nagging question of agency in African American history generally. While standard in other social sciences, qualitative data has not been exploited sufficiently in the economic history of race in the United States (Banks-Wallace 2002, Delgado 1989, Farber and Sherry 1993).

This methodological contribution to economic history, combining qualitative and quantitative evidence in a way that gives each equal weight, brings us closer to the original goals of economic history. Economic history is, after all, a *humanistic* endeavor (Fogel 1975). Many historical questions are not about treatment effects, tests of theory, or parameter estimates. They are questions about the daily lives of individuals and how those lives changed in response to economic changes, how they created new economic environments, and how those economic environments left a lasting impact. The road forward for economic history is not only to be found in replicating the methodologies favored in contemporary scholarship, but also in producing a full range of analysis of empirical evidence to answer a broader set of questions that are not causal or even quantitative in nature.⁴ Historical questions do not view economic history as a laboratory to test economic theory, but rather ask questions about what actually was so that we can understand what is.

³See DuBois' (1897) review of Hoffman (1896) or Ellison's (1964) review of Myrdal (1944) as examples.

⁴I stress that this approach is quite distinct from the use of analytic narratives advanced in Bates et al. (1998), which uses formal models of case studies as the key methodological innovation.

I could make this point the entire focus and offer a long justification of the use of qualitative evidence and the limitations of relying on traditional sources in African American history.⁵ Fate conspired, however, to present me with an opportunity to employ extensive qualitative evidence to investigate one issue in detail— the productivity of black sharecroppers after World War II. This investigation is a detailed one based on the experience of one family, my own. Although the agricultural productivity of African Americans in the antebellum era is well-investigated, after Reconstruction we know much less about how productive African Americans were in the fields.

The cotton picking books retained by my deceased paternal grandparents are quite detailed and allow me to estimate the individual productivity of nine children who were involved in intensive manual cotton picking from 1952 to 1965. This rich quantitative data forms the basis for this study. In addition to estimating the overall productivity (pounds of cotton picked per person per day), I also use the records to investigate gender differences in agricultural productivity.

On average, children in the Logan family picked approximately 120 pounds of cotton per person per day in their late teen years. These estimates are quite similar to recent estimates of slave productivity produced by Olmstead and Rhode (2010), who calculate productivity using detailed plantation records from the late antebellum era from the same region. On average, the children in the Logan family were more than 95% as productive as their enslaved predecessors in the field. Gender differences in productivity were quite small within the Logan family, disappearing almost entirely by late pubescence. Given that the method of picking cotton was largely unchanged over time— both the enslaved and Logan children picked cotton by hand in a process that underwent very little technological innovation— the estimates imply that the extraordinary productivity of slaves persisted long after Emancipation.

These findings spur a number of additional questions. Was the productivity due to how cotton was picked by this family? How did they view this high level of productivity? Answers to these important

⁵Such an argument could be structured by beginning with Murray (1970), who argued that the unique experience of African Americans created a culture so complex that traditional social science could not comprehend, much less describe, its full texture and nuance. I would then turn to, say, Blassingame (1972), who noted that the analysis of American slavery was largely devoid of any description of slave life and used alternative sources and psychological theory to provide an insight into black personality in bondage. I would continue with, say, Genovese (1974), who argued that the development of a distinct African American culture also greatly informs American culture. He, too, required sources outside of the traditional historical apparatus.

questions are not contained in the cotton picking books, but their answers are readily available. To better understand these estimates and how the pounds of cotton contained in the books were actually picked (and, more important, what it meant to those involved in the picking process), I use a new technique in economic history: qualitative interviews. The individual recollections of the portion of their lives spent in the fields is valuable empirical evidence which allows me to answer questions about how this productivity was achieved. The qualitative evidence allows me to paint a fuller, richer picture of the actual living standard that produced such remarkable productivity.

That richer, fuller picture reveals that the work behind the estimates came to define the way that the Logan children viewed racial relations, human capital, savings, investment, and nearly every aspect of their lives. We learn not only about the picking process itself, but that chopping cotton may have been the most physically taxing aspect of the work. Similarly, the sale of cotton seed during the picking season was an important source of revenue for the family, and yet this economic relationship with the landowner was outside of the formal sharecropping contract. We also learn that it is impossible to divorce the work from its social environment— an era in which Jim Crow, segregation, and other elements of overt racial oppression were a fact of life. Although none of the children has picked cotton in more than forty years, this experience continues to govern their daily lives and the way they interact with the world around them. Rather than being an item of the past, the work recorded in the cotton picking books continues to be a salient factor in their current economic decision-making.

2 Agricultural Productivity in the Literature

The relative productivity of male and female labor in agriculture is a perennial topic in economic and agricultural history. Since at least Boserup (1970), biological differences in men and women's capacity to perform agricultural labor has been linked to a number of patterns of development and technological change. Recent scholarship in economics has sought to exploit gender differences in productivity and their links to economic development around the globe (Alesina, Giuliano, and Nunn 2013). In general, the hypothesis is that geographic differences in crops that are more or less gender

equitable has a profound influence on the scope for technological change (Goldin and Sokoloff 1982, 1984).

In American economic history, the debate has centered around differences in agricultural productivity in the antebellum era (Whartenby 1977, Conrad and Meyer 1958, Parker 1979, Fogel and Engerman 1974, 1980, Fogel 2003, Field 1988, Wright 1978, Wright 2006). In particular, scholars have estimated gender differences in manual cotton picking. Unlike other agricultural tasks, cotton picking poses few inherent reasons to suspect gender differences- the actual picking of cotton does not require great physical strength, height, weight, or other physical traits that would biologically favor one sex over the other. Also, the record keeping on plantations in the antebellum era give us a wealth of data to precisely estimate gender differences in manual cotton picking (Parker 1979, Olmstead and Rhode 2010). Given the amount of scholarship surrounding this issue, it is somewhat surprising that a consensus has yet to be reached. Goldin and Sokoloff (1982, 1984) contended that the differences in gender productivity were causally related to the diffusion of manufacturing in the United States, but this claim has been contested by a number of scholars (Fogel 2003, Wright 2006). Olmstead and Rhode (2010) provide the newest evidence from individual-level estimates of productivity in the antebellum era and confirm that gender differences in cotton picking were quite small.

Part of the reason for remaining debate is that our estimates are confined to the antebellum era. Given that the labor in one part of the country (where the gender productivity differences were small) was not free tempers any conclusion one would draw about gender differences in productivity or the role of gender productivity in larger economic changes. We know, for example, that slave women were worked extremely hard during pregnancy, and gave birth to remarkably small children as a result (Steckel 2004). It is unlikely that free persons would organize their labor supply in a similar manner. Additionally, scholars still debate the use of the gang-labor system in cotton picking, another form of agricultural labor organization that was not seen outside of chattel bondage to a large extent (Ransom and Sutch 1977, Fogel and Engerman 1977, 1980, Wright 1978, Olmstead and Rhode 2010).

This project contributes to that literature by exploiting a new source of data to uncover individual estimates of agricultural productivity in manual cotton picking. Most importantly, the estimates come from the twentieth century, nearly a century after the end of chattel slavery in the United States. These

estimates are individual level daily cotton picking rates. Another advantage is that the estimates are derived for a single, large family observed over a number of years, and they inherently control for family and other contextual factors which could bias other estimates.

3 The Setting and Data Sources

3.1 The Setting

The Logans lived in the rural town of Coffeeville, Mississippi, a county seat of Yalobusha county. Yalobusha county sits in a fertile cotton growing region just east of the Mississippi Delta (see Figure 1). During the time period studied, the area experienced significant population decline. The population of the county was 15,191 in 1950, declining to 12,502 in 1960 and further to 11,915 in 1970, decennial declines of more than 15%. The Logans themselves were part of that exodus— while the matriarch and patriarch would remain in Coffeeville, each of their children would depart immediately after the end of their schooling in the segregated schools of Coffeeville.

I graduated that Friday, in May. I knowed I was gone. Wasn't nothing there in Coffeeville for me. I did what they had done and I was going to leave out. [My sister] told me I could live with her when I got there. She told me that at Christmas. So Ma baked me a caramel cake that Friday night and I took that with me on the train. You didn't buy nothing in advance then— you just went to the train station in Grenada and you got the train. I don't remember what it cost, but I got the money for the ticket from picking strawberries. I had been saving for that for a couple of years. It was about fifty or sixty dollars. That's what I left with.⁶

The Logan family sharecropped on the land owned by a prominent landowner in the county who was also the owner of the local cotton gin. The specific terms of the contractual relationship are unknown— none of the children were privy to the details of the arrangement. By all accounts, however, the contract was typical of other families in the area and other families who share cropped the land owned by this landowner.

It was sixty-forty land. That's what I know. Most folks there was working sixty-forty and we didn't have it no different. It was thirty dollars a month furnace money we got in

⁶In keeping with the aim to use qualitative techniques that describe individual experiences, these direct quotes are not corrected and are spelled phonetically to best reflect the spoken responses.

the winter time— and then that got deducted at the end of the season. So by the time the season was done you didn't have no money, really. We wasn't in debt to him, not that I recall, but you wasn't making no money when you settled. But Ma and Dad is the ones who handled all of that. From what I can say, we was just about like everybody else, far as I know. [He] wasn't better than anybody else— all of 'em was about the same.

3.2 Qualitative Data

Interviews were conducted with members of the family during the 2013 and 2014 calendar years.⁷ The process began with individual interviews with a standard list of questions that would be followed up with supplementary questions. By design, the primary questions did not focus on agricultural productivity, but on aspects of daily life.⁸ The supplementary questions would ask about specific aspects of experiences in cotton planting and harvesting. This technique of semi-structured interviews allowed for standardized questions but also allowed the opportunity to elicit specific information that would not be obtained from structured interviews that began with agricultural productivity as the focus.

Separate interviews were used to prevent "herd memory" that can occur when groups of individuals conform to an accepted version of events.⁹ Only matters on which there was broad consensus, and upon which at least three of the siblings recall the same specific facts from their own biographies, are used below.¹⁰ The result of this methodology is a conservative approach to qualitative evidence. Since confirmation was required, the qualitative evidence reflects shared experiences as opposed to individual recollections. This is consistent with the quantitative approach insofar as the aim is to describe the average productivity of the children. The interviews were designed to determine the

⁷These interviews constitute personal biographies of the family members as they are individual oral histories. The purpose of these interviews was to create a record of specific historical events that could provide context for the quantitative results. As such, the interviews are not generalizable beyond this family, do not constitute research, and therefore the interview subjects do not meet the definition of human subjects as defined by institutional policy.

⁸The first question in all interviews was "Tell me your earliest memory" and the second question was "What was your favorite food when you were a child?"

⁹In areas where there was disagreement, supplemental interviews were performed in which the responses in previous interviews were used as a prompt. This was done to discover the source of disagreement, to assess the veracity of the conflicting information, and to discover which responses pertained to actual experience as opposed to the contemporaneous telling of another's experience. These interviews were also semi-structured.

¹⁰Qualitative evidence is no panacea. While it is certainly the case that there may be political or other reasons motivating responses, the contemporary politics of the siblings are quite distinct. Similarly, the matters of fact would, by themselves, have no political motivation. For example, the exact method of cotton picking would not be motivated by a desire to paint one particular picture or another. On the other hand, recollections of the amount of cotton picked could be motivated by a desire to paint a particular picture of the past.

average experience of the children as they worked in the fields.¹¹

3.3 Cotton Picking Data

The quantitative data for cotton picking come from cotton picking books, an example of which is shown in Figure 2.¹² These books were regularly used to record the weights of individual cotton pickers. Most often, the books were used for daily picking where a worker might pick on land and be paid for the amount picked that day. The records used are fragmentary and cover a period from 1952 to 1965, although the family picked cotton under contract before and after this period.¹³ The procedure for weighting as recorded in the books was straightforward:

We had our acres that was just us, so we had to move to get that picked. When you got a sack full you went up and you weighed it. They had a man there who would weigh it and he wrote it down for you in the book. After he weighed it you put it in the trailer. The trailer held a few bales of cotton [a bale is around 500 pounds]. We could pick over a bale a day most times— but it would depend on how thick the cotton was because if it was thick you could pick a bale pretty quick. But if it was thin it took more time. But this was just us [the family] and that was like, our trailer, that’s where our cotton went. And after he had a bale on there he took it off and another trailer got there and you filled that one up and you just kept picking and weighing and filling up trailers.

I use the detailed, daily cotton picking estimates contained in cotton picking books to estimate productivity in manual cotton picking. The records recorded here are necessarily specific. This is common in historical analysis of agricultural productivity. For example, Karakacili (2004) uses manorial roll accounts to estimate productivity before the Black Death. The cotton picking books I use are the daily records of the pounds of cotton picked, per person. These daily weights were not recorded by family members themselves, but others in supervisory roles who, if anything, had

¹¹I take no formal position on which qualitative method should be used in other work. As with quantitative analysis, the most appropriate method is governed by the available resources. In general, however, it is not likely that economic historians should use qualitative techniques which apply grounded theory (Barney and Strauss 1967) as that method requires the abandonment of the theoretical priors. The method employed here is closest to comparative case analysis, where each child’s experience is treated as an individual case. There are distinct advantages of this method over others when the sample size is small (Collier 1993, Baxter and Jack 2008), although disadvantages relative to experimental and statistical analysis should be noted. It could well be the case that economic history offers the opportunity for significant innovation in methods.

¹²The data used here are proprietary.

¹³Not all of the picking recorded here was done on land specified in the sharecropping relationship. It was common to pick daily for others for a daily payment as a means of supplemental income.

incentives to understate the weights recorded, although the fact that the weighing was public would temper any inclination to inaccurately record the volume of cotton picked.

4 The Agricultural Productivity of a Sharecropping Family

The cotton picking data is a quasi-panel dataset, containing observations on individual cotton pickers at several points in time. I estimate average productivity as a function of age using individual fixed effects. The methodology is similar to Olmstead and Rhode (2010), with the allowance that the dates of picking are not always observed. The basic regression is of the cotton picked for that individual (the average of pounds per day) regressed on age, year of observation, and an individual fixed effect. Models were estimated by gender and also pooled. The age profiles that result give the overall average productivity by age (pooled) and by age for each gender, and these three results form the basis of the quantitative estimates of productivity.

4.1 Productivity Estimates from Cotton Picking Books

The data covers nine of the sixteen children of the family, with eight yielding enough estimates to derive age-based measures of productivity. On average, each of the eight children who have records have more than 20 observations of their daily cotton picking each season. The year for all records is deduced from the year of the cotton picking book, which would apply to that calendar year's cotton season. The specific dates are not recorded for all books, but the dates that are recorded allow one to estimate a typical seasonal pattern of cotton picking.¹⁴

Table 1 displays the productivity of the Logan children as recorded in the cotton picking books. By age, it gives the average of the pounds of cotton picked per day as estimated with the fixed effects regression described above. Table 1 also shows the estimates of the productivity for male and female slaves contained in plantation records from Mississippi and Louisiana for the years 1850-1860.¹⁵ As the estimates for slaves come from a larger number of observations with greater accuracy for dates,

¹⁴It is not possible to estimate the impact of cotton picking on human capital (schooling) directly as the estimates for season are noisy due to the large number of observations with missing dates.

¹⁵I thank Paul Rhode for graciously sharing these estimates, restricted to the geographic area closest to Yalobusha county as can be had with that data.

the slave estimates are fit with a cubic function of age and include week of season effects, which are not available in the Logan data.

At every age, the Logan children picked as much cotton per day as their enslaved forbearers. This is seen most clearly in Figure 3, which shows the percentage of slave productivity achieved by the Logan children at each age overall and by gender. The figure shows that male children in the Logan family were always between 90% and 95% as productive as enslaved male children. Females, however, were relatively less productive than enslaved females at early ages but become more productive than female slaves by age 10. By the middle teen years the Logan women were consistently more productive than slave females.

As a function of age, the slope of the relationship suggest that enslaved children picked an additional 8.4 pounds of cotton per person per year as they aged, while the Logan children picked an additional 8.6 pounds per year. Although they began at similar level of productivity at young ages, the Logan children's growth per year in cotton picking was quite steep. The difference between early and late teen years is less for Logan children than slaves, which suggest that Logan children entered into prime-picking productivity at slightly earlier ages than enslaved children.¹⁶

Second, differences in productivity by gender in the Logan family were quite small. Although the gap between males and females was large at younger ages in the Logan family, by age 8 females were more than 90% as productive as males. Figure 4 shows the proportion of male productivity achieved by females by age for both the Logans and slaves. As the figure shows, Logan females achieved near parity in cotton picking by age 11, and this parity persisted throughout the teen years. Relative to male slaves, females also made gains, but not as dramatic. Given the constraints of the data, it is not possible to measure how much of the gender differential between slaves could be due to family-specific differences or due to pregnancy among slaves females. The evidence suggest that age at first birth among enslaved women occurred in the late teen years, such that it would have little impact on female productivity until age 16 (Trussell and Steckel 1978). As none of the Logan females were mothers at these ages, it is not possible to perform a direct comparison. Overall, however, the Logan children picked as many pounds of cotton per day in the 1950s as enslaved children of similar ages in 1860.

¹⁶Although conjecture, this faster move to higher levels of productivity could be the result of improved nutrition relative to slave children (see Steckel 2010).

5 The Context of Cotton Picking: Qualitative Evidence

While the quantitative data tells us that the Logan children were as productive in cotton picking as enslaved children, it leaves a number of unanswered questions. Using qualitative techniques, I answer several questions. First, I investigate how the cotton was picked. The debate over the use of the gang-labor system in cotton picking has not exploited the fact that African Americans continued to pick cotton after Emancipation, and some evidence on the techniques involved in cotton picking after Emancipation could inform the debates on antebellum cotton picking. Second, I consider the larger social setting in which this cotton picking occurred. For historical analysis, the context of cotton picking is as important as the estimates themselves. The qualitative evidence suggest that it is not possible to divorce the analysis of this agricultural productivity from racial relations, poverty, segregation, the Jim Crow South, and racial identity.

5.1 Cotton Picking and Cotton Work

The first questions that qualitative data can answer are the most basic about the process of picking cotton. There is significant debate in economic history about the use of gang labor in cotton agriculture. While Fogel and Engerman (1974) have argued that the gang labor system was instrumental in the productivity of slaves, recent scholarship has questioned that assertion. While the Logans did not pick cotton under chattel bondage, the actual process of manual cotton picking underwent relatively little technological innovation. (While there were significant biological innovations in cotton agriculture, the actual manual harvesting process did not experience similar innovations.) The qualitative interviews show that the cotton picking process used by the Logans was organized and ordered, but independent.¹⁷

Everybody got two rows— you picked at your right and at your left. You had to zig zag it down. When you was done you went on and got another two rows. When we was real little you picked behind Dad 'cause you would get the cotton close to the ground, but that didn't last long. By the time we was in school [age 6 or 7] you had your own two rows and you was out there picking like grown folks.

¹⁷The quotations noted here are not edited for grammar.

You had your own stuff to pick. You had your own sack and your own cotton to pick. You didn't get on nobody's row and they didn't get on yours. You had to get to picking. It wasn't like we was gonna run out of cotton to pick. You got up there and you went at it and that was that. And I tell you, we picked it clean. You had to pick it clean and you had to pick it quick.

In general, the qualitative evidence is not consistent with a gang-labor style of organization. Given the high levels of productivity, one could conjecture that gang-labor was not necessary to achieve high levels of productivity in manual cotton picking. The organization of the work is only one element of the process, however. The picking of cotton itself took a physical toll on the young children, low levels of productivity were discouraged through punishment, and the labor effort required was high.

When you got up you would eat and you was ready to go field. You got up when the rooster crowed. We didn't have no clock with no alarm. It would be dark when we got up. So you would go draw water or feed the chickens and hogs or help Ma get the breakfast ready and stuff. Everybody had their little thing they had to do. You would eat some eggs or bacon and a biscuit and maybe some jelly and then you would set out. Sometimes we had sausage. When you got to the field that's when you would get your sack. The sack was nine foot long, and you was supposed to fill that up as many times as you could. You couldn't be wasting no time out there.

You got to pull all of it [the cotton bloom] off. It don't fall off, you got to take it off with your bare hands. You get all your fingers 'bout tore off because the bulb would hit and it pricks you bad. But then it gets tough and it won't cut you no more. You be down on your knees and all kind of stuff. It's not as hot cause it's in later summer and September so at least it wasn't as bad as July. We picked sun up to sun down— and I'm talking sun up to sun down. Till you couldn't see the cotton no more.

Now [another male sibling] was always getting a whooping. Like he just could never get a sack that would weigh nothing. So when they would weigh what he had Dad would whoop him cause it wasn't no weight. He just couldn't get it. But that was how we had to live— you couldn't be out there fooling around. You didn't want no whooping from Dad for sitting out there not picking like you knew you was supposed to. But we didn't get a lot of whoopings for not picking because we knew what we was supposed to do and we just did it.

The Logan children were involved in all parts of the cotton production process. They planted, chopped, fertilized, and applied pesticides. While not a new finding, the interviews stressed that the entire production process (particularly chopping cotton) was extremely taxing physical labor. Accordingly, some of the children described chopping (the process of clearing weeds from the cotton plant with a chopping hoe until the plant bloomed) as the most taxing work.

You got a chopping hoe and you got a row. You had to chop every weed around that cotton— you can't do that with two rows and you got to chop it up. But chopping is hard, cause it's hot out. It is hot out. All you would see out there in June and July is black folks chopping cotton. And when you finished you had to go right back, you just chopped to chop again and again till you see them blooms. That would be about the end of July, a few times earlier. But until you saw them blooms you was out in those fields and you was chopping sun up to sun down. That was about the worst part to me. Then they came out with "freemud" which was some type of poison that killed the weeds. But I was almost done with school when that came out. You didn't have to chop as much then. I remember that I was sixteen when that came out [1965] because I didn't have to work so hard. That was later on.

Figure 5 shows young members of the Logan family during the chopping season. Because of cotton's long growing season (cotton planting in March or April yields a September harvest), chopping comprised a significant portion of the physical labor involved in cotton production.

I couldn't stand to chop no cotton. Those weeds would come up around there and you'd have to whack at it and whack at it. And that sun was out there and you'd be almost dead out there chopping and chopping and chopping. And we had a good little bit of land so we had to get it good and chopped because if them weeds take hold you are messed up. So we had to get it all chopped because you had to go back. I hated it 'cause you was out there all the damn day bent over chopping in the sun. Now, Mississippi in July ain't nothing to play with, and you out there chopping and carrying on and you bent over and chopping at the ground.

5.2 Seed Money

One important financial aspect of the cotton picking season was the receipt of money from the sale of cotton seed, which was produced through the ginning process and sold separately from the cotton itself. This money was a source of income through the season for the Logan family. This is in contrast to the furnace money provided in the off-season— cotton seed monies were not considered payment and were outside of the sharecropping contract. Since the gin and the land were both owned by the same individual, the seed money— from the perspective of the gin/landowner— was the purchase of seeds at a discount, which would be used for other purposes such as the production of cottonseed oil, a relatively common cooking oil. For the sharecropper, this is a form of revenue during the picking season.

When you take it [the cotton] to the gin, they take the seeds out the cotton. You didn't get all the seeds was worth but you got paid for the seed when you went to gin it. That was our money that we could live on when we was picking. And Ma would get ten pounds of flour, ten pound of sugar, and coffee. We had our own corn and milk cows and hogs and chickens so we didn't have to buy no meat or nothing all the time. You take your own corn and he would take half and give you the other half after he turned it to meal. So we had to pick our own corn or we wouldn't have no meal. That was how we could live— if we had to buy meal and meat and everything else we would have been in debt.

The qualitative evidence also reveals that one reason the Logan family did not remain in debt was that they charged very little to their account besides the furnace money received during the winter. Using their small allotment of personal land as extensively as possible kept the bill for food and other necessities (which were often sold at inflated prices to sharecroppers) to a minimum.

They was wild blackberries and plums. You could pick as much of them as you wanted. Folks would just let you come on they farm and pick for free. They didn't know what to do with it. People would have apple trees and would give us apples if we picked. We growed our own peanuts and popcorn. We grew our own sweet potatoes. You would can all of that stuff for the winter and we would eat on that. We had a little smokehouse and you put the meat in there. You would can the sausage in a jar. You would put the sweet potatoes in the potato house and cover them with dirt. You had your shucked peanuts and you put them on top of the shed and then when they dried out you would put them in a Kroger sack and you would have them, too.

When we would pick good we would have more seed money. I never knew how much it was, I guess it was enough. We didn't starve to death. I guess that means it was enough. But we didn't need as much from the store cause we was growing our own as best we could. But Dad was cheap. He never did want us to get stuff from the store that we couldn't pay for right then. I guess that's one reason we never had nothing.

In sum, the qualitative evidence points to several facts about cotton productivity that are missing from the estimates presented earlier. First, the most taxing work may or may not have been picking itself. The chopping of cotton was (according to some) as taxing an activity that took place at the hottest time of the year. Second, children were expected to be productive cotton pickers— failure to pick an adequate amount would result in corporal punishment. Third, in addition to the productivity in the field, the family's industrious use of their limited resources kept them from falling into debt in their sharecropping arrangement. While, by all accounts, the family had little wealth or savings,

they were not bound to work future seasons. This industriousness is similar to the numerous accounts of slaves who sought out means to extend their rations in the antebellum era (Blassingame 1972, Genovese 1974). Fourth, the arrangement of cotton seed income was a hidden part of the formula, and one that greatly advantaged the local landowner who was also the cotton gin operator. The seed was purchased at the gin where the landowner/gin operator acted as the monopsonist and then seed for planting would be sold to the sharecropper when the landowner/gin operator would act as a monopolist.¹⁸

5.3 Cotton and Life

The most compelling aspects of the qualitative evidence point to the fact that, while cotton picking was only a portion of the agricultural output of the family, the sharecropping system and its attendant institutions cast a long shadow over nearly every aspect of life. When the children were asked to describe what manual cotton picking meant to them, their answers revealed the deep connections between social life and economic activity.

This is what black folks did. That was it. You chopped and you picked and if you was lucky you had some oranges for Christmas. Sometimes we got socks. But we did have fun— we was kids. It wasn't like we was worked to death or anything.

I remember that time Ma got on me 'cause I didn't get my multiplication tables right. She told me "You got to know how to count. If you don't get this counting down these white folks will cheat you. That is all they know how to do, cheat you. The only way you going to know you being cheated is if you can count like they do." Like, if you didn't know how to read the scale they could cheat you on the weights. Or if you didn't know how things got added up you would owe them more than you did. If you didn't know how to do it yourself they would do it and they would always do it for them, not you.

We was in, like, a police state. We didn't have no car. We had a mule and a wagon. Something that was 10 miles away might as well have been 1,000. You couldn't do what you wanted to— talk back, not say "Yes, sir" and "No, ma'am" and stuff. You could get killed. I mean shot dead and that was that. That was what it was, that was life. You was there to work on that land and try to keep some dignity for yourself or whatever. But you wasn't free— you couldn't come and go and have a say in nothing. We didn't know what voting and all that was— that was white folks business. That didn't have anything to do with us. We was there for work. That is what we was taught black folks was for.

¹⁸As seed money and subsequent charges for cotton seed are not available, the implicit interest rate contained in the arrangement cannot be estimated.

It was a time a part from now. When I was out there picking you didn't think about the rest of the world and what you was going to do in the future. You had to work, you had to fill that sack up and pick as fast as you could and as much as you could. I wasn't thinking about what I wanted to be— you was worried about what you had to do. We had cotton to pick— that is what you had to do.

White folks owned everything— the cotton you picked, the land you was on, everything. We didn't know nothing about black folks owning stuff— like stuff you could have and folks couldn't take. It wasn't like a job where you work and then go home. He owned your home. You didn't have nothing he couldn't take from you and you couldn't do nothing about it. So if you wanted to have what little you did get you wasn't going to act a fool. He'd take everything you had and then maybe kill you, too.

The cotton was just a part of it. It wasn't like you picked cotton all year long. But it was what you did that was, I guess, most important for who you was to other folks. And everything went from that. We wasn't different from anybody else there. They was out there like we was— it wasn't like we knew it was bad or we knew how bad things was because that was your life. You picked cotton and your parents did it and they parents did it. That was who we was— but that was part of everything. It wasn't just that, it was everything else.

I will never forget we needed ten dollars to get some flour and sugar, so Ma sent me and [my brother] to [a local merchant]. He told us "I can't let you have nothing like that." And he had a whole hand full of silver dollars in his hand while he did it. He had it right there in his hand. Wasn't nothing to him. Now, he was sho' 'nuff going to get his money back, but he wasn't going to give us none. And what was we gonna do? We needed to eat. So I made it up in my mind that I ever made me some money I wasn't ever going to go to some white man for nothing. Even when they knew they was going to get they money they was going to do you bad. People did not have to let you have they money, even if you was good for it and they knew you was good for it. Even if they knew they could get it back. That's just how it was.

In the interviews, it was revealed that cotton picking was synonymous with powerlessness. To be a cotton picker meant that one had to conform not only to the rigid structure of the task of picking cotton, but its attendant institutions. This included, most critically, a racial hierarchy. While they were young, they were expected, as black children, to address all whites with deference, to move off of the sidewalk to allow whites to pass by, and to endure explicit racial insults and indignities. One consistently painful aspect was the constant way in which their parents were addressed without title by whites, which included observing their parents referred to as "boy" or "gal" by whites. Within the family, they had a personal example of the dire consequences of transgressing this system that tempered any personal desire to overtly resist the racial hierarchy.

What was you going to do? You was in a place and you had a place and you didn't leave that place. You couldn't speak up for yourself. If you didn't shut your mouth about how you was treated they would shut it up for you. They killed Dad's brother...laid him on the railroad track. And then they gonna say it was a suicide, but they killed him as sure as the day is long. And Dad and his brothers knew who did it. They couldn't do nothing about it, or they'd have been killed, too. Think about that, you know who killed your brother and you can't do nothing about it. Nothing. That's what it was— you kept your head down and you worked and you made sure you didn't step out of line. Your life was at stake.

There was never any remark of pride or accomplishment to accompany their self-perceived productivity.¹⁹ At no time did any of the children believe that their work in the fields, and the large amount of cotton they picked, merit any special attention. To the contrary, they remarked at how picking cotton made them feel poorly about themselves, how it was part of an identity that defined them as backward. In general, cotton picking left lasting psychological effects on them and their view of their childhood and adolescence.

In the qualitative interviews it is clear that the children came to view their time in the fields with a mixture of shame and a sense of pride for having survived the experience. This is partially because of the way that others react to that experience. Cotton picking is work that recalls slavery in the American imagination. Since slavery is an American embarrassment, a time on the cross, a period the American collective imagination would rather forget (or at least believe that its vestiges are long passed), the Logan children have to navigate the reality of their experience in a society which would like to negate those experiences. In the interviews they revealed that many whites did not believe that they picked cotton and did not believe that the living conditions were as impoverished as they were.²⁰

In general, the views that the children hold about cotton picking have less to do with the actual work and more to do with what cotton picking represented. To them, cotton picking was a tangible realization of the limited social and economic opportunities available to African Americans in their place of birth in the middle of the twentieth century. Cotton picking went hand in hand with poverty, segregation, dehumanizing race relations, and institutional racism. It was not, to them, a matter of

¹⁹The children knew that they worked hard, but did not know of their productivity relative to any other group.

²⁰In several instances whites remarked that cotton picking by hand ceased to exist sometime shortly after the Civil War. Others believed that this was more a fable— that although the family picked cotton they did so at their leisure as part of a hobby farm.

agricultural productivity, but a representation of a way of life.

6 Conclusion

It is profoundly disquieting to learn that one's own father worked as hard as his slave forefathers nearly 100 years earlier, especially when that earlier period has recently been described as torture in a labor camp (Baptist 2014). According to the recent revisionism, only absolute terror could make people so productive in manual cotton picking. Either that assertion of terroristically-inspired productivity in the antebellum era is false or we find that such terror did not end with Emancipation. This raises new questions of what was required to exert labor effort in the antebellum and postbellum periods and the degree to which Southern institutions changed after Emancipation.

Equally important, this work is not recorded in any regular account of the work history of any of the children. A standard labor economics approach would not account for this significant portion of their work history and productivity, but would rather begin with their work lives after the completion of their schooling, when their "time in the labor force" would begin. To be explicit, this productivity is far beyond the regular aspects of child labor in a modern industrial economy, nor is it employment in a family business, and yet without the estimates produced here none of it would be recorded nor noted.

Even more, our reliance on standard economic measures obscures such experiences. An individual wage series will not capture this experience and black/white wage ratios neglect this experience as well. As such, our standard measures of labor market experience and racial economic inequality also work to make this experience invisible. This only acts to reinforce the idea that this work is insignificant since we, as economists, do not account for it nor inquire about it when analyzing trends in racial inequality.

While I have made every attempt to approach this issue as a detached economic historian, I must concede that the findings have been a source of deep reflection. The narrative perspective expounded on here emphasizes that cotton picking was not simply agricultural productivity but an essential aspect of identity— their personal history. Although none of these individuals ever worked in agriculture as

adults, the long-lived effects of their childhood exposure to work in the fields fundamentally influenced their perspective, expectations, risk aversion, and other aspects of their economic decision making.

This is not to say that the conclusions here are beyond reproach. For example, there was significant innovation in cotton agriculture that may have had direct and indirect effects on the amount of harvest-ready cotton (Olmstead and Rhode 2008). There is also the issue that other researcher could not be expected to have access to these data sources, quantitative or qualitative. The use of confirmation in the qualitative evidence reduces, but does not eliminate, bias in recall and other motivations to describe the past in a particular way.

One of the Logan children described this as "a time apart" from the present. I respectfully disagree. The recent outpouring of historical scholarship tells us that the past is certainly not past. If *prehistoric* variation in some measure has explanatory power, and if this implies that history matters, certainly the life experiences described here cannot be placed far from our own. That is not a time apart, it is today and tomorrow and the day after that one. It is history only in the sense that it happened in the past. In no other way can it be history because it is very much alive.²¹

These experiences are uniquely American, the lens through which we must view our racial present—burned in the fire of slavery, blown in the segregation of Jim Crow, and tempered in the anxious state of contemporary race relations. To acknowledge that is to face the painful aspects of history. The current literature reformulates the problem of racial inequality as case studies in economic development, which is a technique to implicitly downplay the contemporary ramifications of a troubled racial history. This, I believe, constrains the questions we ask, the methods we use, and the lessons we learn.

It is relatively easy to count up the pounds of cotton picked per person per day, but much harder to face the reality of what that calculation means to those whose hands picked that cotton. Economic history requires that we face that reality. Theory and identification strategies are not substitutes for

²¹Contemporary American economic history is more likely to deal with the issue of race as a case study of development economics as opposed to people alive and well in the developed economy of the United States (Hornbeck and Naidu 2014, Chay and Munshi 2012). This creates some difficult conceptual frameworks. It is difficult to reconcile the American South as underdeveloped with the fact that it was highly productive in agriculture and fueled the textile industry. Recently, scholars have asserted that what some economists refer to as underdeveloped is the heart of American capitalism (Baptist 2014). Johnson (2013), for example, notes that the idea that agriculture was synonymous with underdeveloped is a misconception in American history. Similarly, the view of black social networks as relatively simplistic functions of cotton agriculture belies the fact that millions of people from the African diaspora formed a coherent and collective culture despite significant linguistic, cultural, and religious diversity (Levine 1977). That culture has long been noted as one of the United States' largest exports (Murray 1970).

the proper historical contextual interpretation of what we find. There are lived experiences beneath the data, after all, and there are lessons beyond what is recorded in quantitative sources which may be far more valuable to our empirical knowledge. If we are to tell the lessons of economic history we have to be certain that we are telling *all* of it.

This narrative exploration reveals that there is much to be gained in economic analysis by asking inherently qualitative questions. This type of evidence cannot be found in other work in economic history, as it largely concerns the quantitative aspects of the lives of African Americans in urban centers in the North or those who left the South for those locations (Collins 1997, Boustan 2009, Collins and Wanamaker 2014, Eichenlaub, Tolnay and Alexander 2010). It also uncovers an experience that is neglected in recent work on Southern racial inequality in the twentieth century (Baker 2015, Collins and Wannamaker 2015, Larsen 2014, Carruthers and Wannamaker 2015, Aaronson and Mazumder 2011, Black, et al. 2015). Delving into personal experiences, we are left to confront issues of significant *economic* import such as racial inequality, intergenerational transmission of culture, and the persistent effects of institutionalized and individualized racism. These issues should guide the future of African American economic history. We may learn little about cause-and-effect or whether the predictions of one model or another hold, but we learn more, much more, about the human experience.

Table 1: The Productivity of Logan Children, 1952-1965, and Enslaved Children, 1850-1860. Measured by Pounds of Cotton Picked Per Day.

Age	Logans			Slaves		
	All	Females	Males	All	Females	Males
5	16.98	14.78	19.20	18.74	17.15	20.42
6	21.02	18.23	24.86	23.93	22.08	25.97
7	27.75	26.04	30.19	29.98	27.87	32.45
8	35.85	33.75	36.82	36.90	34.51	39.83
9	43.46	42.16	45.25	44.64	41.95	48.09
10	51.88	50.16	52.86	53.13	50.11	57.12
11	60.46	59.94	60.95	62.24	58.86	66.80
12	68.16	67.86	69.25	71.81	68.04	76.97
13	80.54	79.21	82.47	81.66	77.46	87.42
14	89.78	88.35	92.15	91.60	86.93	97.95
15	99.48	98.15	101.49	101.41	96.23	108.32
16	108.86	107.45	108.27	110.87	105.16	118.32
17	118.82	118.12	119.16	119.81	113.53	127.73
18	124.62	122.49	125.95	128.04	121.19	136.36

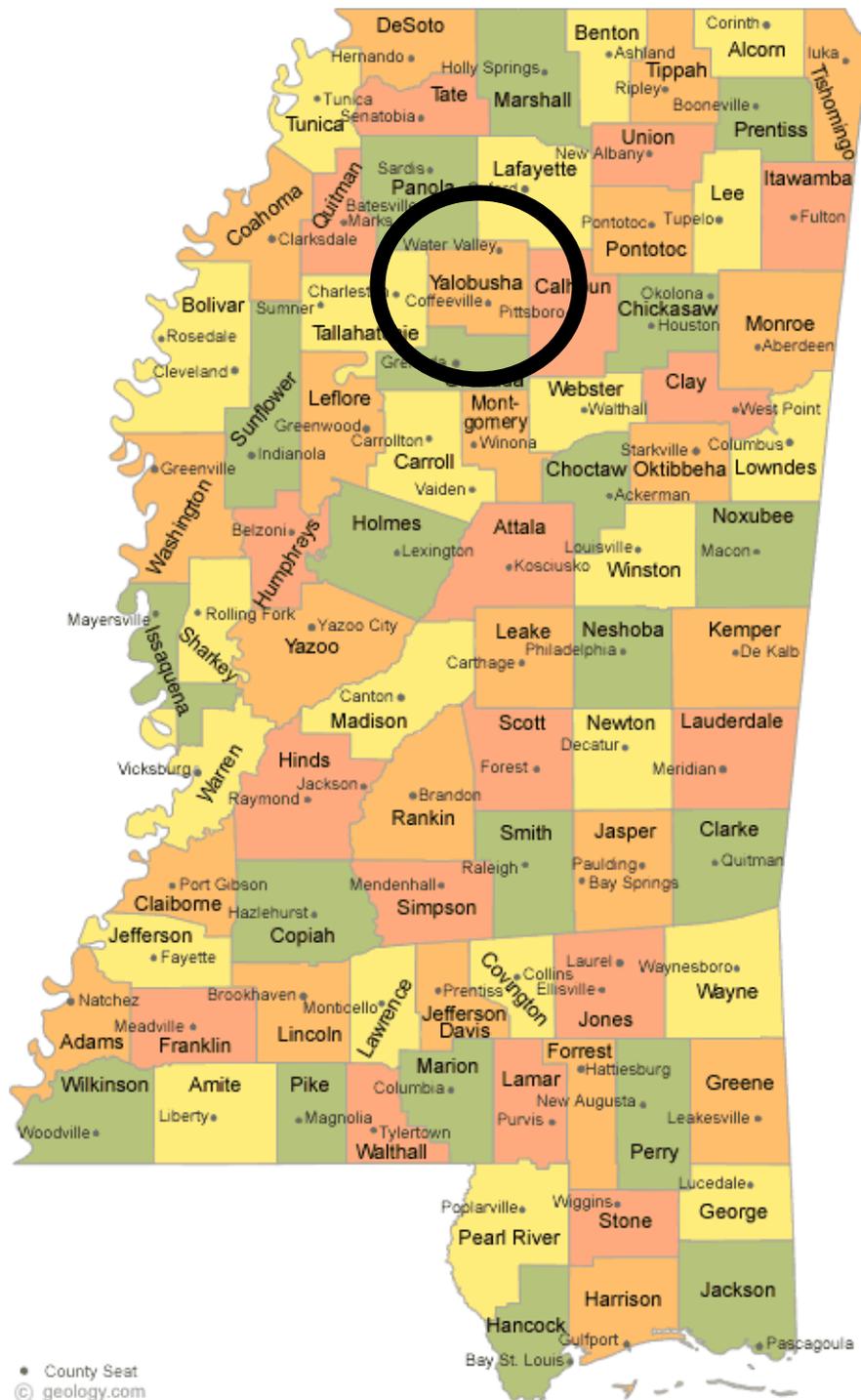


Figure 1: Location of Coffeeville and Yalobusha County, Mississippi.



**Cotton
PICKING
Book
AND
CALCULATOR**



COMPLIMENTS OF

THE NEW GIN

J. C. SIDES, Owner

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COFFEEVILLE, MISSISSIPPI

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COMPLIMENTS OF

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"WE APPRECIATE YOUR BUSINESS"

Figure 2: Example of Cotton Picking Books for 1965 (left) and 1963 (right).

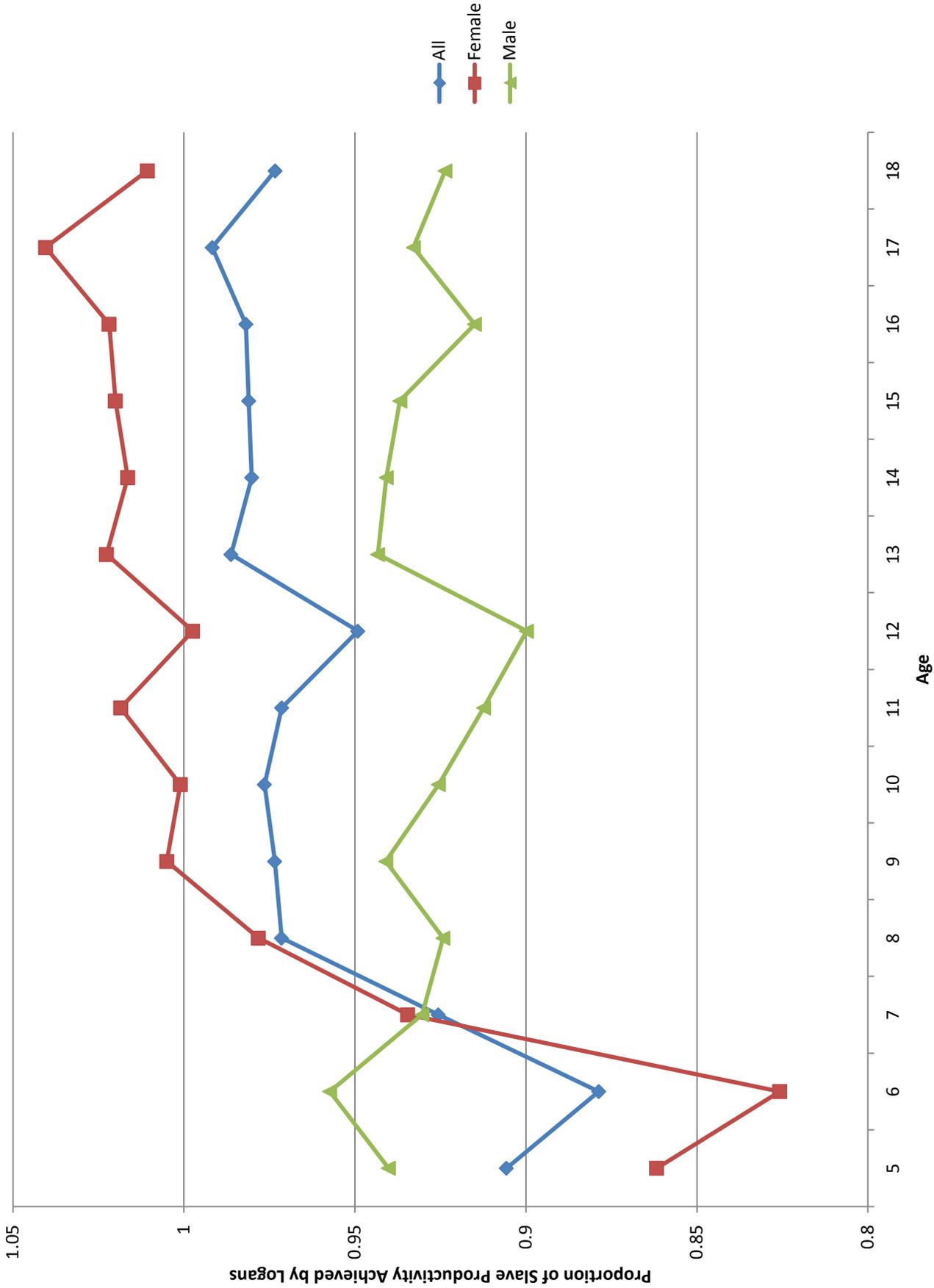


Figure 3: Proportion of Slave Productivity Achieved by Logan Family by Age.

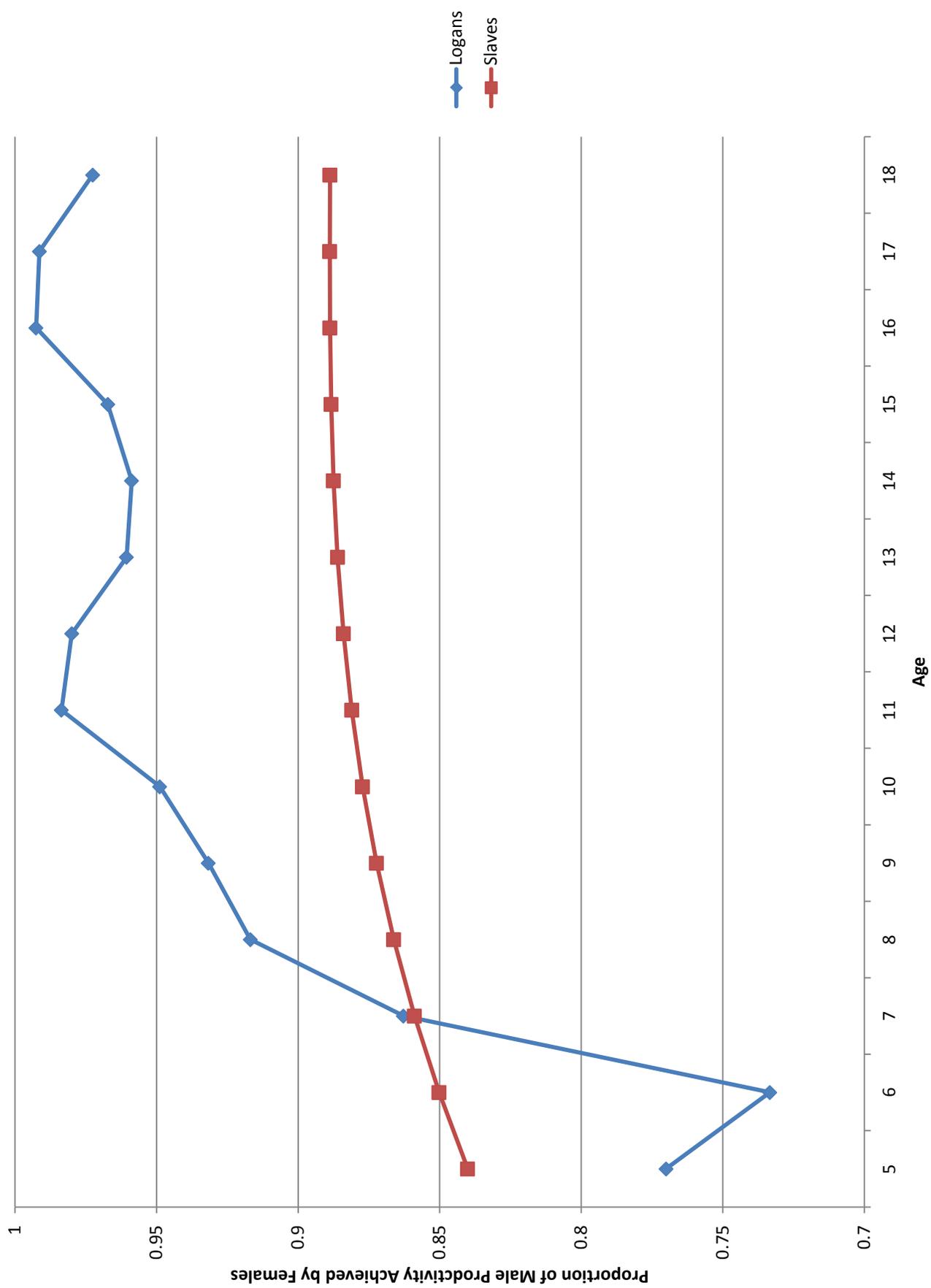


Figure 4: Proportion of Male Productivity Achieved by Females by Age.



Figure 5: Members of the Logan Family During Cotton Chopping Season, May 1967

References

- [1] Aaronson, D. and B. Mazumder. (2011). The Impact of Rosenwald Schools on Black Achievement. *Journal of Political Economy* 119: 821-888.
- [2] Alesina, A.F., P. Giuliano and N. Nunn (2013). "On the Origins of Gender Roles: Women and the Plough." *Quarterly Journal of Economics* 128: 469-530.
- [3] Baker, R. (2014). From the Field to the Classroom: The Boll Weevils Impact on Education in Rural Georgia, Working Paper, Vanderbilt University.
- [4] Banks-Wallace, J. (2002). "Talk that Talk: Storytelling and Analysis Rooted in African American Oral Tradition." *Qualitative Health Research* 12: 410-426.
- [5] Baptist, E.E. (2014). *The Half Has Never Been Told: Slavery and the Making of American Capitalism*. New York: Basic Books.
- [6] Bates, R.H., A. Greif, M. Levi, and J-L Rosenthal (1998). *Analytic Narratives*. Princeton, NJ: Princeton University Press.
- [7] Baxter, P. and S. Jack (2008). "Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers." *The Qualitative Report* 13: 544-559.
- [8] Black, D. A., S. G. Sanders, E. J. Taylor, and L. J. Taylor. (2015). "The Impact of the Great Migration on Mortality of African Americans: Evidence from the Deep South." *American Economic Review*, 105: 477-503.
- [9] Blassingame, J.W. (1972). *The Slave Community*. New York: Oxford University Press.
- [10] Boserup, E. (1970). *Woman's Role in Economic Development*. London: George Allen and Unwin.
- [11] Boustan, L.P. (2009). "Competition in the Promised Land: Black Migration and Racial Wage Convergence in the North, 1940-1970." *Journal of Economic History* 69: 755-782.
- [12] Carruthers, C. K. and M. H. Wanamaker. (2015). *Separate and Unequal in the Labor Market: Human Capital and the Jim Crow Wage Gap*. Working paper, University of Tennessee.
- [13] Chay, K. and K. Munshi (2012). "Black Networks after Emancipation: Evidence from Reconstruction and the Great Migration." Working Paper, Brown University.
- [14] Collier, D. (1993). "The Comparative Method." in A. Finifter, ed. *Political Science: The State of the Discipline II*. Washington, D.C.: American Political Science Association.
- [15] Collins, W.J. (1997). "When the Tide Turned: Immigration and the Delay of the Great Black Migration." *Journal of Economic History* 57: 607-632.
- [16] Collins, W.J. and M.H. Wanamaker (2014). "Selection and Economic Gains in the Great Migration of African Americans: New Evidence from Linked Census Data." *American Economic Journal: Applied Economics* 6: 220-252.
- [17] Collins, W.J. and M.H. Wanamaker (2015). "Up From Slavery? Intergenerational Mobility in the Shadow of Jim Crow." Working Paper, University of Tennessee.

- [18] Conrad, A.H. and J.R. Meyer (1958). "The Economics of Slavery in the Ante Bellum South." *Journal of Political Economy* 66: 95-130.
- [19] Delgado, R. (1989). "Storytelling for Oppositionists and Others: A Plea for Narrative." *Michigan Law Review* 87: 2411-2441.
- [20] Du Bois, W. (1897). "Race Traits and Tendencies of the American Negro. By Frederick L. Hoffman, F.S.S." [Review]. *Annals of the American Academy of Political and Social Science* 9: 127-133.
- [21] Dunn, L.F. and T.D. Logan (2014). "Race and Intransitive Preferences: Evidence from Labor Market Surveys." Working Paper, The Ohio State University.
- [22] Eichenlaub, S.C., S.E. Tolnay and J.T. Alexander (2010). "Moving Out but Not Up: Economic Outcomes in the Great Migration." *American Sociological Review* 75: 101-125.
- [23] Ellison, R.W. (1964). *Shadow and Act*. New York: Random House.
- [24] Farber, D.A. and S. Sherry (1993). "Telling Stories Out of School: An Essay on Legal Narratives." *Stanford Law Review* 45:807-855.
- [25] Field, E.B. (1988). "The Relative Efficiency of Slavery Revisited: A Translog Production Approach." *American Economic Review* 78: 543-549.
- [26] Fogel, R.W. (1975). "The Limits of Quantitative Methods in History." *American Historical Review* 80: 329-350.
- [27] Fogel, R.W. (2003). *The Slavery Debates, 1952-1990*. Baton Rouge, LA: Louisiana State University Press.
- [28] Fogel, R.W. and S.L. Engerman (1974). *Time on the Cross: The Economics of American Negro Slavery*. Boston: Little, Brown.
- [29] Fogel, R.W. and S.L. Engerman (1977). "Explaining the Relative Efficiency of Slave Agriculture in the Antebellum South." *American Economic Review* 67: 275-296.
- [30] Fogel, R.W. and S.L. Engerman (1980). "Explaining the Relative Efficiency of Slave Agriculture in the Antebellum South: Reply" *American Economic Review* 70: 672-690.
- [31] Genovese, E.D. (1974). *Roll, Jordan, Roll: The World the Slaves Made*. New York: Random House.
- [32] Gillard, J. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [33] Glaser, B. and A. Strauss. (1967). *The Discovery of Grounded Theory*. New York: Aldine de Gruyter.
- [34] Goldin, C.D. and K.L. Sokoloff (1982). "Women, Children, and Industrialization in the Early Republic: Evidence from Manufacturing Censuses." *Journal of Economic History* 42: 741-774.
- [35] Goldin, C.D. and K.L. Sokoloff (1984). "The Relative Productivity Hypothesis of Industrialization." *Quarterly Journal of Economics* 99: 467-487.

- [36] Hoffman, F. (1896). *Race Traits and Tendencies of the American Negro*. Publications of the American Economic Association, v.11, n.1-3:1-329.
- [37] Hornbeck, R. and S. Naidu (2014). "When the Levee Breaks: Black Migration and Economic Development in the American South" *American Economic Review* 104: 963-990.
- [38] Johnson, W. (2013). *River of Dark Dreams: Slavery and Empire in the Cotton Kingdom*. Cambridge, MA: Harvard University Press.
- [39] Karakacili, E. (2004). "English Agrarian Labor Productivity Rates Before the Black Death: A Case Study." *Journal of Economic History* 64: 24-60.
- [40] Larsen, T. (2014). *The Strange Career of Jim Crow: Labor Scarcity and Racial Treatment in the Postbellum South*. Working Paper, University of Colorado.
- [41] Levine, L.W. (1977). *Black Culture and Black Consciousness: Afro-American Folk Thought from Slavery to Freedom*. New York: Oxford.
- [42] Logan, B. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [43] Logan, G.A. II (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [44] Logan, J. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [45] Logan, J.A. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [46] Logan, T. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [47] Logan, T.D. (2009). "Health, Human Capital, and African American Migration before 1910." *Explorations in Economic History* 46: 169-185.
- [48] Murray, A. (1970). *The Omni-Americans: Black Experience and an American Culture*. New York: Outerbridge and Dienstfrey.
- [49] Myrdal, G. (1944). *An American dilemma: The negro problem and modern democracy*. New York: Harper.
- [50] Olmstead, A.L. and P.W. Rhode (2008). "Biological Innovation and Productivity Growth in the Antebellum Cotton Economy." *Journal of Economic History* 68: 1123-1171.
- [51] Olmstead, A.L. and P.W. Rhode (2010). "Slave Productivity in Cotton Production by Gender, Age, Season, and Scale." Unpublished manuscript, University of Michigan.
- [52] Parker, W.N. (1979). "Labor Productivity in Cotton Farming: The History of a Research." *Agricultural History* 53: 228-244.
- [53] Ransom, R.L. and R. Sutch (1977). *One Kind of Freedom: The Economic Consequences of Emancipation*. New York: Cambridge University Press.
- [54] Ratcliff, C.L. (2014). Interview with Author. Personal Interview. St. Paul, MN, various dates.
- [55] Solow, R.M. (1985). "Economic History and Economics." *American Economic Review* 75: 328-331.

- [56] Steckel, R.H. (2004). "Fluctuations in a Dreadful Childhood: Synthetic Longitudinal Height Data, Relative prices and Weather in the Short-Term Health of American Slaves." NBER Working paper No. 10993.
- [57] Steckel, R.H. (2010). "The Long Shadow of American Slavery: Human Capital, 1850-1910." Working Paper, The Ohio State University.
- [58] Tobin, J. (1951). Relative Income, Absolute Income, and Saving, in Money, Trade, and Economic Growth (in Honor of John H. Williams), Macmillan Co., pp. 135-156.
- [59] Trussell, J. and R.H. Steckel (1978). "The Age of Slaves at Menarche and their First Birth." *Journal of Interdisciplinary History* 8: 477-505.
- [60] Whartenby, F.G. (1977). Land and Labor Productivity in United States Cotton Production. New York: Arno Press.
- [61] Wright, G. (1978). *The Political Economy of the Cotton South: Households, Markets, and Wealth in the Nineteenth Century*. New York: Norton.
- [62] Wright, G. (1979). "The Efficiency of Slavery: Another Interpretation" *American Economic Review* 69: 219-226.
- [63] Wright, G. (2006). *Slavery and American Economic Development*. Baton Rouge, LA: Louisiana State University Press.