

Announcements

- Midterm 2 is Thursday
- The midterm will cover everything since the first midterm up to and including today's lecture
- In terms of the syllabus: sections V, VI and the indentured servitude part of VII
- In terms of readings: Chapters 2, 4, 6, 16, 18 and the Temin, Fogel and Galenson articles
- Expect a similar format to the first midterm and the past midterms on Blackboard
- Remaining office hours this week: today 4pm to 5pm, tomorrow 10am to noon and 2pm to 4pm

Slavery and the American Economy



Scene on a Cotton Plantation.

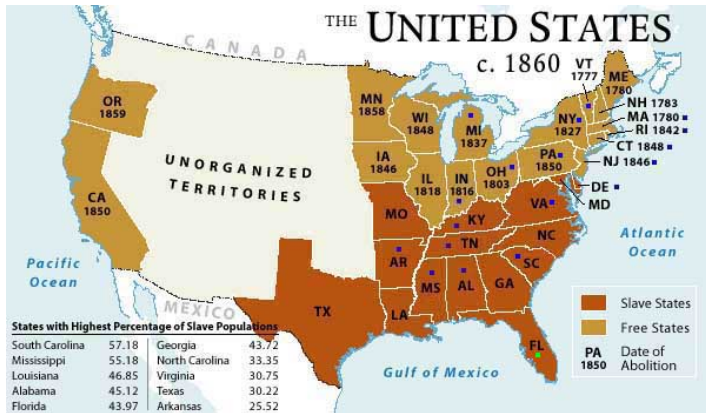
A Brief History of Slavery

- Slaves came to the New World beginning in the early 1500s on French and Spanish expeditions
- Slaves first arrived in British North America in Virginia in 1619
- The trans-Atlantic slave trade continued until 1808 when it was banned by both the United States and England
- The internal slave trade continued until the Civil War
- Individual states abolish slavery at different times during the 18th and 19th centuries
- Slavery is officially abolished by the Thirteenth Amendment in 1865

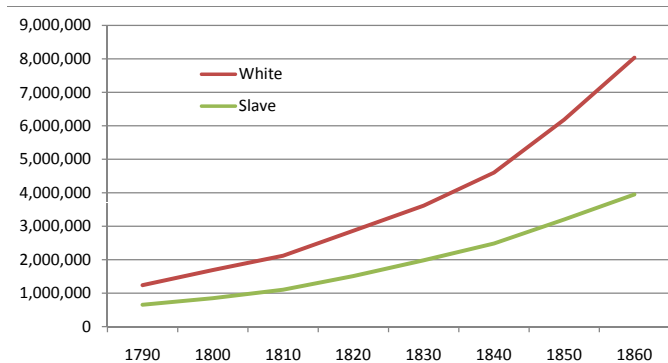
The Trans-Atlantic Slave Trade



Slavery Within the United States



Slave Populations in the South, 1790-1860



Slavery Within the United States



Some Legal Aspects of Slavery

- Slaves were considered property and the laws governing them were developed from laws regarding personal property, animals, servants and employees
- Laws existed to protect slaves from excessive abuse but still allowed greater punishment than for other employees
- Initially manumission was legal as it was seen as an inherent right of property ownership but by the 1830s, many southern states limited manumission
- Laws regarding slave sales differed from many other types of contracts
- In particular, slave sellers were often required to disclose known defects and were liable for unknown defects
- Laws were often harsh for injuring someone else's slave

Slavery and the Intersection of Law and Economics

The laws governing slavery were informed by the economic analysis. These laws would provide the foundations for several aspects of consumer protection and contract law that we consider standard today. A few examples:

- Manumission - over time states limited manumission, recognizing that owners had an incentive to free slaves once they were no longer productive
- Laws requiring sellers to disclose defects - some of the first laws recognizing problems of asymmetric information in markets
- Punishment - slaves could be punished more severely than free laborers, part of the justification for this was a difference in available incentive schemes
- Safety - laws made employers of hired slaves and common carriers liable for physical injury to slaves

Studying Slavery

- Because slaves were bought and sold and worked on plantations that kept detailed records, quite a bit of data is available to economic historians
- Data is available both for the market for slaves and for the work slaves did on plantations
- Among the data sources economic historians have used to study slavery:
 - Census slave schedules
 - Slave ship manifests
 - Records of slave sales
 - Probate records
 - Plantation ledgers
 - Slave narratives

Census Slave Schedules

Page No. 1 in the County of Sevier State 33
SCHEDULE 2—Slave Inhabitants in Sevier
of Missouri, enumerated by me, on the 4th day of June, 1860. W. S. McPherson Ass't Marshal.

1	NAMES OF SLAVE OWNERS.	2	3			4	5	6	7	8	9	10	11	12			13	14	15
			Number of Slaves.	Age.	Sex.									Color.	Number of Slaves.	Age.			
1	<u>Martha Lewis</u>	1	23	m	B														
2		1	18	f	B														
3		1	6	f	B														
4		1	5	f	B														
5		1	2	f	B														
6	<u>J. I. Johnson</u>	1	14	f	B														
7		1	8	m	B														
8	<u>John Smith</u>	1	25	f	B														
9		1	25	f	B														
10		1	12	m	B														
11	<u>W. W. Smith</u>	1	52	m	B														
12		1	50	m	B														
13		1	42	m	B														
		1	18	f	B														
		1	17	m	B														
		1	16	f	B														
		1	8	m	B														
	<u>John Smith</u>	1	25	m	B														
		1	20	m	B														
		1	18	f	B														
		1	16	f	B														
		1	16	f	B														
	<u>Wesley Smith</u>	1	32	m	B														
		1	18	f	B														
	<u>J. A. Sale</u>	1	48	m	B														
		1	35	m	B														
		1	25	f	B														

Ship Manifests

MANIFEST OF NEGROES, MULATTOES, AND PERSONS OF COLOUR, taken on board the
Big Ajax of *Norfolk*
Robt Banks is Master, burthen *100* Tons, to be
 transported to the Port of *New Orleans* for the purpose of being sold
 or disposed of as Slaves, or to be held to service or labor.

Number of Entry.	NAMES.	SEX.	AGE.	HEIGHT.		Whether Negro, Mulatto, or Person of Colour.	Owners' or Shippers' Names and Places of Residence.
				Feet.	Inches.		
1	Charley	man	22	5	3 1/2	Black	<i>W. B. Williams for A. de Endre</i> <i>owned to Henry de Endre</i> <i>of New Orleans</i> <i>Wife of Wm R. de Endre</i> <i>A de Endre</i>
2	Peter	"	19	5	2 1/2	"	
3	John	"	22	5	7	"	
4	Frank	"	22	5	5 1/2	Brown	
5	Barthelt	"	19	5	7 1/2	Black	
6	Abraham	"	19	5	3 1/2	"	
7	Claitorn	"	20	5	5 1/2	"	
8	Isabella	"	19	5	4 1/2	"	
9	Lippon	"	20	5	5 1/2	"	
10	Polly	"	20	5	5 1/2	"	
11	Lack	"	20	5	5 1/2	"	
12	Nelson	"	21	5	10	Brown	
13	Bob	"	18	5	3 1/2	Black	
14	Refray	"	26	5	7 1/2	"	

Probate Records

4 Iron Pott Racks 30/. 1 weeding hoe 3/9.	1.13. 9
1 spade 1/. 1 Hilling hoe 6d 1 Hair Sifter 1/.	. 2. 6
1 Old Copper Coffee Pott	. 0. 6
3 Old Pewter Dishes & 4 Plates 4/.	. 4. 0
3 Pewter Spoons 3d 1 Iron Bread Toster 2d	. 0. 5
1 Negro Woman Named Nel Aged 64 Years	1. 0. 0
1 Negro Woman Named Amery do 54 Do	10. 0. 0
1 Old Black Horse aged 22 Years	.15. 0
1 Mans Saddle & Bridle	.15. 0
1 Cow	2. 5. 0
1 Small Leather Trunk 2/. 1 Japaned Tea Board 2/6.	. 4. 6
2 Bark Bottles 6d 1 Snuff Bottle 1¼d	. 0. 7½

Plantation Records

DAILY RECORD OF COTTON PICKED on Plantation
during the week commencing on the 22 day of October 1851
Overseer.

NAME.	No.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Week's Picking.
		22	23	24	25	26	27	
1								
Joe Eustis	2	2 50	2 55	2 95	3 10	2 80	3 75	16 65
Thos	3	2 55	2 60	2 50	2 90	2 95	2 50	16 80
John Jingle	4	Grinning	Grinning	Grinning	Grinning	Grinning	Grinning	25 80
Jackson	5	1 50	1 60	1 65	1 80	1 65	1 40	9 60
Green	6	Sick	8 55	1 75	1 60	Sick	Sick	4 20
Richmond	7	1 30	1 55	1 50	1 70	1 45	1 65	9 75
Robinson	8	2 30	1 75	3 37	Grin	Grin	Grin	4 05
Harrison	9	1 55	1 65	1 50	1 65	1 55	1 75	9 95
Ed. Felt	10	Waggoning	Waggoning	Waggoning	Waggoning	Waggoning	Waggoning	
Joe J. Gains	11	1 45	1 10	1 45	1 45	1 15	1 30	6 15
John Ham	12	7 5	7 5	5 0	5 5	5 0	1 00	43 5
Stephens	13	1 50	1 45	1 55	1 50	1 90	1 90	8 60
Jefferson	14	2 40	2 30	2 55	2 55	2 65	2 75	15 15
Ed. Felt	15	Grin	Grin	Grin	Grin	Grin	Grin	
Anderson	16	Grin	Grin	Grin	Grin	Grin	Grin	
William C. Pugh	17	12 5	Grin	Grin	Grin	Grin	Grin	1 25
Spencer	18	1 85	1 85	1 85	2 20	2 10	3 10	11 95
St. John	19	1 60	1 65	1 65	1 65	1 65	1 65	8 40
Hartman	20	85	70	100	1 00	1 10	1 10	5 75
John Henry	21	1 55	1 55	1 55	1 60	1 60	1 70	9 55
Jay	22	1 90	2 30	2 35	2 40	2 45	2 45	13 75
Reber	23	2 45	2 65	3 10	3 00	Sick	Sick	11 20
Dick	24	1 25	1 20	1 40	1 55	1 50	1 45	8 35
Joe. Claborn	25	2 10	2 15	2 50	75	Sick	Sick	7 50
Phillips	26	2 00	2 05	2 25	2 25	2 30	2 35	13 20
Wilson	27	2 50	1 80	2 75	2 85	Sick	Sick	9 90
Elyah	28	1 20	1 30	1 35	1 30	1 50	1 45	8 10
29								

The Federal Writers' Project Slave Narratives

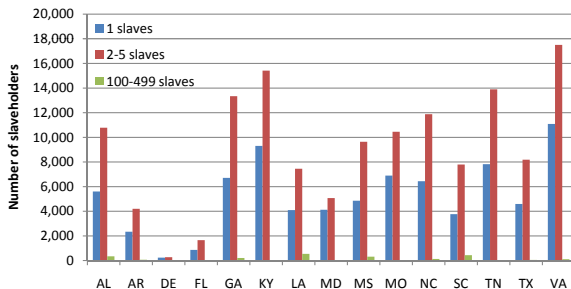
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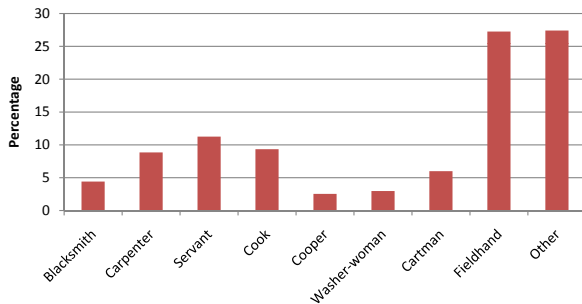
that would 'commodate a whole fence rail, it wuz so big, an' had pot hooks, pots, big old iron ones, an' everything er round to cook on. Aunt Winnie had a great big wooden tray dat she would fix all us little niggers' meals in an' call us up an' han' us a wooden spoon apiece an' make us all set down 'round the tray an' eat all us wanted three times ev'ry day. In one corner of the kitchen set a loom my Mother use to weave on. She would weave way into the night lots of times.

The fust thing I 'members is follerin' my Mother er 'round. She wuz the housegirl an' seamstress an' ev'rywhere she went I wuz at her heels. My father wuz the overseer on the Hunt place. We never had no hard work to do. My fust work wuz 'tendin' the calves an' shinin' my Master's shoes. How I did love to put a Sunday shine on his boots an' shoes! He called me his nigger an' wuz goin' ter make a barber out o' me if slavery had er helt on. As it wuz, I shaved him long as he lived. We lived in the Quarters over on a high hill 'cross the spring-branch from the white peoples' house. We had comfortable log cabins an' lived over there an' wuz happy. Ole Uncle Alex Hunt wuz the bugler an' ev'ry mornin' at 4:00 o'clock he blowed the bugle fer us ter git up, 'cept Sunday mornin's, us all slept

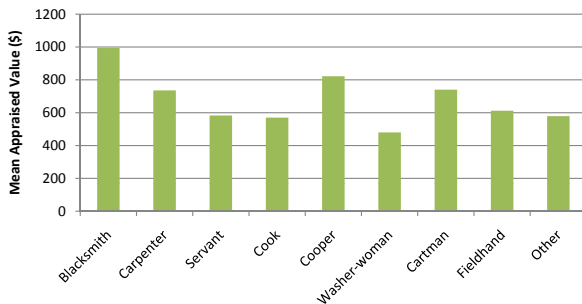
Slaveholders by State and Number of Slaves



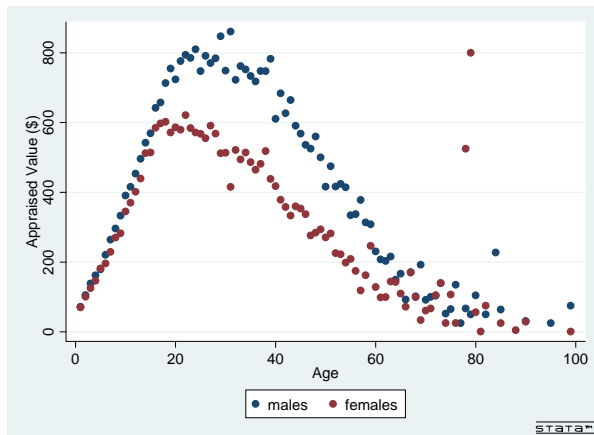
Slaves by Skill



Slave Value by Skill



Slave Value by Gender and Age



The Geography of Slavery

- Slavery is typically thought of as a Southern phenomenon and the patterns of slaveholding seem to confirm this
- This doesn't mean that slavery wouldn't work in the Northern economy
- The Northern farms faced the same labor constraints as Southern farms and in fact slaves were occasionally used in wheat production
- The growth of Southern slavery had a lot to do with the productivity of slaves in growing the southern staple crops of cotton and tobacco (and sugar in Louisiana)
- It was this high productivity in cotton and tobacco that allowed southern farmers to compete for slave labor with Caribbean sugar plantations

The Geography of Slavery

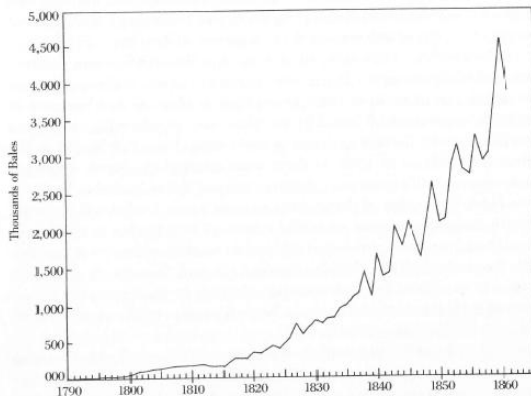
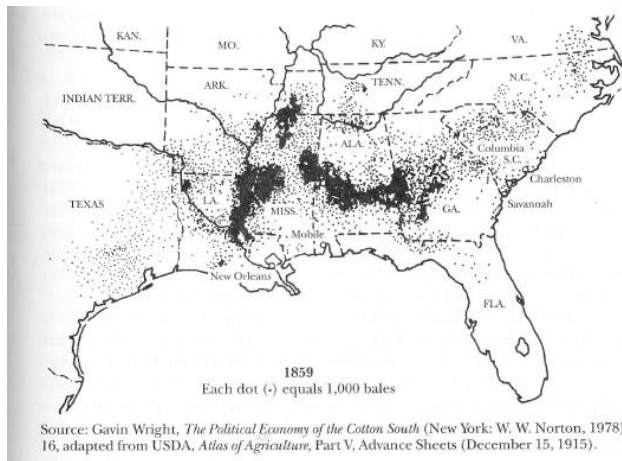


Figure 2. The course of U.S. cotton production, 1791–1861.

The Geography of Slavery



The Geography of Slavery



The Productivity and Profitability of Slaves

- The patterns of slaveholding suggest that slaves were most productive in the South on cotton and tobacco plantations
- However, this doesn't tell us whether slavery was more profitable than accomplishing the same tasks with free labor
- One of the big debates in economic history was whether or not slavery was profitable and efficient as an institution
- An answer to this question would help to determine whether slavery was an economically viable institution (whether it would have continued if the Civil War didn't happen) and how important slavery was to American economic development

The Traditional Economic View of Slavery

"[I]t was widely believed that the slave plantations were unprofitable and inefficient enterprises that were kept in operation by a class prepared to sacrifice its private economic interest, enduring economic stagnation for the South, in order to maintain its political and cultural hegemony."

–Fogel and Engerman, 1980

The Traditional Economic View of Slavery

Up until the 1970s, the traditional view of the economics of slavery could be summarized as follows:

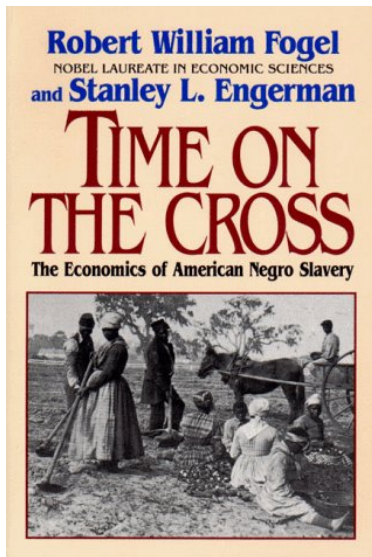
- Slavery was an unprofitable investment
- Slavery was a dying institution
- Slave labor was economically inefficient
- Slavery retarded the growth of the southern economy
- Slavery provided extremely poor living conditions for the typical slave (in terms of consumption, health and physical abuse)

Coerced Labor and Efficiency

Why did people think slave labor was inefficient?

- The general belief was that coerced labor would put in less effort than paid labor and would be more likely to engage in forms of resistance
- People thought that even with the threat of punishment to get slaves to work, the productivity of a slave simply wouldn't be as high as that of a paid worker
- Under this view, using slave labor requires potentially costly supervision and lower levels of output per worker
- Slavery would be an inefficient institution that would have held back the southern economy

Igniting the Modern Debate over Slavery



Fogel and Engerman's 'Principal Corrections'

Fogel and Engerman argued for ten 'corrections' to the traditional view of slavery:

- (1) Slave owners were not irrational, slaves were generally a highly profitable investment
- (2) There is no evidence that economic forces alone would have ended slavery
- (3) Slave owners anticipated future prosperity
- (4) Slave agriculture was more efficient than free agriculture
- (5) The typical slave field hand was more productive than his white counterpart

Fogel and Engerman's 'Principal Corrections'

- (6) Slavery was not incompatible with an industrial system
- (7) Slave breeding did not destroy the black family
- (8) The material conditions of slaves compared favorably with those of free industrial workers
- (9) Slave income was expropriated by owners but at a lower rate than previously assumed
- (10) The southern economy wasn't stagnating and was instead growing rapidly between 1840 and 1860

The Reaction to Time on the Cross

“[Time on the Cross is] simply shot through with egregious errors” – Paul David

“[Time on the Cross should be consigned] to the outermost ring of the scholar’s hell, obscurity” – Thomas Haskell

“Time on the Cross is a failure” – Richard Sutch

What was so controversial?

- Several of Fogel and Engerman's points had already been conceded (the profitability of purchasing slaves, the role of slaves in industry and cities)
- The big controversy centered around the claims of efficiency and slave welfare
- The strongest objections were to the following assertions:
 - Slave plantations were more efficient than farms using free labor
 - The rate of expropriation was low and the material living conditions decent for slaves
 - Punishment was used less often than previously assumed
 - The family was the basic social unit under slavery

Slavery and Efficiency

Total Factor Productivity on Southern Farms Relative to Northern Farms (Northern Farms=100), 1860

Farm Size (number of slaves)	Old South	New South
0	98.4	112.7
1 to 15	103.3	127.2
16 to 50	124.9	176.1
51 or more	135.1	154.7
All slave farms	118.9	153.1
All farms	116.2	144.7

Slavery and Efficiency

Work hours per year for slaves and free farmers

Group	Hours per year
Southern slaves	2,800
Northern farmers	3,200
Corn belt farmers	3,365
Western dairy farmers	3,365

Where was the efficiency gain coming from?

- Slaves weren't more productive because they were working longer hours
- They were actually producing more with a shorter work year
- One part of this increased productivity may have been scale economies
- Another reason might be that large plantations effectively used a different labor technology
- Larger plantations using slave labor could employ the gang system

The Task System vs The Gang System

- There are two general approaches to using slave labor on a farm: the task system and the gang system
- The task system:
 - Each slave is assigned an amount of work to get done by the end of the day (perhaps longer)
 - The work might require several different actual tasks
 - Amount of work was proportional to ability (hand rating)
 - Example: the day's work might be to plow, seed and hoe a certain area of land
- The task system could be implemented on any size of farm

* The field-hands are all divided into four classes, according to their physical capacities. The children beginning as “quarter-hands,” advancing to “half-hands,” and then to “three-quarter hands;” and, finally, when mature, and able-bodied, healthy and strong, to “full hands.” As they decline in strength, from age, sickness, or other cause, they retrograde in the scale, and proportionately less labor is required of them. Many, of naturally weak frame, never are put among the full hands. Finally, the aged are left out at the annual classification, and no more regular field-work is required of them, although they are generally provided with some light, sedentary occupation. I saw one old woman

Frederick Law Olmsted, “A Journey in the Seaboard Slave States” (1856)

The Task System vs The Gang System

Some typical tasks for slaves (based on a full hand):

- Ditcher: 1,000 cubic feet in light meadow, 200 cubic feet in cypress swamp
- Sewing rice: 2 acres per day
- Reaping rice: .75 acres per day
- Cooper: 18 barrels per week
- Wood chopper: cut and split 1 cord per day

The Task System vs The Gang System

The basic characteristics of the gang system used on plantations:

- Slaves were divided into groups (gangs) with specialization of tasks
- These groups might be based on skill and ability
- The division of labor within a gang made a member responsible for a precise task but also made performance dependent on the actions of the others in the gang
- The gangs were typically composed of 10 to 20 slavehands and headed by a single driver
- In many ways the gang system was achieving for plantations what the assembly line would accomplish for manufacturing

The Task System vs The Gang System

There are a few different explanations for why the gang system could lead to greater efficiency:

- Sorting slaves by physical capability led to greater productivity through exploiting comparative advantages
- Direct supervision in gang system produced greater effort than incentive structure of task system
- Steady and intense pace of work under the gang system (keep up to the people ahead you, don't get in the way of people behind you)

Gang System Efficiency: Comparative Advantage

An example of comparative advantage:

- Suppose that a strong slave can plow one acre per day or pick 50 pounds of cotton per day
- Suppose that a weak slave can plow one quarter of an acre per day or pick 25 pounds of cotton per day
- Notice that the strong slave has an *absolute advantage* in both tasks and a *comparative advantage* in plowing

Gang System Efficiency: Comparative Advantage

Total output with both slaves divided their time evenly between tasks:

$$\text{Plowed acres} = \frac{1}{2} \text{ day} \cdot 1 \text{ acre/day} + \frac{1}{2} \text{ day} \cdot \frac{1}{4} \text{ acre/day} = \frac{5}{8} \text{ acres}$$

$$\text{Cotton picked} = \frac{1}{2} \text{ day} \cdot 50 \text{ lbs/day} + \frac{1}{2} \text{ day} \cdot 25 \text{ lbs/day} = 37.5 \text{ lbs}$$

Gang System Efficiency: Comparative Advantage

Total output having weak slave specialized in picking and still aiming for $\frac{5}{8}$ acres plowed:

$$\text{Plowed acres} = \frac{5}{8} \text{ day} \cdot 1 \text{ acre/day} + 0 = \frac{5}{8} \text{ acres}$$

$$\text{Cotton picked} = \frac{3}{8} \text{ day} \cdot 50 \text{ lbs/day} + 1 \text{ day} \cdot 25 \text{ lbs/day} = 43.75 \text{ lbs}$$

Gang System Efficiency: Steady and Intense Pace

own supervisor.¹ Upon many estates of small dimensions the owner would lead the plow-gang, making his own furrow, and requiring the negroes to keep pace with him, while his son would do likewise with the hoe-gang. Or if the planter spared himself from the manual labor, he would oversee the work either in person or through a hired overseer, or in many cases through a reliable slave whom he constituted foreman or “driver” and vested with authority subordinate to his own. In some localities, as in most of the Carolina rice district, the negroes instead of being worked strictly in gangs were given tasks of hoeing or plowing a specified area for each day.

Uldrich Phillips, “The Origin and Growth of the Southern Black Belts” (1905)

Gang System Efficiency: Steady and Intense Pace

