



Institutional change

Stanley Engerman*

University of Rochester, Rochester, NY 14627-0156, USA
Harvard University, Cambridge, MA 02138, USA

ARTICLE INFO

Article history:

Available online 13 April 2012

JEL classification:

N36

N56

N96

Keywords:

Slavery vs. free labor
Indentured labor

ABSTRACT

Engerman, Stanley—Institutional change

This paper deals with the rise and decline of slavery in the Americas, focusing on the timing and pattern of slave emancipations and the economic adjustments made to the legal ending of slavery. *Journal of Comparative Economics* 40 (4) (2012) 596–603. University of Rochester, Rochester, NY 14627-0156, USA; Harvard University, Cambridge, MA 02138, USA.

© 2012 Association for Comparative Economic Studies Published by Elsevier Inc. All rights reserved.

I. The recent interest in the nature and role of institutions, and their effects on the economy, covers a very broad range of issues.¹ These concern legislation and agreements concerning land, labor, and capital goods, including various types of government control over assets including human and physical capital. Given this broad range of issues covered, it is not always easy to describe a set of institutions as being either uniformly good or bad in influencing economic growth. Any analysis of the relation of institutions to economic development thus has some uncertainty. Such evaluations are quite complex at any one point in time, but they are even more so when changing circumstances over time can lead in different directions depending on the nature of the political and technological environment. Then the seemingly favorable institutions existing at one time may have quite different impacts in future years, and also that different effects may result from differing packages of institutions.

Perhaps these complexities are most severe in discussing institutions relating to the control and use of labor. Labor is possibly the most important of the factors of production and has been made to confront a very large number of constraints of quite different forms.² There have been several different major institutions regarding labor, and no matter how broadly defined the institutions, intricate points of law exist which means that what is allowed to labor (or their hirers) can take rather different forms. Before focusing attention mainly on one specific form of labor institution—slavery—I want to briefly discuss several of the major institutions concerning labor that have been of importance historically, existing for long periods of time and in many parts of the world.

II. Slavery entails the ownership of one person by another, with the rights of owners to buy and sell slaves.³ Slavery was usually of an “outsider” from a different society. It often was the result of military capture, and often meant movement of the slaves across long distances to new locations. Slavery has existed in many places, in all parts of the world, and it persisted, legally, into the nineteenth and twentieth centuries, and, some argue, still exists today. The laws of slave societies have had very

* Corresponding author. Fax: +1 585 256 2309 (Rochester).

E-mail address: s.engerman@rochester.edu (S. Engerman).

¹ For a general discussion of these issues, see Stanley L. Engerman and Kenneth L. Sokoloff, *Economic Development in the Americas since 1500: Endowments and Institutions* (Cambridge University Press, 2011).

² Labor is an important input, but these individuals also are members of society and voters on political issues whose rights are major measures of welfare. It is not always easy to separate the aspects.

³ On slavery, see Stanley L. Engerman, *Slavery, Emancipation and Freedom: Comparative Perspectives* (Baton Rouge: Louisiana State University Press, 2008).

Table 1
Initial Decrees of Emancipation.

Savoy	19 December	1771
Baden	23 July	1783
Denmark	20 June	1788
France	3 November	1789
Switzerland	4 May	1798
Schleswig–Holstein	19 December	1804
Poland (Grand Duchy of Warsaw)	22 July	1807
Prussia	9 October	1807
Bavaria	31 August	1808
Nassau	1 September	1812
Estonia	23 March	1816
Courland	25 August	1817
Württemberg	18 November	1817
Livonia	26 March	1819
Mecklenburg	18 January	1820
Grand Ducky of Hesse	17 December	1820
Hannover	10 November	1831
Electoral Hesse	5 January	1831
Saxe–Altenburg	29 April	1831
Saxony	17 March	1832
Brunswick	12 October	1832
Schaumburg–Lippe	24 January	1845
Schwarzburg–Sondershausen	28 March	1848
Reuss, older line	25 April	1848
Saxe–Weimar	18 May	1848
Austria	7 September	1848
Saxe–Gotha	20 October	1848
Anhalt–Dessau–Köthen	29 October	1848
Saxe–Coburg–Gotha	25 January	1849
Oldenburg	18 February	1849
Schwarzburg–Rudolstadt	27 April	1849
Anhalt–Bernburg	29 August	1849
Lippe	20 November	1849
Saxe–Meiningen	5 May	1850
Reuss, younger line	14 April	1852
Hungary	2 March	1853
Russia	19 February	1861
Romania (the Danubian Principalities)	14 August	1864

Source: Jerome Blum, *The End of the Old Order in Rural Europe*, Princeton University Press, 1978, p. 356.

well-defined property rights, both in regard to slaves and other assets, and legally-defined property rights for non-slave owners were similar to those of others in the free populations the main difference from other societies being in the absence of any rights for slaves.

Serfdom, while seemingly having certain characteristics similar to slavery, also had significant differences. Most prevalent in areas of relatively high population density, such as Europe and Asia, it meant labor was bound to land, with the serf generally working part-time for the lord of the land or the manor and part-time for himself. The serf could be sold but, it was most frequently in a package with land, permitting the preservation of the family. Serf labor was coerced and the serf was exploited. Within Europe serfdom frequently existed until the late nineteenth century, ending at about the same time as slavery in the New World (see [Tables 1 and 1A](#)). As with slavery, its ending did not bring any compensation to the serfs, but emancipation provided financial benefits to owners.

Slavery and serfdom would not only be lifetime conditions, but the status was also inherited by the mother's offspring. Another frequent form of coerced labor, indentured or contract servitude, was neither lifetime nor inherited (see [Table 2](#)).⁴ Indentured servitude and its variant, apprenticeship, meant a contractual agreement for several years of labor. While apprenticeship was generally within a narrow local area, indentured labor often meant long distance transcontinental movement. This involved detailed networks in sending and receiving areas, with regulations regarding shipments, and controls over labor use. Indentured labor was often used for plantation labor. In the case of 19th Century indentured labor from Asia, the decisions to end this form of labor, unlike the case of ending slavery, were made in the areas of departure, not in the areas receiving the labor. This form of indentured labor went most frequently to the Caribbean and other sugar producing areas from India and China. Many contract laborers returned to their homelands, although in several cases they remained in large numbers in their new places of residence. There were two major periods of indentured labor. The first, mainly of English and Germans to North America in the eighteenth century, ended at the start of the nineteenth century, with most of the transported labor remaining in North America. Unlike slavery, contract labor immigrants had a final ending date, and was entered into voluntarily by the laborers.

⁴ See also David Northup, *Indentured Labor in the Age of Imperialism, 1834–1922* (Cambridge: Cambridge University Press, 1995).

Table 1A
Emancipation of Serfs in Europe.

Period	Number of decrees	
1711–1800	5	(Including Denmark and France)
1801–1820	11	
1821–1830	0	
1831–1840	5	(All in 1831 and 1832)
1841–1850	13	(Mostly German states)
1851–1864	4	

Table 2
Estimates of Intercontinental Flows of Contract Labor, Gross Movements, Nineteenth and Early Twentieth Centuries.

	Areas of origin to receiving region	Years	Numbers (thousands)	
a.	India: to	British Guiana	1838–1918	238.9
b.		Trinidad	1838–1918	143.9
c.		Other British Caribbean	1838–1915	46.8
d.		Mauritius	1834–1910	451.8
e.		French Caribbean	1853–1885	About 79.7
f.		Réunion	1826–1882	86.9
g.		Surinam	1873–1916	34.0
h.		St. Croix	1862	0.4
i.		Fiji	1878–1917	61.0
j.		Natal	1860–1912	152.4
k.		Mombassa	1895–1922	39.5
l.	India: to	Malaya	1844–1910	249.8
m.	China: to	British Guiana	1852–1879	13.5
n.		Trinidad	1852–1865	2.6
o.		Other British Caribbean	1852–1884	1.7
p.		Peru	1849–1874	About 90.0
q.		Cuba	1848–1874	124.8
r.		Hawaii	1865–1899	33.6
s.		Transvaal	1904–1907	63.7
t.	Japan: to	Hawaii	1868–1899	65.0
u.		Peru	1898–1923	17.8
v.	Java: to	Surinam	1890–1939	33
w.	Portuguese Islands: to	Hawaii	1878–1899	10.8
x.		British Guiana	1835–1881	32.2
y.		Other British Caribbean	1835–1870	8.8
z.	Pacific Islands: to	Australia	1863–1904	61.2
aa.		Elsewhere in Pacific	1863–1914	About 40.0
bb.		Peru	1862–1863	3.5
cc.	Africa: to	British Guiana	1834–1867	14.1
dd.		Jamaica	1834–1867	11.4
ee.		Trinidad	1834–1867	8.9
ff.		Other British Caribbean	1834–1867	5.0
gg.		French Caribbean	1854–1862	18.5
hh.		Réunion	1848–1861	34.3
ii.	Yucatan: to	Cuba	1849–1871	About 2.0
jj.	Angola: to	São Tomé and Príncipe	1876–1915	About 96.5

Note: Several intracontinental flows are included: those from India to Malaya, from Yucatan to Cuba, and from Angola to the offshore islands. Also, some relatively minor intercontinental flows of contract labor are omitted, in addition to movements within Africa in the late 19th and 20th centuries. In a few cases there may be small amounts of noncontract labor included, and there may be some differences between numbers registered, numbers departing, and numbers arriving, but these will have only a minor impact on the figures. The years are not in all cases calendar years, and the dates of flows are approximations in some cases, including years in which the trade was prohibited, but, again, these will not have any impact on the interpretations. Finally, there are a number of discrepancies among the various sources (compare, for example, the details of estimates for the Indian emigration in Ferenezi and Willcox, *International Migrations*, with the estimated inflows given in other sources), but, again, these do not alter the basic patterns. Sources: See Stanley L. Engerman, "Contract Labor, Sugar, and Technology in the Nineteenth Century," *Journal of Economic History*, 43 (September 1983) pp. 635–659.

III. The case of non-coerced, so-called free labor, can be rather more complex, in trying to define its essential characteristics, which often varies somewhat by nation.⁵ British free labor, for example, long had been subject to constraint by Masters

⁵ See Robert J. Steinfield and Stanley L. Engerman, "Labor: Free or Coerced? An Historical Reassessment," in T. Brass and M. van der Linden (Eds.), *Free and Unfree Labor: The Debate Continues* (Bern: Peter Lang, 1997).

Table 3
The Timing of the Ending of Slave Trade and Slavery.

	Ending of Slave Trade	Ending of Slavery
Denmark	1803	1848
England	1808	1834
United States	1808	1865
Netherlands	1814	1863
France	1815	1848 ^a
Brazil	1830	1888
Spain (Cuba)	1835	1886 ^b
Sweden	1794	1847

^a Haiti, by 1804, is a special case.

^b Puerto Rico, 1873.

and Servants Laws, which limited a workers' ability to quit jobs. The terms of the receipt of welfare payments under the British poor laws also imposed constraints on migration.⁶ In the US the returns to free labor were influenced by government policies regarding land purchase as well as by the magnitude of free immigration. In parts of Europe and Asia there were also constraints on the ability of laborers to emigrate to foreign nations. There are numerous issues related to credit and land purchases, borrowing, and taxation that influence the meaning of free labor. More constraints could be listed, but the point is that "free labor" is not necessarily and always "fully" free, and it may not always seem the complete polar opposite to slavery or serfdom in either its legal or operative terms. This uncertainty about the precise nature of the distinction of free and unfree labor, is further complicated when we discuss questions of comparative standards of living and intensity of work under the different labor forms.

IV. Much of the literature on institutions, even those that focus on the origins and the demise of particular institutions, do not deal directly with questions of the time it takes for an institution to be established or with the time pattern of its decline and the nature of the transition to a successor state. Rather, much of the discussion represents a comparison of two equilibrium states. Such comparison is, of course, important, but it does mean that important parts of the historical record will be missed.

Important points are seen in studying the rise and fall of plantation slavery in the New World. While, in retrospect, the theoretical statements of the conditions for slavery to occur seem to be met relatively early and in dramatic fashion, there was a roughly quarter-century lag in two of the largest colonies, Jamaica and St. Dominique, between settlement by white Europeans and the establishment of the sugar–slave plantation economy. The growth of the slave–tobacco economy in Virginia and Maryland required over a century after settlement. Studies of the time–path of the establishment of slavery need to make allowances for changing markets as well as refinements in legal codes. In studying serfdom the basic origins have been attributed to either of two factors – the lord's ability to coerce laborers or else to the desire of workers on the land to secure military protection against outside forces, with some possibility that the role of these two causal factors would vary over time. In these (and other) cases attention to both timing and to the path of change over time can be central to the historical story.

V. Similarly, a detailed study of the pattern of decline of an institution will yield considerably more historical information than just the existence of the facts of its decline. This is because, in many cases, declines take varying amounts of time, and seem to include many different possibilities than do origins, while conditions for a voluntary ending of slavery are known in the case of the New World this voluntary ending was never the case. The Haitian case was the major ending of slavery by a successful slave revolt while all others ultimately involved legislation by government units. I want to use the study of the decline of slavery in the New World to demonstrate the richness of the study of this topic and the types of historical questions it poses. In some cases, there will be an intermediate stage between slavery and free labor while in other cases there would be no legislated transitional step, and, depending on the form of the transitional legislation, the nature of the post-slave society would differ. As the specific measures and forms taken to end slavery were often quite different in different places, they did have rather different outcomes and led to different forms of transitions. To indicate these points about the implications of measures taken to end this particular institution, I will discuss the case of slavery, mainly in the Western Hemisphere.

VI. The dating of the end of slavery and of the slave trade as institutions occurred at rather different dates and were the result of different types of legal and legislative actions in the various nations and colonies. In Britain the major event regarded in the attack on slavery was the ending of the slave trade in 1808 (in contrast with the legislation ending slavery in the colonies in 1834, and the expected ending of the apprenticeship in 1840 which, however, ended in 1838. In the US greater attention is given to the ending of slavery in 1865 (with less said about the ending of the slave trade in 1808). This difference in timing between ending the slave trade and ending slavery is significant since in most New World societies the legal ending of the slave trade occurred up to 50 years before the ending of slavery (see *Tables 3–6*).⁷ While the ending of the

⁶ These laws were in effect from 1823 to 1871. Earlier labor legislation included the Statute of Artificers of 1563 served to limit mobility of workers and did remain on the books until 1819.

⁷ The date in these tables are drawn from Stanley L. Engerman, "Emancipation in Comparative Perspective: A Long and Wide View" in *Gent Oostindie* (Ed.) *Fifty Years Later: Antislavery, Capitalism, and Modernity in the Dutch Orbit*. (Leiden: KITLV Press, 1995, pp. 223–241).

Table 4
Slavery Laws in the Northern United States.

	Law of Free Birth	Law or Provision Ending Slavery
Pennsylvania	1780	
Rhode Island	1784	1842
Connecticut	1784	1848
New York	1799	1817 (to be ended 1827)
New Jersey	1804	1846

Table 5
Slavery Laws in Spanish America.

	Law of Free Birth	Law of Provision Ending Slavery
Argentina	1813	1853
Peru	1821	1854
Ecuador	1821	1851
Columbia	1821	1851
Venezuela	1821	1854
Uruguay	1825	1853
Bolivia	1831	1861
Paraguay	1842	1869

Table 6
Slavery Laws in the Spanish Caribbean and Brazil.

	Law of Free Birth	Law of Provision Ending Slavery
Puerto Rico	1870	1873
Cuba	1870	1886
Brazil	1871	1888

slave trade can be regarded as the initial political and moral step toward ultimately ending slavery, the time lag could be substantial and slavery was thus permitted to persist for several decades in the absence of the transoceanic shipment of slaves from Africa.

The distinction between ending the slave trade and ending slavery was an important consideration in the discussions of the early abolitionists. Thomas Clarkson, for example, discussed whether abolition of the slave trade or of slavery was politically more feasible and should represent their initial basis of agitation.⁸ Clarkson pointed to the advantage of first attacking the slave trade, since naval actions had a long history and ending it would limit the number of slaves in the colonies. To end slavery in the colonies would have meant a need to provide means for a transition of the slaves in the colonies to freedom and would also mean a more direct interference with the property rights of colonial settlers. The choice to attack the slave trade first seemed a more promising move. It turned out to be quite successful, and was a policy followed by most other countries. To some abolitionists, ending the slave trade was only the first step to bringing about the ending of slavery, arguing that it could be the opening moral wedge in achieving the broader reform. Others argued that the dynamic economic and politics changes that had brought about the ending of the slave trade could ultimately bring about the ending of slavery on economic and demographic grounds. The argument, however, often had a rather lengthy temporal dimension, and even then would presumably occur only in the absence of certain offsetting change, such as the acquisition of more territory which could utilize slave labor. Wilberforce and Pitt, for example, placed this period from ending the slave trade to the ending of slavery in the Caribbean at about 200 years.⁹ Others, such as Lord Grenville, added another century to slavery's continued existence.

VII. Historian's discussions of the ending of slavery often focus on the dates of government legislation, but these were often not the dates of the ending of slavery or of the freed-labor apprenticeship. The US case of ending slavery was rather unusual in several dimensions. First, emancipation was immediate after the Civil War, with no time lag between the legal decision to end slavery and the achievement of freedom by the ex-slaves, although this was about 57 years after the ending of the slave trade. Second, the US was the one major case of abolition in the nineteenth century that did not provide any compensation, in funds or in labor time, to slaveowners. But, as was standard at the time, no compensation was paid to former slaves (or, in Europe, to former serfs).

⁸ See Thomas Clarkson *History of the Rise, Progress, and Accomplishment of the Abolition of the African Slave Trade* (new edition). (London: John W. Parker, 1839). As part of the attack on the slave trade, abolitionists claimed that they would stop with the slave trade and that this was not a ploy to end slavery by legislative means, although some believe that ending the slave trade would bring about the ending of slavery.

⁹ For W. Wilberforce, see *A Letter on the Abolition of the Slave Trade* (London: T Cadell and W. Davies, 1862).

Table 7

Slave Prices, Land–Labor Ratios, and Changes in Sugar Production in the British Slave Colonies Prior to and after Emancipation.

	(1) Average slave prices 1823–1830 (£)	(2) Land/Labor ratio (square miles per thousand total population)	(3) Percentage change in average annual sugar production 1824–1833–1839–1846	(4) Period in which preemancipation level of sugar production regained	(5) Ratio of sugar production in 1887–1896 to sugar production in 1839–1846
1 Antigua	33	3.1	+8.7		1.5
Barbados	47	1.7	+5.5		3.5
St. Kitts	36	2.9	+3.8		2.7
2 Trinidad	105	47.7	+21.7		3.0
British Guiana	115	832.4	–43.0	1857–1866	3.4
Mauritius	70	8.0	+54.3		3.1
3 Dominica	43	16.3	–6.4	1847–1856	0.7
St. Lucia	57	15.5	–21.8	1857–1866	1.7
Nevis	39	5.0	–43.1	1867–1876	
Montserrat	37	4.6	–43.7	1867–1876	2.5
St. Vincent	58	5.7	–47.3	Never	0.7
Tobago	46	8.8	–47.5		
Jamaica	45	12.2	–51.2	1930s	0.6
Grenada	59	6.3	–55.9	Never	

Sources: For full details see Stanley L. Engerman, "Economic Change and Contract Labor in the British Caribbean: The End of Slavery and the Adjustment to Emancipation," *Journal of Economic History*, 21 (April 1984), p. 142.

Table 8

Changes in Output of Four Plantation Crops of the US South.

	Average Output 1856–1860	Average Output 1867–1871	Period in Which pre-Civil War Level Regained
Cotton (million lbs.)	1720.2	1323.6	1871.75
Tobacco (million lbs.)	434.2	284.3	1877–81
Rice (million lbs.)	123.3	47.9	1882–86
Sugar (thousand tons)	132.4	54.4	1884–88

Sources: Cotton: George K. Holmes, *Cotton Crop of the United States, 1790–1911*, USDA Bureau of Statistics, Circular 32 (Washington, DC, 1912). Tobacco: George K. Holmes, *Tobacco Crop of the United States, 1612–1911*, USDA Bureau of Statistics, Circular 33 (Washington, DC, 1912). Tobacco output in 1866 was 388.1 million pounds. There was a westward shift in tobacco production; e.g., Virginia did not regain the antebellum level until c. 1900.

Rice: George K. Holmes, *Rice Crop of the United States, 1712–1911*, USDA Bureau of Statistics, Circular 34 (Washington, DC, 1912). There was a marked shift in the regional pattern of rice production with Louisiana being the major producer after 1890. South Carolina's 1890 output was about one-quarter of its level in census year 1860.

Sugar: Noel Deerr, *The History of Sugar* (London: Chapman and Hall, 1949–1950), p. 250 (Louisiana). The last crop before the Civil War was 264,161 tons, while the average for the 4-year period of 1851–1854 was 191,378 tons.

The most frequent form of slave emancipation in the Americas and some other parts of the world, was a form of delayed emancipation with slavery and/or coerced labor apprenticeship both persisting for a long period. This was the emancipation law introduced in five Northern states of the US between 1780 and 1804, in several Latin American nations, and later Cuba and Brazil, where it was known as the "law of the free womb." The basic form of these laws was: (1) no individual enslaved as of the date of passage would be freed – although in some cases subsequent legislation terminated this aspect of slavery – and (2) those born after that date would be considered to be legally free, but owed a period of years to the owner of the mother in the form of apprenticeship, during which time they could be rented out (but were not to be sold to another state in which slavery was still legal, although it is believed that some did occur). The reason for this apprenticeship was two-fold. It was meant to provide a time for the laborers to be "educated" into freedom, a consideration of many slave owners as well as many of the supporters of the blacks. Possibly more important, it provided the owner the opportunity to recover much of the cost of child-raising so that emancipation was relatively inexpensive to him as well as to the local taxpayers. In effect, the apprentices paid most of the costs of their rearing and, thus purchasing their own freedom, and did so by providing 18–30 years (depending on the area and gender) of coerced labor.

In several cases in the Americas, where there was no "law of the free womb" introduced, there were still terms which delayed the date of "full freedom" past that of the abolition legislation. In these cases there was a period of so-called apprenticeship introduced before coerced labor was terminated. This was the means used in the British and Dutch colonies, as well as the Spanish colony of Puerto Rico. The purpose was to provide both some "education" or "training" for coping with freedom and also to provide some compensation in labor time for the loss in capital value caused by the emancipation to the slave owners. The periods of apprenticeship and the deferral of freedom was 10 years for the Dutch, 3 years in Puerto Rico, and while scheduled to be 6 years for the British colonies, it was reduced overall to 4 years. The British use of magistrates to presumably "protect" the ex-slaves was not regarded as successful, in a manner similar to the outcome for the Freedman's Bureau in the US, both of which were believed to be more favorable in handling bargains to the owners than to the ex-slaves.

While some slave emancipations in parts of Asia and Africa, such as India and Indonesia, occurred in the 19th century, most emancipation took place in the twentieth century, with varying compensation schemes. The UN recognized the final legal ending of slavery in Oman in 1970 (and, for the third time in the century Mauritania in 1980). Even today it is argued that forms of slavery still exist and the proper definition of slavery for concerns of the UN and other humanitarian agencies remain.

VIII. In the political and economic debates about the benefits and costs of different institutions, certain considerations related to the issue of timing are often ignored. Discussions of the relative efficiency and profitability of slavery, in contrast with variants of free labor, have had a long and continuing history, and were often central to the antislavery and proslavery arguments. On the antislavery argument it is often claimed that over time free labor will drive out slave labor and that in the absence of warfare or other governmental actions, slavery would come to a quiet end to be replaced by free labor. Yet seldom is there provided a time horizon in which this will occur, a rather important point for understanding contemporary politics. When estimates are provided they seldom point to an immediate transition. Two interesting arguments for the US can be studied. First, in 1861, after the Civil War had begun, one of the leading proponents of US slavery's economic backwardness, John Elliot Cairnes, expected slavery to end, not at once, but "in a very distant day," or even later, say 40 years, even longer if the South was successful militarily.¹⁰ In his 1858 debates with Stephen Douglas, Abraham Lincoln described his policy to end slavery without warfare. His measures were to not interfere with slavery where it existed, but to limit slavery's expansion into the new territories. Given the high rates of population growth this would increase the labor–land ratio in the slave states, reducing the prices of slaves. Over time the price of slaves would fall, ultimately to zero, and owners would voluntarily free their now worthless slaves. When asked how long this would take, he answered about 100 years – an estimate similar to several others at the time. Lincoln, however, pointed to the errors in earlier forecasts, in effect by ignoring the possibility of technological and other developments. He argued that the founding fathers did not spell out a policy for the end of slavery, claims that at the time it was expected that slavery will come to a halt on land labor ratio grounds. Perhaps it may have, but for the shock to the system introduced by the diffusion of the innovation of the cotton gin. What if an earlier nineteenth century date was found for air conditioning? While there may have been few as precise estimates for the survival of slavery such as that of Lincoln, it was seldom expected that the demise of slavery would be immediate, and, indeed the gradualism was regarded as a preferred solution.

The transition from slavery to so-called free labor had different patterns in different cases, and they did not always follow a smooth step-by-step process. In some cases the nature of both the old and new institutions reflected the climatic and geographic circumstances of the area as much as they did any legal provisions. The government attitudes to foreign immigration, whether of free labor or indentured servitude, provided the possibilities for an alternative labor force to replace the freed slaves who, if the demographic circumstances were appropriate, preferred to avoid plantation labor.

The range of variations possible in adjustments to the end of slavery is suggested by the legal actions taken in a non-slave case, Australia. In the 1860s it was decided to have Australia produce sugar and at that time the preferred method was on plantations. Since the whites in Australia were not willing to work on plantations, it was necessary to bring in plantation workers from the Pacific islands under contract labor. Over 30 years later Australia introduced a "White Australia" policy and ended the importation of contract labor. To maintain their desired production of sugar they subsidized small farms using white workers and imposed tariffs even though they believed this would mean higher priced sugar, a higher price that they were, under the circumstances, willing to pay.¹¹

Some areas generally reached earlier production levels some time after the ending of slave labor, while others never did. Some areas used free and subsidized labor drawn from Europe, others used labor under contract from Asia and Africa; still others, like the US south, adjusted by having labor transfer from existing small-scale agriculture to the increased production of export crops, though still on small farms, and some were able to keep ex-slave labor working on plantation systems. Such a diversity of institutional responses is an indication that there may be a range of acceptable institutions, not merely one unique preferred or possible outcome.¹²

Looking at the variation in responses in the British Caribbean, among other places, there is an interesting issue that also pertains to the regions of a national state. In the Caribbean possessions of the British there was generally a uniform set of policies introduced by the Colonial Office in Britain, to apply to all islands. Yet the same policy had different outcomes in different islands, based on the varying economic and demographic conditions (Table 7) The same different outcomes occurred in various US regions (Table 8). In some cases legislation may be quite effective while in others they may be of no importance in certain of the colonies. Of course there will always be cases of institutions being favorable to some individuals and not favorable to others, a circumstance central to the politics of state decision-making.

The various acts that came with the original importance of "free labor" point to the flexibility of that institution. Some changes took place due to the desires of labor, some to demand of the hirers of the employing classes. These include various controls regarding hours and days of work for children, men, and women; controls over immigration and emigration; min-

¹⁰ J. E. Cairnes, *The Slave Power: Its Character, Career, and Probable Designs*. (New York; Harper & Row, 1869 (1862)).

¹¹ This example indicates that racism does not always lead to the unique outcome of enslavement, but rather can have alternative outcomes, depending upon the specifics of technologies, tastes, and racial attitudes.

¹² Although smaller scale sugar farms were not unheard of in the nineteenth century they were found mainly in China and India, nations of very high population density. Other examples of influencing labor institutions are by setting the nature and magnitude of immigration, the manner of allocating land, and the use of tariff and tariff policy.

imum wages; rights to union membership, taxes on income or consumption, and related concerns. There are two important aspects to the attempt to control labor in the interests of employers. One is the desire to get workers to a preferred workplace to be productive; second is to provide appropriate incentives to be productive in those places. Slavery can solve the first of these by forced relocation, but the second problem remains to be solved, as it also does for free labor, which also requires appropriate incentives to produce.