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Strategic Factors in the Economic Development of Early Massachusetts

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"Strategic Factors in the Economic Development of Early Massachusetts"

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Strategic Factors in the Economic Development of Early Massachusetts.

For the UCLA Conference on North American Economic Development

Winifred B. Rothenberg

In what follows I am presenting not so much a paper as a discussion of a few of the questions Joyce Appleby and Robert Brenner suggested might guide our conversation.

I. The Rural Capital Market.

Central to the process of economic development is the transformation of the agricultural economy. That transformation consists of two processes: raising the productivity of resources <u>within</u> agriculture, and, as a consequence, facilitating the exodus of resources <u>from</u> agriculture. Enhancing productivity within agriculture is achieved by the more effective use of inputs. The shift out of agriculture is achieved when factors of production are sufficiently mobile to respond to the higher returns to be earned in the industrial sector where scale economies, elastic demand, dense linkages, favorable terms of trade, capital deepening, and rapid innovation generate increasing returns that spill over to the macroeconomy.

When capital is mobile it is said to be "liquid." The capital invested in agriculture is made more liquid when farmers are willing to shift an increasing proportion of their assets from farm physical capital to negotiable credit instruments, an evanescent form of wealth whose liquidity is enhanced by the collective willingness of others in the capital market to make that shift.

This transition can be observed in the process of happening in a quartile analysis of the wealth of a probate sample of decedents, mostly farmers, in Middlesex County, the rural hinterland of Boston, between 1730 and 1838. Hypothesizing a break-point in 1781, the shift is visible when the two subperiods are compared.

1) Between periods 1 and 2, there was, in constant dollars, a three-fold increase in the Total Wealth, and a doubling of the Net Worth (Total Wealth minus Debts) of the bottom three quartiles of the sample, and a four-fold increase in the Wealth and the Net Worth of the richest quartile, which confirm the accumulation of capital in agriculture across the wealth spectrum.

2) There is a marked shift over the break-point in the composition of decedents' wealth in the direction of greater liquidity. The value of Farm Physical Capital (tools and livestock) as a share of Total Wealth shrank by over 50 percent for all quartiles, while mean holdings of Financial Assets tripled for the poorest quartile, quadrupled for the second, increased fivefold for the third, and increased nearly thirteenfold for the richest quartile after 1781. And as a share of wealth, Financial Assets doubled in constant dollars for all but the poorest, but even they continued to hold a quarter of their wealth in liquid assets in both periods.

3) The association between Wealth and Financial Asset holdings can be measured in log regressions for the whole sample, which show that the wealth elasticity of demand for financial assets increased five-fold between the first and second periods. This alone is an important finding for it suggests that the shift toward more liquid forms of wealth was endogenous, a function of the process of economic growth itself, and might have happened even if the Revolution and independence had not offered up a new menu of investment opportunities.

4) But there was a new menu of investment opportunities created by the exigencies of war finance and the infrastructure building that followed Independence. and it changed the composition of farmers's intangible assets. Although loans remained the principal financial asset held by farmers in all quartiles, securities appear as early as 1778 in the estates of even the poorest

quartile, increasing in the wealthier quartiles as a share of financial assets. In the second period, in addition to state bonds, rural 'portfolios' contained shares in bridges, turnpikes, the Middlesex Canal, an enormous number of local banks, in marine and fire and life insurance companies, in textile, hat, glass, and iron manufacture, and, by the end of the period, in railroads. In terms of the development process, the sudden appearance of these bonds and securities in rural probate inventories and administration accounts speaks most relevantly to the issue of intersectoral shift in the direction of capital flows -- from rural to urban, from agriculture to industry, from periphery to center.

5) Given the spatial concentration of agriculture, the intersectoral mobility of capital will also register as a shift in space, and this I attempt to catch in a Distance-from-Boston variable in my Financial Assets regressions. If holdings of financial assets diminish with distance from the hub of the regional capital market, as one might expect, then the sign on the Distance variable would have been negative. One piece of evidence confirming the spatial extension of the region's capital market over the period is that the sign on the Distance variable switches from negative in the first period to positive in the second. Total wealth decreases with distance from Boston, and financial assets vary with total wealth; yet after 1781 distance from Boston no longer deterred more remote wealthholders from participating in the rural capital market.

No story of rural capital accumulation in the development process should ignore the role played by mortgage lending (although up to now I have.) I have just begun to learn something about the incidence of farm tenancy, the availability of mortgage capital, and the relationship between them in the late

18th century. I have a long way to go before I can call this even "preliminary," but perhaps I can say something interesting even at this early stage.[1]

In terms of the exodus of capital from agriculture upon which, as we have said, industrialization depends, a farm mortgage would appear to be a reverse flow -- from urban to rural, from commerce and banking to agriculture, from Boston to the countryside. But investment of capital in agriculture -- as the British experience has taught us -- is the condition of its transfer out of agriculture! We are told that the investments of the Massachusetts Hospital Life Insurance Company -- "the company that mattered more than any other to the [Boston] Associates...[and] the largest financial institution in New England"[2] -- "were concentrated in western Massachusetts farm mortgages"[3] before 1830. After 1830 eastern investors sought to invest in farm lands farther west, lured there by high rates of interest (if the loan were repaid) and by the appreciating value of the collateral (if it were not).[4]

But in my own sample of farm mortgages from the Middlesex County Registry of Deeds between 1800 and 1830 I have so far found no Boston money invested in farm mortgages in Boston's own hinterland. With the single exception of a creditor from Charlestown, Massachusetts, the mortgagees were themselves

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[1] Out of the sample of 200 Middlesex County deeds that I have examined so far, 69 or just under one-third, were mortgages. The wording of a mortgage deed is like any other deed, except that in a proviso in the last line the conveyance is made conditional upon the mortgager's default after the expiration of the term agreed upon -- usually one year.

[2] Robert F. Dalzell, Jr., Enterprising Elite: The Boston Associates and the World They Made (New York, 1987), p. 81.

[3] Alfred H. Conrad, "Income Growth and Structural Change," in Seymour E. Harris, ed., American Economic History (New York, 1961), p. 39.

[4] Allan G. Bogue, Money At Interest: Thje Farm Mortgage on the Middle Border (Ithaca, 1955), p. 265.

residents of rural towns, who, by investing in farm mortgages in other rural towns contributed to the accumulation and mobilization of capital from within the rural economy.[5]

That the Boston "insiders" -- dazzled, one imagines, by the profits to be made in commerce, shipping, banking, manufacturing, and speculation in western lands -- neglected to "attend to their hinterland" throughout the 19th century, forced the countryside to pursue growth through an endogenous process of market integration.

Boston's choice was not without cost to Boston whose stagnant population, diminished regional influence, and sluggish per capita income growth after 1740 stand in sharp contrast to Charleston S.C., which grew to surpass Boston by "aggressively nurturing" its plantation hinterland.[6] But it was also not without cost to the hinterland. Development, as we said above, is a dialectical process by which the shift of resources out of agriculture must be accompanied by an intensification of resource use within agriculture. If Boston capital was being channeled away from rural Massachusetts one would expect that to have had a dampening effect on endogenous growth within the agricultural sector. My labor productivity index (1795-1805=100) rises from 98 to 154 between 1785 and 1840, a very respectable growth rate of about 1.0 percent per annum. One asks, with

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[5] This is an instance of the sort to which McCusker and Menard refer when they warn of the way in which the research design in New England social history over the past 25 years -- the proliferation of town studies -- has blinded us to the trade relations between towns that determine the pattern of economic development. John J. McCusker and Russell Menard, The Economy of British America, 1607-1789 (Chapel Hill, 1985), p. 102.

[6] Russell Menard, "A Buddenbrooks in Boston? Entrepreneurs, Capital, and the Problem of Boston's Relative Failure in the 18th Century," unpublished ms., May 1994, pp. 3, 6.

Menard, Why didn't Boston investors see the expansion going on around them? And what difference would it have made if they had?

One respect in which it might have made a difference is in the extent of farm tenancy. Like mortgages, this is an area in which I am just beginning to formulate some ideas. The archive is the 1798 Federal Land Tax which identifies for each property the owner and the 'occupant'. Towns differ enormously in the proportion of total properties occupied by someone other than the owner. The more urban, the larger the share of 'occupants'. Cambridge farms were heavily tenanted. The frontier -- Berkshire County, the New Hampshire border, and the vast, empty lands of Maine -- had no tenants at all. In Reading -- a middling, settled community -- about 10 percent of the farms were occupied by someone with a name different from the owner. If 'occupants' were indeed tenants,[7] then the simplest hypothesis is that the rate of tenancy increased with local land values. But in that case mortgage capital should have been available as an alternative to tenancy in the more densely populated places where the rate of tenancy was highest. But, as we saw in the discussion above, capital markets are not perfect!

If farm mortgage capital travelled from lenders to borrowers in different towns remote from and unknown to each other, it would be fully consistent with my analysis of decedents's credit networks from administration accounts at probate. For those cases for which the towns of both parties are known, a grid with town of borrower on one axis and town of lender on the other, revealed a strong central tendency along the diagonal in the first period, i.e., most loans between 1730 and 1780 were between credit partners in the same town. In the

[7] At the Registry of Deeds I was able to find almost every Cambridge 'occupant' in the Grantee Index -- that is, they bought property within a decade after 1798. Either this speaks to a springy agricultural ladder, or my 'occupants' were not tenants in the first place!

second period that grid has no pronounced diagonal. It would appear that no special bond linked townspeople to one another in what had once been the intimate business of extending credit.

Given the bias in the data -- probate evidence vastly understates the credit networks of the deceased, most of whose obligations had been discharged before death -- these widening and thickening networks describe the process of recruiting capital for development. Both the increased productivity of agriculture and the shift out of agriculture were mediated by a capital market whose extension in space was the engine of endogenous growth.

A discussion of the sources of capital accumulation in agriculture should take account of the locational capital gains accruing to farm land in Massachusetts (or indeed, in any densely populated countryside) on account of access to markets. In this case I am not referring to road building, but to the twin processes of market proliferation and market concentration that I documented in my book. The proliferation process is seen in the increasing number of market-places -- from 5 in 1750-1775, to 25 in 1806-20 -- to which my sample farmers hauled their loads. The concentration process is seen in the increase -- from a Gini (or, as geographers call it, a Localization Index) of .56 in 1750-1775, to .68 in 1836-1855. Increasing the <u>number</u> of market-places widens the "feasible commercial range" of agriculture and by so doing confers on more farm land the locational capital gains that come from access to markets. The increased <u>density</u> of selected market towns confers on them the increasing returns generated by Central Place activities and by the final demand linkages of the marketing institutions that cluster there.

II. What Role Did Government Play?

"Government" here must mean any or all the relevant governments -- British, Provincial, Town, State, National -- and the several relevant branches of each -- the Courts and the legislatures in particular -- which acted instrumentally either to retard or to accelerate the development process. Of all the political economy issues that could be raised, I will be concerned here with the social control of prices in colonial Massachusetts as seen through the Town Recods of Concord, Massachusetts.

At the Town Meeting in Concord on or about March 3, 1777, the Selectmen presented to the Votable Inhabitants an Act "to Prevent Monoply and Oppression Empowering them to Regulate the Prices of the Goods and necessarys of Life according to the ancient usuage and custom of this Town" [underlining mine]. Pursuant to this purpose they published a list "setting and establishing" the prices, in lawful money, of oak firewood, charcoal, live shoats, upper leather hides, saddles, dressed flax, New England rum, West Indies rum, and milk; and of wages for laborers by the day (allowing seasonal differentials), carpenters or joiners by the day (allowing a seasonal differential), cordwainers by the pair of shoes ("the leather being found"), blacksmiths by the horse "all Round," or by the implement, spinning linen by the skein, horse hire and chaise hire by the mile, entertainment and horse keeping at publick houses by the night, and dressing woolen cloth by the yard.

Since this Act, date 1777, was clearly an emergency war-time measure, one cannot help but be struck by two things. The first is the goods and necessaries not on the list. The prices of the principal items produced and consumed in rural Massachusetts were not fixed: English hay, fresh meadow hay, corn, wheat, rye, oats, barley, peas and beans, vegetables, orchard products, butter, cider, grist milling, pork, beef, and live cattle.[8]

The second thing that struck me is that the Act claims to rest upon "ancient" precedents which it is at pains to invoke, but in my close reading of Concord's Selectmen's and Town Meeting Records from 1672 on, I did not find precedents for the town to interdict "the rise and fall" of market prices. In 1672 the Selectmen were instructed as to their 23 "responsibilities," none of which was to set prices.

What one does find is abundant evidence of the selectmen fixing the value of the minister's salary in kind. Question: did they by that act override the market determination of prices?

At its meetings each year between 1694 and 1711, the town assumed a value of wheat at 5s. a bushel, rye at 4s, Indian corn at 3s (in addition, barley at 4s and firewood at 7s per cord) for the purpose of paying half of the Rev. Mr. Estabrook's salary of L80 in 'country pay'. To have maintained those values for 17 years makes it clear that these ratios established the value of the shilling in which Estabrook was paid, not of the grain, and they set the value of the shilling, not as the numeraire for all the exchange relations in the relevant markets but for the sole purpose of mediating this transaction with the minister.

These values did not reflect changing conditions in the demand and supply of grain. They remained unperturbed through good harvests and bad, not even

[8] This list of omitted commodities might be used to argue that they were omitted because they were produced within households for use, not for profit, and that therefore their 'prices' were 'constructed' for the purposes of bookkeeping barter, not for market exchange. This, however, would not be consistent with the evidence of buying and selling of precisely these commodities in farm account books. See my From Market-Places to a Market Economy: The Transformation of Rural Massachusetts, 1750-1850 (Chicago, 1992), pp. 43-46.

registering, in the price of wheat, the blight of wheat rust in the 1680s that ended wheat cultivation in eastern Massachusetts. The values placed on these grains when they were used as 'money' bore no more relation to the market prices of these grains in exchange than did nineteenth-century mint ratios to the relative market prices of silver and gold. Had those ratios been real prices the United States would have had genuine bimetallism, not the "limping monometallism" that resulted from the persistently bad fit between mint price and market price.

The point can be driven home by contrast to an earlier episode. In 1631, the Province made corn legal tender for debts "at the usual prices prevailing." By this Act, the price of corn, which had been fixed by law at 6s., was now freed by law. In consequence, fluctuations in the market value of corn-as-commodity led to "great difficulties" in regulating the value of corn-as-currency.[9] By 1670 the "great difficulties" had provoked new legislation effectively limiting the contracts for which payment could be made in kind, but not touching the issue of price fixing, as follows:

> "Whereas the Law tit.'Payments' pag 63 doth make Corn, Cattle and Fish equal with Money and to be paid as Money, when Money is intended for, which at that time when the Law was made was as good as Money, but now is otherwise, and proveth prejudicial and injurious, as experience sheweth upon several accounts: there fore as an Addition to, and explanation of that Law; This Court doth Order and Enact, That henceforth all Contracts, Agreements, Engagements or Covenants for any specie whatsoever, shall be paid

[9] William B. Weeden, Economic and Social History of New England, 1620-1789 (Boston, 1894), I:119.

in the same specie Bargained for; Any Law, Usage or Custome to the contrary notwithstanding."[10]

Returning now to the Concord story: upon his death in 1711, Estabrook was succeeded by Rev. Mr. Whiting who requested that his salary be paid entirely in money, and the issue of 'country pay' did not come up again in Selectmen's meetings until 1778, when the Rev. Mr. Ripley's salary, set at L100, was once again to be paid half in kind, that half -- in the midst of war-time inflation -- was once again to be calculated in terms of corn at 3s and rye at 4s.! but with the acknowledgment that it was "to rise and fall with these articles." Beginning in 1792, his 'country pay' "was stated by the rise and fall of Beef & Pork & Rie & Indian corn, and as Rie & Indian corn hath risen one shilling on a Bushel this year from the stated price by reason of it being somewhat scarce, said assessors have therefore added to the...stated salary a shilling on each bushel of grain."

The Value of a Bushel of Grain in Calculating the Minister's Salary in Concord.

Years	Corn	Rye
1694-1711	3s	4s
1778	3s	4s
1792	4s	5s
1793	4s6d	6s6d
1794	4s9d	7s6d
1795	5s6d	7s
1796	6s6d	7s6d

[10] Laws and Liberties of Massachusetts, 1640-1691 3 vols. (Wilmington, DE, 1976), p. 121

1797	5s	7s
1802	75 cts=4s6d	83-1/3 cts=5s

Although the need to fix the minister's 'country pay' was moot for most of the 18th century in Concord, the long period between 1711 and 1778 was not without regulation. In its meeting in March 1738/39, the Town added the office of Clerk of the Market to its roster of Town Officers, which included the Assessors, Town Clerk, Selectmen, Sealer of Weights and Measures, Sealer of Leather, Fence Viewers, Surveyors of Highways, Surveyors of Hemp and Flax, Tithingmen, Field Drivers or Haywards, Hogreeves, Constables, Inspectors of Horses on the Common, Overseers of the Poor, and Pound Keeper.

Since the market is the single most effective mechanism for endogenizing growth and initiating development, it behooves us to consider the impact of these functionaries -- particularly the Clerk of the Market -- on the exchange relations in the town. I quote at length from the Provincial legislation which established the office:

> "It is ordered by this Court and Authoritie thereof, that henceforth every Baker shall have a distinct mark for his bread & keep the true assizes as heerafter is expressed, viz. When wheat is ordinarily sold at these severall rates heerafter mentioned the pennie white loaf by averdupois weight shall weigh when wheat is by the bushell ... [and there is at this point a schedule of wheat prices and the corresponding weight of the pennyloaf] ... and so proportionably: under the penaltie of forfeiting all such bread as shall not be of the severall assizes as is aformentioned to the use of the poor of the towne where the offence is committed, and otherwise as is

heerafter expressed: and for the better execution of this present Order; there shall be in everie market towne, and all other townes needfull, one or two able persons annually chosen by each towne, who shall be sworn at the next county Court, or by the next Magistrate, unto the faithfull discharge of his or their office; who are heerby authorized to enter into all houses, either with a Constable or without where they shall inspect or be informed of any bread baked for sale; & also to weigh the said bread asoft as they see cause; and to seize all such as they finde defective. As also to weigh all butter made up for sale; and bringing unto, or being in the towne or market to be solde by weight: which if found light after notice once given shall be forfeited in like manner. The like penaltie shall be for not marking all bread made for sale. and the sayd officer shall have one third part of all forfeitures for his paines; the rest to the poor as aforesayd."[1646][11]

Even late in the century, loaf-bread bakers, who remained the principal target of surveillance, were to be informed as to the "middle price of Wheat; At which price the said Bakers shall bake their Bread for the following Moneth" [1681].

The Province also enacted laws throughout the 1630s and again in 1648 to set the days of the week when a Market shall be kept in Boston, Salem, Lynn, and Charlestown, and set aside two days of each year for a Fair in Boston, Salem, Watertown, and Dorchester. Presumably, market-days and the opening and closing

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[11] The Laws and Liberties of Massachusetts, 1641-1691, 3 vols. (Wilmington, DE, 1976), p. 9. Underlining mine.

times during market-days, were set by law in order that Markets and Fairs could be policed to prevent regrating, forestalling and what was called "oppression."[12]

But the Province laws that speak most relevantly to the social control of the economy are the laws against "oppression."

> "Whereas there is Oppression in the midst of us, not only by such Shopkeepers and Merchants, who set excessive prizes on their Goods, but also by Mechanicks and Day Labourers, who are daily guilty of that evil, For redress whereof, and as an Addition to the Law tit. "Oppression": It is Ordered by this Court; that any person that Judgeth himself oppressed by Shop keepers or Merchants in setting Excessive prizes on their Goods have hereby liberty to make their Complaint to the Grand Jurors, or otherwise by Petititon to the County Court immediately, who shall send for the person accused, and if the Court upon Examination judge the person complaining injured, they shall cause the offender to return double the overplus, or more then the equal price to the injured person, and also impose a Fine on the Offender at the discretion of the Court, And if any person judge himself Oppressed by Mechanicks or Day Labourers, they may make complaint thereof to the Select Men of the Town who if upon Examination do finde such Complaint just, having respect to the

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[12] The antique lineage of such ordinances is astonishing. If I am reading Maitland correctly, laws regulating the hours of buying and selling were already "ancient customs" in the year 1221! Frederick Pollock and Frederic Maitland The History of English Law Before the Time of Edward I 2nd ed. (Cambridge, 1978), fn.2, p. I:662. It wasn't until 1757 that the city of Boston relaxed its controls on the Faneuil Hall Market. The reliance, for perhaps 1000 years, on virtually identical institutions to 'discipline' the market should teach us something about the fit between institutions and the modes and social relations of production.

quality of the Pay, and the length or shortness of the Day Labour,they shall cause the Offender to make double Restitution to the party injured, and pay a fine of double the value exceeding the due price" [1675].

But no "due prices" were set.

Experience must have taught that considerable real-price flexibility will be achieved no matter how assiduously "due prices" are enforced: the administered price of bread moved penny for penny with the price of wheat (which was not set) and inversely with the weight of the pennyloaf. A market economy can coexist with a price-fixing regime as long as buyers and sellers are free to adjust quantities to the administered prices. That prices respond flexibly to quantities demanded and supplied is a sufficient condition for a market economy, but not a necessary one. The necessary condition is that quantities demanded and supplied respond flexibly to price. To any price, including an administered price.

III. The Legal Status of Contract Labor in Massachusetts Agriculture.

To allocate human resources toward their most productive employments, the labor market plays two roles: it transmits the signals, and it motivates the appropriate responses. Wage gaps -- different real wages for the same job -- are the signal[13]; labor mobility -- the movement of labor in the direction of the higher wage -- is the response. The persistence of job-specific intersectoral,

[13] A necessary condition of a 'free' labor market is that the labor force be paid wages, otherwise wage differentials would be inadequate to motivate the optimal allocation of labor. But a wage labor force is not a sufficient condition. The monks of Battle Abbey were farming the manor lands at Marley entirely with wage workers by 1350. See Eleanor Searle, Lordship and Community (Toronto, 1974). I doubt that they were free to move.

interregional or urban/rural wage differentials warn that impediments erected against the mobility of labor have distorted the labor market. (Of course, the notion that people are perfectly mobile, that a wage increment at the margin will induce a worker to tear himself and his family up by the roots, is only a neoclassical model. The wonder is that so many people in the last 150 years have in fact conformed to the model!)

Among the impediments to the mobility of labor has been a host of institutions (and of the legal rules to sanctify them) that agrarian societies have designed to tie labor to the land in varying degrees of bondage. Slavery, serfdom, feudal dues, sharecropping, truck, peonage, indentured servitude, the encomienda, labor bosses, partidaros, padrones, and long-term contracts with "lock-in" features (like the settlement provisions of the Poor Laws) that are asymmetrical in their effects, have characterized agrarian labor systems throughout the world since the origins of settled agriculture.

But a free labor market requires an agricultural wage labor force that is free to move, even free to quit at will,[14] and that may well be New England's Peculiar Institution.

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[14] "Free" labor can mean unimpeded pursuit of maximal advantage. Freedom can also be -- as the song says -- "just another word for nothing left to lose." When Karl Polanyi links the birth of industrial capitalism, and of the free labor market that is its necessary condition, to the repeal of the Old Poor Law in 1834, he is using "free" in the second sense of abandoning wage workers to free-fall.

The legal history of labor contracts has aroused considerable interest recently.[15] as a special application of the new institutional economic history which has taught us to recognize that market economies evolve within a unique system of legal rules that enforce contracts, define property rights, resolve conflicts, provide remedies at law, establish due process, and set the boundaries between the public interest and the private.

For Morton Horwitz, 19th century judges transformed American labor relations when they made the enforcement of labor contracts an instrument of capitalist redistribution. "[I]f [the worker] left his employment before the end of the term...the employee could receive nothing for the labor he had already expended" (p. 186). Horwitz's implication is clear: that the judges of the early 19th century, in the interests of fashioning an "instrumental conception of American law" for emerging capitalism, radically transformed the 18th century world in which such exploitation of the weak would have been condemned as "an illegitimate form of duress" (p.184).

But Robert J.Steinfeld traces the remarkable persistence of the Master-Servant model in labor contracts for nearly 500-years. The servant is presumed to have voluntarily surrendered to the master all property rights in his or her labor -- a transfer of property no different from slavery except in the consent presumed to have been obtained at the outset. A quit is then a theft of the master's property in his servant's labor, a criminal offense and punishable by

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[15] See Robert J. Steinfeld, The Invention of Free Labor: The Employment Relation in English and American Law and Culture, 1350-1870 (Chapel Hill, 1991); Morton J. Horwitz, The Transformation of American Law, 1780-1860 (Cambridge, MA, 1977), pp. 186-88 and the reference to Britton v. Turner, fn. 148, p. 332; and Peter Karsten, "Bottom'd on Justice..." Journal of American Legal History 34 (1990).

imprisonment or mutilation. No Golden Age temporized Master-Servant labor contracts before the 19th century!

For Steinfeld and for Peter Karsten as well, it was in the 19th century that capitalist market relations combined with the outraged sensibilities of the abolition movement to redefine the labor contract as a "covenant between judicial equals," not a property exchange.

The debate is fascinating, but the question, in the final analysis, is an empirical one: how did employing farmers handle incomplete contracts, and what does that tell us about the functioning of labor markets in the development of the Massachusetts rural economy?

I have collected from farm account books a sample of 692 monthly labor contracts for the period 1750 to 1865. Fifty-two -- 7-1/2 percent -- of those contracts were ended by premature quits. In no case did the employing farmer withhold wages, although had he done so he would, in all likelihood, have been upheld in Court on the grounds that "an express contract bars an action on quantum meruit."

That agricultural workers who had committed themselves to long-term contracts were in fact allowed to quit without penalty obviously increased the mobility of the labor force, which, as we have said, is a necessary condition of the market-driven optimization of resource allocation. But on the other side of the labor market stand the employing farmers who apparently consented to forego the redress to which the law entitled them. It is worth considering how much of a "distortion" that may have introduced. In his review of Steinfeld's book, Farley Grubb has written, "The invention of 'free' labor through the court victories of a few workers seeking to renege on their labor agreements and thus unilaterally redistribute gains from their employers to themselves, created a negative externality for all workers. It institutionalized moral hazard into labor law. Employers became reluctant to use long-term contracts, and workers therefore lost the opportunity to borrow on the collateral of their future human capital. Estimating the size of this welfare loss would be an interesting economic problem."[16]

There is no doubt that what we now call moral hazard became a significant factor in the negotiation of farm labor contracts. And Grubb is quite right to imply that its significance was independent -- as moral hazard frequently is -- of the actuarial risk, that is, of the proportion of quits to total contracts and the proportion of contracts to the size of the labor force.

Calculating either of these proportions in the aggregate is problematical,[17] but the issue of moral hazard -- the source of which really should be broadened to include not just quitting but also unacceptable behavior that provokes firing -- can be gotten at in other ways. There is abundant anecdotal evidence from farmers's day-books and diaries of how difficult these hired hands could be: "labouring under indisposition of the bottle," "unable to work," "his mind is apparently not with his body nor his body much at work," "left in an unexpected manner," "left us, he says, because the work is hard and he has to get up too early in the morning. Poor fellow," "became homesick and

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[16] In the Journal of Economic History 53 (March 1993), p. 208.

[17] Aggregating monthly contracts over many farmers at a moment in time is difficult for two reasons. a) The need for a live-in hired hand is clearly related to the age of the employing farmer and the number and ages of his sons. It is a life-cycle phenomenon. b) In terms of what the implicit contract literature calls "lock-in" and Grubb calls "borrowing on the collateral of their future human capital," twelve one-month contracts will loom large in any aggregation but have far less significance than one twelve-month contract.

left."[18] And from my sample of account books: "went home sick and never returned," "worked 2 mos & 3 days & went away with a sufficient reason," "refused to work, left me & went home," "never hire again till he is able to do a Mans days work," "Nelson threatened to go away before his time was out, to sue me, etc." "N. quits I hope for good," "left off and went home."

An analysis of the differentials in per diem wages between day workers and contract workers -- differentials that persist even after adjusting for living costs, for seasonality and for harvest premia -- suggests that the farm labor force was segmented, and a comparison of the two populations of workers reveals the demographics of that segmentation. Contract workers were younger, single, from out of town and, after 1830, increasingly foreign-born. They were "more migratory but less hopeful" than day workers, more apt to be passersby "who come here to work" on the way to a job in a factory.

Thus segmentation -- a long-handed way of saying 'class'? -- acted to compound the moral hazard problem of quits, and it is difficult to say which -- heterogeneities in the population or "the invention of free labor" -- produced the greater negative externalities.

Nor whether the positive externalities to which these attest -- the mobility of labor -- are not in fact more important to the economic development of rural New England.

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[18] From Jack Larkin, "'Labor is the Great Thing in Farming'..." Proceedings of the American Antiquarian Society, 99 (Worcester, 1989), pp. 196-98.

IV. Conclusion.

New England agriculture between 1750 and 1850 suffered from a number of constraints which are familiar to all of us, among them the absence of technological change. The growth of per capita output in that economy was the consequence of wider and better integration between market-places. The wider the activities drawn into the orbit of a single market the more efficiently the market can perform its functions of production, allocation and distribution. The more mobile the factors of production the more effectively market prices can perform their signalling function.

This paper has been concerned to demonstrate the mobility of rural capital, the mobility of farm labor, and the workings of a market process in the behavior of commodity prices even under a regime of social controls. These demonstrations of factor mobility then become premises in an argument that economic growth is an endogenous process by which wider and better integrated markets generate increasing returns even in the absence of technological change.

Endogenous growth theories are fast becoming the paradigms of choice among development and macro economists. One such example, if I understand it correctly, is Ken Sokoloff's influential work on the growth of early New England industry. Another is my model of the growth of preindustrial New England agriculture.