

OF FORESTS AND TREES, Part 1.

1. I could start off by saying “Marx has some problems in his analysis of ground-rent.” However, it’s not exactly the case that Marx is wrong in his analysis of the derivation of ground-rent or in his calculations of the comparative rates of ground-rent. It’s more that Marx misses a few things, a few important things; he misses the transformation of British agriculture that underlies the fluctuations in ground-rent and the fluctuations in agricultural commodity prices. It’s more that he takes Ricardo’s and others’ assertions about the availability of land, the “insatiability” of demand, about the “natural” fertility of land as not just accurate, but *eternal*. Does Marx do this as a matter of *regard* for Ricardo? Of *faith*? Of expediency so he can get to what he really wants to discuss, which is not really ground-rent at all? Beats the hell out of me, almost literally, which upon reflection means I need to change what I want to start off saying.

So... so after thinking about it for a little bit, I want to start off by saying that *I* have some problems with Marx’s analysis of ground-rent. He misses a few things, a few important things, like the transformation of English agriculture; like the transformation of English landlords; like the transformation of the social relations of production which rent does not cause, but which rent *serves*. Some things, some really important things, he doesn’t miss.

And more than that, I think various *mis*-apprehensions of Marxism, and mis-analyses of advanced capitalism stem from the ambiguity in Marx’s analysis of ground-rent. Normally, I could start that off by identifying Lenin’s theory of imperialism as an example; Lenin’s and others’ theories of *rentier* capitalism as another example; the various theories according to which *monopoly* has transcended the law of value for capitalism as an example; the theories that have US capital as a monopoly capital, and/or a financial hegemon extracting tribute, extracting *rent*, from

a) Other developed capitalisms

b) Other less developed capitalisms or

c) Both;

Through *either*

a) Artificial inflation of prices for its highly processed (large value-added) goods *or*

b) currency manipulation *or*

c) Both,

as an example. And all those examples, I would identify as so wrong, so transparently “left” recapitulations of the capitalists’ own mythology of “having finally, seriously, this time we’re sure, once and for all we have conquered the business cycle” mantras that it makes me laugh. I could start off by saying that. But only later.

2. We know *how* Marx engages with these categories of rent, capital, wage-labor, value. He engages through opposition and the opposition is elaborated through critique. Marx begins his critique of ground-rent when he begins his critique of capitalism. *In the Economic and Philosophic Manuscripts of 1844* Marx launches his initial probe into the complexities of ground-rent. We see Marx establishing the characteristics, the determinants in and of rent that will occupy him for the next 25 years. We get fertility, the relation of rent to population, the ever-present and always unrealizable demand for food, and the landlord and rent as obstacles to both the industrial capitalist and the development of industrial capitalism.

In the first manuscript, we have Marx telling us:

(5) While, thus, the landlord's interest, far from being identical with the interest of society, stands inimically opposed to the interest of tenant farmers, farm laborers, factory workers and capitalists, on the other hand, the interest of one landlord is not even identical with that of another, on account of the competition which we will now consider.

I'm not about to disagree with the accuracy of Marx's characterization of the landlord as all that is petty, venal, and vicious in human history, however much I think those attributes are better applied to the nuclear family. If the landlord isn't the sum total of cynicism, avarice, pettiness, dishonesty and brutality in all of human history, then he or she still comes close. And close does count.

However, Marx's claim that the landlord stands inimically opposed to the interest of the industrial capitalist is indicative of the ambiguity that persists throughout his analysis of rent.

Marx regards rent as the way in which:

...property in land realizes itself economically, that is produces value. [Capital, Volume 3, Chapter 37 "Transformation of Surplus Profit into Ground-Rent]

Rent is the means by which land produces *value*. Except it isn't because the land doesn't produce value. Ground-rent is the mechanism by which *labor* in agriculture manifests its transformation from the *supplier of surplus-product* and into the source of *surplus value*. Marx says, but does not *pursue* as much in *Theories of Surplus Value, Part 2*:

...the very existence of rent is feasible because the average wage of the agricultural laborer is below that of the industrial worker. Since, to start with, by tradition (as the farmer turns capitalist before the capitalists turn farmers) the capitalist passed on part of his gain to the landlord, he compensated himself by forcing wages down below their level...Surplus-value can be increased, without the extension of labour-time or the development of productive power of labour, by forcing wages below their traditional level. And indeed this is the care wherever agricultural production is carried on by capitalist methods...Here then we already have a potential basis of rent since, in fact, the agricultural labourer's wage does not equal the average wage. This rent would be feasible quite independent of the price of the product, which is equal to its value.

Ground-rent is the capitalization of land; its organization as a means of production for exchange rather than a means of consumption.

Still, this transformation, this capitalization of land is stymied, incomplete, and necessarily so. Capital does not encounter land, at least not in Europe, in either its "natural" state, or in its "commodity" condition. Capital encounters landed property as encumbered by the pre-existing relations of production. Capital encounters land as constrained by a form of private ownership that is at once archaic and powerful.

Ground-rent then is a bit more than just the capitalization of land. It is capital adapting, and adapting itself to, feudal property that is refracted through the lens of market exchange and market value.

Even in, especially in, the most advanced capitalist country in Europe, capital is confronted with the obstacle of its own uneven and combined development.

Marx's target is not this uneven and combined development. His target is not ground-rent as the preservation, extension, and dissolution of the archaic relations of production. His target is not the part ground-rent, and landed property play in the reproduction of capital. His target is not the

part ground-rent plays in driving the social differentiation, the class relations, which accompany and signify the transition to capitalism.

Marx's target, more than anything else, more than anyone else is David Ricardo.

3. For Marx, Ricardo is the best bourgeois political economy can produce; a figure of profound analytic capabilities and severe shortcomings, like capital itself. Ultimately Ricardo is constrained by the power of his own analysis. Ricardo's examination of the economic categories of capitalist production begins with, requires, and reproduces the excision of those economic categories from the social relations of production that give the categories life. At its end, Ricardo's analysis substitutes ideology for history.

Next to bayonets, cruise missiles, and beehive rounds, ideology is the bourgeoisie's sharpest tool. Ideology tells the bourgeoisie exactly what they want to hear: *There was a history. History has come to its end.* The circumstances surrounding the birth of capital, the origin of the bourgeoisie, are not immortal, but rather *completely natural*. Capitalist markets are nature's way of organizing humanity. *There was creation. Capital is the crown of creation.*

Landed property, as capital confronts it, is not so natural, but the political economist regards economic categories of landed property, and rent as excised from their social relations. To the political economist ground-rent is a-historical. For the English political economist, the origin, function, movement, and *result* of ground-rents in the period 1794-1815 versus the period 1500-1550 are immaterial. Ground-rent by any other name is ground-rent, and is an obstacle to the accumulation of industrial capital.

Marx is in hot pursuit of Ricardo, and in this hot pursuit he is inclined to allow, repeat, and even accept Ricardo's less-than-historical critique of landed property and ground-rent. Marx is not doing this for the purpose of exposing the inadequacy of Ricardo's critique. Before Marx begins his own critique of Ricardo's theory of ground-rent, it's as if Marx feels he needs to defend Ricardo's "natural/unnatural" a-historical conceptualization of ground-rent in order to achieve his real objective. That objective is the rescue and recovery of the labor theory of value from the *equivocation, the qualification and disqualification* it suffers in Ricardo's analysis of rent.

So we have Marx repeating Ricardo's "materialist basis" for ground-rent: The supply of fertile land is limited. The supply is limited by "natural" conditions as the "more fertile" land is the land occupied; as "less fertile" land is always brought into cultivation as the population grows. The supply is limited by the social relations in that landlords monopolize the land.

Ricardo maintains, and Marx accepts, that not only is land of inferior quality brought into cultivation as the population expands, but also that *proportionately less productivity gains are realized with successive applications of additional capital to the same plots of land.* In *Capital*, Volume 3, Chapter 37 Marx writes:

That Mr. Lavergne is not only familiar with the economic achievements of English agriculture, but also subscribes to the prejudices of the English tenants and landlords, is shown on page 48:

"One great drawback attends cereals generally ... they exhaust the soil which bears them."

Not only does Mr. Lavergne believe that other plants do not do so, but also believes that fodder crops and root crops enrich the soil:

"Forage plants derive from the atmosphere the principal elements of their growth, while they give to the soil more than they take from it; thus both directly and by their conversion into animal manure contributing in two ways to repair the mischief done by cereals and exhausting

crops generally; one principle, therefore, is that they should at least alternate with these crops; in this consists the Norfolk rotation" (pp. 50, 51).

No wonder that Mr. Lavergne, who believes these English rustic fairy-tales, also believes that the wages of English farm labourers have lost their former abnormality since the duties on corn have been lifted.

The Norfolk four-course rotation was no fairy tale, and the ability of clover, legumes, etc. to fix nitrogen in the soil is no myth. As Mark Overton writes:

The effects of the rotation were to increase yields of grain and to allow much higher stocking densities. These effects are modeled in Table 3.19 which demonstrates convincingly that the Norfolk four-course could indeed have been responsible for unprecedented changes in both crop and livestock productivity and output...

*Partly because the integrated mixed-farming systems comprised so many mutually dependent components their evolution took time. Hence the long lag between the appearance in England of clover, turnips and other components of the Norfolk four-course system and the perfection of the system itself, whose widespread diffusion must be dated to the first half of the nineteenth century. Nevertheless there can be no doubt of the superiority of the new system at whose root quite literally lay the improved management of soil nitrogen. This of course was not the farmer's intention, since the chemistry was unknown to them. Their concern was with fodder. Sowing grass leys focused attention on the range and suitability of grasses that could be grown and so clover was selected...; turnips were an alternate source of fodder. Once grown, and integrated into arable rotations, their probably unintended outcome was an increase in overall output. Although systems such as the Norfolk four-course rotation increased output of both stock and crops their major contribution maybe have been that optimum output occurred with a larger proportion of arable crops than under a system of permanent grass and permanent arable. The much increased amounts of manure from more efficient fodder crops, and the rotational use of crop residues, allowed this substantial increase in grain area, while still maintaining, or even boosting, yields. [Mark Overton, *Agricultural Revolution in England*, p. 117, 120-121, Cambridge University Press, 1996]*

So here's my point, what I would have said first, if I didn't have to provide the background: Marx, in his pursuit of Ricardo, fails to comprehend exactly what Ricardo failed to apprehend: the revolution in English agriculture, the revolutionary increase in output and yield between 1750 and 1850. This failure is not so much a case of Marx failing to see the forest because of the trees as it is the case of Marx failing to see the *deforestation* because of the *tree farms*.

4. For Marx, the transformation of agricultural, the capitalist transformation of agricultural that actually operates *through* rent just isn't the issue, and that's a shame. This is the only instance in Marx's writings, that I know of, where Marx actually adopts the position, the attitude, and the analysis of an *economist*, in essence abstracting the economic categories from the historical relations, and the historical development, that produce the economic category.

Ground-rent, for Marx, is the grand exception that is the proof of the rule of the law of value. Ground-rent will be the vector by which Marx, accepting the elements of ground-rent as Ricardo describes them, will prove how the apparent anomaly in the prices of agricultural commodities—where the less efficient producer, and the dearer product, set the market—actually validates the labor theory of value.

For Marx, following Ricardo, ground-rent exists as a transfer of value from industrial capital to the landlord. Rent is a deduction from profit, but not just from the profit of the tenant capitalist-

farmer. Value moves, through the mechanism of price, from the superior productivity of industrial capital, and lower cost of industrial commodities, to the inferior productivity of agricultural capital and the higher cost of agricultural commodities.

Says Marx:

Incidentally, however the phenomenon of rent may be explained, the significant difference between agriculture and industry remains in that in the latter, excess surplus value is created by the cheaper production, in the former by dearer production. [Theories of Surplus Value, Part 2, Chapter 8]

So... ground-rent does not cause the higher prices, or the increase in price of agricultural commodities. The possibility for rent exists in those higher prices. The values of agricultural commodities are, like the values for all commodities, determined by the labor-time embodied therein as mediated by the time necessary for their reproduction. In agriculture, however, increased production necessarily entails, creates, an increase in the time necessary for the reproduction of any individual commodity. In agriculture, unlike industry, the expansion of production does not mean the relatively greater production of use-values with the same or proportionally less expansion of exchange-value.

In agriculture, the increased production does not reduce the socially average time necessary for reproduction and all of this occurs because *demand is not satisfied*.

Says Marx:

If the area of fertile land were enlarged or the fertility of the poorer soil so improved that I could satisfy demand, then this game would end. [TSV, Part 2, Chapter 8].

In *The Poverty of Philosophy*, Marx gives us the outline of Ricardo's argument that he will use, and maintain, for his own examination of rent throughout his economic manuscripts, including volume 3 of *Capital*:

We have seen that, according to the Ricardian doctrine, the price of all objects is determined ultimately by the cost of production, including the industrial profit; in other words, by the labour time employed. In manufacturing industry, the price of the product obtained by the minimum of labour regulates the price of all other commodities of the same kind, seeing that the cheapest and most productive instruments of production can be multiplied to infinity and that competition necessarily gives rise to a market price – that is, a common price for all products of the same kind.

In agricultural industry, on the contrary, it is the price of the product obtained by the greatest amount of labour which regulates the price of all products of the same kind. In the first place, one cannot, as in manufacturing industry, multiply at will the instruments of production possessing the same degree of productivity, that is, plots of land with the same degree of fertility. Then, as population increases, land of an inferior quality begins to be exploited, or new outlays of capital, proportionately less productive than before, are made upon the same plot of land. In both cases a greater amount of labour is expended to obtain a proportionately smaller product. The needs of the population having rendered necessary this increase of labour, the product of the land whose exploitation is the more costly has as certain a sale as that of a piece of land whose exploitation is cheaper. As competition levels the market price, the product of the better soil will be paid for as dearly as that of the inferior. It is the excess of the price of the products of the better soil over the cost of their production that constitutes rent. [Poverty of Philosophy, Chapter 4, "Property of Ground Rent"]

Marx concludes the paragraph with what he regards as near insurmountable obstacles to the “parity” of industrial and agricultural production:

If one could always have at one’s disposal plots of land of the same degree of fertility; if one could, as in manufacturing industry, have recourse continually to cheaper and more productive machines, or if the subsequent outlays of capital produced as much as the first, then the price of agricultural products would be determined by the price of commodities produced by the best instruments of production, as we have seen with the price of manufactured products. But, from this moment rent would have disappeared also.

Yet, here is exactly the transformation imposed upon agriculture by capitalism, a transformation that finds its agents, *in part*, through the *receivers* of *rent*, the rent-seeking, *profit-seeking* landlords.

5. Marx certainly achieves his objective. He pursues Ricardo and brings him to ground [-rent]. The critique of Ricardo that Marx produces using ground-rent as a vector absolutely restores the integrity and viability of the labor theory of value.

The analysis of cost-price and the differentiation of cost-price from value establish the *mediation* through which the law of value must operate given the private ownership of the means of production. Marx demonstrates not only why prices deviate from values, but more importantly how the deviation of specific, individual, numerous prices from specific, individual, numerous values is the mechanism through which the law of value enforces itself. The analysis by Marx at one and the same time answers the “transformation question” before it is asked; embeds the labor theory of value as the center around which all of capital spins and morphs; proves that profit is derived from exchanging commodities at their values, but the profit so derived for any commodity is a distribution of, a proportion, a relation to the totality of value of all commodities.

Marx has climbed the ladder of Ricardo’s labor theory of value, and having done so, has no more need for ladders. The labor theory of value is firmly established at ground [-rent] level.

Here are the determining conditions of Ricardo’s theory of ground-rent, and Marx reproduces in *and as* his own in the critique of Ricardo: increased and increasing population; increased demand for agricultural commodities; inability of cultivated land to satisfy the demand for agricultural commodities; cultivation of less fertile lands; inability of new areas of cultivation and/or successive applications of capital to old areas to maintain or improve yields.

Marx certainly recognizes the weaknesses in Ricardo’s theory of the persistent, if not eternal, *scarcity* of agricultural output. We have Marx’s recognition of the feasibility of rent in the lower wage paid the agricultural laborer. We have Marx explaining how the new land brought into production is not necessarily less fertile, *naturally*, but that successive applications of capital are required to this new land to establish productivity equal to that of the already cultivated property. We don’t see Marx recognizing that his very recognition of this quality contradicts the assertion that successive application of capital produce declining returns.

We hear Marx telling us that if, in agricultural production, the machinery and constant capital inputs stood in the same ratio to the labor, variable capital as the ratio is industry, then rent would disappear:

If the mode of production changed in such a way that the ratio of variable to constant capital became the same as the average ratio in industry, then the excess of value over the average price of wheat would disappear and with it rent—excess profit. [Marx, TSV Part 2 “Herr Rodbertus.

New Theory of Rent (Digression) {9} Differential Rent and Absolute Rent in Their Reciprocal Relationship. Rent as an Historical Category. Smith's and Ricardo's Method of Research"]

We don't hear Marx analyzing exactly this trend in the development of capitalist agriculture, even though he writes:

In our view rent arises from an historical difference in the organic component parts of capital which may be partially ironed out and indeed disappear completely, with the development of agriculture.

But this is exactly the point where the historical analysis of rent, of its function in expanding the capitalist relations of production in agriculture, the capitalist organization of labor in agriculture should begin.

6. Ricardo's study of ground-rent and price formation in agriculture is heavily informed by the dramatic price inflation in agricultural commodities in the period 1794-1815, the period of the anti-Jacobin and then Napoleonic Wars. In part, it was the military's demand for agricultural commodities, and not just agricultural commodities, that drove the price inflation of these years.

This period is also the initialization period of the industrial revolution, when steam power was harnessed to the production of textiles; to the production of coal; and to the processing of grain.

The military's requirements in the midst of this dramatic transition in the technical basis of production worked to the benefit of some, but not to the benefit of all. There was little or no benefit to the cottagers living in and around the villages and manors, who depended on rights of common for pasture, for maintaining production and productivity of their smaller, rented plots. There was no benefit to the commoners who rented almost no land for their direct production and relied almost completely on the common rights. There was certainly no benefit to the agricultural laborers. Between 1780 and 1810, real wages for agricultural workers declined by twenty percent.

For the most part, the dramatic price inflation and the subsequent climb in rents were driven by the number of poor harvest years, and the number of successive poor harvest years. Bad harvests were recorded in 1794, 1795, 1799, 1800, 1809, 1810, 1811, and 1812.

During this period of bad harvests, the population of England continued to grow, nearly doubling in the 1780 to 1806 period.

All the elements for the basis of rent are in place: population growth, inability of agriculture to meet demand, declining wages, apparent failure of successive applications of capital to maintain yield, cultivation of less fertile lands. Marx writes:

But apart from absolute rent, the following question remains for Ricardo:

The population grows and with it the demand for agricultural products. Therewith their price rises, as happens in similar cases in industry. But in industry, this rise in price ceases as soon as demand has become effective and brought about an increased supply of commodities. The product now falls to the old, or rather below the old, level of value. But in agriculture this additional product is thrown on to the market neither at the same price nor at a lower price. It costs more and effects a constant rise in market-prices and along with that, a raising of rent. How is this to be explained if not by the fact that ever less fertile types of land are being used, that ever more labour is required in order to produce the same product, that agriculture becomes progressively more sterile? Why, apart from the influence of the depreciation [of money], did agricultural products rise in England from 1797 to 1815 with the rapid development of the

population? That they fell again later proves nothing. That supplies from foreign markets were cut off proves nothing. On the contrary. This in fact created the right conditions for demonstrating the effect of the law of rent as such. For it was the very cutting off of foreign supplies which forced the country to have recourse to ever less fertile land. This cannot be explained by an absolute increase in rent, because not only did the rental rise but also the rate of rent. The quarter of wheat, etc. rose in price.

It cannot be explained by depreciation because although this might well explain why, with greater productivity in industry, industrial products fell, hence why the relative price of agricultural products rose, it would not explain why in addition to this relative rise, the prices of agricultural products were continuously rising absolutely. Similarly, it cannot be explained as a consequence of the fall in the rate of profit. This would never explain a change in prices, but only a change in the distribution of value or of price between landlord, manufacturer and worker. [Karl Marx, *Theories of Surplus Value*, (Chapter IX) History of the Ricardian Law of Rent [6] Ricardo's Thesis on the Constant Rise in Corn Prices. Table of Annual Average Prices of Corn from 1641 to 1859].

Marx is a bit over-zealous, but he is writing in his notebooks. If the price increases tell us something about the mechanisms of accumulation and apportionment, then the price declines also tell us something about accumulation and apportionment. In fact, it is Marx's contention, at least for industrial capital and industrial commodities, that it is only in the totality of those changes in those prices, in that inflation and devaluation that the truth of accumulation and apportionment is manifested.

The correlation between population growth and price increase is a strong correlation, but it is not an absolute correlation. Again, Mark Overton in his *Agricultural Revolution in England* points out that there is a positive correlation between the rate of growth of the population in England and the rate of growth in prices:

*It indicates a strong positive relationship from the 1540s to 1780s: the rate at which prices were growing followed the rate of population growth. But after the 25 year period starting 1781 the relationship changes: population growth rates rise to unprecedented levels [over 1 per cent per annum], but the rate of growth in prices starts to fall, from a peak of over 2 per cent per annum...Although population was growing, the agricultural sector of the economy was able to expand output to meet the additional demand, so that prices failed to rise so rapidly as they had done under pressure of demand in previous centuries. [emphasis added] ...at the start of the eighteenth century English agriculture seemed unable to expand output significantly, but by the end of the century such expansion was well under way. [Overton, *Agricultural Revolution in England*, p.69-70]*

As a matter of fact, after 1800 the correlation between population growth and rate of growth of prices turns negative, with the steady population growth rate of about 1.4 percent per annum coincident with a *negative* rate of growth of prices. This negative trend is reversed only when the rate of population growth declines after about 1825.

It's not Ricardo's fault that the poor state of English record-keeping regarding its agricultural revolution prevented him from recognizing that such a transformation had occurred. It's not Marx's fault that the English record-keeping and analysis of the record that did exist was still in a poor state at the time he undertook his critique. However, it is Marx's "fault" that in his defense of the law of value, he abstracts, in his discussion of rent, that law from the social relations that it embodies and reproduces.

The law of value is not some *deus ex machine*, nor is it some *divinitus machine*. It is a law derived from the social relations of production. It is derived from and reproduces the relations of classes. It is a law containing and expressing the way society organizes its own reproduction. That organization is of time itself as the means of *exchange*. It is the conversion of time into labor-time; the conversion of labor-time into the production of *values*; it is the exchange of labor-time for value. The law of value is nothing but the reproduction of the conflict between labor and the conditions of labor. The core to that reproduction, to that law, is the dispossession of the immediate, direct, producers.

So if the law of value is not compromised by ground-rent but rather confirmed and expressed through ground-rent, and Marx most definitely proves exactly this, then ground-rent must be vehicle, a vector, a mechanism, a mediation for the realization of that core to the reproduction of value. Through ground-rent, the class renting out the ground, must be reproducing the social relation of value even to, especially to, the point of transforming itself as a class in the process, and in the relation, itself.

This transformation is exactly what ground-rent accomplishes. This transformation is exactly what ground-rent accomplishes painfully, acutely, chaotically in the inflationary period of failed harvests during the anti-Jacobin and then Napoleonic Wars.

7. So what is this revolution? What is transformation of English agriculture? And what about the period 1794-1815, what processes are quickened by and during this period of inflation? What is the legacy of this period?

First and foremost, the effects of the price inflation, the changes in land use, land tenure, rights of common are very different for different regions, and for different villages within the same region in England. Still there are *trends*, and the trend is our friend.

During this English “revolution,” the growth in agricultural yield outpaced the increase in new lands brought into cultivation. Jonathan Theobald in his paper “Agricultural Productivity in Woodland High Suffolk 1600-1850,” [from the *Agricultural History Review* available on the website of the British Agricultural Historical Society: www.bahs.org.uk volume 50, part 1, 2002. See note at end on how to access paper from this site] writes:

For example, figures show that although the area under grain grew by approximately 160 percent between 1670 and 1850, the total grain yield in this period increased by over 500 percent implying that land productivity was noticeably improving.

...in the 170 years after 1700 the agrarian economy of England was utterly transformed, and agricultural practice and productivity significantly improved. Overton noted in 1996 that ‘the magnitude of changes that occurred [in Norfolk between 1750 and 1850] were out of all proportion to those which had occurred during the preceding 500 years, and changes of similar magnitude were happening elsewhere’ in England.

Output exceeded, and by far, increases in arable acreage. Yields improved, but yield is a very “soft” measure of agricultural improvement, as one of the factors determining yield is the amount of land devoted to the cultivation of crops.

Liam Brunt in his paper “Estimating English Wheat Production in the Industrial Revolution,” [available at: <http://www.nuff.ox.ac.uk/economics/history/paper29/29bruntweb.pdf>] writes:

By 1771 the effect of crop rotation reached a peak because the average crop rotation featured a large proportion of turnips and a relatively small proportion of grain crops- so the wheat yield

was correspondingly high. But as the price of wheat rose dramatically through the Revolutionary and Napoleonic Wars (1793 onwards) farmers grew a higher proportion of wheat and accepted a lower wheat yield per acre. In the post-war depression the proportion of wheat in the rotation shrank dramatically (thus improving yields) but thereafter increased in response to rising prices. Two aspects of this process need to be stressed.

First, the change in crop rotation was a rational response to temporarily high prices. The soil is effectively a 'nutrient bank' where the farmer can either make a deposit or a withdrawal. When wheat prices were temporarily high during the Napoleonic Wars it was optimal for the farmer to make a withdrawal (i.e. grow more wheat in the rotation) and run down the quality of the soil.

We see there is a *moment* that corresponds to Ricardo's claim, and Marx's endorsement of the claim, that successive applications of capital to the same land provide a declining rate of return in agriculture. But this moment is not a "natural event" but a *market decision* to apply capital in order to *deplete* the land of its potential, improved yield and output in favor of a compressed, reduced but *more valuable* immediate yield and output.

We see a possible moment that corresponds to Ricardo's and Marx's theory of increased agricultural prices due to the incorporation of marginal, less fertile land. There follows increased effort for increased production, theoretically, but at a higher price, practically. The marginal lands require more capital, more labor, more time to provide the yield and output of the land already in cultivation. The increased cost of this expanded production to meet the *moment* of insufficient supply or increased demand raises the average social cost of reproducing the total agricultural product. Again, however, this is a moment, a market decision, and not the permanent characteristic of agricultural production.

Says Brunt:

The point to note is that variations in total wheat output are much more sensitive to changes in crop rotation than changes in arable acreage. There are two methods of raising wheat output by 25 percent. One option is to keep the same crop rotation and increase the arable acreage by 25 percent. This is clearly very costly because it involves a high fixed cost for bringing new land into production (even if the farmer simply ploughs up pasture land). Moreover since the new land is likely to be of lower quality it will require an acreage increase in excess of 25 percent... The second option is to keep the same arable acreage and grow 25 percent wheat instead of 20 percent wheat.

Marx's claim that agricultural producers cannot multiply and reproduce their critical instrument, the land, at will and with the same level of productivity as the bourgeoisie can multiply their machines ignores the ability to bring fallow land into production, and to alter rotations.

Certainly the price inflation of 1790-1813 brought new lands, formerly marginal lands into production but neither massively nor quickly enough to determine the price of wheat. The weather conditions that limited the harvest by exacerbating the underlying low level of technology, in particular the poor drainage, of most English agriculture did act that massively and that quickly.

J.A Perkins, in his paper "The Prosperity of Farming on the Lindsey Uplands: 1813-1837," [available on the BAHS website, volume 24.2, 1976] writes:

The high prices of cereal prevailing during the majority of the war years offered the prospects of a return to farmers for bringing the light soils of the Lindsey uplands permanently under the plough, to be cultivated with cereal and fodder crop rotations designed to raise the fertility of the soil and the profitability of farming in the longer term. To bring the land to a peak of fertility

required a considerable investment of capital, which was largely borne by a tenantry occupying their farms without the security of leases, and which—although inflation during the war years reduced the time-span between investment and return—was not completely returned before a number of years had elapsed. **The landlords provided the framework** [emphasis added] for progress by financing the enclosure of the land and the relocation of farmsteads...Thereafter, the landlords mainly assisted their tenants by permitting a lag to exist between the level of farm rents and the productivity and profitability of farm. But the initiators of the agricultural revolution on the Lindsey uplands were the tenant farmers, and the overwhelming bulk of investment in the land from the turn of the 19th century consisted of tenant outlays.

In converting the land from pasture to permanent tillage the tenants had to expend a total of £ 8 to £ 9 per acre, of the equivalent of fifteen to twenty times the unimproved annual value of the land in the late 1790s... the land had first to “pared and burnt,” by gangs of men....Next the land was “marled” or dressed with chalk at the rate of 80 cubic feet per acre to...counteract... the tendency of turnips grown on light soils to run to a taproot. Finally the process of reclaiming the land for tillage was completed by a dressing of 60 bushels of bones per acre on the initiating turnip crop in the rotation.....

...There were, however, important differences of emphasis between the farming of the wartime and that of the postwar years. Where previously the farmers had striven to raise output without according much consideration to costs, whose increase was retarded in the instances of rent and wages by custom and tradition, and whose general significance was eroded by inflations, after 1813 they were motivated to increase the productivity of labor and capital as well as the productiveness of land. After 1813, the prosperity of farming came to depend not only upon the farmer’s ability to increase the gross output of their farms, to maintain the level of their farm by means of a larger volume of produce, but also upon a lowering of costs per unit of output to maintain profit margins. Both of these objectives were achieved by the continued development of the farming system.

What we have here is *half* the story of the revolution in English agriculture, the story of increasing applications of capital providing increased output and *demanding* the modern measure of value, profitability.

No revolution is so benign as to simply be the product and the record of hardy, hard working entrepreneurs, conquering nature with drill and plow, overturning the soil inspired by their innate acquisitiveness. Revolutions, even those that don’t overthrow kings, tyrants, and classes; even those that don’t establish kings, tyrants, classes; even revolutions in the prosaic practice of agriculture involve more than just “improvement.” Within, and under, those indexes of output, yields, productivity—*those measures of the change* in the forces of production—are the *measures changing* the relations of production.

Within those measures that record, between 1700 and 1850, the 100 percent increase in sown arable acreage; that productivity of land doubled; of the 100 percent growth in labor productivity [Mark Overton, “Re-establishing the English Agricultural Revolution,” BAHS website, volume 44.1, 1996]; is the coded record of the transformation of the land and its products into capital, and the changes in the proportions of that capital to the labor it commanded. *That* code, when deciphered into its measures of capital and labor, tells us that improvement was a by-product of acquisition and accumulation.

The level of technology circumscribed by capital sets for the farmer an optimum scale of operations—an expanded *area* to be cultivated where the relationship between costs and benefits

is optimized. This expanded area, this “new” land brought into cultivation is not “virgin” land of unknown fertility, existing at the edges of established agriculture, but the land cultivated by the cottagers, and small farmers who cannot afford the cost of enclosure and must sell or abandon the land. The expanded area is the “wastes,” the fens and moors and marshes utilized as resources for subsistence by cottagers, commoners, small farmers, hunters, artisans, day laborers, seasonal laborers. The “improvement” of agriculture is the attack on the right of common to tillage and pasture, to gleanings, to the folding of livestock. The expansion is the expansion of private property.

“*The landlords provide the framework by financing the enclosure of land,*” the major result of which was the increase in average farm size. J.A. Perkins writing again about Lindsey in “Tenure, Tenant Right, and Agricultural Progress in Lindsey 1780-1850” [BAHS website, volume 23.1, 1975] states:

In 1787, to take one example, the 2200 acres of land in the parish of Beelsby on the Wolds were divided between four farms of over 300 acres each, four small farms of between 10 and 40 acres each, and eight small holdings of from 3 to 9 acres each, which shared with two other cottages without land in the exploitation of the 70 acres of “Cottagers Pasture.” Thirty years later, the whole parish was divided into two large farms of 1,086 and 1,080 acres respectively.

The loss of rights to common, of access to the wastes, fens, marshes, all these made the market dependency of producers, big and small, more acute... and more desperate. The high prices of the Napoleonic War years seemed to provide relief, and prosperity, to the small farmers and the cottagers, as prices for their surplus product brought higher prices. However, the rising prices of *inputs* to production, of the means of subsistence, and the rising rents that the small farmers and cottagers had to absorb made them that much more market dependent, and that much less capable of withstanding any economic adversity such as reduced harvest due to poor weather. Subsistence required *income*. Income meant production for exchange, for the market.

And when income was not enough to provide for subsistence and rent? Then the direct producer, the smaller tenant, the commoners, the cottagers were dispossessed, and were left with only one thing of value to exchange in the markets, their labor-power.

And here we can see the social function of the price inflation of agriculture products, and the resulting high rents. Inflation is accumulation by almost, but not quite, primitive means. Landlords are the personification of that almost, but not quite, primitive means.

8. Enclosure effectively concentrated capital—land, buildings, implements, livestock, seed—into fewer hands, operating expanded acreage. Certainly the process was uneven, but the trend was the trend to larger farms cultivated “in severality”—without obligation to the community of producers, large, small, poor, and even landless.

The trend to larger farms was not confined to enclosed acreage but was the trend in both open and enclosed field farming. Enclosure, however, was the dominant response to increased *market dependency*. The effects of enclosure on the social relations of agricultural production were the “other half” of the agricultural revolution in England, transforming class relations from those of common right, common obligation, common allocation, and common service to those of private accumulation. With the transformation of the relations of land to labor there comes, necessarily, the “disappearance” of those who depended upon the common appropriation, on the reproduction of the common right. The disappearance is, of course, the transformation through dispossession of that class reproducing itself as private producers engaged in agricultural

production through the common management, supervision, regulation of the source of surplus--landed labor.

J. M. Neeson writing in *Commoners: Common Right, Enclosure and Social Change in England 1700-1820* [Cambridge University Press, 1993] concludes in his study of twenty-three parishes in Northamptonshire between 1780 and 1815:

We can summarize the findings on disappearance of landholders and decline of survivors' holdings as follows: First: half of all landholders sold all their lands in enclosing parishes during the enclosure period, compared to only one quarter of those in open parishes. Occupiers sold as frequently as owners who let their lands; and tenants left the land at the same rate. The smaller the holding, the more likely was the sale of land...One exception to this rule seems to have occurred in forest parishes, where smallholders stayed on the land in greater numbers than elsewhere, perhaps encourage by continued enjoyment of common right.

Second: surviving landholders sold some of their land too, and tenants worked smaller holdings. One third of the remaining original landholders lost a significantly larger amount of their lands than would have gone to the tithe-owner for tithe compensation. In contrast only one eighth of open parish landholders lost land on this scale... [p.239-240].

Thus, with the possible exception of parishes where part of the old common-right economy survived, many smallholders sold all their land at enclosure and most sold some of it. Although there was no common parish experience, there was a common shareholder experience...

...it becomes that enclosure dealt small peasants a double blow, for not only did they lose common right, they lost land too. No argument about the rise and fall of classes can do justice to this effect of enclosure. Whether the English peasantry disappeared or not, the effect of enclosure on the last generation of open field peasants was profound. [p.242-243]

Open-field agricultural communities were no utopias for small proprietors, for small tenants, for cottagers, and commoners, but they were less market-dependent, less exchange-driven. The organization of production, the use of land and labor, was fundamentally opposed to the capitalization of agriculture.

Open-field agricultural practices were *not* less "efficient," less "productive" than enclosed field agricultural practices. Much of the advance in crop rotation, land "conditioning," and convertible husbandry had been developed on and incorporated into open-field cultivation without reductions in common rights.

Enclosure was first and foremost the reconfiguration of the relation of land to labor, of landed labor, institutionalizing profit and accumulation as the determinants of production. The reconfiguration of labor was not limited to the small holder of land but extended to the village. Destroying the common rights excluded the landless, the small-holding artisan, the craftsman from supplementing his or her income; from maintaining himself or herself as a small private producer insulated from the expanding market dependency. Destroying the common right also prevented the artisan, the landless, from presenting himself or herself as a *casual* wage-laborer, seeking wages only at various times and only as individual circumstances dictated.

Enclosure was not simply dispossession from land, from property, but the dispossession of labor from any direct attachment to the products of its own creation. It is the extended moment in English history that transforms production into production *for exchange*; where the market becomes the mechanism for subordinating labor to property by transforming land into capital.

In this historical transformation of the social relations of production, we can determine why it was that while modern capitalism begins its existence in the transformation of agriculture, the accumulation of capital proceeds more slowly in agriculture than in industry. We can even account for the different rates of capitalist accumulation and development among countries.

Those different rates have little to do with the “strength” of the landlords, the level of rents, the “diversion” of profits from the industrial capitalists and to the landlords through rents. That difference indeed has its origin, as Marx noted, in the fact that capital does not confront landed property in a “pristine” state, but in its pre-existing social organization. However, that condition is not the “one-sided” domination of the feudal lords. The social organization of agriculture in England was also the prevalence of the small-scale, “subsistence plus surplus” cultivators of open-field, common right land.

The more that small scale “subsistence plus surplus” mode reproduces itself, actually “fractalizes” itself, the more difficult is it for capital, and the capitalists, to establish the commercial relations of land to production, of labor to product, that can create and sustain the market. The more difficult it is to create those relations that can transform production into production for exchange, and exchange into accumulation.

Rent is no integument to that market relationship. On the contrary, rent is its hand-maiden. The rent-seeking, profit-seeking landlord, in the very process of rent-seeking, is transforming land into capital and, at the same time, doing away with class of landlords. After the wave of enclosures during and after the Napoleonic Wars, the number of landlords in some parishes of the English countryside was reduced by one-third, as landlords too sold out, and cashed in.

In the end, the revolution in English agriculture sets the stage for eclipse of those old tenets of ground-rent theories, where less productive land is always brought into cultivation, where demand can never be satisfied, where successive applications of capital provide reduced yields, and where excess surplus value accrues to the higher priced product, to the least efficient producer. In the end, the revolution in English agriculture sets the stage transforms agricultural production into the reproduction of capital and thus sets the stage for *overproduction*.

In his paper “Adjustments in Arable Farming after the Napoleonic Wars” [BAHS site, volume 28.2, 1980], A.R. Wilkes writes:

For twenty years after the Napoleonic War the response of England’s farmers to low wheat prices was to produce more. While some of the increase was obtained from higher yields, the major part came from vastly expanded acreages. This development seems to have taken place throughout the country. Although on some farms, it was a positive economic response...on many it represented the only possible response by farmers already growing wheat as their main crop. Such people were unable or unwilling to adjust to other types of farming, and they were forced increasingly to pin their hopes on the traditional rent-payer, often at the expense of good farming. This pattern did not change until the mid-1830s.

9. Capital accumulates so much faster in industry than in agriculture for the very reason, in part, that Marx identifies as being the basis for rent—the lower average wage paid to agricultural labor in comparison to the wage paid to industrial labor.

Accelerated accumulation in industry is precipitated by the higher wages paid to urban workers who cannot supplement their own subsistence through access to common rights in agriculture. Consequently, the source of industrial capital, the wage, and the wage alone as the source of reproduction of the laborer consistently pushes against the capitalists’ need to restrain costs.

Capital attempts to resolve this tension by aggrandizing greater wage labor through *proportional expulsion*—by reducing the amount of time of the working day required for the reproduction of the workers’ wages. The expulsion requires the substitution of the inanimate, insensate, machine—the application of increasing amounts of fixed capital to the production process.

The fixed component only transfers its value, its cost to the capitalist, piecemeal, incrementally in the value of the individual product. The ability of fixed capital to amplify accumulation exists solely in its ability to reduce the time of production of the commodity, which also reduces the amount of value transferred from the machinery to commodity. The capitalist has no choice save to operate the fixed capital on the largest scale, running continuously, ceaselessly.

No such continuity of production is possible in agriculture practiced on the small scale, limited by subsistence, circumscribed not only in space by area, but in *time*, by its very seasonality, disrupting the continuing of production, extending the lag between production and product.

Only through expansion of the area for cultivation, through dispossession of the small producer, can capital in agriculture begin that process *leading to* accumulation. In this, the trajectory of capital, rent is not the barrier, it is the facilitator. Rent launches capital.

S. Artesian

December 29, 2010

Part 2 will examine rent and “natural resources”- and the suitability of rent as an explanation for price fluctuations in a representative natural resource like... oil.

Note: How to access papers from the BAHS website.

1. go to www.bahs.org.uk
2. in the left margin, click on *Agricultural History Review*
3. on the new screen click on “search and read past articles from the Review...”
4. on the new screen click on “to search an index to articles with links...”
5. Scroll to volume in which the paper appears and click.