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Rob Bryer

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Rob Bryer
UNIVERSITY OF WARWICK

THE ROOTS OF MODERN CAPITALISM: A MARXIST ACCOUNTING HISTORY OF THE ORIGINS AND CONSEQUENCES OF CAPITALIST LANDLORDS IN ENGLAND

Abstract: A major debate neglected by accounting historians is the importance of landlords in the English agricultural revolution. The paper uses accounting evidence from the historical literature to test Marx's theory that, from around 1750, England's landlords played a pivotal role by adopting and then spreading the capitalist mentality and social relations by enclosures and changes in the management of their estates and tenants. It gives an accounting interpretation of Marx's theory of rent and argues that the available evidence supports his view that the conversion of English landlords to capitalism underlay the later stages of the agricultural revolution. The conclusion explains the linkages in Marx's theory between the agricultural and industrial revolutions, and calls on accounting historians to conduct archival research into the agricultural roots of modern capitalism.

INTRODUCTION

To fulfill the promise of accounting history we must engage with important theoretical and historical debates, particularly those about the genealogy of modern business. A critical debate, neglected by accounting historians, concerns the origin of business in agriculture. Economic historians have struggled to explain the 'agricultural revolution', the massive increase in output that by around 1850 allowed England's population to grow through previous historical limits. Many believe the period "c.1700 - c.1850 . . . was a time of momentous change, in which the output of English agriculture increased by a factor of around 3.5 . . ." [Wade Martins and Williamson, 1999, p. 2]. Most agree on the broad outlines of the change. In 1500 around 80% of the

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British population worked in agriculture, and by 1850 it was only one in four. Between 1770 and 1850 Britain's population doubled, but it maintained and may eventually have even increased overall living standards without large imports of food. Output per worker in agriculture probably doubled. By 1800, while many small farmers survived, England had a unique rural structure with many landlords leasing farms to tenants who employed landless wage laborers. Except for some areas of the Low Countries, it had the most productive agriculture in the world. Many think a particularly important factor was the increase in labor productivity that was much faster in England than in Europe. Nevertheless, exactly "when and how this dramatic transformation was brought about is a matter of considerable debate . . ." [Campbell and Overton, 1991, p. 5; see also, Overton, 1996a, p. 1; Turner, Beckett and Afton, 2001, Preface]. Modern historians, however, unite in their scorn for the traditional explanation that the revolution was the product of an "increase in rationality, a new spirit of commercialism in farming" because it is "consistent with nearly any pattern" of change [McCloskey, 1972, p. 30]. Lord Ernle, for example, the authoritative early 20th century agricultural historian, thought that driving the revolution was a "new race of men" (1961, p. 222). The paper supports the traditional approach by precisely defining this new rationality as a 'calculative mentality', and uses accounting to explain and then test Marx's theory that the English agricultural revolution was a critical element in the transition from feudalism to industrial capitalism.

Historians neglect Marx's theory even though many accept a broadly similar chronology. Marx saw the beginnings of change in the late 15th century, but thought the revolution began with the formation of a class of capitalist farmers by around 1670, and that capitalist landlords spread and deepened the revolution from around 1750.¹ Historians often argue an important element from 1750 was that many English landlords began to see "it was in their commercial interests to take a positive lead in promoting change . . ." [Beckett, 1986, pp. 157, 171]. For example, from 1700 to 1750 an index of English and Welsh landlords' investment in "Structures, etc.," increased from 112 to

¹Always remembering that "epochs in the history of society are no more separated from each other by hard and fast lines of demarcation, than are geological epochs" [Marx, 1996, p. 374]. 'Revolution' can mean profound change or rapid change. Here we mean profound change, no matter that it took 200 years or more.

114, but from 1750 to 1800 it increased to 143, and by 1850 to 232 [Allen, 1994, Table 5.4, p. 109]. E.P. Thompson detected what he called an “important moment of transition” around 1750. He noted the landlords’ “far more aggressive agrarian posture” and “meticulous . . . attention to accountancy . . .” [Thompson, 1978, p. 44]. The paper argues that these changes came from the landlords’ conversion to capitalism. Modern historians, by contrast, often assume the English landlord had always been a “capitalist”, an “entrepreneur” who “had to take decisions about the use of his own capital . . .” [Beckett, 1986, pp. 137, 138; Mingay, 1963, p. 268].² The question they do not ask is why, in that case, it was only from around 1750 that landlords began to demand “a level of profit sufficient to support the lifestyle expected of an aristocrat . . .” [Beckett, 1986, p. 138]? It is no answer to say that the “expanding economy, . . . widening markets and rising prices . . . invited . . . sufficiently flexible . . . landowners to invest more capital and farmers to improve productivity . . .” [Mingay, 1963b, p. 284]. We must ask why English landlords, unlike their continental counterparts, were “sufficiently flexible” to accept the invitation of the markets by investing to increase productivity? The answer, the paper argues, reveals their vital contribution. It was not simply the provision of capital. As Mingay himself suggests, the landlords’ most significant contribution was “perhaps their attitude toward economic development . . .” [1963, p. 201]. The paper defines this attitude and uses accounting evidence to support Marx’s view that their vital contribution was spreading capitalist social relations and its mentality which gave the idea of “improvement” its meaning.³

The paper first explains Marx’s theory of the transition to capitalism, his theory of the agricultural revolution, and his theory of rent, as integral elements of a testable accounting history. According to Marx, to become capitalists, landlords had to adopt a rate-of-return-on-capital mentality. The paper then argues that this mentality spread throughout the landlord class during the financial revolution of the late 17th and early 18th centuries. The following part examines Marx’s assertion that the

²I shall follow Marx and most historians who refer to landlords, farmers, etc., in the masculine, even though “estate affairs were often temporarily or permanently in the hands of wives, daughters, or widows” [Mingay, 1976, p. 89].

³In the 18th century ‘improvement’ usually meant investment in agriculture for profit; ‘To enhance in monetary value’ (*Shorter Oxford English Dictionary on Historical Principles*, 1973). “[W]hen landlords spoke of ‘improvement’, it was usually an ‘improved rental’ they had in mind . . .” [Mingay, 1963, p. 172].

capitalist mentality — the search for higher rents by increasing the rate of return on the capital employed in the farm — drove parliamentary enclosures. It concludes that landlords used enclosures to impose capitalist accountability on their tenants, thereby spreading its relations and mentality. Rents usually increased sharply after enclosure, and continued to increase well into the 19th century. Marx was critical of Ricardo's theory of rent that attempted to explain these increases. Economic historians often rely on Ricardo's theory to explain the rent setting process and the historical trends. The paper contrasts Marx's and Ricardo's theory of rent as alternative accounting histories, and criticizes Allen's [1992] well-known use of Ricardo's theory to support his controversial assertion that enclosures did little to further the agricultural revolution. Put simply, Ricardo's theory implies that accounting was irrelevant to enclosures and managing rents, whereas Marx's theory implies that it was central to both. The paper argues that Ricardo based his theory on a faulty understanding of capitalist accounting that Allen perpetuates. Finally, the paper explores the accounting implications of Marx's theory for how capitalist landlords should manage their rents. It discusses how English landlords determined their rents; how they chose the length of their leases and the size of their farms; how they made fixed capital and other investments; and supports Marx's theory with the available accounting evidence. The conclusion explains the linkages in Marx's theory between the agricultural and industrial revolutions, his 'queer story' of rent in which English landlords helped to create the industrial revolution that, ultimately, undermined their position as a powerful class by turning them into investors, undifferentiated elements of the capitalist class. The paper concludes that accounting historians can make a critical contribution to important historical debates by elaborating and testing Marx's theory of the transition to capitalism against the large amount of still unexplored archival material available.

A MARXIST ACCOUNTING HISTORY OF THE ENGLISH AGRICULTURAL REVOLUTION

Marx argued that industrial society emerged from long processes of class conflict resulting in the overthrow of the feudal mode of production by the capitalist mode of production. A society's mode of production combines its 'forces of production' — the material and human means of production — and its 'social relations of production' — the modal relations of economic

superiority and subordination that condition the way owners of the means of production extract surplus value from labor. Accounting is central to understanding and testing Marx's theory because rationalizing and reproducing each set of social relations — each way of extracting surplus — is a particular calculative mentality and a mode of accountability [Bryer, 2000a]. The feudal mentality pursued the direct appropriation of surplus labor (labor itself, commodities or cash) from self-sufficient peasants, and feudal landlords and merchants kept income and expenditure accounts. The capitalist mentality pursues the rate of return on capital employed in production by extracting surplus value from the sale of commodities or services produced by wage labor, and the capitalist keeps balance sheets and profit and loss accounts. To use this correspondence to explain and test Marx's theory of the agricultural revolution and the role of landlords, we must first explain his theory of the transition to capitalism as a testable accounting history of the interrelationships between revolutions in the social relations of production and revolutions in accounting and calculative mentalities. Marx proposed a two-step transition to the capitalist mode of production that we should observe as the transition from the feudal to the capitalist way of accounting.⁴ Step one is from the feudal to a transitional, 'capitalistic' or 'semi-capitalist' mentality and ways of accounting. Step two is from the semi-capitalist to the capitalist mentality and accounting. Figure 1 summarizes the ideal-typical historical modes of accounting we should see according to Marx's theory:

FIGURE 1
Accounting Signatures of the Transition
from Feudalism to Capitalism

Calculative Mentality	Feudal	Semi-capitalist	Capitalist
Accounting Signature	Consumable Surplus (CS)	CS Opening Capital	Profit Capital Employed

⁴This and the following two paragraphs summarise a discussion of Marx's theory of the transition to capitalism and the views of his critics and supporters in Bryer [2000a] and a preliminary survey of accounting evidence in Bryer [2000b].

Marx says the first decisive step towards capitalism occurred around 1550 when some farmers undertook enclosures and employed wage labor. Although, like modern capitalists these farmers exploited wage labor, they were only “formally” capitalists, only semi-capitalists, because they made no attempt to change the methods of production, and continued to pursue feudal surplus using charge and discharge accounting. Semi-capitalists of a different kind appeared in trade with the first joint stock companies. These enterprises, employing socialized capitals, were the first to pursue a rate of return on capital.⁵ These merchants were only semi-capitalists because they pursued consumable surplus divided by the initial capital advanced. The capitalist mentality is the product of the semi-capitalist relations and mentalities that emerged in agriculture and trade. Capital from the land flowed into trade, and capital from trade flowed back onto the land bringing with it the return-on-capital mentality. Farmers harnessed the merchant’s rate of return mentality to their mentality of exploiting labor in production giving us the capitalist mentality. This mentality was revolutionary because it drove farmers, landlords, entrepreneurs and, ultimately, managers to continuously increase the intensity and productivity of labor to earn an excess return on capital. Capitalists, in short, pursued the ‘real subsumption’ of labor by managing production to increase the return on capital employed.

Capitalism appeared when peasants became “free” wage workers and faced “free” capital [Marx, 1973, p. 502-503]. Capital began to win its freedom when landed and mercantile interests merged as semi-capitalist farmers invested in privateering ventures, for exploration, commodity production and international trade. Conflicts over who would reap the rewards from international trade culminated in the ‘bourgeois revolution’ of

⁵ The paper uses the terms ‘socialised’ and ‘social capital’ to describe a continuum from recognisably social to fully social capital, the “thing” that Marx called “total social capital” [Marx, 1988, p. 23]. Socialised and social capitals are both pooled. Socialised capital involves pooling across a limited number of investors for limited purposes. Capital becomes social by losing its identity with its owner, but in the early stages with socialised capital there are restrictions on who can invest in the capital and its purposes — on the transferability and the uses of capital. An example is a partnership where the entry of a new partner requires the agreement of the other partners. By contrast, at its upper limit fully social capital involves pooling across all investors and all investments. All members of an investing society can participate in a social capital; the capital is freely usable for any lawful business; and is freely transferable - for example, marketable government debt and listed shares. Here the identity of the owner with the functioning of capital disappears and the social restrictions are minimal.

the mid-17th century which resulted in the victory of the rate-of-return-on-capital mentality over the feudal mentality [Bryer, 2000b]. The bourgeois revolution paved the way for the 'financial revolution' that matured into a large and active market in government debt. In Marx's theory, the financial or "credit system . . . is itself on the one hand an immanent form of the capitalist mode of production and on the other hand a driving force of its development into the highest and last possible form . . ." [1981, p. 742]. Government debt provided a riskless foundation for the development of joint stock companies [Marx, 1976b, pp. 919-920]. Capital gained its freedom in these markets for social capital where the required return on capital appeared and provided the owners of capital with the means for judging their investments [Bryer, 1994a].

Peasants were 'freed' from their land by enclosures that reached a new intensity from the 1760s, completing by parliamentary means a process that began in the 16th century. Marx thought that many farmers became capitalists from 1670 to 1750 helping to create capitalist landlords [1981, pp. 276, 751, 754, 938]: "the farmer turns capitalist before capitalists become farmers . . ." [1969a, p. 17]. In other words, ordinary farmers became capitalists before landlords and merchants became capitalist farmers. According to Marx, landlords became capitalists in two steps. The first was the appearance of capitalist tenant farmers turning their landlords into *de facto* capitalists, even though they were not necessarily consciously active capitalists. Landlords as a class took the second step when social capital on a national scale and the first real land market appeared and the typical landlord's mentality changed from a focus on feudal rent to a focus on the rate-of-return on capital. Semi-capitalist landlords soon became conscious and active capitalists if they had capitalist farmer tenants. Capitalist landed property "is a specific historical form, a form transformed by the intervention of capital and the capitalist mode of production . . ." [Marx, 1981, pp. 751, 754]. In other words, capitalist farmers and social capital created capitalist landlords. Capitalist farmers engage in the real subsumption of labor. This, Marx says, only gets "under way" from around 1670, and improvement and cost reductions only "set in" from around 1750 [1981, p. 938]. Marx's theory, in short, is that "*wage labour* in its totality is initially created by the action of capital on landed property, and then, as soon as the latter has been produced as a form, by the proprietor of the land himself. This latter then 'clears' . . . the land of its excess mouths . . ." [Marx, 1981, p. 276]. Modern landed property

appears as a “form” when capitalist farmers appear, and then, says Marx, the “proprietor”, the landlord, finishes the job. Driving him to clear his land of excess mouths — that is, to increase labor productivity through enclosures and other investment — was the landlord’s conversion to capitalism.

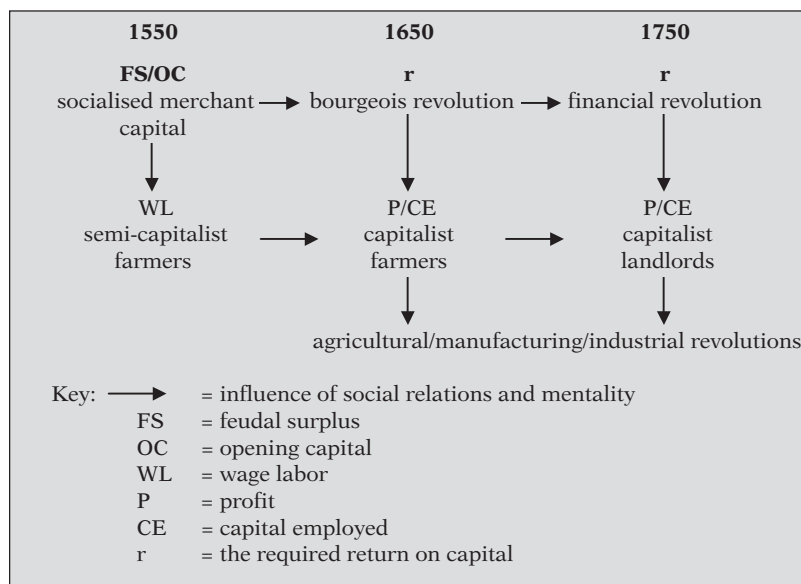
Capitalist landlords were a necessary condition for the industrial revolution: “Although capital can develop itself completely as commercial capital without th[e] transformation of landed property it cannot do so as industrial capital . . .” [Marx, 1981, p. 277]. First, capitalist landlords led in completing the creation of universal wage labor [Marx, 1981, pp. 276-277]. Second, through enclosures, other investment, and the active management of their tenants, landlords made capitalist attitudes the common form. To become a capitalist the landlord “needs only to transform his workers into wage workers and to produce for profit instead of for revenue . . .” [Marx, 1981, p. 277], that is, change his mentality to produce for capitalist profit instead of feudal rent. As the capitalist mentality spread in agriculture, it spread in ‘industry’ because “[o]riginally, agricultural labour and industrial labour are not separate: the second is an appendage of the first . . .” [Marx, 1981, pp. 770-771]. As the real subsumption of labor gave an economic advantage, the capitalist revolution quickly spread: “Once it has appropriated agriculture and mining, the manufacture of the principal textiles, etc., it moves on to other sectors . . .” [Marx, 1976b, p. 1036]. The capitalist appropriation of industry is Marx’s ‘industrial revolution’ [Bryer, 2004b]. Figure 2 summarizes Marx’s history of the capitalist revolution.

In reading figure 2 we must remember that class conflict drove each transition. Marx’s history of capitalism is the history of how socialized and social capital eroded and eventually overthrew “the socio-political limits in which capital was confined . . .” [Marx, 1976b, p. 1030]. It will take accounting historians many years to test all aspects of Marx’s theory of the transition to capitalism. The focus for this paper is when and how English landlords became capitalists, Marx’s landlords’ revolution, and its consequences.

The Landlords’ Revolution: An important element in creating capitalist landlords was the change to money rents and legally secure leases from the late 16th century. Apart from allowing the farmer to keep a surplus as prices rose and rents lagged behind, when the capitalist farmer appeared the legal basis of money rents also promoted the transition to the capitalist land-

FIGURE 2

Marx's History of the Capitalist Revolution



lord [Marx, 1981, p. 934]. When the landlord got contractually determined capitalist rent he became, *de facto*, a capitalist: “With the intervention of the capitalist farmer between the landowner and the actual working tiller . . . [t]he nature of rent thereby changes. . . . Instead of rent, the normal form of surplus-value is now profit, and rent now counts as . . . surplus profit . . .” [Marx, 1981, pp. 935-936]. Rent becomes “generally acknowledged” as surplus profit, that is, by the landlords as well. Surplus profit is the excess of a farm’s total profit over that part retained by the farmer. Only after 1750 did this, Marx’s capitalist rent, become rent’s “normal and dominant form”. Landlords had commuted most labor rents and rents in kind into contractual money rents by around 1600. During the 17th century most landlords gave up farming for themselves, letting almost all their land to tenants for money rent. However, it does not necessarily follow that “capitalist relations had arrived in the English countryside . . .” [Beckett, 1986, p. 136]. In Marx’s theory, money rents remained feudal unless the tenant was a capitalist. For example, in Aberdeenshire money rents had replaced feudal obligations by 1600, but as late as 1780 landlords “had not yet come to define the main potential of their estates to be capitalistic rent . . .” [Carter, 1977, p. 54]. Aberdeenshire

landed property only became “thoroughly capitalist, simply a source of ground rent for the owner” [Carter, 1977, p. 56] by the end of the Napoleonic wars.⁶ Marx would agree that this did not mean “responsibility had therefore passed from the landowners . . .” [Beckett, 1986, p. 136]. Landlords gave up farming during the 17th century, and this time for good, not only because their feudal powers had declined, but because they had, for the first time, adopted the rate-of-return on capital mentality. When larger landowners no longer “wished to tie capital up in farm stock . . . [t]he view became firmly established that if there was capital to spare it was safer and possibly more lucrative to invest it in mortgages, purchase of land or the Funds . . .” [Mingay, 1963b, pp. 168-169].

Also pushing landlords towards the rate-of-return on capital mentality was the land market starting in the late 17th century. In this market, “the capitalized rent, the price of land, and therefore its alienability and actual alienation, now becomes an important aspect . . .” [Marx, 1981, p. 938]. Besides its direct impact on the landlords’ mentality, this market helped to drive the transition in other ways. One important consequence was that “urban and other holders of money can buy plots of land with a view to leasing them either to peasants or to capitalists, and enjoy the rent on their capital thus invested as a form of interest. This factor, too, helps to promote the transformation of the former mode of exploitation, of the relationship between owner and actual tiller, and of rent itself . . .” [Marx, 1981, p. 938]. Fuelling the land market were Royalist attempts to recover estates after the Restoration, demand from the larger landowners to consolidate and extend their estates, and demand for land from wealthy merchants and businessmen. Finally, and critically important in promoting the rate-of-return mentality, was the appearance of a national capital market, based on a huge growth in public debt to finance war in the interest of trade. By 1750 landlords generally saw investment in stocks and shares or land as essentially the same because both provided a return on capital. With growing indebtedness, rising rents, and the financial benefits of capitalist agriculture plain for all to see, many landlords became consciously and actively capitalist. Now they wanted their tenants to increase their rents by increasing the rate-of-return on the capital invested in their farms. This could

⁶As Carter defines neither capitalistic, capitalist nor ground rent, we take his description at face value.

explain why only then “a growing number of landlords became actively engaged in the process of agricultural improvement”, whereas before 1750 “few of them had taken a personal interest in the farming on their estates . . .” [Roebuck, 1973, p. 17]. According to Marx, before 1750 most landlords retained their feudal mentality. We can directly test this theory by translating it into accounting ideas and looking for changes in the ways landlords accounted for rents.

An Accounting Translation of Marx's Theory of Capitalist Ground Rent: According to Marx, the transition to capitalism entailed a change in the mode of accountability [Bryer, 2000a]. If so, we should find changes in the ways landlords calculated their rents and used accounts to manage their tenants. Feudal rent (FR) is the total consumable surplus (CS) from a farm minus the consumption of the farmer (FC). That is, $FR = CS - FC$. Here we expect the landlord to account for cash flows or income and expenditure in the feudal fashion using charge and discharge accounting, and to use coercive individual accountability. Capitalist rent, by contrast, is the total profit of the farm minus the farmer's profit, that is, the general or average rate of profit on the capital the farmer owns, and the accountability is economic. Instead of coercion, the landlord relies on market forces and accounting calculations to discipline his tenants into producing the maximum rate-of-return on capital from the farm. The general or average rate of profit emerges in industry and trade. In modern finance theory the equivalent is the required return on the market portfolio [Bryer, 1994a]. Marx's theory of capitalist rent is simply that “[l]anded property enables the proprietor to lay hold of the difference between the individual profit and the average profit . . .” [Marx, 1981, p. 787]:

$$R_i = r_i K_{Ti} - r_G K_{Fi}$$

R_i = capitalist ground rent from farm i ;

r_i = the rate-of-return on the capital employed in farm i ;

K_{Ti} = the total capital employed in farm i by the landlord and the farmer,

r_G = the general rate of profit, and

K_{Fi} = the capital the farmer employs in farm i .

Marx distinguished “absolute” from “differential” rent. Absolute rent is central to his theory of the interconnections between the agricultural and the industrial revolutions. He defines it as “the excess of *value* over the *average price* of raw produce . . .” [Marx, 1969, p. 142]. Agricultural commodities sell for

more than they should because agriculture uses more labor and less material inputs and is, therefore, less productive than industry, and this is the source of the landlord's absolute rent. Agricultural products are, therefore, relatively more valuable and so agriculture earns a higher return on capital than industry. In industry the market competes any excess returns away. In agriculture it does not because the landlord steps in and collects the excess as absolute rent [Marx, 1969b, p. 41]. On top of absolute rent is any differential rent. Differential rent arises from farms that earn above average profits from above average natural fertility, location, or investment of capital, below average wages or taxes, or suppressing the farmers' returns below the general rate of profit. Marx attributed the discovery of the theory of differential rent to James Anderson in 1777, "a practical farmer" who, like a modern capitalist, thought "[t]he soil can be continuously improved . . ." [Marx, 1969b, pp. 114, 145]. The capitalist landlord thinks of all his rent as differential rent, and this is our focus in parts three, four and five. The paper's conclusion explains the role of absolute rent in Marx's theory of the industrial revolution.

Capitalist landlords do not pursue the largest amount of rent, but the maximum "rate of rent", that is, "rent in proportion to the agricultural capital advanced . . ." [Marx, 1969a, p. 107; 1969b, p. 113]. The rate of rent depends upon the profitability of the farm, the proportion of the capital the landlord provides, and the general rate of profit:

$$\frac{R}{K_L} = r_F + \frac{K_F}{K_L} [r_F - r_G]$$

R = total rent,

K_L = the landlord's capital employed,

r_F = the rate-of-return on the capital employed in the farm,

K_F = the farmer's capital employed,

r_G = the general rate of profit.

According to Marx' theory, therefore, we expect the consciously active capitalist landlord's system of accounting to encompass his rent, his rate of rent, the total profitability of the farm, and the return to the farmer. A landlord's system of accounting includes not only the final accounts, that may only record the collection of rent and his expenditures, but his whole system of accountability which includes the financial calculations he performs and the discipline they impose on tenants to pursue the maximum rate-of-return on capital.

A capitalist landlord sets his rents so an efficient farmer keeps the general rate of profit on his capital. If the farmer is a capitalist he will not accept less for long. This is what Marx means when he says that with the appearance of the capitalist farmer the nature of rent “thereby changes”. If the farmer is a capitalist, the landlord is to this extent “thereby” a capitalist whether consciously and actively or not. However, there is no guarantee that an unconscious and inactive *de facto* capitalist landlord will collect the maximum rate of rent. If he charges too much his tenants will not invest their capital or may desert his farms. If he charges too little, he enriches his tenants at his expense. The landlord or his tenants may invest too little or too much. According to Marx, therefore, we should expect that as landlords with capitalist tenants acquire the rate-of-return on capital mentality they soon become consciously active capitalists and spread its mentality by imposing it on all their tenants. We should find evidence of this transition in their accounts and changes in their systems of accounting, in the way landlords held their tenants accountable for rent. The landlord could tell us he is a capitalist by the way he calculates his rent demand; how he decides his investments in enclosures or other improvements, the length of his leases, the size of his farms, or the capital his tenants should have. English landlords came to do all of these things in the capitalist manner. To explain why, we start by tracing the genesis of the capitalist landlord in the history of the financial revolution and developments in landlords’ accounting practices. This supports the view that the landlords’ rate-of-return on capital mentality came from their immersion in social capital.

THE GENESIS OF THE CAPITALIST LANDLORD

On the surface, there was nothing new in the relationships between landlords and commerce from the late 17th century. Landowners were not major initial investors in stocks and shares [Beckett, 1989, p. 548]. “Men of commerce had always entered into landownership, and there was a more restricted inflow of such newcomers in the 18th century than in the previous two centuries . . .” [Mingay, 1963b, p. 268]. From the later 16th century landed gentry had invested in merchant ventures and, with some reservations, landowners continued to mingle and merge with wealthier merchants and businessmen [Mingay, 1976, pp. 6-10]. But never before had landed society lived in a world of social capital. From the Restoration in 1660 to the

collapse of the South Sea Bubble in 1720, commercial and financial revolutions engulfed English society [Carswell, 1993; Dickson, 1967]. Building on a steep upturn in trade, ship-building and merchant capital, by around 1750 England had a national market for capital based on 'public credit', mainly government debt to finance wars to protect and extend the North American and West Indian markets [Dickson, 1967, p. 11]. London was the focus, a city that inevitably drew the wealthy landowner and his family, and where they banked their rents. Landowners borrowed heavily on mortgages from insurance companies. Many landowners may have bought stocks and shares. Some merchants became landowners in a national land market in which landlords were also buyers extending and consolidating their estates. From all these directions, landlords were pushed to adopt the rate-of-return on capital mentality.

The Appearance of the Modern Mortgage: Under classical common law, the borrower (mortgagor) transferred the freehold of a property to the lender (mortgagee) for the duration of the mortgage, usually six months. The freehold reverted to the lender if the borrower defaulted by as little as one day, and he still owed the principal. From around 1600 the Courts of Chancery began accepting petitions from defaulting borrowers and ordered redemption of their property on payment of interest and principal in cases of special hardship, and from 1625 it automatically gave relief when the borrower offered payment within a reasonable time [Simpson, 1961, p. 227]. Where the borrower did not pay, the lender could foreclose. In the early 17th century judges began to agree that if the borrower paid the interest the lender could not force the owner to sell land [Finch, 1956, p. 32; Beckett, 1986, p. 296]. The elements of the modern law of mortgage existed by the early 17th century, but only at the end of the century were mortgages automatically and indefinitely extendable so long as the borrower paid interest. Only from the 1690s did investors consider mortgages raised on estates "as good as investment in the 'funds'" [Mathias, 1983, p. 51]; "a routine device for using land to raise long-term finance..." [Allen, 1992, p. 104]. By the end of the century, if the lender wanted repayment of his money, "normally he had no difficulty in finding a purchaser to whom he could assign his mortgage..." [Finch, 1956, p. 32]. Landlords also "had no difficulty in finding lenders, for credit was no longer dependent on the personal reputation of the borrower..." [Finch, 1956, p. 131]. This greatly expanded their borrowing capacity, and in the 18th

century they exploited it to the hilt. As their debts rose, landlords immersed themselves in the universe of social capital where, perhaps, for the first time, the remorseless deduction of interest from their rents convinced many that the rate-of-return on capital governed their extravagant lifestyles.

Many English landlords borrowed to improve their lands. This might explain why Denmark, Germany and France had similar increases in wheat yields to those in England, but lower labor productivity [Allen, 1992, pp. 1, 56]. It could also explain why the trend towards larger farms markedly accelerated in the 18th century [Allen, 1992, p. 86]. However, the important question is whether the appearance of modern mortgages caused these changes, or the mentality that demanded bigger and more productive farms produced the modern mortgage? Why was there a delay in introducing modern mortgages? A possible explanation is the widespread adoption of the rate-of-return on capital mentality by landlords only in the 1690s with the beginnings of a national capital market. The notion of “long-term finance”, that is, the clear separation of capital and interest, exists only within the rate-of-return on capital mentality. In the feudal mentality a mortgage is a “pledge” [Simpson, 1961, p. 132]. That is, the owner pawns his land, and in law this is no different from pawning his silver plate. By the early 17th century judges had established the legal principle of unfettered redemption — provided the borrower obeyed the laws of capital by paying the interest. Writers and parliament began to value land and property using present value, more and more thoroughly as the 17th century wore on, and lessors used it when financing London’s rebuilding after the Great Fire of 1666 [Scorgie, 1996, pp. 240-242]. In 1668 Sir Thomas Culpeper’s discourse in favor of reducing interest from 6% to 4% “support[s] a contention that landowners understood and used discounting to assist them in managing their woodlands . . .” [Scorgie, 1996, p. 244]. However, using the certainty of the law as our guide, only by the 1690s was it generally accepted that land was capital, an income earning asset in which the mortgagor had an inalienable “estate”, the “equity of redemption” [Simpson, 1961, p. 228]. Chancery judges ignored contractual agreements and applied the laws of capital. Just as the land was capital to its owner, the debt was capital to the mortgagee, usually secured by giving him the power of sale [Simpson, 1961, p. 229]. The modern accounting rules of ‘deprival value’ applied to both. The value of land to a borrower is its income-earning ability. To compensate for its loss we must give him its

replacement cost, its current market value. The value of the land to the lender, however, is only the face value of the debt, and if we deprive him of the security of the land we must compensate him by giving him back his money. When these rules became widely accepted, mortgages became negotiable financial securities.

Stocks, Shares and Loans: Even if landlords had wanted to sell their land and invest in stocks and shares, at first they had limited opportunities. Only by 1695 did more than one hundred joint stock companies exist [Carswell, 1993, p. 8]. Several peers held stock in the New East India Company from the late 1680s to 1707, and peers held stock in the Bank of England [Beckett, 1986, pp. 80-81]. From the 1690s to 1750 government borrowing created a range of financial securities, but initially, “the landed classes as a whole were not significant contributors of new capital for public loans . . .” [Dickson, 1967, p. 302]. Some notable landowners were initial investors in the funds, for example, Lord Townshend [Dickson, 1967, p. 265; Rosenheim, 1989, p. 157]. However, many more may have invested in the secondary markets. Evidence suggesting that they did is Sir Robert Walpole’s reason for killing a scheme to reduce the interest on the National Debt in 1737 that “the younger sons of landed gentry, as well as ‘monied men’, would be sufferers . . .” [Langford, 1999, p. 46]. Furthermore, very few large landowners escaped unscathed from the collapse of the South Sea Bubble in 1720 [Beckett, 1986, pp. 81, 86], which was an unforgettable experience for them. Their flight back into land (buying land or, more likely, lending to other landowners) and the increase in land value forged the link between the rate of interest and the price of land [Beckett, 1986, pp. 81-83]. By the early 18th century “potential buyers looked at the return on the funds to decide the timing of a purchase . . .” [Beckett, 1989, p. 558]. From around 1750, landowners are “switching their interests around according to the rate of interest”, and they use the same approach when making investments in improvement, that is, “by the expected rate of return . . .” [Beckett, 1986, p. 84; 1989, pp. 565, 585, 586, 605].

The Late 17th Century Land Market: Encouraging the spread of the capitalistic mentality in the landowning class, particularly in the period 1650 - 1690, was an influx of wealthy merchants [Beckett, 1986, pp. 71-73, 117, 553; Carswell, 1993, p. 9; Clay, 1985, pp. 143, 160]. There was a great deal of movement in the

land market from around 1750 [Beckett, 1989, p. 552]. Notably active were those “who were not farmers or gentry with deep roots in the countryside, but were employed in trade, industry, or the professions; or who lived, in an urban setting, the lives of leisured gentlemen on incomes from the funds . . . [who] did not see their property as a treasured inheritance but as a useful capital asset . . .” [Clay, 1985, p. 174]. Successful lawyers immersed in commercial life were also important buyers of land up to 1750 [Beckett, 1986, pp. 67-68]. Substantial planters from the British West Indies with connections to the London money market bought estates in England [Clay, 1985, p. 190]. Investors in the ships’ companies engaged in the slave trade often did the same [Davis, 1962]. Through the first half of the 18th century, landowners “had to accept within their ranks men with mercantile-based fortunes” [Beckett, 1989, p. 545]. Supporting Marx’s view that this helped to promote the capitalist mentality, Defoe, Smith and others thought that “commercial wealth . . . greatly enhanced the economic efficiency using the land”; that “[c]ommercial instincts brought to the land habits of accounting and profit calculation learned in trade, habits of ploughing back capital into a business to expand it . . .” [Mathias, 1983, pp. 149, 5]. To test this assertion we need to examine landlords’ accounts.

Landlords’ Accounts: Evidence of landlords beginning to use double-entry bookkeeping (DEB) would suggest they had a capitalistic mentality because DEB automatically gave them the means to calculate rate-of-return on capital [Bryer, 1993a]. In 1660 Abraham Liset published *Amphithalami, or, The Accountants Closet*, the first English book on DEB for estates. This gives a worked example with a running commentary of the ledger of a gentleman’s estates for the year ended 31 December 1658. Liset keeps accounts for two estates and two stewards. He debits all property accounts with the capital value at 1 January 1658. He debits rents collected to the steward and credits the property, and he makes opposite entries for disbursements and expenditures. At the end of the year, Liset carries the opening balance of the property forward and transfers the excess of rent over disbursements to the gain and loss account [Lee, 1981, p. 544]. With such accounts it would be possible for the landlord to calculate the feudal rate-of-return on his capital.

The first known example of DEB applied to estate accounts are those of the Francis Willughby Executorship, 1672-1682 [Lee, 1981]. Sir Henry Barnard, the principal trustee, installed

these accounts in 1673, possibly using Liset as a model. As executor, his interest was in financial control, so he did not value the estates. Sir Henry kept the accounts on a cash basis, drawing no distinctions between capital and revenue expenditures, and he did not periodically balance them. To remedy these defects, in 1676 Sir Henry “brought down . . . an Accomptant, so that in a short time I hope to perfect all your accounts . . .” [Lee, 1981, p. 545]. We know nothing of the provenance of this Accomptant, Thomas Godfrey. Godfrey’s new system “provided Sir Henry with a potent instrument of financial control over the estates in his charge, far superior to any other then available, so far as is known . . .” [Lee, 1981, p. 548]. By valuing the estate properties it would also have provided the means for calculating the estate’s rate-of-return on capital.⁷

How do we explain this early application of DEB to estate management? To Lee it “was the work of an obscure accountant three centuries ago with few or no models to guide him and with ‘generally accepted accounting principles’ more than two centuries in the future”, the work of a “talented man” [1981, p. 548]. Thomas Godfrey as an individual might remain obscure, but his social role and his models and accepted principles need not. Although Godfrey called himself an Accomptant, this did not have the traditional meaning — one who prepares charge and discharge accounts [Lee, 1981, p. 545]. Godfrey’s title had the modern meaning — one who provides the means (accounts) to hold others accountable. He might be an early example of an emerging profession of Accomptants. The English East India Company hired ‘accountants’ from the early 17th century [Bryer, 2000b], and other joint stock companies are likely to have been doing the same. The connection with socialized capital could also explain Godfrey’s accounts. The “year 1676 was a crucial one for the Willughby’s. Henry Barnard became a knight; Emma [Willughby] became the third wife of Josiah Child (1603-1699), one of the richest men in England”, and Godfrey installed the new accounting system. Josiah Child happened to be “a London merchant, a director of the East India Company, and later its Governor . . .” [Lee, 1981, p. 548]. From 1677 “extensive investments were made under Sir Josiah Child’s influence in the stock of the East India Company . . .” [Lee, 1981, p. 549]. This is precisely the type of social milieu in which, according to Marx, the

⁷ Although Godfrey set up capital accounts each with “a unique set of assets and liabilities . . .” [Lee, 1981, p. 545] it is not clear whether these included more than accumulated rents.

rate-of-return mentality of socialized capital should be growing towards the end of the 17th century.

A rate-of-return on capital mentality spreading within the landed gentry could explain the steady flow of manuals of double entry estate accounts from the reprint of Lisset in 1684 [Lee, 1981, p. 544]. For example, Thomas Richard's *The Gentleman's Auditor* [1707]; Roger North's *The Gentleman Accomptant* [1714]; Richard Hayes, *The Gentlemen's Complete Book-keeper . . .* [1741]; and Anon, *The Gentleman's and Lady's Accomptant* [1744]. Roger North advocated and presented a sophisticated system of estate accounts based on DEB [Parker, 1997]. North had early experience of government in London, but spent most of his life as a gentleman farmer and author in Norfolk. Roger's brother was the well-known Dudley North, author and merchant. North's "emphasis, not only upon accountability, but also on what he called 'Managery' . . ." [Parker, 1997, p. 37], is consistent with the increasing interpenetration of the mentalities of socialized capital and capitalist agriculture. Parker says "Richards presents charge and discharge in double-entry clothing . . ." [1997, p. 37]. However, he says this only because "no values are placed on the properties", even though there is space for the accountant to insert a capital value. An account existed for "My Lord B's Estate in general . . ." [Parker, 1997, p. 37]. The "Estate in general", is the Lord's capital. Parker is right that other books of the late 17th and even early 18th century used charge and discharge or only cash receipts and payments, which would support the view that the rate-of-return mentality was not yet general. Consistent with this, Lee thinks DEB in estate accounts "was probably not common before 1750 . . ." [Lee, 1981, p. 551]. Jones says from around 1750 we see a "transition from the charge and discharge basis to double entry accounts, integrated the one with the other . . ." [1985, p. 41]. A clear example is the account books of Herbert Mackworth of Gnull, Glamorgan, for 1759-1760 [Jones, 1985, p. 53]. They give us direct evidence of the capitalistic mentality at work. "Attempts were made to measure the profitability o[f] various aspects of work undertaken by the Estate with the object[ive] of indicating overall profitability, thus giving the landlord an idea of what the Estate could repay him on account of capital, or 'principal', originally advanced or invested . . ." [Jones, 1985, p. 53]. Not surprisingly, according to Marx's theory, Herbert Mackworth and his son were very keen on improvement [Jenkins, 1983, p. 56]. Oldroyd finds the same attitude on the Bowes' estates and "unequivocal evidence of double-entry bookkeeping . . . [in] a

pro-forma scheme of partnership accounts for lead mining and smelting, compiled around 1741", and evidence of its use between 1741 and 1746 [1999, pp. 182-183].

Landlords did not need DEB to calculate the rate-of-return on capital; they could modify their well-understood single-entry systems. Napier thinks it unlikely that landlords used their accounts for this purpose because, for example, for the second Marquis of Bute "to gain an overall picture of his Glamorgan estate, he would have had to consolidate in his own mind accounting and other information from several sources . . ." [1991, p. 171]. However, Bute did care about the rate-of-return on his capital. In 1828 he "was advised that a new dock at Cardiff would cost £66,000 and generate a return of 7% . . ." [Napier, 1991, p. 166]. The accountant kept his mineral ledger using DEB from 1826 to 1831 [Napier, 1991, p. 170]. The form of his Account Current and the Abstract for the estate "suggests that . . . [the accountant] used a double entry ledger", if only a "rudimentary one" [Napier, 1991, p. 170]. There are many ways accountants could adapt charge and discharge systems [Baxter, 1980, p. 70]. Bailiffs' accounts of farms in hand could provide examples as "even during the eighteenth century [they] displayed a remarkable similarity in presentation, in that annual profit and loss columns and stock valuations were drawn up and farming matters were clearly separated from other estate interests . . ." [Jones and Collins, 1965, p. 87]. Furthermore, the landlord or his agents could use records of cash receipts and payments in a variety of ways — adjusting for opening and closing debtors, creditors and stocks — to measure and control profitability [Oldroyd, 1999, pp. 182, 197].

The landlords' adoption of the rate-of-return on capital mentality is the first step. The following parts argue that from around 1750 many landlords took the second step by becoming capitalists and spreading its mentality and social relations through enclosures, through capital investment, and their management of rent.

CAPITALIST LANDLORDS AND PARLIAMENTARY ENCLOSURES

The flood of parliamentary enclosures beginning in the 1760s that swept away the open commonfields and commons was a critical element in Marx's landlords' revolution. To see if he is right we must examine the landlords' and farmers' motives. Economic historians often misunderstand Marx's views on

enclosures. Allen repeats the dominant view. He says Marx thought “[e]nclosures and large farms created private property and capitalism . . .” [1992, p. 2]. Marx has it the other way around: capitalism created enclosures and large farms. Marx saw capitalist enclosures not simply as a technically efficient reorganization of the land, but, crucially, as arenas in which the farmer would be accountable to the landlord for the capital employed. They “conquered the field for capitalistic agriculture, made the soil part and parcel of capital . . .” [Marx, 1974, p. 685]. They made land “suitable for the application of capital and labour” [Marx, 1969a, p. 141]. They allowed the capitalist farmer freedom to maximize the rate-of-return on capital. But, more important for the landlord, enclosures legally and physically defined the boundaries of the capital for which he could hold the farmer accountable. “Enclosure, whether by Parliamentary act or local agreement operated to define and strengthen the control of individuals over cultivable land . . .” [O’Brien, 1977, p. 180]. After 1760 enclosures were the landlords’ largest expenditure [Mingay, 1963b, p. 179; Holderness, 1988, p. 20].

Marx would have agreed that “the growth of capitalist farming . . . [was] fuelled by enclosure . . .” [Turner, 1989, p. 58]. He thought that capitalist landlords and farmers used enclosures to increase labor productivity by innovation and investment to produce higher returns on capital and higher rents [Marx, 1974, p. 908]. Consistent with this, Allen shows that 18th century “open villages were far less innovative than the enclosed” [1992, p. 15]. He finds, however, that these innovations made “only a minor contribution” to increases in crop yields and labor productivity [Allen, 1992, p. 15]. He concludes that Marx “exaggerated the contribution of enclosure to the growth in labour productivity . . .” [Allen, 1992, p. 151]. He thinks the major economic consequence of enclosures “was to redistribute the existing agricultural income, not to create additional income by raising efficiency . . .” [Allen, 1992, p. 181]. In support, Allen calculates the farmers’ excess returns from open fields and from enclosures using Ricardo’s theory of rent [1992, p. 174]:

$$sT = pQ - wL - iK$$

s = surplus per acre,

T = total acres,

p = the price of total output,

Q = total output,

w = the price of labor including that of the farmer and his family,

L = total labor hours,
 i = the price of capital,
 K = the farmer's capital.

Allen measures Ricardian rent (sT) as sales (pQ) minus wages, seeds, repairs and all other expenditures on labor, etc., (wL) and the "price" of capital (iK) ($sT = pQ - wL - iK$). His "capital cost" "equals the depreciation plus the interest of live-stock and implements, that is, the assets with lives longer than one year". He charges 5% only on the farmer's livestock and implements, the maximum rate of interest the law allowed [Allen, 1992, Appendix II]. A major difference between Ricardo and Marx's theories of rent, therefore, is that according to Marx the farmer wanted a return on all of his capital, on his productive capital and his capital of circulation (his inventories, debtors and cash). Another is that, according to Marx, the farmer "does not demand customary interest but the *customary profit* . . ." [1969b, p. 158], that is, the general rate of profit.⁸

If the landlord collected less rent than Ricardo's theory predicts, the farmer kept an excess return. Allen finds that landlords generally collected Ricardian rent from enclosed farmers. By contrast, they often failed to collect full Ricardian rents from open field farmers [Allen, 1982, p. 941]. Allen concludes, therefore, that the aim and result of enclosures was to redistribute surplus; an expression of the landlords' increased power in the 18th century. In Marx's terms, he sees enclosures and rent increases as acts of feudal coercion with no revolutionary implications, "the . . . outcome of a power struggle . . ." [Overton, 1996b, pp. 162-163]. What follows argues that enclosures provided the foundation for capitalist accountability: that they did help landlords to eliminate the farmer's excess returns, but not through a power struggle over a given surplus. The landlords used their remaining feudal power (their dominance of the land and parliament) to impose capitalist accountability and control over their tenants. Landlords could not appropriate full economic surpluses from open-field farms as there were limits to their feudal power. To control these surpluses and generate more, landlords had to transform feudal into capitalist accountability. Enclosure was the first essential step, but it was not sufficient to produce an increase in output and productivity. Unlike Allen, Marx envisaged no simple enclosure effect — no

⁸I critically examine the Ricardian theory of rent in a later section. For the remainder of this section I take Allen's empirical results at face value.

increase in productivity or yields from simply putting up fences, etc.

An Enclosure Effect?: Enclosed farmers could innovate because enclosures removed collective constraints on the farmer's decisions, but why they should is a mystery in Allen's explanation as the landlord diverts any excess return to himself. According to Marx, enclosed farmers innovate because they are accountable to a capitalist landlord and engage in the real subsumption of labor to maximize their returns on the largest possible capital. Arthur Young "strongly believed that the character of the farmers of enclosed lands was quite different from that of the occupiers of the open fields". He thought the "farmers using enclosures were more progressive in their ideas, more open to the possibility of increasing output by adopting improved practice" (quoted in Mingay, 1975, p. 103). The reason was that "[e]nclosures raise rents; high rents made men industrious Everything must be turned to good advantage when high rents are paid; the farmer knows that everything must be profitable; and that very circumstance renders them so . . ." [Young, quoted in Mingay, 1975, p. 104]. Anticipating the 'results control' approach of modern management control theorists [Bryer, 2004c], Young claimed that by holding tenants accountable for high rents, "[m]en have been taught to think . . ." [quoted in Mingay, 1975, p. 111]. Certainly, as land agent Thomas Davis commented of Wiltshire in 1811, '[e]nclosures make a good farmer better and a bad one worse'. Clearly, "enclosure could bring improvement only if the farmers were ready and willing to innovate . . ." [Beckett, 1990, p. 39] — only if they had the appropriate mentality. Enclosures in themselves raised neither labor productivity nor yields; in themselves they played no role [Turner, 1986, p. 687].

Allen, by contrast, looks for an enclosure effect on yields, and concludes that we must, therefore, control for the effect of soil and climate, etc. [1992, p. 135]. He controls for soil type and finds that increased yields from enclosures were insignificant. At the national level using 1801 crop returns, Turner, however, finds "the increase in yield that can be postulated as a result of enclosure were 23% for wheat and barely and 11% for oats . . ." [1989, p. 53]. The increase for Northamptonshire "can partly be attributed to inferior land having been taken out of crop production, which necessarily raises the statistical average . . ." [Turner, 1989, p. 53]. From Allen's perspective, Turner's study was flawed [Allen, 1994, p. 116]. However, shifting corn production to more fertile land after enclosure is a "result of

enclosure”, the result of applying the capitalist mentality to the opportunities it created. Therefore, Turner’s increases in yields give us a better guide to the motives for enclosure than Allen’s. Only by relying on arbitrary quantitative criteria for deciding whether changes were ‘revolutionary’ can Allen conclude that neither productivity nor yield increases were significant because he finds greater increases during the 17th century. The increases he finds insignificant might have been significant to the landlord and the farmer. We cannot understand enclosures by studying crop yields and productivity in isolation from changing patterns of farming and output [Turner, 1989, p. 53], and to understand this we must understand the mentality behind them. If the promoters were capitalists, even apparently small increases in yields and labor productivity in conjunction with smaller capital per acre [Allen, 1992, p. 18] might have given the larger enclosed farms significantly greater returns on capital and, therefore, their landlords greater rents. Did landlords promote enclosures for these reasons? Was it the case that “from a landlord’s point of view enclosure was an investment, the profit from which was a higher rent . . .” [Turner, 1984, p. 41]? “Were accountancy procedures, however crude, employed? . . .” [Turner, 1984, p. 44]. From Marx’s viewpoint, we must ask whether enclosers calculated the expected return on the capital employed. Although we need systematic research, the evidence available supports the view that many did, using either rate-of-return, residual income, or present value calculations.

Parliamentary Enclosures, Accounting Calculations and Class Conflict: In their extensive studies of parliamentary enclosures, historians only occasionally give us evidence of accounting and financial calculations, although they often imply they were not unusual. In 1775 Nathaniel Kent (a Norfolk land steward) thought that “if an acquisition would contribute towards making possible an enclosure or some other rationalization of farm layout, then it would be worthwhile as an investment . . . because [of] the high rate of return obtainable from capital . . .” [quoted in Clay, 1985, p. 181]. Turner says that some “evidence suggests that enclosers were sensitive to opportunity costs, invoking the capital cost of enclosure only in terms of the foregone income from investing the same money elsewhere . . .” [1984, p. 45]. He gives an example from 1775 when the principal landowner in the Buckinghamshire hamlet of Sedrup calculated residual income [Turner, 1984, p. 45]. Turner says of this type of calculation, “while not commonplace, . . . it was not unusual for

recognized enclosure commissioners and land surveyors to make this kind of estimate as a preliminary to framing a bill . . .” [1984, p. 45]. Sometime in the 1770s Sir William Lee of Hartwell in Buckinghamshire made a present value calculation to evaluate an enclosure proposal [Turner, 1984, p. 45]. Landlords sometimes calculated the number of years before the rent increase repaid the capital. The rent increase on enclosure gave a constant surplus each period, so the reciprocal of the payback period was the rate-of-return on the initial capital. As the Sedrup enclosure’s forecast rent increase would have repaid the capital after three years [Turner, 1984, p. 45], its rate-of-return was $33\frac{1}{3}\%$. Widespread concern with the rate-of-return on capital from 1750 could explain why neither price levels nor interest rates provides a convincing explanation of enclosure activity [Turner, 1984, p. 51]. If landlords were capitalists they based their decisions to enclose on the expected rate-of-return that was a function of expected interest rates and profits.

Acceptance of the capitalist mentality could also explain why, although rents increased markedly on enclosure, and often redistributed surplus from tenant to landlord, no serious conflict erupted between them. Why, that is, the “tension between the . . . ideals . . . of paternalistic responsibility for their tenants . . . [and] the apparent advantages of active, engaged management, of improvement . . . probably lessened towards the end of the seventeenth century . . .” [Heal and Holmes, 1994, p. 113]. Feudal paternalistic responsibility for tenants meant physical capital maintenance, that tenants should not be ‘wasted’ [Bryer, 1994b]. In the capitalist mentality it means the tenant earns the general rate of profit on his capital. Certainly, there was conflict between landlords and peasants, particularly the smaller farmers and below that had most to lose. Marx, however, would have agreed “[l]andlords and tenants shared a common interest, but the ultimate benefit of any improvement went to the landlord . . .” [Turner, 1989, p. 57]. The landlord got the maximum rate of rent and the farmer got the general rate of profit on the largest capital. If the equation $R_i = r_i K_{Ti} - r_G K_{Fi}$ governed rents, they could double on enclosure (as the conventional wisdom says they did) if the rate-of-return on total farm capital increased modestly and the farmer took the general rate of profit.

All this could happen without a power struggle between the two groups. According to Young, enclosed farmers got a lower rate-of-return on capital than open-field farmers [Allen, 1982, p. 941]. However, if enclosed farmers employed a larger capital they could earn the same or a larger profit. For example, assume

before enclosure that the rate-of-return on the total capital of £100 invested in the farm is 15% and the farmer brings capital of £50 and takes the general rate of profit of 10%. The rent is £10 = $[0.15 \times £100] - [0.10 \times £50]$, and the farmer's profit is £5. If, after enclosure, the rate of profit on the farm increased to 16.67%, and the capital employed after enclosure was £150 and the general rate of profit stayed the same, rent would double to £20 = $[0.1667 \times £150] - [0.10 \times £50]$. If before enclosure the farmer took (say) a 12% return on his capital so that rent was £9, conflict could ensue over the redistribution of £1 of surplus. However, the farmer's income could stay the same or rise if, as often was the case, enclosure allowed him to employ a larger capital [Allen, 1994, p. 98; Overton, 1996b, p. 127]. If in the example the farmer could invest an additional £10, his profit stayed at £6, and rent increased to £20.67. Perhaps this is why initiatives for enclosure "[o]ften . . . came from the larger farmers who desired more compact and easily-worked farms" [Mingay, 1963b, p. 181] on which they could employ more working capital, particularly higher densities of livestock [Turner, 1989, p. 50]. This switch continued through the early 19th century despite a shift of relative prices favoring grain production. From 1700 to 1850 the farmers' capital increased as they expanded flocks and livestock to take advantage of improved pastures and greater production of winter forage [Allen, 1994, p. 117]. This could help explain why farmers benefited, but by less than landlords, from enclosures [Turner, 1984, p. 44].

Enclosures and Accountability: Allen's finding that in the late 1760s rents gave enclosed farmers no excess returns but that open field rents did, is consistent, as Boyer says, with "landlords learn[ing] how to properly value land only upon its enclosure . . ." [1993, p. 919]. That is, according to Marx, learning how to make modern accounting calculations. Allen does not otherwise explain "why convention was so much better at setting rents on enclosed land than on open-field land . . ." [Boyer, 1993, p. 919]. Marx's theory says that whereas from around 1670 growing numbers of farmers could do capitalist accounting, landlords only became capitalists from around 1750 and learnt it then. This suggests that until then, open field tenants kept some or all the surpluses because landlords had neither the mentality to demand capitalist accountability, nor the systems and manpower to enforce it. By contrast, Turner, Beckett and Afton argue that landlords did not claw back surpluses because they became better at "identifying and extracting the value of

their shared asset . . .” [1996, p. 16]. In their view, this happened because “changes in the economic environment of eighteenth-century farming initially worked in favour of the tenants, and that advantage was halted, and to a large degree reversed, at enclosure . . .” [Turner, Beckett and Afton, 1996, pp. 234-235].

However, this explanation takes no account of Allen’s finding that by 1806 the gap between rent and surplus on open-field farms had disappeared. Allen does not explain why open-field rents captured the full Ricardian rent during the inflation of the French war years but did not during the 1760s. “[I]f the open-fields market was in equilibrium in 1806, what does that imply about the causes of the enormous wave of enclosures at that time? . . .” [Boyer, 1993, p. 920]. According to Allen, landlords enclosed to get the Ricardian surplus. However, they had no need to enclose in the early 19th century if open-field rents already transmitted this surplus. By contrast, Marx’s theory explains these enclosures as the result of spreading demand for capitalist accountability. That is, the landlord’s motive became not simply to increase his rents to collect his Ricardian surplus, nor simply to get increased rents through immediate increases in productivity. Rather, landlords enclosed to secure capitalist accountability from their tenants to increase the long run rate-of-return on the capital employed on their land. Landlords and farmers, like most political economists, thought that increased rent was a return for increased efficiency (i.e., was differential rent), and saw enclosures as the beginning of a program of capital investment to increase it. As Edward Laurence, the well-known writer and land steward put it, the improving landlord “should not immediately think that *All* is to be set right on a sudden; but Time and Patience must be allow’d and then something may be done to Satisfaction. . . . In all . . . cases, a Sum of Money *must* be allow’d and expended to make good Deficiencies; and this before the Landlord can, or ought, so much as to think of, an Advance of Rent . . .” [1731, pp. 2-3].

If landlords judged enclosures and other improvements by differential rent, what type of rent, Ricardo or Marx’s? It is true that “we know all too little about how rents were assessed, the process of agreement between tenant and agent, the methods of payment and accounting, and the techniques for agreeing abatements, remissions and . . . evictions” etc., [Turner, Beckett and Afton, 1997, pp. 6-7]. Marx and Ricardo’s theories of rent produce very different views of how landlords set about managing their estates. However, only Marx’s theory is consistent with modern accounting and the evidence we have of its use.

RICARDO OR MARX'S THEORY OF RENT?

Ricardo recognizes only circulating and fixed capital, and so does Allen. Ricardo says that “[a]ccording as capital is rapidly perishable, and requires to be frequently reproduced, or is slow of consumption, it is classed under the heading of circulating or of fixed . . .” [1973, p. 26]. The modern notion of fixed capital does not depend on its durability. Thinking that it does wrongly focuses attention on the physical properties of the asset and not its economic function in the production process [Marx, 1978, p. 298]. The essential point is whether the owner recovers the capital bit-by-bit over more than one operating cycle. In Marx and modern accounting the distinction between fixed capital and circulating capital is not immutable. They are not, as they are in Ricardo, “a set of definitions under which things are to be subsumed . . .” [Marx, 1978, p. 303]. Ricardo thought certain objects the capitalist buys are by their nature fixed and others are circulating. Modern accountants would agree with Marx that it is “rather definite functions that are expressed in specific categories . . .” [1978, p. 303]; that the functions and categories of fixed capital are as follows. As labor uses the fixed capital it transfers the capital’s value to the commodity. Accountants call the consumption and recovery of this capital depreciation. This value becomes, first, an element of productive capital as work-in-progress; then it becomes capital of circulation as finished stock, debtors or cash, etc. [Bryer, 1999a].

Ricardo ignored these elements of the farmer’s capital of circulation. His equation for rent simply divides the cash flows of the farm between the landlord and the farmer (who keeps the cash flow shielded by ‘depreciation’). Perhaps this is why Allen confidently claims that rents, having little to do with accounting, “were determined administratively or bargained between landlord and tenant” using “conventions” (for example, open fields rents were 10s. per acre, and enclosed were 20s.) [Allen, 1992, p. 181]. Furthermore, following Pollard [1965], he claims that neither landlord nor farmer “could . . . do the requisite accounting . . .” [Allen, 1992, p. 183]. Pollard’s key claim was that leading industrial concerns did not attempt calculations of the “profit rate on capital” but, as Edwards and Newell say, he “is certainly wrong” [1991, p. 51].

If we include the use of residual income accounting, there is evidence that some farmers did calculate the rate-of-return on capital employed [Bryer, 2004a]. In 1611 Robert Loder calculated his excess profit on the capital he employed in production [Bryer, 2000b]. In 1765 a Romney Marsh grazier deducted “1 yrs

Interest on £560 money advanced on the stock @ 4 per cent” from his surplus [Reading University Library, KEN 19/1/1, p. 5]. In 1788 Arthur Young published accounts that measured residual income and calculated the rate-of-return on the “Total stock of the farm, or capital employed . . .” [1788, p. 236]. Allen accepts that 18th century entrepreneurs often used the residual income approach, although he confuses it with his ‘opportunity cost of capital’. That is, he says they “typically allowed 5 per cent interest on the investment and computed the rate of profit on the residual . . .” [Allen, 1992, p. 183]. Allen says “Young . . . used this value in calculations of farm profits . . .” [1992, p. 319]. In reality, Young used it as a benchmark for calculating the excess profit over ‘interest’ as a benchmark rate-of-return. In the 18th century entrepreneurs and farmers considered any excess the return to entrepreneurship [Hueckel, 1976, pp. 334-335].

Were the Agricultural Experts Ricardians?: To bolster his argument that farmers and landlords set rents innocent of modern accounting, Allen refers to the widely quoted essay by Tuckett *On Land Valuing* published in 1863. Allen claims Tuckett as a Ricardian because he says “there can be no doubt that the difference between the produce and the expenses must, in the end, regulate the rent that a farmer can afford to pay . . .” [quoted by Allen, 1992, p. 182]. It is not clear from this that Tuckett is a Ricardian. Tuckett quotes with qualified approval the “same idea” that “the fair rent, ‘it is presumed, may be obtained by estimating the expenses incurred and the profits arising during the whole course of one rotation of crops on different soils’ . . .” [1863, p. 5]. His qualification is that in estimating profits, “to enter on these needful calculations” over one rotation “will require great practical experience . . .” [1863, p. 6]. Tuckett did, therefore, think it was possible and desirable to estimate “profits” in determining rent. There was no mechanical formula, but Tuckett clearly thought that the boundary of rent was “profit” which the land surveyor should estimate as best he could. Tuckett found “[s]uch calculations . . . very interesting, and I have often made them for my own satisfaction . . .” [1863, p. 6]. They should, however, be supplemented by an intimate knowledge of the rent market to gauge the ‘fair’ level of rent. According to Marx, this was the rent that left the farmer with the general rate of profit on his capital.

Young, Marshall and other experts appear to have had this formula in mind. Marshall thought, “a proprietor should spare

no reasonable expense to come at a fair rental value . . .” [quoted in Turner, Beckett and Afton, 1997, p. 17]. He should use two or three valuers and, presumably, average their valuations to arrive at his forecast. Alternatively, he should use local market price, the summation of all money-backed forecasts: “in every neighbourhood, there is a peculiar, yet fair Market Price . . .” [Marshall, quoted in Turner, Beckett and Afton, 1997, p. 17]. This is what Squarey meant in 1878 when he said that no “precise formula can be adopted in fixing its amount . . .” [1878, p. 441]. The reason was that in the real world the “rent of land is that surplus of money which on an average of years, may be expected to remain after paying the fixed and fluctuating charges . . .” [Squarey, 1878, p. 440]. Turner, Beckett and Afton think Young’s “more sharply defined capitalist attitude” towards setting rents looks Ricardian [Turner, Beckett and Afton, 1997, pp. 19-20]. Given Young’s capitalist understanding of accounts, however, his attitude looks Marxist. For example, his view that the landlord should include in his calculation of rent estimates of the cost of carriage to market. “[The] goodness of roads, and a moderate distance from market, are circumstances highly necessary to be attended to in the hiring of a farm; and that, if they are wanting, the rent ought to be estimated accordingly . . .” [quoted in Mingay, 1975, p. 158]. Put another way, the “general rule, in the words of David Low [in 1823], was ‘that the landlord so regulate his demands on the tenant, as not to exact as rent any part of that fund which is necessary to the farmer as capital’ . . .” [Beckett, 1989, p. 610]. This, for Marx, typified the capitalist mentality.

Capitalist landlords should seek the highest rent consistent with maintaining the farmer’s capital, for example, by reducing rent in response to improvements paid for by the tenant, or because of hard times. This principle underlay the system of ‘rack renting’ approved of by agricultural experts and practiced, for example, by Coke of Norfolk [Turner, Beckett and Afton, 1997, p. 14]. In this context ‘rack’ has two meanings — a ‘horizontal bar’ or ‘shelf’, and to ‘stretch the joints (of a person) by tugging or pulling’. A rack rent, therefore, was a high, level rent, unlike earlier forms (mainly beneficial leases and copyholds) that had the tenant pay a large lump sum followed by a nominal rent and, perhaps, feudal services in money, labor or kind. A step towards rack rents was the recognition, beginning in the 17th century, that with beneficial leases the amount the tenant paid in advance was the present value of the nominal fine [Finch, 1956, p. 202]. The landlord calculated the fine as so

many years depending on the rate of interest multiplied by the difference between the economic rent and the nominal rent [Stone, 1965, p. 318]. Financial tables existed in the early 17th century to convert fines into equal annual equivalents, that is, the equivalent annuity [Finch, 1956, Appendix II, p. 173]. Turner, Beckett and Afton say in practice the fine “was rarely based on real economic information . . .” [1997, p. 25]. They think that only a few “farmers were sufficiently wealthy and educated to think in this way — the majority kept no records let alone understood the finer details of accountancy”, but they admit that David Low’s clearly capitalist “way of thinking was well established . . .” [Turner, Beckett and Afton, 1997, p. 20]. Sir Ralph Verney’s management of his tenants suggests this way of thinking also existed in the late 17th century.

Sir Ralph Verney, An Early Capitalist Landlord?: “Sir Ralph’s goal throughout his life” was “the highest possible rent . . .” [Broad, 1973, p. 249]. Broad says Sir Ralph reveals his “capitalist view of the landowner’s position” when he says “I ever was and still am of the opinion that no man is bound to suffer his tenants to reap the benefits of his land because they are poor . . .” [1973, p. 248]. In short, Broad thinks Sir Ralph is a capitalist because he is “grasping” and “harsh” [1973, p. 213]. However, Sir Ralph also said, possibly revealing his truly capitalist view, “on the other side I do believe a landlord is obliged to take but an equitable rent for his land so as the tenant by God’s ordinary providence and blessing upon his honest endeavors may be a gainer by it. And to my knowledge I never broke this rule . . .” [quoted in Broad, 1973, p. 248]. The capitalist rule is that equitable rent leaves the tenant with the general rate of profit on his capital. A landlord like Sir Ralph, deeply involved in the personal management of his business and knowing the markets well, could with equanimity leave the calculation of the equitable rent to the market. Broad says that for Sir Ralph, “[a]s in the true definition of rack rent, market forces alone determined the level . . .” [1973, p. 248].

However, this does not necessarily mean that Sir Ralph was not a consciously active capitalist landlord. He almost certainly had a rate-of-return mentality. As a Royalist Sir Ralph had to sell two-thirds of his pre-civil-war estates, but stabilized his financial position by marrying his eldest son to the heiress of a City merchant whose family had recently settled on the land [Broad, 1973, p. 7]. He immersed himself in the City, spending around five months in London every year, and his younger son

became a successful Levant merchant in the 1650s. He had a wide circle of friends and contacts, including the Earl of Warwick and other prominent merchants trading with socialized capitals in the West Indies and North America, all vigorous investors in the East India Company and elsewhere [Brenner, 1993, Bryer, 2000b]. Although Sir Ralph “did not normally invest in commercial enterprises he once put £150 in Africa Company stock. However, one of the services which he provided was to arrange the putting out of money for friends and relatives . . .” [Broad, 1973, p. 8]. Sir Ralph usually reinvested the money by lending to landed families, but in 1678 he attempted unsuccessfully to invest £800 in East India stock through his son John for a friend [Broad, 1973, p. 9]. Clay says, the “injection of mercantile wealth greatly revived the fortunes of the Verneys . . .” [1985, p. 152]. However, their involvement with mercantile wealth might also have had profound effects on their mentalities as farmers and landlords. Although Sir Ralph did little farming himself, only becoming involved when he could not let particular farms, he was an improving landlord [Broad, 1973, p. 246].

Broad says that Sir Ralph’s approach to enclosures and improvements “was very much in line with the best contemporary thought on the subject as laid down rather late by Edward Laurence . . .” [1973, p. 246]. Laurence published his *The Duty and Office of a Land Steward* in 1727, based, he says, on “above Twenty Years” experience [1731, p. ix]. However, Broad says that where “Sir Ralph was very much at odds with Laurence’s idea of good administration was in his basic attitude to his tenants and his consistent insistence on rack renting . . .” [1973, p. 247]. Arguably, however, while Sir Ralph and Laurence’s landlords used different methods, their “basic attitudes” were the same. Broad does not discuss Laurence’s views, but if they were a late presentation of the best practice of many landlords in his day, they were capitalists, just like Sir Ralph. Certainly, Sir Ralph appears “harsh” in keeping rents as high as possible and evicting tenants in arrears of more than one year “unless they had reserves of capital . . .” [Broad, 1973, p. 252]. Laurence’s aim was that estates were “let to the Satisfaction of both Landlord and Tenant, . . . [f]or altho’ the Lord’s Estate ought to be let at best advantage, yet it should be let without *racking* the industrious Tenant . . .” [1731, p. 84]. Although their methods appear to be different, by “racking” Laurence means, just like Sir Ralph, charging rents no higher than an industrious tenant could pay and earn a “profitable return . . .” [Laurence, 1731, p. 14].

Sir Ralph did his energetic best to avoid setting rents too high by keeping a close watch on the efficiency and capital reserves of those who found his rents hard to bear. He tried to keep potential tenants in reserve, and, when all else failed, even “Sir Ralph could not avoid reducing his rents . . .” [Broad, 1973, p. 252]. Certainly, it would be risky for a “Person of Quality at a distance” to entrust this method of management to his land steward who might set his rents too high for a short term advantage to himself (e.g., higher salary) and long term disadvantage to the Lord. For Lords at a distance, Laurence recommended formal calculations: “a Steward . . . , should take his *Pen* in hand, and make a *Calculation* with the Tenant . . . of what may be sold off the Farm, which ought to be . . . at least *two Rents*, if it is intended a Farmer should thrive; and *thrive he must*, or else the Landlord will suffer *first or last*. By these Methods and fair *Calculations* a Farmer is treated in familiar, easy way, and you beat, or rather convict, him with his own Weapons. But he will not be *bully’d* or *hector’d* into an *advanc’d Rent* . . .” [1731, p. 19]. Here Laurence contrasts the feudal landlord who bullies his tenants to pay high rents with the capitalist Lord that has his steward make calculations and talk to his tenants in their language — the language of markets and accounting. Sir Ralph apparently talked mainly of markets, but he was, unlike Sir Pexall Brocas of Steventon, Hampshire (for example) no bully. “Brocas’s ‘hard usage’ of his tenants was legendary: demands for extortionate rents, and for loans that usually proved permanent, were backed by threats of vexatious lawsuits and the attention of his thugs . . .” [Heal and Holmes, 1994, p. 115]. Laurence’s, by contrast, was the modern way, “not the *violent* one of *forcing* . . . tenants . . . beyond their Power, but the *gentle* and *rational* one of persuading, and instructing them . . . that they may be able, not only to *pay*, but to *advance* their Rents . . .” [1731, p. 5].

Laurence gives us no details of how to calculate his ‘two rents’, that is, rent for the landlord and profit for the farmer. However, he says that stewards should lease to a “careful and provident Farmer . . . [who] keeps well his Accompts, and wisely balanceth his Gain and Loss, if he would be assur’d that he gets by his Farm, and thrives in the world . . .” [Laurence, 1731, pp. 82-83]. He should also be concerned with the tenant’s capital: the “Steward, before he lets any considerable Farm to seeming-good Advantage of an *advanc’d Rent*, should be well satisfied of the *Ability* of the Tenant A Farm of a Hundred pounds a year requires at the least Three hundred pounds Stock; and if ‘tis

a grazing Farm, above Four Hundred pounds . . .” [Lawrence, 1731, p. 127]. This implies the tenant farmer wanted a particular return on his capital, and the steward should calculate if an industrious farmer could achieve this. Perhaps this is why Laurence thought increasing all rents by the same amount was “unjust” [1731, p. 17], presumably because farms needing the least improvement should get the highest rent increase because their rate-of-return on capital was higher?

Rack-renting and Farmers’ Returns on Capital: Beneficial leases survived in certain areas as late as the end of the 19th century, but from around 1750 landlords increasingly imposed rack rents. Turner, Beckett and Afton say that even in the 19th century the landlord tempered the “fully articulated ‘rack’ rent” with “conventions based on social position” because “landlords were often reluctant to push rents up to the highest possible levels . . .” [1997, pp. 13-15]. Certainly, rack rents “reflected a desire to assume [more] direct control of their estates”, as did using more tightly drawn lease contracts, the employment of professional stewards, and the introduction of DEB [Turner, Beckett and Afton, 1997, p. 15], but these trend are consistent with Marx’s landlords’ revolution. Also consistent is Hueckel’s finding that “the long-run equilibrium return to [the farmer’s] capital over this period probably lay within the range from 9% to 14% . . .” [1976, p. 343], approximating the general rate of profit, which implies that landlords also received ‘fair rents’. In other words, as capitalists the landlords did push rents to the ‘highest possible levels’ consistent with their ‘social position’. To what extent did this range result from market forces or the landlords’ and tenants’ calculations? According to Allen, if early industrialists did not understand accounting, the “average farmer” certainly could not [1992, p. 183]. However, at least some landlords and agents did understand capitalist accounting and accountability.

An ideal-typical capitalist landlord’s accounting system came from the pen of Thomas Lovett, chief agent at Chirk Castle after 1750. Lovett prepared model accounts for a 400-acre farm. He starts by calculating the necessary capital, which he reckons as £1279.14.0. “Now I want to know what profits may be reasonably expected from the circulation of this large capital in the business of Farming . . .” [quoted in Jones, 1985, pp. 67-68]. Just like a modern capitalist he expects profit from the circulation of capital in production and, to confirm this, in calculating his profit Lovett deducts “[w]ear and tear in the implements of

husbandry . . . and the decay in dairy utensils . . .” [quoted in Jones, 1985, p. 68]. Lovett then deducts “[t]he interest on his neat Stock and neat Cash laid out . . . after the rate of £10 per cent” [quoted in Jones, 1985, p. 68], to calculate his residual income. Like a modern capitalist he “distinguishes . . . between revenue and capital and recognises that certain types of ‘capital’ wear out or fall by the wayside and have to be replaced . . . to maintain his starting capital intact . . .” [Jones, 1985, p. 72].

Historians have studied only a few leading landlords’ accounts in any detail, and fully supported generalizations must await systematic research by accounting historians. The following part highlights two prime examples where we have some relevant accounting details, although questions remain. One example is Thomas William Coke (‘Coke of Norfolk’) who appears as an ideal-typical capitalist landlord, a man peculiarly fitted for his times and for his self-appointed role as promoter of improved agriculture. He was an incurable enthusiast and self-publicist, not beyond distorting the facts to show himself in the best possible light [Parker, 1975]. He and the early agricultural historians, who took him at his word, magnified and distorted his role in the agricultural revolution. Nevertheless, Coke of Norfolk and his predecessors are an important test of Marx’s theory: “the very fact that Cokes management was set up as an example for others to follow makes . . . his study worthwhile . . .” [Wade Martins, 1980, p. 249]. Given that in north west Norfolk “there were excellent farmers, deploying large capital, holding Coke farms before Thomas William Coke succeeded his father” [Parker, 1975, p. 73], the Cokes appear a classic case of capitalist farmers producing capitalist landlords. Consistent with this, the Cokes’ improving leases kept up with, but did not lead, their progressive tenants [Wade Martins, 1980, p. 76]. Thomas Coke was subject to capitalistic influences. Following their disaster with the South Sea Bubble, the Cokes never seriously invested outside agriculture until the 1850s, but they borrowed heavily [Parker, 1975; Wade Martins, 1980].

Another prominent example is George Granville who inherited the Leveson-Gower estates in 1803 [Wordie, 1982]. With the estate and title he also inherited the capitalistic mentality of its agents who, from 1758, had “brought in a new commercial attitude . . .” [Wordie, 1982, p. 48]. From this time “the estate had steadily come to be regarded more and more as first and foremost an investment, which gave a good or bad return in accordance with the efficiency of the management . . .” [Wordie, 1982, p. 59]. As we shall see, the evidence supports the view that

by the 1790s the Leveson-Gower estates had a capitalist chief-agent, and in 1803 they had a capitalist Lord (George Granville, the second Earl Gower, was Marquis of Stafford from 1786, and Duke of Sutherland from 1833). In the early 18th century the Leveson-Gowers were in debt. From 1750 they were investing in industrial partnerships and lending money to turnpike and canals.

Capitalist influence also comes from early industrial capitalists [Wordie, 1982, p. 107]. Not only did these entrepreneurs draw the landlord's attention to his unexploited mineral wealth, they drew in his money [Wordie, 1982, pp. 107-108]. Regardless of the landlord's intentions this money circulated as capital. From around 1750, the management of the Leveson-Gower estates changed from what had been a "permissive", haphazard involvement, to "direct landlord participation" in industrial and agricultural development [Wordie, 1982, p. 112]. The following examines Cokes', Leveson-Gowers', and others' capital calculations; their focus on the rate of rent; their calculations of the length of leases, the capital adequacy of tenants, and the appropriate size of their farms. It concludes that the accounting evidence supports Marx's view that the motivation for the direct involvement of landlords was their capitalist mentality.

CAPITALIST LANDLORDS AND THE MANAGEMENT OF RENT

Thomas Coke's guardians took control of the estate in 1707. In 1708 they reviewed the rents and put them up, starting a trend that continued until after the Napoleonic Wars [Parker, 1975, p. 4]. In 1717, just before Thomas came of age, the guardians produced a table showing how much the rental of the estates had increased, and how much of this was due better "management" [Parker, 1975, p. 5]. Parker states the nub of the management problem for capitalist landlords in his summary of the principles the guardians applied "to assess accurately the potentialities of the land, to encourage the tenants to attain them and to secure a rent correctly reflecting those potentialities. Too low a rent reduces the landlord's income, too high a rent forces farmers to mismanage their farms and harm the land . . ." [1975, pp. 5-6]. In Marx's theory, the "potentialities of the land" is the potential rate of profit on the farm. Too low a rent means the farmer gets more than the general rate of profit on his capital, and too high a rent means the farmer fails to maintain his capital. Coke's steward applied these principles in

1824 when he severely criticized a tenant who sub-leased for adopting the feudal approach to the management of rent: “he has squeezed exorbitant rents out of the Tenants, so as to incapacitate them from effecting necessary improvements . . .” [quoted in Parker, 1975, p. 177]. “Encouragement” of the tenants meant the landlord helping or fully financing investment and regulating his demands for rent. Thus, we must not assume that when Coke allows rent arrears to build up or reduces rents, as his land steward put it, “from his innate goodness of heart . . .” [Parker, 1975, p. 149], that he is simply searching for social prestige. Coke and his agents knew that to get his rents the farmer must have enough capital to efficiently run his farms. He therefore only let to “good men . . . possessed of good capital . . .” [Parker, 1975, p. 15]. That is, those “greater capitalists” who were more likely to continue paying rents even if from accumulated wealth [Wade Martins, 1980, p. 89]. However, to encourage them Coke made capital investment in his tenants’ farms based on capital calculations.

Capital Calculations: A capitalist landlord will increase rents to recover the capital he invests in a farm and give him the farm’s rate of profit on the capital. At the very least, he will want an ‘interest’ return on his capital. For example, in 1711 Coke’s guardians increased the rent by £10 a year to a tenant “for the interest of £200 laid out in building a barne and which is to remain an improved rent . . .” [Parker, 1975, p. 8]. As part of their management of Coke’s estates the guardians decided to encourage tenants by bearing some or all the costs of marling. They did this by allowing deductions from rents. For example, from 1710 to 1715 John Carr of Massingham “marled by agreement 240 acres, and was allowed 8s. an acre in return . . .” [Parker, 1975, p. 7, see also p. 41]. An indication of the type of thinking that might have gone into these calculations is Blaikie’s (Coke’s steward) claim in 1828 that improvements “on Arable land may pay £10 p. Cent on Capital, under particularly favorable circumstances. Improvements on Grass land, especially draining wet land may and generally will pay from £50 to £100 p. Cent on Capital expended . . .” [quoted in Parker, 1975, p. 155, fn.70]. In 1850 Coke’s land steward “introduced new clauses into his leases whereby the estate was ensured a return on improvements made to farms: 5% was charged for drainage work and 7½% on the cost of building work . . .” [Wade Martins, 1980, p. 100]. Coke of Norfolk spent a great deal on farm buildings. Consistent with a capitalist mentality, as Young said of them,

“the great object [was] to prevent waste and save labour . . .” [quoted in Wade Martins, 1980, p. 143]. The question remains whether the greater object was to maximize the rate-of-return on the capital employed. Evidence supporting this is the careful provision of “adequate implement sheds, as more wear and tear was caused by implements by leaving them outside than through actual work . . .” [Wade Martins, 1980, pp. 170-171]. ‘Wear and tear’ is central to the capitalist idea of the circulation of fixed capital and accounting for depreciation to recover its cost.

The Leveson-Gower estates also invested heavily from the 1790s to increase the returns from its tenants’ farms. With the appointment of John Bishton as chief agent in 1788, “more landlord capital than ever before was poured into both of the major properties . . . as a means of raising rents a view that coincided exactly with that of the young George Granville who inherited the estates in 1805 . . .” [Wordie, 1982, pp. 57-58]. The switch from an emphasis on consumption to an emphasis on the rate-of-return from productive investment was, for Marx, the essence of the landlords’ revolution. By 1850 “interest on landlord’s capital was a major element in rent”, accounting for some 60% on average [Holderness, 1981, p. 233].

The Rate of Rent: A landlord keeping his final accounts using charge and discharge, could still indicate a capitalist mentality by keeping separate records of investment and showing concern for the rate of rent. Coke’s audit books, for example, distinguish land purchases and buildings from repairs. From 1790 to 1882 the total invested in the estate recorded in the accounts was £536,818 [Wade Martins, 1980, p. 99]. It is unclear how accurate this total is as it includes a large element for buildings and repairs [Wade Martins, 1980, p. 99]. Wade Martins thinks Coke’s investment produced a modest incremental return of 7.6% even without allowing for an increase in the value of land, or for the fact that rents might have increased anyway, or that rents in 1882 were at a peak [Wade Martins, 1980, pp. 99-100]. She says the return could be as low as 4.6%. By contrast, if we take Coke’s investment as £536,818, with net rents of £59,709, the estate’s rate of rent in 1882 was 11.1%. Which rate-of-return was in Coke’s mind? Wade Martin’s incremental rate-of-return ignores the capital invested by Coke and his tenants in 1790, and they are not in constant prices. To estimate the real capital in 1790 and 1883 would require considerable work even if the data exists. To show why it could change Coke’s appreciation of his

returns, suppose, for example that from 1790 to 1883 the capital in Coke's estates doubled. If so, the rate of rent in 1790 was 3.4% [$\pounds 18,461/\pounds 536,818$], and by 1883 it was 5.6% [$\pounds 59,709/\pounds 1,073,636$]. Only if, say, the capital in 1790 was a quarter of that in 1883, would the rate of rent fall with investment from 13.8% to 8.8%. Similar problems arise with Spring's analysis of the seventh Duke of Bedford's "modest" returns from investment between 1842 and 1861 [1963, p. 49]. Wade Martins explains Coke's apparently low returns by notionally adding the "intangible" returns of the "admiration" of his fellow landlords [1980, p. 104]. Thomas William, however, seemed generally happy with his returns, and wanted the world to admire him for his investments. He "took pride in the amount he had invested in his estates", and "boasted" in his will (and before he died) that he had spent $\pounds 500,000$ [Parker, 1975, pp. 94, 154].

Coke's accounts distinguished expenditure on "improvements" for each estate. Although this heading disappeared after 1784 [Parker, 1975, p. 56], the accountants continued to distinguish capital and revenue expenditures. Parker questions whether they consistently distinguished repairs from improvements, citing an item the accountants classified as improvement in 1745 "for 'making new banks, mending old banks' . . ." [Parker, 1975, p. 56]. To decide whether they should have classified the latter as repairs or improvement we must understand what the accountants meant by "mending". At that time it could mean to 'amend', to 'improve in quality', to 'supplement'. If the workers 'amended', that is, converted, the old banks into new banks (for example, made them wider, deeper, different slope) the accountants were right to classify this expenditure as improvement in the capitalist sense — to increase the store of use-values available or lower their cost.

Parker's other example is payments, which he says, "were not capital investment at all, such as payments to outgoing tenants for crops left growing on their farms . . ." [1975, pp. 56-57]. While not fixed capital, these payments were for capital of circulation. Parker also questions whether payments for marling are "fixed investment . . ." [1975, p. 57], and this after he repeatedly tells us that the beneficial effects last for up to thirty years! After the improvements heading disappeared, the accountants did not religiously distinguish repairs and improvements, particularly when the repairs element was small [Parker, 1975, p. 95]. Coke's books distinguished expenditure on drainage only from 1851 when it became the estate's responsibility [Wade Martins, 1980, p. 96], and struck the balance of the "net proceeds" of the estate

after “everything needed to keep the estate in good order had already been taken . . .” [Parker, 1975, p. 22].

This organization of the accounts reflected Coke’s management of the estate. It suggests a strong commitment to the maintenance of his estate as his productive capital. As Parker says, “[t]he fact is expressive of a state of mind. The estate was the basis of all the Coke life and its efficient management was axiomatic. . . . Spending on it . . . was accounted for as a prior charge, coming before [large] housekeeping and personal needs . . .” [1975, p. 22]. On the face of it, this could suggest the feudal idea of physical capital maintenance. However, evidence consistent with concern for the rate of rent is provided by the fact that when Mr Blaikie became the land steward he made clear that he thought Coke had over invested [Wade Martins, 1980, p. 95].

Certainly, it might seldom be possible to find repair costs as a separate item in the accounts [Beckett, 1986, p. 201]. Accounts, however, often highlighted important items of capital. For example, in the accounts of the second Viscount Townshend, “ditch and hedgework, marling took special time and labor to accomplish, so it was accounted for separately as an extraordinary expenditure . . . , an acknowledgement of its status as capital improvement . . .” [Rosenheim, 1989, p. 127]. The accounts of Guy’s Hospital’s estates did not distinguish repairs from new buildings, but they distinguished other key items of capital expenditure. The Abstract dating from 1762 distinguished between rates and taxes, buildings and repairs, money spent on sea walls and river banks, planting woods, allowances to tenants, and agents’ salaries and fees [Trueman, 1975, p. 522]. We must also look outside the final accounts for evidence of concern with capital. Until 1864 the Bute accounts made no distinction between capital and revenue, and no accounts survive for Bute’s Docks. Nevertheless, Bute knew from various documents that his Ship Canal cost £222,000 in cash [Napier, 1991, pp. 173, 170]. As Laurence said, before a steward “engageth in any Work of Consequence relating either to *In-closures*, or *Architecture*, or *Draining*, &c. [he] should first send as exact an Estimate as possible, what the same will amount to, that his Lord may *sit down and count the Cost*, and make a deliberate Judgment, whether the Charge will answer his Expectations in the propos’d Benefit . . .” [1731, p. 78].

Evidence consistent with landlords pursuing the rate of rent is their tendency to invest more of their rentals in bad times, and less in good times [Holderness, 1971, p. 178]. Historians

usually explain this by the fluctuating need of the landlord to “attract or retain tenants . . .” [Rule, 1992, p. 60; Turner, Beckett and Afton, 1996, p. 208; Holderness, 1981, p. 234]. They see the landlord’s decision to invest heavily in fixed capital as the same as his decision to allow arrears, take over taxes and repairs, or to reduce his rent, simply the transfer of “income” [Turner, Beckett and Afton, 1996, p. 208]. An alternative argument is that tenants were more reluctant in bad times to undertake fixed capital investment for which, until the later 19th century, they typically had no legal security [Squarey, 1877, p. 435]. In good times, when the farmer found it relatively easy to earn the general rate of profit, the landlord persuaded him to make fixed capital investments. In bad times the landlord could not do this so easily. To maintain their rents, the landlords had to invest more in fixed capital. For example, suppose at the necessary level of fixed capital investment $r_F = 0.15$, $K_F/K_L = 0.5$, and $r_G = 0.1$, then the rate of rent is $17.5\% = (0.15 + 0.5[0.15 - 0.1]) \times 100$. Suppose bad times arrive and that if the landlord does not invest in additional fixed capital, r_F will fall to 0.12 and his rate of rent will fall to 13%. Suppose, however, that if the landlord invests the necessary fixed capital r_F only falls to 0.14. If, thereby, the proportion of capital the farmer provides, K_F/K_L , falls to (say) 0.25, the rate of rent is 15%. As Mingay says, “enforced expenditure in the difficult years . . . was merely an alternative to unwelcome reductions in rentals . . .” [1963, pp. 178-179]. In good times, the less the landlord invests in fixed capital the higher his rate of rent, and we expect him to persuade tenants to take more of the burden. By the same logic, an advantage of leasing mines instead of direct working was that the landlord minimized his capital investment [Mingay, 1963, p. 193]. The history of landlord investment in agricultural fixed capital supports this model.

Until the reforms of the late 19th century, when a tenant left the farm his fixtures became the property of the landlord [Holderness, 1981, p. 233]. In practice the landlord did not often enforce his rights and farmers generally did invest in fixed capital [Holderness, 1981, p. 233], possibly a third of the total over the period 1750-1870 in East Anglia [Holderness, 1972, p. 446], for example. Nevertheless, reflecting the legal uncertainty, the conventional wisdom was that the farmer should invest only in working capital [Currie, 1981, p. 77]. The landlord provided the fixed capital ‘embodied in the land’ and the farmer provided the ‘working capital’ he could take with him. In practice, however, this distinction became blurred, tenants often investing in embodied fixed capital. For example, during the Napoleonic Wars,

1793-1815, when prices and rents increased, "farmers were required to take more initiatives . . . [and landlords'] outgoings, except on enclosure, were kept to a minimum . . ." [Holderness, 1972, p. 441]. In East Anglia, the proportion of landlords' rents spent on improvements and repairs fell sharply from 1796 to 1806 [Holderness, 1972, Table 2, p. 439]. However, although the conventional distinction blurred in the heady days up to 1815, in the recession that followed farmers saw its wisdom clearly, perhaps for the first time in a generation. In the recession and for some years tenants became unwilling to make permanent improvements, and landlords became obliged to provide funds for investment, often in lieu of rent reductions [Currie, 1981, p. 77].

The rate of rent helps to explain broad patterns of landlord investment. However, to explain why particular landlords adopted particular strategies we must understand their mentalities. The Dukes of Marlborough, for example, neglected the buildings on their estate [Wade Martins, 1980, p. 138]. This neglect might have been the product of a feudal mentality. Landlords were not inevitably capitalists. As his steward said after Coke of Norfolk's death, he could have used the £500,000 for "Horse racing or any other Gambling transaction if he had been so inclined' . . ." [quoted in Parker, 1975, p. 154, fn.65]. Coke could have lived in the typically feudal way and focused solely on consumption. To be capitalists landlords need not necessarily be heavy or consistent investors. Some might attempt to get the going rate of rent by a policy of minimal investment [Holderness, 1981, p. 233]. Suppose, for example, that the landlord invests fixed capital to the point where $r_F = 0.15$, the rate of rent is $0.1625 = 0.15 + 0.25(0.15 - 0.1)$. If the landlord invests less, $r_F = 0.14$ and rents are correspondingly lower, then he will get the same rate of rent so long as the proportion of capital the farmer provides does not fall below 56.25%, i.e., $0.1625 = 0.14 + 0.5625(0.14 - 0.1)$. Thus, it is possible that although in 18th century literature "landowners continue to be represented as 'big spenders' and not frugal investors . . ." [O'Brien and Heath, 1994, p. 53], many were capitalists. From 1750, "many progressive landlords shifted their method of estimating gross income from the number of rents to the interest charged on capital and labour annually expended . . ." [Davidoff and Hall, 1987, p. 204]. In Marx's terms, many shifted from pursuing feudal rent to the pursuing the capitalist rate of rent, and imposed this mentality on their tenants. "This calculation of profitability, enforced by cost conscious estate agents and bailiffs, influenced farmers. An Essex man who farmed over 1000 acres saw himself 'more in the

nature of a person employing capital than a farmer'" [Davidoff and Hall, 1987, p. 204]. Although capitalist farmers first created capitalist landlords, from the 1750s it is more likely it will be the Lord pressing the farmer to become a capitalist, than the other way round. One of the mechanisms landlords used to create capitalist mentalities in their tenants was shortening the length of their leases.

The Length of Leases: Many agricultural experts (for example, Arthur Young) advocated long leases because they thought security of tenure gave the "illusion of ownership" [Wordie, 1982, p. 185] that encouraged the farmer to invest in the farm. An obvious problem for the landlord, however, was the inability to raise rents quickly if prices increased, and for the tenant the landlord's reluctance to reduce them if prices fell. This argument weighed heavily with landlords from 1750 as prices and rents rose, and by 1850 the majority of tenants had yearly lettings [Holderness, 1981, p. 234; Turner, Beckett and Afton, 1997, p. 199]. If the tenants were substantial capitalist farmers (as Young assumed) the balance of incentives could favor a long lease [Wordie, 1982, p. 185]. If the landlord did not rent to substantial capitalist farmers willing and able to invest in fixed capital and bear the risks, the balance of the argument swung towards short leases. Furthermore, if the capitalist landlord could not take the capitalist mentality of his tenants for granted — as Coke of Norfolk, for example, probably could — short leases could help him impose and sustain it. One reason for introducing short leases was so that "rack-rented farms could . . . become subject to market forces . . ." [Turner, Beckett and Afton, 1997, p. 199], but another was that they made tenants more accountable to landlords.

The short lease became an engine of capitalist revolution. A prominent example was its use on the Leveson-Gower estates. James Loch, their chief agent from 1812, used short leases combined with landlord investment in fixed capital to hold tenants accountable for the maximum return on capital. Loch had a keen interest in capitalist accounting. In 1835 he recommended that the Earl of Dudley should use "double-entry forms, capital accounting, and the break-down of accounts to provide specific information such as net profit on individual concerns, administrative expenses, debts outstanding, or receipts from investments . . ." [Raybould, 1973, p. 231]. Loch's predecessors from Thomas Tibbetts in 1722 also insisted on DEB [Wordie, 1982, p. 36]. For the Earl's mines Loch recommended depreciating the

capital cost or value for wear and tear. The accountant should prepare a “capital account”, an “Account of the value of all the Articles and Machinery, including the Cost or Value of the Pits themselves at each work should also be taken annually with such additions or the contrary as the case may have occurred . . . and a certain sum per cent should be written off yearly on Account of the loss for Tear and Wear . . .” [quoted in Raybould, 1973, p. 233]. There seems every reason to think Loch would have the same attitude towards agricultural fixed capital [Raybould, 1973, p. 233].

Loch revolutionized the estate’s management structure, appointing full time specialists in building, surveying, law, accounting, etc [Wordie, 1982, p. 64]. His opposition to long leases came from his desire to be “free from any troublesome restrictions . . .” [Wordie, 1982, p. 184]. One was a shortage of capital diverting the tenants away from generating the maximum rate-of-return. To maximize the returns, to focus on the “unfettered cultivation of the soil”, the tenants must not only use the most appropriate techniques, but must increase their working capital [Wordie, 1982, p. 219]. Loch also encouraged the tenants to invest their own capital because “by increasing their output through improved efficiency . . . [they would] get . . . a larger return from a larger bulk sale . . .” [Wordie, 1982, p. 225]. Similarly, the landlord’s rate of rent would increase. The major restriction faced by Loch, however, was that capitalist improvers were not universal on the estates. Stimulated by frequent visits to Coke’s Holkham and other areas of improvement, Loch set about generalizing best practice capitalist farming throughout the Leveson-Gower estates [Wordie, 1982, pp. 204-213]. These, with heavy investment by the landlord, were the carrots. The stick was the accountability of the tenants for their financial performance, and at the heart of this was the short lease.

Loch had almost eliminated long leases by 1820 [Wordie, 1982, p. 214]. Short leases provided the legal foundation of his system of accountability because, while the landlord could do little if the tenant farmed badly or exploited the land, he could easily evict and sue for unpaid rent. In practice, most annual tenants enjoyed security of tenure, and in this sense the difference with long leases was “insignificant” [Holderness, 1981, p. 234]. However, this supports the argument that short leases meant tenants were accountable. Accountability works when the threat of punishment produces the desired behavior. That farmers on yearly lettings were as secure as tenants on long leases suggests they satisfactorily discharged their accountability.

“Those who held at will did not dare to exploit their farms for fear of the watchful agents and the threat of six month’ notice . . .” [Wordie, 1982, pp. 220-221]. On the contrary, many tenants had invested heavily in their farms [Wordie, 1982, p. 223]. Despite Loch’s claimed ideal that landlords should invest in fixed capital, he cajoled many tenants to do this [Wordie, 1982, pp. 218, 222-223, 221]. He clearly offended their capitalist sensibilities when he “robbed them of what they considered to be their just reward for improvements by raising rents as soon as these had been carried out . . .” [Wordie, 1982, p. 223]. For Wordie this illustrates “the eternal dilemma, the great dichotomy of the whole landlord-tenant system . . .” [1982, p. 220]. He is right that the landlord and tenant shared a common interest “up to a point” — for Marx, the point where the tenant gets the general rate of profit on a large capital, and the landlord gets the maximum rate of rent. It is questionable, however, whether the Leveson-Gower experience shows that “thereafter their interests diverged . . .” [Wordie, 1982, p. 220]. From the capitalist viewpoint, charging rent to expropriate the tenants’ returns on their own fixed capital went too far, was ‘unfair’ [Wordie, 1982, pp. 191-192, 225].

Capital Adequacy and the Size of Farms: Many landlords thought it “dangerously imprudent to let a farm to a tenant who lacked sufficient capital to stock it and run it properly . . .” [Mingay, 1975, pp. 48-49]. The landlord had to calculate the necessary capital to know if the tenant had sufficient. Arthur Young’s calculations in *The farmer’s guide in hiring and stocking farms* 1770, illustrates how progressive landlords probably thought about the problem. Allen says Young’s aim “was to determine how much a farm was worth, but his calculations ignored most of the capital costs and so overstated the value . . .” [1992, p. 183]. In particular, he says Young ignored depreciation [Allen, 1992, p. 183]. Young’s aim, however, was not to value the farm. It was to show how it was that “farms are every day hired with much smaller sums of money than the most considerate persons would allot for the purpose . . .” [quoted in Mingay, 1975, p. 49]. Young calculates the minimum money capital required by the farmer of a 400-acre farm over its first three years of operation [Mingay, 1975, p. 53]. That is, the least amount he can get away with and expect to survive. As Young’s purpose was to show the inadequacy of focusing solely on cash, he made no charge for depreciation. He well understood that capital to finance a few years’ cash flows would be inadequate because the capital the

farmer needs to work his farm is not merely the cash outlays required in the first few years. It includes necessary reserves to withstand adversity and funds to make investments in fixed capital [Mingay, 1975, p. 55]. Without sufficient capital, for example, a “vein of the finest marl may be under his fields; he can have nothing to do with it . . .” [quoted in Mingay, 1975, p. 55].

The landlord could display a capitalist mentality by his attitude to the size of farms. Farms were exceptionally large on Coke’s estates, and grew larger [Parker, 1975; Wade Martins, 1980], but the size of farms in general steadily increased, particularly from around 1750 [Beckett, 1990; Allen, 1992]. This trend supports Marx’s view that the capitalist mentality was setting in because large, efficiently run farms produced higher returns on capital and therefore higher rents. How big farms should be to maximize the rate-of-return on capital depends on the circumstances. These circumstances — particularly the supply of farmers with sufficient capital — changed over time [Holderness, 1981]. The capitalist principle is to choose the size of farm that gives the highest return on capital. As a steward of the Marquis of Bath put it in 1794, those “farms are of the most proper size, which return the most proportional produce at the least proportional expense . . .” [quoted in Beckett, 1983, p. 318]. If farms of optimal size produce the highest output per acre for the least cost per acre, it follows they produce the highest profit per acre and therefore the highest rate-of-return on capital per acre. From the 1730s successive writers argued for an increase in farm sizes [Beckett, 1983, p. 313]. Beckett thinks Young was virtually alone in his “doctrinaire beliefs” about the virtues of large farms; that farms should be big regardless of the circumstances [1983, pp. 321, 324]. In fact, Young advocated large farms for strictly capitalist reasons. As Hermann Levy pointed out, Young’s concern was “looking simply at the greatest possible profit to be made, or at the purely economic fitness of things”. It was only “from the latter point of view [that] he had defended the large farm system on the profitableness of corn growing . . .” [quoted in Beckett, 1983, p. 323, fn.57]. According to Young, the size of farms should not be indiscriminate, but chosen to maximize “profitableness”. Young judged many farms of his day to be too small whereas others disagreed. However, this does not make him an isolated doctrinaire. In Beckett’s view, “the debate went against Young”, but he concedes “the fact that in 1851 a third of the cultivated acreage was held in farms of 300 acres or more suggests that his views were not entirely lost on the landowning community . . .” [1983, p.

323]. He says that some of Levy's comments suggest that Young mellowed in his later years and "became more enamoured of small holdings . . ." [Beckett, 1983, p. 323, fn.57]. Levy, however, does not say Young changed his mind about the economics of large farms, only that he became concerned about their social consequences [Beckett, 1983, p. 323, fn.57].

Allen says Young misunderstood the relationship between the size of a farm and its capital. Allen finds that capital per acre declined with farm size, and thinks it "remarkable that Young's data contradict his belief that large-scale farmers practised a more capital-intensive agriculture than small-scale farmers . . ." [1992, p. 195]. Allen's interpretation of what Young means by 'capital intensity' is debatable. Young does not say that capital per acre increased with farm size, but that a "considerable farmer, with a greater proportional wealth than the small occupier, is able to work great improvements in his business . . . ; he can build, hedge, ditch, plant, plough, harrow, drain, manure, hoe, weed, and, in a word, execute every operation of the business, better and more effectually than a little farmer . . ." [Young, quoted in Allen, 1992, p. 190]. The capital employed by the wealthier farmer is larger and its economic efficiency "better" than a smaller capital. "He [the wealthy farmer] also employs better cattle and uses better implements; he purchases more manures, and adopts more improvements". This is Young's capital-intensive farmer, one who has better capital and implements per acre. Having better quality capital is consistent with needing less capital per acre. For example, larger farms could use better wagons to cart their produce to market more cheaply. Young thought the poor state of the roads made "the expense of carrying out the corn . . . prodigious". However, "[s]ome savings may be made . . . by using broadwheeled wagons, for which reason they should ever be used on farms large enough for 9 or 10 horses . . ." [quoted in Mingay, 1975, p. 158]. Marx had the same view: "in production on a larger scale; the saving is on the keeping of horses and other production costs, not by the use of more capital on the same land . . ." [1981, p. 814].

It is undoubtedly true that "whatever may have been the case at [Coke's estates at] Holkham, elsewhere large farms did not bring in the greatest rents . . ." [Turner, Beckett and Afton, 1997, p. 13], but this evidence is not necessarily inconsistent with large farms producing the maximum rate of rent. For example, Nathaniel Kent said, "it is to large estates that we look for moderation in rents, as they were generally let upon a fair

and consistent scale . . .” [Turner, Beckett and Afton, 1997, p. 13]. Kent’s words are consistent with large estates (with large farms) charging capitalist, that is, “fair and consistent” rents. It may be true that small farms “were more likely to yield high rents, pro rata, because they were worked more intensively and effectively . . .” [Turner, Beckett and Afton, 1997, p. 13]. But why, then did landlords not break up their farms? The answer may be a limited and diminishing supply of small farmers with capital to work them, although this varied over time, and limited administrative resources at the landlords’ disposal to exploit them. With limited supplies of small farmers with capital, the only feasible long-term option was the trend towards larger farms because their “advantages . . . lay in their lower unit costs rather than their greater output [per acre] . . .” [Turner, Beckett and Afton, 1997, p. 13]. In other words, their advantage was their higher rate-of-return on capital and rate of rent.

CONCLUSION:
MARX’S ‘QUEER’ STORY OF RENT AND
THE AGRICULTURAL ROOTS OF
THE BRITISH INDUSTRIAL REVOLUTION

Detailed study of changes in landlords’ accounts and systems of accountability could allow us to test systematically for the appearance and spread of the capitalist mentality in this important class from around 1750. We have seen some evidence of DEB in estate accounts becoming more common from around 1750. There is some evidence of capitalist calculations for enclosure decisions; of calculations to assess the capital adequacy of tenants, to determine rent increases and rebates. There is evidence of concern for the rate of rent; the length of leases; and for the size of farms. While we need systematic research to fill in the many gaps left by economic historians, these phenomena support Marx’s view that the capitalist mentality became lodged in the collective mind of the landed class from around 1750. Future research must encompass the farm accounts of the larger landowners and lesser gentry, tenants and bailiffs’ accounts. Nor must we forget the writings, accounts and calculations of land stewards from which came many well-known advocates of improvement in addition to Edward Laurence and Arthur Young — those such as William Marshall, Thomas Stone, Nathaniel Kent, and Thomas Davis [Mingay, 1967, p. 27]. Tracing the development of capitalism in agriculture should help to trace its development in industry, Marx’s

industrial revolution, and the interactions with the agricultural revolution. Historians disagree about the existence and nature of any links between the agricultural and industrial revolutions [Jones, 1974; Clark, 1999]. For Marx, the key link is the replication in industry of the capitalist mentality and the social relations of production created by the agricultural revolution. What follows outlines his theory of the interconnections between these revolutions, his 'queer story' of rent, and calls for accounting history research on this neglected question.

Marx argued that increases in absolute rent and not differential rent underlay the rapid rise of rents in the later 18th century because, although the productivity of agriculture was increasing, it was growing at a much slower rate than in manufacturing. In his theory, "absolute rent . . . arises from the fact that capital is invested in agriculture rather than manufacture; a rent that is quite independent of differential rent or excess profits which are yielded by capital invested in better land . . ." [Marx, 1969b, p. 242]. Today, the neo-classical orthodoxy recognizes only Ricardian differential rent. Ricardo ruled out absolute rent because he assumed the average prices of all commodities always equaled their labor values. He also assumed that the organic composition of capital (the ratio of variable capital to total capital employed) was the same in agriculture and industry [Marx, 1969b, pp. 129, 244]. Ricardo's theory of rent, therefore, effectively ruled out the agricultural revolution and any further radical development in industry, making a "twofold historical error . . ." [Marx, 1969b, p. 244]. Ricardo assumed the productivity of labor in agriculture and industry were equal, and that with population growth agriculture's productivity would fall [Marx, 1969b, p. 244]. By contrast, in Marx's theory absolute rent arose from "the relatively faster development of manufacture (in fact the truly bourgeois branch of industry) as against agriculture . . ." [1969, pp. 18-19]. This is Marx's "queer" story of rents. It began in the late 17th century when rents increased as capitalistic manufacturing appeared. From around 1750 real (inflation-adjusted) rents began to increase more steeply as the 'industrial' revolution gathered momentum as capitalists pursued the real subsumption of labor. Landlords and their advisors agreed with the political economists that all rent was differential; that real increases arose from agricultural improvement. Landlords therefore invested or had farmers invest, continually boosting agricultural productivity in their search for differential rent. The search continued until, during the last quarter of the 19th century, after a sustained period of high investment, the

productivity of agriculture caught up with a now stagnating industry dominated by coal and cotton [Marx, 1969b, p. 110]. Combined with cheap food imports, the rapid increase in labor productivity in agriculture during the later 19th century caused absolute rent to fall sharply. "Landlords were frequently disappointed by the way rents did not rise in proportion to the money invested . . ." [Wade Martins, 1980, p. 98]. According to Marx, landlords were unwittingly reducing absolute rent, undermining their own privileged position through their zealous commitment to the capitalist mentality. When rents fell in the later 19th century the landlords radically restructured their portfolios out of land and into stocks and shares [Beckett, 1986]. Having helped to spread the capitalist mentality throughout society, the landlords, "reduced to a mere receptacle, ceased to fulfill any function in production" [Marx, 1969b, p. 56], and became absorbed within social capital.

To test Marx's theory of the industrial revolution we must investigate farmers' and landlords' accounts in conjunction with those of industrial entrepreneurs [Bryer, 2004a; 2004b]. During the 18th century, "the distinction between landowners and industrialists tended inevitably to be somewhat blurred . . ." [Mingay, 1963b, p. 199]. Industrial enterprises often "developed out of the estates themselves, such as coal-mines, iron- and copper-mines, and even ironworks, canals and tar distilleries, some of which grew to considerable size . . ." [Pollard, 1965, p. 211]. It was no accident that land stewards "branched out as entrepreneurs on their own account and often built up important industrial concerns . . ." [Mingay, 1967, p. 4]. There are clear links between estate managers and emerging industrial enterprises [Pollard, 1965, pp. 25-30]. They had the knowledge, experience, capital, and many probably had a capitalist mentality. Given a shared capitalist mentality, it is not "surprising that in these circumstances that early methods of industrial management were borrowed from the great estate . . ." [Mingay, 1967, pp. 4-5]. Nor is it surprising that by 1750 some management techniques developed on the leading estates "showed many of the characteristics of the adolescent industrial firms . . ." [Pollard, 1965, p. 26]. Mephram, for example, finds that industrial departmental cost accounting paralleled development in farm accounting: "Arthur Young proposed a farm accounting system in which there was a 'departmental' ledger for each field . . ." [Mephram, 1988, p. 60]. Young's tours included some major industrial firms, and his cost accounting for farmers (e.g., 1797) was thoroughly modern, mirroring the development of accounting in the

industrial revolution [Juchau, 2002, p. 378; Bryer, 2004a].

The limited accounting evidence we have supports Marx's view that landlords and industrialists were becoming capitalists together. Jones asks of the clearly capitalist accounts of Thomas Lovett (summarized above), "to what extent was this kind of thinking being paralleled in the developing industries in the later eighteenth century? . . ." [1985, p. 72]. His research into early cost accounting in Wales shows the parallels are striking [Jones, 1985]. Jones thinks it "perfectly natural for the mid-eighteenth century to have seen . . . a system of bookkeeping and accountability based on double entry . . . embraced by . . . landlords and industrial and commercial entrepreneurs alike . . ." [1985, p. 60]. However, to establish and explain this convergence we must find and explain broad trends in social accountability; demonstrate exactly what the "community of interests" was that arose from the "intermingling of men of commerce and landowning . . ." [Mingay, 1963b, p. 263]. To do this we must identify and explain the accounts of many individuals, starting with the early capitalist farmers that Marx and others [e.g., Tawney, 1941, 1954] say began the agricultural revolution [Bryer, 2004c].

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