

# *Commons Sense: Common Property Rights, Efficiency, and Institutional Change*

GREGORY CLARK

Common property rights were widespread in English agriculture for at least 600 years. Since privatizing common fields allegedly produced huge profits in the eighteenth century, common land owners seemingly squandered 15 percent of potential income for generations. Ingenious explanations have been produced for this market failure. This article argues for a simple, brutal resolution. Common fields survived because enclosure was generally unprofitable before 1750, when changing relative prices made private property rights marginally more efficient. Then people responded quickly to modest profits. The rich gains from enclosure existed only in the imaginings of wild-eyed eighteenth century agrarian reformers.

In the preindustrial era in countries across a wide swath of northern Europe much of the land was held not as exclusive private property but in some form of joint ownership, where for at least part of the year the land was under communal control. This system is variously called the *common field* or *open field* system. In England common land was of many different types: arable and meadow which was private for part of the year, pasture which was common all year (but where access was limited), and "waste" land to which all members of the village community had free access. In England common land was often referred to as "open" land and private land as "enclosed" land because generally individual plots of common land were unfenced and scattered in small parcels in large open fields, whereas private land was fenced. But there were forms of fenced and hence physically enclosed common lands such as "lammas land," "michaelmas land," "half-year land," and stinted communal pastures. And there were also occasionally lands that although purely private or "several" were physically open. In this article I will adhere to the convention that common land is any land that has communal property rights attached to it, fenced or not. Because the termina-

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tion of common property was generally associated with physically enclosing the land, the process in England is called "enclosure," and for convenience I will use this conventional term and also use "private" interchangeably with "enclosed."

The experience of England in the eighteenth century convinced agricultural reformers across Europe, and modern historians, that the common field system of property rights was a drag on agricultural efficiency. The large rent increases that were reported when common fields were enclosed in the late eighteenth century seem proof to many of the inefficiency of the system.<sup>1</sup> Rents, it was said, often doubled or tripled upon enclosure. Thus, "everyone agrees that rents rose precipitously immediately after enclosure. The data indicate that they commonly doubled and tripled and in some cases rose even more."<sup>2</sup> Rents increased on average by 135 percent on enclosure in the late eighteenth century in five villages studied by Jack Purdum. This implied mean rates of return on the capital invested of 15 percent, well above the interest cost of the capital borrowed of 5 percent. F. M. L. Thompson calculated an average rate of return in 12 enclosures on the Fitzwilliam estates in the 1800s of 16 percent, and on 17 enclosures on the estates of the Duke of Rutland between 1787 and 1799 of between 10 and 33 percent, averaging 19 percent. Thus even the least successful of these enclosures were enormously profitable.<sup>3</sup> Here was profit without risk.

These gains seemingly existed for hundreds of years before some land was enclosed. Using new data described below on land rents and on enclosure costs, Figure 1 shows the implied gross rate of return on enclosure in England from 1600 to 1839 if rents doubled on enclosure. The gross rate of return from enclosing varies between 9 and 14 percent. Even in the seventeenth century, hundreds of years before some enclosures were completed, the estimated return from investing in enclosure is nearly double the alternative return from buying land. The net efficiency gain from enclosure, assuming rents are at market values, correspondingly averages about 15 percent.<sup>4</sup> In the late eighteenth century the enclosure movement of England became a "pan-European" movement. European agricultural experts and improving landlords advocated the rational property rights regime of England in contrast to the "barbarous conditions" and "primitive customs" of their own lands. Governments across Europe decreed that the common fields should be eliminated. Yet despite the great gains observed from English enclosures cultivators in most of the common field lands obdurately refused to profit by

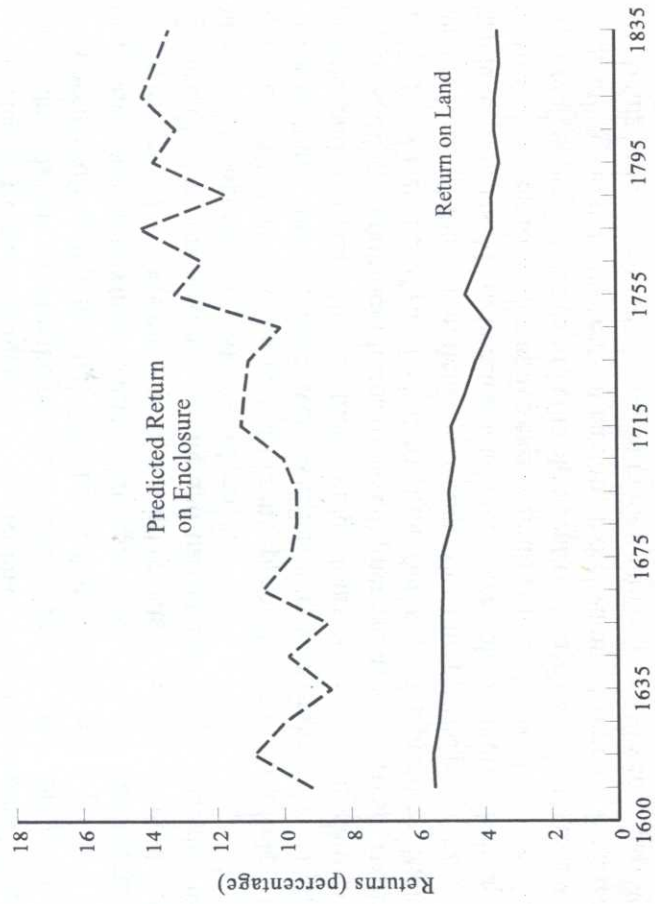


FIGURE 1

THE PREDICTED RETURN IF RENTS DOUBLED UPON ENCLOSURE, 1600-1839

Notes: The rent on private land in each decade, enclosure costs, and the return on capital invested in farmland, is derived from U.K., "Reports of the Charity Commissioners."  
Source: Clark, "Land Hunger." See also Table 8, below.

England's example.<sup>5</sup> Gold coins littered the soil of northern Europe for hundreds of years and no one bothered to pick them up.

The inefficiency of the common field system seemingly proves that inefficient institutions can persist indefinitely, and there have been many attempts to explain how this is possible. Thus Deirdre McCloskey argued that the rent difference was a transitory phenomena, observed only at the close of the system as in the eighteenth century in England, since there was some inertia in moving to the by then more efficient exclusive private property rights. She argued that in the Middle Ages and earlier it was an efficient way of providing self insurance to farmers, given the absence of other markets, through allowing them to distribute land holdings in space. Others have read the lesson of the common fields as being that there is a trade-off between equity and efficiency. Enclosed agriculture was more efficient than common, but the transition to enclosed agriculture entailed losses to the smallest land owners and occupiers, and to the formally landless. Only in England was the governing class strong enough to enforce this transition in the face of the opposition of the small holders. In other countries weaker

<sup>1</sup>McCloskey, "Persistence" and "Economics." McCloskey gives an excellent description of how the system operated.

<sup>2</sup>Blum, "English Parliamentary Enclosure," p. 503.

<sup>3</sup>Purdum, "Profitability"; and Thompson, *English Landed Society*, pp. 222-26.

<sup>4</sup>Assuming rents before enclosure were one quarter of the value of output.

<sup>5</sup>Blum, *End*, p. 265.



ruling classes were unwilling to incur the wrath of the small holders.<sup>6</sup> Phillip Hoffman, trying to explain the puzzle of delayed French enclosure given its supposed profitability in England, argues that in France the gains from enclosure were impossible to attain through free contract. Because France had a different legal system where unanimity was always required the enclosure of common field agriculture and the reclamation of "waste" was blocked by opportunist holdouts in France.<sup>7</sup>

Robert Allen has taken a very different approach to common fields. He has argued that common fields were as efficient, or even more efficient, than private land. Thus data from Arthur Young's tours circa 1770 on yields and inputs show common field farms to have higher yields than private farms.<sup>8</sup> Thus the existence and survival of common fields is not a problem. Rather the puzzle is why common fields were converted into private property. This happened, argues Allen, because landlords were able to double their rents upon enclosure through a massive expropriation of surplus from tenants. Enclosure took place in England in the eighteenth century because it was a way for landlords to raise the rents of land to market values. Common field land was being rented for much less than market value. The efficiency gap was illusory. Thus,

First, only half of the surplus generated by open field farms accrued to the landlord as rent, and to the church and state as tithes and rates. Second, enclosure did not raise efficiency . . . the major economic consequence of the enclosure of open field arable in the eighteenth century was to redistribute the existing agricultural income.<sup>9</sup>

Enclosure was mainly expropriation of the peasantry. But Allen's work, rather than resolve the problem of the common fields, creates a fresh set of conundra. For he finds that as far back as 1450 common field land rented for less than half the amount of private land. And even after long periods of relatively stable money rents such as in the period 1620 to 1750, the differential persisted. If common fields are as efficient as private then owners persistently charged tenants of common field land less than the market value of the land. Allen argues the failure was one of perceptions. There was a conventional belief among both owners and tenants that private land was worth double the rent of common land, which market pressures somehow never changed.<sup>10</sup> But where did this conventional belief come from? Further if owners and tenants believed erroneously as early as 1450 that private land

was worth double the rent of common land, then why were not owners pressing to enclose much earlier? Why did 24 percent of the land of England still lie common in 1750 when owners had believed since 1450 that if they enclosed the land they could double rents? Allen's view thus still leaves two puzzling failures by landlords: a failure to rent common land for anything like its value, and a failure to use enclosure to raise the rent long before the late eighteenth century.

Using a large body of new data on market land values in England from 1500 to 1912 on charity land this paper proposes a solution to the problems posed by the English enclosure movement under which the rental market for land functioned perfectly well. The key to this solution is that enclosure did raise rents, but by 40 percent or less.<sup>11</sup> Further the interest cost of the capital expenditures required to move land from the common field to the private state was in the order of 25 to 35 percent of the rental value of common land circa 1800. Thus there was very little private or social gain from enclosing land. The net efficiency gain after the costs of conversion was at its maximum about 3 or 4 percent. Common fields persisted because they were not very inefficient. Indeed since the return on capital invested in land fell from about 5.5 percent in 1600 to 3.5 percent in 1750, while the rent of land rose relative to the cost of enclosure, the onset of the parliamentary enclosure movement in England was the result of changes in the costs and benefits of enclosure, not institutional innovation or a new profit-centered ethos in the countryside.

This solution accepts, and gives further evidence for, Allen's pioneering view that there was little efficiency gain from enclosure. But it argues that the further story he builds of massive redistribution of income on enclosure, and of consequent centuries long failure in the land market, comes from overestimating the rent gains from enclosure.

#### WHY IS IT BELIEVED THAT RENTS DOUBLED OR TRIPLED?

The common field problem is created by the view that rents doubled or even tripled on enclosure. Below I will show that this was not so for a sample of 22,000 plots of land held by charities. But this view is so entrenched in English agrarian history that we must first consider where it came from and what its evidential base is. Otherwise the reader will think that the new evidence from the charity sources must just be an anomaly to be disregarded when placed against a mountain of other evidence. I show here that the existing evidence is in fact a molehill, and a molehill that if anything points to modest rent gains.

The general problem is a failure to take into account several factors that

<sup>6</sup>Grantham, "Persistence."

<sup>7</sup>Hoffman, "Institutions."

<sup>8</sup>Allen, "Efficiency," p. 949; and Young, *Farmer's Tour*. Allen also showed that the evidence of early nineteenth century experts on agriculture shows little yield difference between common and enclosed land. Allen, *Enclosure*, pp. 130-49.

<sup>9</sup>*Ibid.*, p. 181.



made the rent gain from enclosure seem higher than it was. The most important of these is that almost all the quoted evidence for the gains from enclosures comes from the period 1760 to 1815, when rents in England as a whole were rising, sometimes quite rapidly. On private land in the charity sample the market rental value of an average sized enclosed plot in 1760 to 1764 was £0.54, compared to £1.73 in 1810 to 14.<sup>12</sup> Thus when rents before and after an enclosure were compared, the gains in rent came partly from the general rent inflation. Enclosures in addition often resulted in land being freed from tithe. In this case tithe-free private land will seem more valuable than common land burdened with tithe. Also in parliamentary enclosure rack rent leases formed years before when rents were lower were replaced by new leases at current rents (supposedly with compensation to the tenant). This again would make the effect of enclosure on rents seem much greater.

Failure to control for these factors allowed eighteenth century observers such as Arthur Young to conclude that enclosure doubled rents, even though the instances they quoted demonstrate otherwise. Young, who promoted enclosure with vigor, tirelessly enumerated the huge rent gains it implied. Enclosure raised rents by 90 percent in Warwickshire, 150 percent in Leicester, and 74 percent in Northamptonshire. In Oxford the gains were even greater ranging from 100 to 400 percent.<sup>13</sup> What Young does not clarify is that the common land rents were from many years before the enclosed rents, in a period when even rents on enclosed land were rising, and that in most cases the land became tithe-free after enclosure. When we correct the examples of Young from Oxford for these two problems, we find that on average the estimated gain from enclosure alone was only 45 percent, as Table 1 shows. Even Young's sweeping and probably unreliable assessment of the gains from enclosure on inspection suggest at best modest underlying improvements.<sup>14</sup>

Other authors of the county reports of the Board of Agriculture, published between 1793 and 1814, also often wrote of rents doubling on enclosure, but generally with the same vague claims as Young. A rent rise of 92 to 130 percent is quoted, for example, for Queniborough in Leicester, consequent on enclosure. But the rent before enclosure is for 1793, and that after for 1809. Deducting the general rise in rents, and correcting for the removal of tithe as in Table 1, the net rent gains from enclosure are between 7 and 28 percent.<sup>15</sup> But even some of the Board of Agriculture experts give much more

<sup>12</sup>These rents are for an average sized plot of private ground with the average number of buildings per acre. The average plot size was 25.3 acres.

<sup>13</sup>Young, *General Report and General View*, p. 87.

<sup>14</sup>A further suggestion that Young's statements are not derived from any facts he collected comes from Allen's reworking of his 1768 to 1771 data on rents per acre in common and private villages. Allen found that rents per acre were higher in the common field villages. Allen, "Efficiency," p. 940.

TABLE 1

## THE RENT GAINS FROM ENCLOSURE IN OXFORDSHIRE FROM ARTHUR YOUNG

Parrish	Reported Rent Gain from Enclosure by 1813 (percentage)	Date of Enclosure Act	Tithe Eliminated	Corrected Rent Increase (percentage)
Alvescott	200	1796	yes	37
Bicester	200	1794	yes	36
Fringford	200	1762	no	10
Stoke Lyne	200	1794	yes	36
Stratton Audley	400	1780	yes	84
Wendlebury	100	1801	yes	-1
Wooton	400	1770	no	111
Average	243			45

Notes: The rents have been corrected for the general movement of rents on enclosed charity land in the south of England between the date of enclosure and 1813. The allowance made for the elimination of tithe was to reduce the later rents by 15 percent. When land was enclosed by parliamentary bill in the eighteenth century and tithe eliminated the normal procedure was to give the tithe holder an allotment which was one fifth of the arable land allotted, one ninth of the pasture and one eighth of the meadow. Sources: Young, *General View*, p. 87. The enclosure dates are from Tate, *Domesday*. The tithe statuses of the parishes after enclosure were inferred from Kain, *Atlas*. The tithe land allowances are from Evans, *Contentious Tithe*, p. 99.

modest views on the gains from enclosure. Table 2 lists the rents on common and enclosed land quoted by Parker, whose reports on Rutland and Huntingdon are voluminous and detailed. Parker's numbers show modest benefits.

The claims of contemporaries at best point to limited rent gains. How did they get translated into today's received wisdom? The modern belief that enclosure doubled rents seems to owe much to Gordon Mingay. In his 1963 work, *English Landed Society in the Eighteenth Century* he notes that, "Exceptionally, rent increases of three- or even four-fold were achieved in the late eighteenth century, but probably a doubling of rents was much nearer the average."<sup>16</sup> There are no specific instances given in this text, however, of individual rent increases.<sup>17</sup> F. M. L. Thompson in *English*

TABLE 2

## PARKINSON'S ESTIMATES OF THE EFFECTS OF ENCLOSURE ON RENTS, CIRCA 1810

Land Use District	Gain (gross rents) (percentage)	Gain (allowing for removal of tithe) (percentage)
Heavy arable	75	25
Light arable	51	23
Pasture	51	40

Source: Allen, *Enclosure*, pp. 176-77. See also Parkinson, *General View*.

<sup>16</sup>Mingay, *English Landed Society*, p. 183.

<sup>17</sup>Later Chambers and Mingay state, but again without specific instances, that "perhaps a doubling of rents, from about 7s to 15s per acre was the common result of enclosure in the Midlands." Chambers



*Landed Society in the Nineteenth Century*, a companion book to Mingay's, quotes exactly the same ballpark estimates of the effects of rents on enclosure. Thompson comments in detail on the experience of enclosure on two large estates, the Fitzwilliam estate in the 1800s and the estate of the Duke of Rutland from 1787 to 1799. The rent increase on which the return on capital is based is given only in the second case, and it is only 60 percent. But in the same period the enclosed estates of the Duke experienced a 30 percent rent increase. Thus the net gain in rents from enclosure was at maximum 23 percent. The real return from the capital invested, absent the general rent inflation, was not 19 percent but 7.3 percent, modestly above the cost of capital.<sup>18</sup>

The "doubling" wisdom moved from agrarian historians to more "cliometric" economic historians with the work of McCloskey on the common fields in the early 1970s. McCloskey correctly summarized the prevailing view that rents doubled.<sup>19</sup> She does not give her sources, though it is clear from the context that one of these is Mingay. McCloskey's work led Jack Purdum in his 1972 dissertation to estimate the gains from enclosure in five villages in Nottingham enclosed between 1787 and 1796. The immediate gross rent gain on enclosure was between 30 percent and 258 percent, with an impressive average gain of 135 percent. There are problems, however, even with Purdum's detailed study, which suggest that the rent gain from enclosure in these villages likely averaged only 67 percent.<sup>20</sup>

McCloskey subsequently made her own attempt to estimate the rent gain, concluding "The rise of rent on enclosure, then, was 100 percent notionally,

<sup>18</sup>Thompson, *English Landed Society*, pp. 222–26. The 23 percent rent increase is only the upper bound since the enclosures may also have terminated leases formed when market rents were lower. In the Fitzwilliam case the rent increase is not given, but it is clear the calculated returns to enclosure include general rent gains. Other equally authoritative figures made even stronger claims. W. E. Tate, the great authority on Parliamentary Enclosure, asserted that "On the whole, perhaps a 200 per cent increase is a fair average of the improvement that was expected." Tate, *English Village*, p. 158. Tate cites a variety of sources for his estimation, mainly the opinions of seventeenth- and eighteenth-century writers on agriculture, and including Arthur Young's *Tours of 1768, 1770, and 1771*.

<sup>19</sup>McCloskey, "Enclosure," p. 33. Clark, "Cost," for example, based on the work of McCloskey, takes large rent gains on enclosure in the eighteenth century as a given.

<sup>20</sup>Purdum, "Investment," p. 319. The first problem is that the raw rent gains on enclosure were 30, 30, 168, 188 and 258 percent, which is a remarkable range. The gain of 258 percent at Weston was the result of the owner gaining 77 percent more land from the enclosure. Additions of land of such magnitude were very rare in lowland England in the charity data, and something comparable was only found on one enclosure—which was at Edwinstow, only ten miles from Weston (where the charity land increased by nearly 600 percent with a forest allotment!). The reason seems to be that both Edwinstow and Weston were on the edge of Sherwood Forest, and gained much forest land on the enclosures.

Further Purdum argues that there is no need to correct for general rent inflation since we are looking at a one-year change, and "All five of the manors studied appear to be on annual tenancies." But the assumption that the farms were all on annual leases is probably wrong. If we look at rent movements not just in the year of the enclosure, but all the way from 1787 to 1807, when the effect of any termination of leases would be reduced, then the average rise above general rent inflation is much less. Adjusting for this, the net rent gains are -7, 4, 73, 82 and 183 percent (at Weston). If Weston is regarded as

and probably a little lower in practice."<sup>21</sup> McCloskey cites two main types of sources in reaching this conclusion. The Board of Agriculture Reports, which we have already seen offer no concrete cases of large rent gains, and a variety of estate surveys. But if we average the evidence from the eleven estate surveys she uses which have specific dates, the raw rise in rents averages only 74 percent, with a range of between 2 and 233 percent. Controlling for general rent inflation the rise of rents is only 41 percent, and ranges between -18 and +185 percent.

English agrarian historians who have discussed the effect of enclosure on rents since the early 1970s have generally taken the "doubling" of rents as established, and have been content to illustrate this fact with a few authorities and examples. Michael Turner, for example, notes that "Examples abound which show this rise of rent upon enclosure, sometimes doubling, sometimes trebling." But the four specific examples he gives in this source are highly ambiguous on the true rent gain. He cites, for example, the rent increases found by T. W. Beastall on the Scarborough estates in Lincolnshire. But these enclosures generally involved also major investments in drainage and farm buildings. And even then the true rent increases as a result of both the enclosure and the other investments were much less than a doubling. Wharton and Blyton, for example, were enclosed and improved from 1796 to 1805. Rents rose by 183 percent from 1791 to 1811. But the rise net of general rent increases on enclosed charity land in southern England was only 51 percent. The return on the capital invested, part of which was borrowed at 5 percent, was thus 5.1 percent absent the general rent inflation. This is hardly an advertisement for huge gains from enclosure.<sup>22</sup>

Figure 2 summarizes the literature. Each box lists an author who asserted that enclosure doubled, or more than doubled, rents. Each arrow links that author to other authors quoted as authorities for this view. The heavily outlined boxes give the authors who list specific cases, the number of cases listed, the reported rent gain, and then the rent gain corrected for the problems listed above. It is clear from this survey of almost the entire enclosure literature that there are remarkably few instances indeed in which we can attest that enclosure produced even a doubling of rents. The average rent gain for the cases that can be checked, 37 in all, although claimed to be 83 percent, on correction for the general movement of rents is a mere 29 percent which is entirely in line with the Charity Commission results. The idea that we know there were huge rent gains from enclosure thus seems to be a myth. In reality, based on the published evidence, we do not know what the average gains actually were, though they were most likely much smaller than a doubling.

<sup>21</sup>McCloskey, "Open Fields," p. 21.  
<sup>22</sup>Turner, "Cost," p. 100; and Beastall, *North-Cumbrian Estates*, p. 10.







pastures were measured in such units as "cowgates," and "sheepgates," but there is enough information to assign an acre equivalent to these measures.<sup>26</sup> Again for convenience I refer to this below as "common" land. *Unregulated common* or "*waste*" refers to common land on which there was unrestricted access. This is generally referred to as "waste." In most cases the existence of access to common waste associated with a plot only becomes known because there was a later enclosure under which the charity plot received an allotment of waste. See examples 4 and 5 below. Finally *enclosed common* and *enclosed waste* refers to private land which was formerly respectively regulated common or waste.

The following five descriptions of land from the tenth report of the Charity Commission illustrates the kind of information available with which to classify land as common, waste, private, and enclosed waste, and how it was coded in the data set.<sup>27</sup>

"By an indenture, dated 22nd December 1707, . . . Samuel Bailey . . . did thereby grant, enfeof and confirm . . . all those three yards of arable land, lying in the west field of Norton aforesaid, in a furlong there called Windick; and also, all those three yards of arable land, lying in the same field, in a furlong there called Colforde; and also, all those three yards of arable land, lying in a field called Upper Hamdon, . . . There are now the same nine yards of land, making about 2 A. 1 R. in the possession of the parish, . . . which answers in quantity and situation to the description in the deed above abstracted." This was coded as 2.25 acres of regulated common in 1707.

"By indentures, . . . dated 11th April 1702, conveyed . . . by the description of all those several parcels of pasture and arable ground, lying dispersedly in the common grounds called Brown's meads and Rusby grounds, in the parish of Iver; containing, by estimation, eight acres." This was coded as 8 acres of regulated common in 1702.

"By indenture, dated 16th May 1611, Robert Tyffin, . . . granted and conveyed . . . all that close of land or pasture called Haycroft, containing four acres by estimation, lying in Marsh field in Kingston. . . . Upon the Kingston inclosure, an allotment of 1 R. & 28 P. on Surbiton common, was awarded to this charity." This was coded as 4 acres of enclosed common and 0.42 acres of common waste in 1611.

"By indenture, dated 20th March, 4 Henry VII (1489), reciting that Robert Warren conveyed a croft of land lying in the parish of Finchley. . . . The house and croft, forming the first parcel in Robert Warren's gift . . . are now on lease, together with a small allotment, added on the enclosure of Finchley

<sup>26</sup>Of 2,343 plots which had common land, only 144 had some or all of that common measured in "gates" alone.

TABLE 3  
SUMMARY OF OBSERVATIONS WITH PROPERTY RIGHTS KNOWN

Period	All Plots	Plots with Regulated Common		Plots with Waste	Plots with Land Use	Plots with Common Land and Land Use
		Regulated Common	Waste			
1500-1649	411	118	35	159	67	
1650-1699	675	194	75	250	84	
1700-1749	1,094	312	140	336	135	
1750-1799	1,225	246	129	274	80	
1800-1849	13,607	1025	267	3,547	404	
1850-1912	6,061	52	34	1,370	25	
All	23,073	1,947	680	5,936	795	

Notes: "Plots with regulated common" and "plots with waste" are those plots which contain respectively at least some regulated common land, and some waste land. Many plots have a mix of common and private land.

Source: U.K., "Reports of the Charity Commissioners." For details see Clark, "Charity Commission."

common, . . . for 21 years from Michaelmas 1815. They consist of—A small messuage, barn and out-buildings, with a yard and piece of ground, containing 1 A. 3 R. 37 P. A parcel of meadow or pasture called Great John's Field, 6 A. 3 R. 8 P. Ditto called Little John's Field, 3 A. 2 R. 5 P. Allotment, 2 R. 11 P."<sup>28</sup>This was coded as 12.31 acres of old enclosed land and 0.57 acres of common waste in 1489, and as 12.31 acres of old enclosed land and 0.57 acres of enclosed waste in 1815.

"The estate consists of a good farm house, with a garden and out buildings, and a small paddock, a close of pasture containing about an acre and a half, and about 24 customary acres, or eighteen statute acres in the common fields, with three cow commons and a right of pasture for sheep. It is now let to \_\_\_\_\_ (sic) Busby as yearly tenant." This was coded as 1.5 acres of enclosed land, 18 acres of regulated common, 3 cow gates, and unspecified common rights.

The fact that most of the land is observed several times, including once in the nineteenth century after most land has been enclosed means that we get fairly accurate measures of the land area, and also get indications of common waste attached to earlier plots that would not show up in any contemporary description. The amount of information on common and private land for each period is listed in Table 3. Although there were about one-third as many plots having some waste attached as were plots that had at least some common land, on average waste was a small share of all common land, amounting to only about one sixth of all common.

To measure accurately the relative rental value of private land, of common land, and of waste, it is important that I am able to attribute land to each category with reasonable accuracy. For the years after 1720 the predominant way that common land became private was through the process of parliamentary enclosure. The records of parliamentary enclosure as recorded



Another test of the representativeness of the Charity Commission data is to ask whether common land shows up in the right proportions in the right counties at any given date. Taking the period 1720 to 1759 we can estimate the average percentage of the county private in the Charity Commission data, and the average percentage common as measured by the extent of parliamentary enclosure. If we regress the percentage common in the charity data by county (*FCOMCC*) on the percentage common as measured by parliamentary enclosure for the same years (*FCOMPP*) the estimated relationship is,

$$FCOMCC = 0.001 + 1.095FCOMPP$$

(0.025) (0.085)

$$n = 42, R^2 = 0.80$$

Thus at the county level the parliamentary data on average predicts well what is observed in the sample of charity lands. There is on average about 10 percent more common than would be predicted if parliamentary enclosure was the only source of enclosure after 1720. These two tests suggest that if we accept that parliamentary enclosure was the overwhelming source of enclosure after 1720 then the Charity Commission data is a good indicator of the amount of common land in each county in each year after 1720. There is no reason to expect that it will be any less reliable a guide for the years before 1720.

#### THE RENT GAINS FROM ENCLOSURE

Let me first compare the rental value of common and private (enclosed) land in a very simple way, which follows the method used by Allen, just to illustrate that the surprising results below stem directly from the data.<sup>29</sup> That is I compare just the rent per acre of the subset of land that was either all common with land which was all private, not controlling for any other factors. The results are shown in Table 4, for each of three periods. Private land rents for more than common, but the differential is much smaller than under the traditional story. Thus the overall differential is a mere 29 percent advance for private land over common. In comparison Allen, using this method, found on average a 109 percent differential. As can be seen from the size of the standard errors there is no possibility that the differences here are just the result of sampling error.

The average size of plots that were all private or all common does differ, and throughout the sample there is a very strong relationship between plot

<sup>29</sup>Allen, "Price."

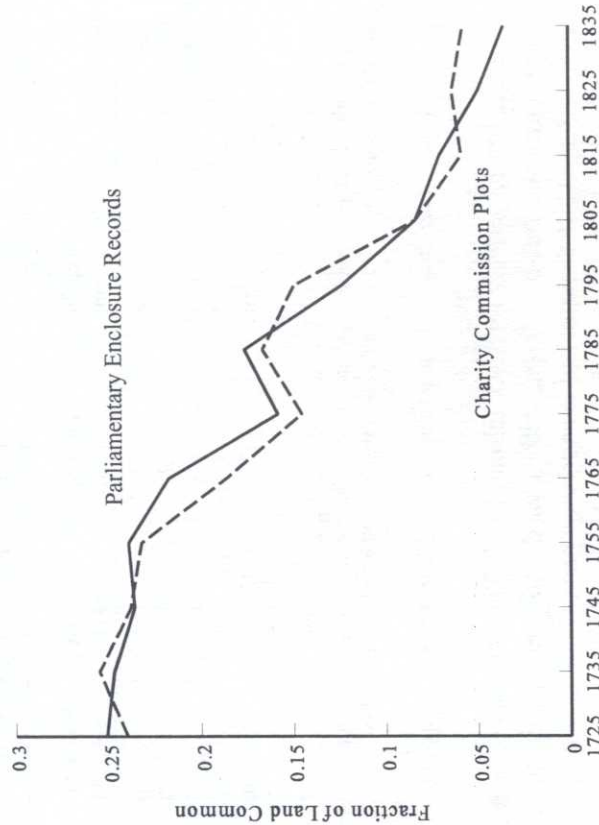


FIGURE 3  
THE FRACTION OF LAND COMMON: PARLIAMENTARY RECORDS VERSUS THE CHARITY COMMISSION SAMPLE, 1720-1839

Notes: Because there are a few parishes with very large numbers of observations, especially in the last two decades, I calculate the average fraction of land which is common in each parish in each decade in forming Figure 3 to avoid overweighing these parishes. Thus, for example, Haxey in Lincolnshire shows up 75 times in my data, and on average 75 percent of the plots in Haxey are common land. If each of these Haxey plots is counted once then it increases the fraction of land common in the 1830s from 6 percent to 7 percent. With the procedure adopted in the figure the fraction common on the 75 Haxey plots is averaged into one observation for Haxey in the 1830s. Source: See Clark, "Charity Commission."

In Tate's *Domesday of Enclosures* allow me to estimate for most parishes the fraction of the land in any year after 1720 which was held in common. I can thus compare the fraction of land revealed as common by the charity records with the fraction suggested common by the parliamentary enclosure records. In Figure 3, for example, I show the fraction of the land which was common in each decade from 1720 to 1839 in the charity land compared to the fraction common as estimated for the same set of parishes from the parliamentary enclosure records. As can be seen, the Charity Commission sample accords fairly closely with the parliamentary enclosure records.<sup>28</sup>

<sup>28</sup>In some cases the charity records show enclosed land in a parish, but the records of parliamentary enclosure as summarized in Tate, *Domesday* suggest that the whole parish was then common land. An inspection of a sample of these cases revealed that the area recorded in the parliamentary enclosure most likely included land already private. The parliamentary enclosure records, for example, suggest that before 1810 Rushock in Worcester was entirely common land. A charity estate covered two-thirds of the



TABLE 4  
THE VALUE OF COMMON AND PRIVATE LAND IN CROSS SECTION, 1500-1839

	Common Land		Private (Enclosed) Land		Difference
	Average Rent	Average Area (acres)	Average Rent (acres)	Average Acres	
1500-1699	0.83 (0.061)	33.2	1.14 (0.044)	30.1	+37
1700-1799	0.78 (0.046)	17.4	1.11 (0.026)	24.9	+42
1800-1839	0.92 (0.023)	9.5	1.12 (0.006)	23.8	+22
All	0.87 (0.019)	15.2	1.12 (0.006)	24.2	+29
			B. Controlling for Size		
All Plots larger than 10 acres	0.54 (0.019)	47.2	0.77 (0.005)	54.4	+43
All Plots less than 10 acres	0.99 (0.025)	3.1	1.36 (0.0012)	3.9	+37

Note: The value of private land in each period is normalized using a plot of size 4.4 acres as standard. The average rental value of the private land does not equal 1 because the plot size effect on rents is non linear. The sample included only plots with at least five acres of land per house, or two acres per cottage or barn. Standard errors in parentheses.

Source: U.K., "Reports of the Charity Commissioners."

size and land rent, where smaller plots rent for more per acre than large. The reasons for this effect are not entirely clear. Land in more valuable uses such as meadow or orchard tended to be held in smaller units, but even once we control for land use smaller plots rent for more per acre. But since the landowner gets to choose the plot size it is not clear if we should control for this effect in comparing common with private land. If common land can be conveniently divided into smaller units that rent for more, then that may be one of the advantages of common land over private.

But even when we control for differences in plot size in cross section, though, the rent difference does not increase much. Thus panel B also reports the average rents of common and private land separately for large and small plots. Now the average plot size of the common and private land in each group is about the same. The rent differential is a little larger but is still only 43 percent in favor of the private land on the larger plots and 37 percent on the smaller plots.

The above comparison assumes that common land and enclosed land have the same inherent quality other than their property-rights status. We can test this because for much of the enclosed land we have a record of whether it was formerly common land. To utilize also plots that are partially common and partially private I regress,

$$V_{it}/Z_t = a - b_c FCOM_{it} - b_{ec} FCOMENC_{it} + e_{it} \quad (1)$$

Where  $V_{it}$  is the rent per acre of plot  $i$  at time  $t$ ,  $Z_t$  measures average land rents per acre on private (enclosed) land in each decade,  $FCOM_{it}$  is the fraction of plot  $i$  which was common, and  $FCOMENC_{it}$  is the fraction of plot  $i$  which was enclosed common land. Using all the data from 1500 to 1912 the estimated coefficients are, with standard errors in parentheses,

$$V_{it}/Z_t = 1.155 - 0.406FCOM_{it} - 0.302FCOMENC_{it} \\ (0.027) \quad (0.018) \\ n = 22,070, R^2 = 0.02$$

These estimates show common land was worth 35 percent less than old enclosed land. But enclosed common land was worth 26 percent less than old enclosed land. So the implied rent gain on enclosure would be only 14 percent. These results suggest that we have to be careful to control for land quality in comparing common and private land.

Since we have 4,742 plots of land that are observed more than once, we can control for variations in the quality of the plots between common, old enclosed, and newly enclosed land by rewriting equation 1 as,

$$V_{it}/Z_t = a - b_c FCOM_{it} - b_{ec} FCOMENC_{it} + u_i + e_{it} \quad (2)$$

where  $u_i$  measures the quality of each plot. By subtracting from each side of equation 2 the average rent per acre on each plot, I instead estimate,

$$\Delta(V_{it}/Z_t) = -b_c \Delta FCOM_{it} - b_{ec} \Delta FCOMENC_{it} + \Delta e_{it} \quad (3)$$

where the  $\Delta$  indicates a difference between the individual value of this variable and the value for the plot on average.<sup>30</sup> The estimated coefficients from this estimation are,

$$\Delta(V_{it}/Z_t) = -0.330\Delta FCOM_{it} - 0.095\Delta FCOMENC_{it} \\ (0.078) \quad (0.079) \\ n = 7,733, R^2 = 0.01$$

We can use the estimates of the coefficients in equations 2 and 3 to give estimates of the average rental value of old enclosed land, common land, and enclosed common land. This gives the estimates reported in Table 5. These estimates imply that overall enclosing common resulted in a gain of 39 percent in rent, and for plots of a size greater than or equal to 10 acres a gain

<sup>30</sup>On average each plot is observed 2.6 times. Of the plots observed more than once 771 saw the enclosure of at least some common or waste between the first and last observation.



TABLE 5  
THE RELATIVE VALUE OF DIFFERENT LAND TYPES, 1500-1912

Land Type	All Plots	≥ 10 Acres
Old enclosure	1.084	0.764
Enclosed common	0.844	0.696
Common	0.609	0.478

Notes: These estimates are constructed allowing for the fact that plots with different property rights show differences in inherent value. All land values are reported relative to that of the average piece of enclosed land. Common land includes regulated common and waste.

Sources: U.K., "Reports of the Charity Commissioners."

of 46 percent in rents. These estimates are very similar to those calculated by crude methods in Table 2. This implies that on average the gain in rent from enclosure was equal to 23 percent of the average value of enclosed land, and this is the figure I use below in comparing the costs and benefits of enclosure.

So far I have lumped together the two different types of common land: common where access was regulated, and unregulated common or "waste." When I estimate separately the values of each type of land, using the methods of equations 1 and 3 I get the results shown in Table 6. As can be seen, splitting common land into the two types shows that the rent gain from enclosing regulated common land is always estimated at less than the gain from enclosing waste land. In the time series estimate, the rent gain from enclosing regulated common is 0.204, which is about 20 percent of the value of enclosed land. The rent gain from enclosing waste is 0.484, or about 47 percent of the value of enclosed land, but this estimate is very imprecise.

The implied value of each type of land from the time series estimates are

TABLE 6  
RENTAL VALUE AND PROPERTY RIGHTS, CONTROLLING FOR PLOT QUALITY, 1500-1912

Land Type	Over Time		
	Cross-Section All	All	Small Plots (< 10 Acres)
Old enclosure	1.160 (0.007)		
Regulated common	-0.351 (0.028)	-0.253 (0.087)	-0.263 (0.181)
Enclosed regulated common	-0.220 (0.025)	-0.049 (0.088)	-0.062 (0.177)
Common waste	-1.465 (0.119)	-0.779 (0.185)	-1.425 (0.514)
Enclosed waste	-0.419 (0.028)	-0.295 (0.117)	-0.405 (0.503)
Observations	21,299	7,733	3,623
R <sup>2</sup>	0.02	0.01	0.01

Note: The sample includes only plots with at least five acres of land per house, or two acres of land per cottage or barn. Standard errors are in parentheses.

TABLE 7  
THE RELATIVE VALUE OF DIFFERENT LAND TYPES, 1500-1912

Land Type	All Plots	≥ 10 Acres
Old enclosure	1.088	0.771
Enclosed regulated common	0.928	0.719
Regulated common	0.723	0.511
Enclosed waste	0.590	0.450
Common waste	0.106	0.150

Notes: These estimates are constructed allowing for the fact that plots with different property rights show differences in inherent value. All land values are reported relative to that of the average piece of enclosed land. Common land includes regulated common and waste.

Sources: U.K., "Reports of the Charity Commissioners."

reported in Table 7. These estimates suggest common waste was of very little economic value to holdings, generally contributing per acre only 10 percent of the value of regular enclosed land. Though waste increased in value by enclosure more than did regulated common, enclosed waste still rented for only about half the value of old enclosure. Thus the land left as common waste seems to have been inherently less valuable than the land which was either regulated common or enclosed.

When we examine the use that different types of land were put to the reasons for the differences in value between old enclosed land and enclosed common land become clear. Table 8 shows the calculated value of enclosed land in each use. The table also shows the fractions of regulated common, enclosed common, and old enclosure in each use for the years 1780 to 1839.<sup>31</sup> Regulated common land was much more likely to be arable, which is a relatively low value use, and there was no common land used as garden or orchard, which was a very high-value land use. But interestingly enclosed common had a land-use pattern that was very much like the regulated common, with arable again predominating. Thus this sample of land suggests that in the years 1760 to 1839, where most of the observed enclosures occurred, there was little change in the major patterns of land use following enclosure. Hence little of the rise in rents following enclosure was a result of switching land use.<sup>32</sup> The difference in rental value observed above between old enclosure and enclosed regulated common can be almost entirely attributed to the differences in land use between these two types of land. Although the observed difference averages 17 percent, land use alone would predict a 22 percent difference.

An alternative method of comparing the rental value of common and private land exploits an entirely different approach, which does not require me

<sup>31</sup>The comparison is limited to this period for fear that land use may have shifted over time.

<sup>32</sup>Within the arable land there may have been changes in the type of rotations used. It would be nice to observe land use on exactly the same plots before and after enclosure, but there are only 27 plots where such data is available. On these plots there was indeed little sign of any switch away from arable to more valuable land uses.



TABLE 8  
LAND USE ON PRIVATE AND COMMON LAND, 1780-1839

Land Use	Value Relative to Arable <sup>a</sup>	Old		Regulated		Enclosed Regulated	
		Enclosure (percentage)	Common (percentage)	Common (percentage)	Common (percentage)	Common (percentage)	Common (percentage)
Arable	1.00	19.6	43.4		41.4		
Pasture	1.38	33.8	27.0		24.8		
Meadow	1.54	30.4	29.7		27.8		
Garden	3.32	8.1	0.0		2.8		
Orchard	2.86	2.7	0.0		0.0		
Wood	0.80	1.9	0.0		0.0		
Hops	1.71	0.4	0.0		0.0		
Osier	1.75	0.2	0.0		0.3		
Fen	1.34	0.9	0.0		0.3		
Marsh	1.44	2.2	0.0		2.5		
Number of observations		3,575	803		326		
Average implied value relative to arable		1.55	1.26		1.32		

<sup>a</sup>These relative land values were calculated from the rental value of enclosed charity land. Note: Meadow is pasture land which is mown for hay, as opposed to being just grazed by animals. Osier was land growing willows for basket making. Source: U.K., "Reports of the Charity Commissioners."

to know anything about the common rights status of any particular plot and allows me to use also the observations of charity land where the enclosure status of the land is not given. After 1720 the great majority of the enclosure of common land in England was done by the use of private parliamentary acts. Tate lists such acts giving the parish, the date, and generally the area enclosed.<sup>33</sup> I am thus able to divide parishes into two groups. First, parishes where at least 10 percent of the area was enclosed after 1720 by parliamentary act, which I call common parishes. Second a region where less than 10 percent was enclosed by such acts, which I call enclosed parishes. The characteristics of each set of parishes are as shown in Table 9.

Common and enclosed parishes were widely distributed across the various parts of England. If enclosure doubled rents then average rents in the common parishes should be significantly lower in the years before 1750 than in the enclosed parishes. As we move from 1700 to 1839 the rents of the common parishes should move towards those of the enclosed, since by the 1830s only 10 percent of the land in the common parishes was still common. Thus

TABLE 9  
THE CHARACTERISTICS OF ENCLOSED AND COMMON PARISHES

Type of Parish	Number	Area		Percentage Common in 1720
		(millions of acres)	(millions of acres)	
Common	3,937	15.05	6.58	43.7
Enclosed (Private)	5,733	17.57	0.26	1.5

Source: U.K., "1851 Census"; and Tate, *Domesday*.

TABLE 10  
RENTS IN COMMON LAND AND ENCLOSED REGIONS, 1700-1839

Period	1700-1759	1760-1799	1800-1819	1820-1839
<i>DCOM</i>	-0.083 (0.034)	-0.060 (0.053)	-0.135 (0.034)	-0.058 (0.016)
<i>DMX</i>	0.842 (0.151)	0.956 (0.168)	0.905 (0.091)	0.193 (0.081)
<i>DNORTH</i>	-0.194 (0.046)	-0.068 (0.070)	-0.019 (0.046)	-0.019 (0.024)
<i>HPA</i>	0.885 (0.457)	0.602 (0.767)	0.480 (0.528)	0.620 (0.278)
<i>LAREA</i>	-0.724 (0.037)	-0.609 (0.052)	-0.467 (0.031)	-0.582 (0.013)
<i>LAREA</i> <sup>2</sup>	0.160 (0.013)	0.130 (0.021)	0.071 (0.014)	0.150 (0.006)
<i>LAREA</i> <sup>3</sup>	-0.012 (0.001)	-0.010 (0.003)	-0.004 (0.001)	-0.014 (0.001)
<i>LDEN</i>	0.237 (0.20)	0.355 (0.029)	0.383 (0.017)	0.315 (0.008)
Observations	1,551	1,217	3,420	12,165
R <sup>2</sup>	0.37	0.31	0.33	0.30

Note: The sample included all only plots with at least 5 acres of land per house. The log forms for parish density and plot area were chosen because these produced a much better fit to the data. Standard errors are in parentheses.

Source: U.K., "1851 Census"; Tate, *Domesday*; and U.K., "Reports of the Charity Commissioners."

in 1720 average rents in the enclosed parishes should be about 27 percent higher than in the common parishes, but by 1830 only about 5 percent higher. Further since as I show above the Charity Commission plots seem to be a representative sample of land in the various parishes of England, the average rents on these plots within each type of parish should reflect the average rent differences between common and enclosed parishes.

Thus I estimate for the years where I have broad coverage of the country, 1700 to 1759, 1760 to 99, 1800 to 19, and 1820 to 39 the following regression:

$$V/Z_{it} = a + b_0DCOM_{it} + b_1DMX_{it} + b_2DNORTH_{it} + b_3HPA_{it} + b_4LAREA_{it} + b_4LAREA_{it}^2 + b_4LAREA_{it}^3 + b_2LDEN_{it} + e_{it} \quad (4)$$

where *DCOM* is 1 if the plot is in a parish that had more than 10 percent common land in 1720, 0 otherwise; *DMX* is 1 if the plot is in Middlesex, *DNORTH* is 1 if the plot is in the north of the country (Cumberland, Durham, Lancashire, Northumberland, Westmoreland, or Yorkshire), *HPA* is the number of house equivalents per acre, *LAREA* is the log of the area of the plot, and *LDEN* is the log of the population density of the parish in 1801 for the first three samples, and in 1841 for the 1820 to 39 sample. If enclosure doubled rents the prediction is that the value of *b*<sub>0</sub>, the coefficient on



TABLE 11  
THE COSTS AND BENEFITS OF ENCLOSURE, 50 ACRE PLOT, 1600-1839

Period	Rent of Enclosed Land (£/acre)	Enclosure Cost (£/acre)	Gross Return on Enclosure (percentage)	Cost of Capital (land)	Net Return
1600-1609	0.29	2.19	4.2	5.5	-1.3
1610-1619	0.36	2.35	5.0	5.6	-0.5
1620-1629	0.36	2.55	4.6	5.4	-0.8
1630-1639	0.37	3.04	4.0	5.3	-1.3
1640-1649	0.43	3.06	4.5	5.2	-0.7
1650-1659	0.44	3.59	4.0	5.3	-1.3
1660-1669	0.49	3.25	4.9	5.2	-0.4
1670-1679	0.46	3.30	4.5	5.2	-0.7
1680-1689	0.46	3.36	4.4	5.0	-0.6
1690-1699	0.48	3.52	4.4	5.0	-0.6
1700-1709	0.47	3.32	4.6	4.9	-0.3
1710-1719	0.51	3.20	5.2	5.0	0.2
1720-1729	0.53	3.34	5.1	4.5	0.6
1730-1739	0.52	3.29	5.1	4.2	0.8
1740-1749	0.47	3.30	4.6	3.8	0.9
1750-1759	0.61	3.26	6.1	4.5	1.5
1760-1769	0.61	3.47	5.7	4.1	1.6
1770-1779	0.72	3.54	6.5	3.7	2.8
1780-1789	0.63	3.83	5.4	3.7	1.6
1790-1799	0.93	4.70	6.4	3.5	2.9
1800-1809	1.21	6.46	6.0	3.6	2.4
1810-1819	1.50	7.46	6.5	3.6	2.9
1820-1829	1.30	6.63	6.3	3.4	2.9
1830-1839	1.23	6.47	6.1	3.5	2.6

Note: Rent increases from enclosure and costs are for a 50 acre plot.  
Source: Return on land are from Clark, "Land Hungry."

*DCOM*, should be -0.21, falling to -0.05 by 1820 to 39. The estimated value of  $b_0$  in each period is shown in Table 10. As can be seen there is very little sign of any upward movement in average rents in the common parishes as the enclosure movement proceeds. Given the standard errors on *DCOM* we can certainly rule out any idea that average rents in the common parishes rose by 20 percent relative to the enclosed parishes. A smaller rise is possible given the noise in the data.

Given the general noisiness of land rents, I cannot say for sure how much enclosure raised rents. I can say that there is absolutely no possibility that enclosure raised rents by as much as 50 percent. The best estimate seems to be that enclosure raised rents by about 39 percent, which corresponds to a gain from enclosure of 23 percent of the rental value of enclosed land.

#### THE NET GAIN FROM ENCLOSURE

There is also sign that the rent gain from enclosure was relatively constant as a fraction of rents over time. Because the great bulk of enclosures in the

sample occurred in the years after 1760 it is not possible to estimate using time series methods the gain from enclosure before this. But if I estimate the coefficients of equation 1 for cross sections of land in the subperiods 1500 to 1699, 1700 to 1799, and 1800 to 1912 I find that the rent differentials between old enclosure and common land are relatively constant. Thus the estimated rent differences, measured relative to the value of all enclosed land, are 37 percent in the first period, 41 percent in the second, and 35 percent in the last. Table 11 shows for the decades in the years 1600 to 1839 the estimated average rent of a 50-acre parcel of enclosed charity land. If the percentage rent differential between common and enclosed land was indeed constant, the gain from enclosing a 50-acre parcel per acre in each decade will be 0.23 times this estimated rent.

The Charity Commission reports also give information on the costs of enclosure in 161 cases between 1693 and 1883. Using these I can establish that enclosure costs were dependent on the area enclosed, and were roughly proportional with the agricultural wage rate in the enclosure year. Thus if we define *COST* as the enclosure cost per acre (in £), *AREA* as the area enclosed, *WAGE* as the average farm wage in England (in pence per day), *DNF* as a dummy variable set to 1 if costs excluded fencing costs, 0 otherwise, *DNC* as a dummy variable set to 1 if costs excluded commissioners costs, 0 otherwise, and *DWASTE* as a dummy variable set to 1 if the enclosure is of waste land, 0 otherwise we find that the estimated relationship is

$$LN(COST) + -0.27 - 0.210LN(AREA) + 0.87LN(WAGE) - 0.55DNF \quad (0.030) \quad (0.19) \quad (0.14)$$

$$-0.23DNC + 0.04DWASTE \quad (0.13) \quad (0.12) \quad (5)$$

$$R^2 = 0.383, n = 161$$

(standard errors in parentheses).<sup>34</sup>

The nearly one to one proportionality of enclosure costs and wages is not surprising since the chief elements in enclosure costs were fencing the land, building new roads, constructing new farm buildings, and surveying the land and reallocating it. Almost all these costs were largely labor costs. Fencing, for example, mainly involved the labor cost of digging ditches and planting quick for the hedges. Road building costs were also mainly labor costs. I thus estimate enclosure costs in each decade, using 1810 to 19 where I have

<sup>34</sup>The agricultural wage level before 1834 is estimated from a database of wages compiled mainly from farm and estate accounts, either taken from the primary sources, from the Beveridge archive at the London School of Economics, or from secondary literature. After 1834 the estimates of Arthur Bowley



returns in the latter period is the rise of all rents relative to wages in the years after 1750. The expected net profit from enclosure will be the expected gross return minus the cost of capital. Rational landowners should regard the cost of enclosure as the net return on landownership. For the owner could sell some of their land to finance the costs of enclosure on the rest. Thus Figure 4 and Table 11 also show the net return on landownership. As can be seen the expected returns from enclosure only significantly exceed the costs after 1720.

Using these estimates I can roughly calculate the net social gain from the parliamentary enclosure movement in the years 1720 to 1840. The calculated net return on capital averages 2.0 percent over this period. This works out to be an efficiency gain from enclosure of 2.8 percent, if all of the return above the interest cost of capital is to be counted as economic surplus.<sup>36</sup> Since in fact enclosure had risks (the rent gain was variable as were the costs of the enclosure) the true social efficiency gain will be even lower than this since land owners had to be compensated for these risks. Thus there is no evidence that common fields in England in the eighteenth century were an inefficient institution.

Now it is of course not possible to estimate the exact effect of enclosure on rents and the exact costs of enclosure. But even if the increase in rents from enclosure was closer to 30 percent of enclosed rents, and even if the costs of enclosure were somewhat lower, the general character of the story told above would not change. Enclosure would be at best marginally profitable in the period before 1760, yielding a net return above the cost of capital of no more than 1 or 2 percent. Enclosure would become a much more profitable activity after 1760 because of the decline of returns on capital and the rise in rents compared to wages. This implies, however, that there should have been very little enclosure between 1620 and 1720, a period which many believe saw as much enclosure in England as did the next 100 years. In a separate paper I show that the same charity lands do indicate little enclosure in the period 1600 to 1720.<sup>37</sup>

#### ENCLOSURE AND REDISTRIBUTION

Two stories have been told in which enclosure involved a substantial redistribution of income between tenants and the rural poor and land owners. The first, exemplified by Allen, argues that enclosure was chiefly a vehicle to increase rents on common land to market levels. The second, exemplified by Jane Humphries, argues that enclosure saw the confiscation from the

<sup>36</sup>This efficiency gain is calculated by assuming rents on common land were 25 percent of the value of net output.

<sup>37</sup>Clark, "Growth."

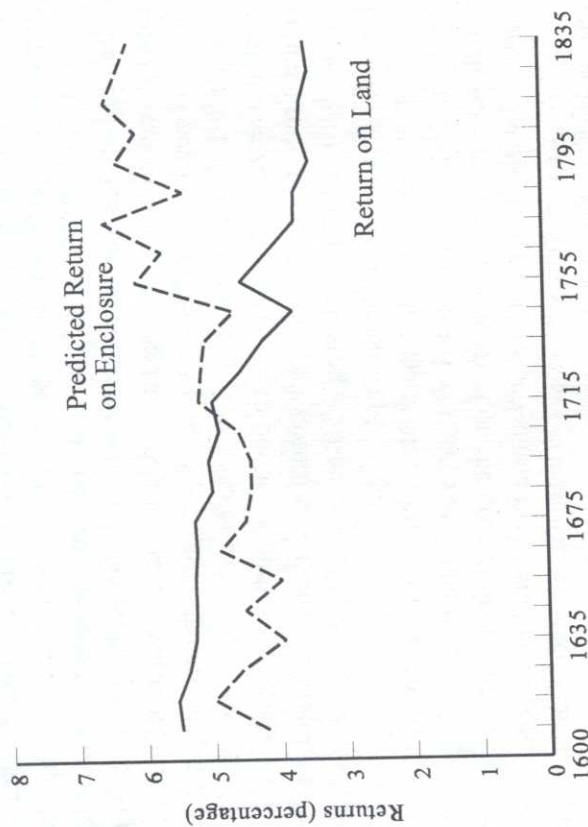


FIGURE 4  
THE PREDICTED RETURN IF THE RENT INCREASE ON ENCLOSURE WAS 23 PERCENT  
OF THE RENT OF ENCLOSED LAND, 1600-1839

Sources: Table 6 and Clark, "Land Hunger."

many observations on enclosure costs as a base, assuming that enclosure costs in year  $t$ ,  $COST_t$ , are given by

$$COST_t = COST_{1810} \left( \frac{WAGE_t}{WAGE_{1810}} \right)$$

The second column of Table 11 shows the calculated enclosure cost on this basis for each period back to the years from 1600 to 1609 for a 50-acre enclosure allotment.<sup>35</sup>

The third column in Table 11 shows the expected gross percentage return from enclosure, which is the rent gain absent general rent inflation divided by the enclosure costs. Figure 4 shows these expected returns. As can be seen the calculated return is generally less than 5 percent from 1600 to 1750, after which it rises to about 6 percent. The reason for the rise in expected

<sup>35</sup>B. A. Holderness has supplied a set of conjectured enclosure costs at ten year intervals for Britain for 1760 on in Holderness, "Agriculture," pp. 18-23. His estimated enclosure costs are not too far from the numbers derived here. Thus for the benchmark period 1810 to 19 Holderness estimates average costs per acre at £5.2, across all holding sizes. Costs per acre clearly varied with plot size on the charity land. For the average sized plot with cost data, which was fifty acres, my estimated cost for 1810 to 19 is £5.3 for a 50-acre plot, which would be not too far from the average enclosure allotment in England.



landless poor of significant common rights.<sup>38</sup> The results above have implications for these views. The estimated rent gains from enclosure are so modest that even in the heyday of enclosure, between 1760 and 1820, when the calculated returns were relatively high, the net annual gain to the landlord from enclosure absent general rent gains is estimated at less than 7 percent of the rent of enclosed land. There was profit for landlords in enclosure, but not huge profits. Were there significant losses for others?

Though rents rose by little more than was required to cover the costs of enclosure this does not rule out the possibility that common land was rented below market values and that enclosure was mainly a socially inefficient mechanism to force up rents. There is no evidence, however, in the Charity Commission records of a tendency to let common land *in particular* at artificially low rents, or indeed of a general tendency in earlier years to let land at non economic rents. The only systematic exception to leasing at market rates was the tendency of charities in parts of the west and south, for example in Bristol, Winchester, and Oxford, to let land and houses at traditional low rents on leases that were renewable on payment of a small customary fine. This seems to have reflected general practices by landowners in these areas. Thus the commissioners noted of the parish of All Saints in Oxford,

The practice of leasing for long terms, with frequent renewals, taking small fines, and reserving nominal rents, is of very ancient standing within the city of Oxford; but we apprehend, that trustees of the charity are not justified in granting such leases, and that such a practice would not be sanctioned by a court of equity.<sup>39</sup>

The lack of legal constraint forcing the continuation of these leases is illustrated by the decision of the Bristol City Corporation in 1790 not to renew such customary leases when they expired. Yet Winchester Corporation was still renewing the same type of below-market leases in the 1830s. But this custom applied equally to enclosed and to common land, and there is no sign of enclosure being used as a mechanism to terminate these leases. Indeed Winchester Corporation had a charity farm that was still leased in the traditional way in 1824 despite having being enclosed in 1791.<sup>40</sup> The constraints creating these non economic leases seem to have been strong extra-legal social conventions giving some property in land to the tenants, but there is no sign that enclosure was used to terminate these purely customary rights.

In the absence of any evidence of a failure to set rents at market values except where constrained by local customs, we have to take the rent evidence as indicative that enclosed land was marginally more efficient than

common, and that enclosure did not result in any loss of surplus by the average common field tenant.

The second issue is whether some of the rent gain on enclosure was purchased by the theft of the common rights of the landless to grazing and fuel on the waste land of the village. Humphries argues that such access to the waste, if it enabled a family to keep a cow, would add to family income as much as half the wage of male workers. The rights to gather fuel alone were estimated to be worth from two to six weeks wages of a male worker. In contrast J. D. Chambers argued access to common was of very slight value to the average rural family.<sup>41</sup> The Charity Commission data allows us some estimate of the potential income available to the rural poor from access to the waste. For the years 1700 to 1759 I have information on the amount of common waste land attached to 2,011 plots of charity land in England scattered across 1,343 parishes and townships, derived from information on the waste added to land by later enclosures. On average only 3.6 percent of this land was waste. Thus by the end of the major wave of enclosure from 1760 to 1840 the English poor lost access to only about 0.8 million acres of waste land. Since there were about 870,000 hired adult male agricultural laborers by 1851, this implies that the average family lost access to about 1.1 acres of waste.<sup>42</sup> On average each of those acres of waste represented a gain in rent to land owners of £0.70 or less. Now, as noted above, it seems plausible that a lot of this new rental value was created by the investment of owners in fencing and land improvement. But even if we suppose that all the gain in rents to landowners was a direct theft of common rights from the poor, the average landless family in 1850 would thereby have lost £0.77 in income, which would be about 2 percent of a rural laboring family's income. Further in the south of England, where most of the rural poor were, the fraction of waste was only 3 percent. Given the greater rural population densities there that means that the average southern landless family in 1851 lost access to much less than one acre of waste.

The estimates in Table 8 above on land use on regulated common land before and after enclosure also suggest that at least after 1760 enclosure should not have reduced demand for labor in rural areas. For there is no sign of changes to less labor intensive use of land as pasture or meadow after enclosure. Enclosure at worst would cause only the most marginal reduction in the economic condition of the rural poor.<sup>43</sup>

<sup>41</sup>Humphries, "Enclosure," pp. 26-33; and Chambers, "Enclosure."

<sup>42</sup>The number of agricultural laborers is the number of those listing this occupation in the census of 1851 aged 15 and over. Since most of the younger workers would be resident in their parents household or on farms, the number of households is taken as 0.8 times this number.

<sup>43</sup>In fairness to Humphries, she argues that the value of common rights was not just the rental value but the opportunity they afforded for families to utilize the unemployed labor capacity of women. But most villages in England had numerous small plots of land that the poor could have rented in order to

<sup>38</sup>See Allen, *Enclosure*; and Humphries, "Enclosure."

<sup>39</sup>U.K., "Reports of the Charity Commissioners, Vol. 6," p. 411.

<sup>40</sup>The nonlegally binding nature of these arrangements is witnessed by the fact that around 1806 the Winchester Corporation by fiat increased the level of the customary fines charged upon renewal. U.K.,



## CONCLUSION

The data from the Charity Commission reports present a much more mundane picture of the enclosure process than has been considered before. Common fields were not an inefficient institution which persisted for hundreds of years despite the huge profits available from enclosing. Instead the gains from enclosure were always modest, especially given the risks involved. Further the pace of enclosure accelerated in the 1760s at a time when the return to enclosure increased as a result of increased land values relative to wages. Moreover, the dependence of enclosure profitability on the cost of capital and land rents means that it is quite possible that while enclosure was profitable in England after 1720 it would remain unprofitable in many other European countries where capital costs were often higher, and where there was not the same run up in land rents relative to wages.

The estimated values in equation 6 suggest that enclosure costs were composed of about two-thirds fencing costs and one-third the costs of the Commissioners of Enclosure. Of the Commissioners costs about 42 percent are estimated by Holderness to be investments in land improvement. Thus of the total cost of conversion from common to private land about 80 percent represented real investments in fences, roads, and drains. The common field system was relatively efficient because while land rents were lower on common land, the common fields economized on such costs. The reason land rents were not dramatically lower on common land was that these commons were carefully regulated by the village community, with access rights specified. The only land where unlimited access was allowed was the "waste." Waste, as we see in our estimations above, was typically land that was much less productive than regular farm land. The systems of property rights in English agriculture thus seems to have been responsive to changing costs and benefits and not capricious holdovers from a barbaric pre-economic past.

The enclosure of common lands also seemingly would have little redistributive impact in the English countryside. Rents rose somewhat, but as indicated above there is every reason to believe that this was simply because of a rise in the market value of land after enclosure. The landless lost access to waste land, but the amount of land they lost access to was very small and even on the most generous assumptions would have yielded them little income.

The market worked. The economic problem of the common fields and the enclosure movement was founded on a myth of vast profits created by early agrarian reformers and mistakenly perpetuated by historians, including this author.

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