"Natural" and "Improved" Land in Marx's Theory of Rent

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Marxian value theory has always had some difficulty with incorporating the products of nature into the calculation of value. Right at the start of *Capital,* Marx ([1894] 1976) insists that it is not the purpose of his theory to explain the contribution of all natural phenomena to the value of output. This may be satisfactory as a general proposition of the objectives of Marxian value analysis, but it faces difficulty in the understanding of ground rent, for here the relationship between "natural" and (human) "produced" phenomena must be addressed directly. It is not sufficient to isolate nature as outside the value sphere.

Specifically, the question must be posed: how, within Marxist theory, do we understand the relationship between natural and produced attributes of land; for example, how do we compare the contribution of a man-made dam and a naturally occurring dam to the value of output produced on land?

This paper contends that Marx himself cannot provide an answer to this question. His answer is flawed in two respects. First, Marx is inconsistent in how he resolves this issue within his theory of rent; second, his answers are inconsistent with his own theory of value. As for the first, it is probably true that there are a number of inconsistencies within Marx's writings on rent,[1] so such a "discovery" is of little consequence. These writings were, after all, just notebook entries, some comprising just an isolated paragraph, assembled and edited by Engels after Marx's death. They were by no means prepared by Marx in a state fit for publication. Nonetheless, they remain the basis of the analysis of land rent and the relationship between land owners and capitalists within the Marxist tradition. But the stronger claim of this paper is that the internal inconsistency is a reflection of some basic anomalies in Marx's theory of rent. It suggests that, at least within Marxist value analysis,[2] a distinct theory of rent is obsolete; land must be understood in the same way as capital generally. It therefore suggests a challenge to some central issues in Marxist rent theory, and many recent interpretations of it (e.g., Ball 1977; Fine 1979; Harvey 1982; Murray 1977–78).

Marx developed his theory of rent via an exhaustive critique of Ricardo's rent theory (Marx [1959] 1975). Marx's theory differed from that of Ricardo in two fundamental respects: it was predicated upon a different theory of value, and a different notion of (in Ricardo's term) the margin. In particular, Marx introduced the concept of absolute rent, along with differential rent.

No attempt will be made here to provide an exegesis of those categories. Suffice it to say for readers unfamiliar with Marx's rent theory that differential rent is somewhat similar to Ricardo's intensive margin,[3] while absolute rent is a rent appropriated on all agricultural land (even at the "mar-

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[1] One of the more important inconsistencies is identified by Ball (1977); Marx's discussion of differential rent II involves a confusion of marginal and average returns to capital investment in land.

[2] Land is important to Marxist theory for more than the calculation of values. As with Marx's theory of capital generally, land is also a social relation. This is land in its capacity of *property,* that is, class relations expressed through ownership relations.

[3] Fine (1979) correctly emphasizes that the two categories are not the same because they are constructed within different theories of value. They may be said to be equivalent categories within their respective theories.

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gin''), associated with the (assumed) lower organic composition of capital in agriculture compared with industry proper.

Crucially, Marx accepted important elements of the way in which Ricardo had posed the rent question, and this, it will be shown, prevented Marx from solving the rent problem adequately.

MARX'S REFERENCES TO THE RELATIONSHIP

The relation between natural and man-made attributes of land becomes an issue for Marx in two different contexts, for which he provides two different explanations. They will be discussed in the reverse order to which they are raised in *Capital,* so that attention can be focused on Marx's first-presented explanation, which can be judged as his most direct consideration of the issue.

One reference to the relationship arises in the context of differential rent (specifically, differential rent type II which relates to different applications of capital to different units of land) in explaining why land of greater embodied capital will (ceteris paribus) appropriate a higher rent for its owner.

Marx here argues that, for the duration of a period of land tenure, the benefits of high land fertility remain with the farmer. However,

> In the case of more permanent improvements, the artificially inflated fertility of the land is its new natural fertility when the tenancy contract expires. ([1894] 1976, 813)

It could be said that Marx is here engaged in debate with notions of rent assessment by real estate agents, so that the ''rent'' which he is discussing is the popular notion, involving all payments by tenants to owners, be they for use of land or capital. But the same proposition is reiterated when Marx contends later:

> Although [permanent improvements] are the product of capital, they operate just like the natural differential quality of the soil. ([1894] 1976, 844)

Marx identifies such capital as contributing to differential rent.

The argument here is that the average rate of profit in agriculture depends on the existence of a combination of the natural quality of land and capital investment in land. Over time, the process of competition will dictate how much capital must be embodied in ''marginal'' land in order to maintain the average rate of profit in agriculture, and thus determine which land must cease production by requiring too much capital to permit production at the industry's price of production. Similarly, it establishes the conditions under which capital investment in land can secure an above-average rate of profit in agriculture, which is the basis of differential rent II.

The other context in which Marx addresses the relationship between man-made and natural fertility is in discussing the relationship between rent and interest.

The question posed by Marx is whether the difference between rent and interest relates directly to the difference between natural and man-made fertility; that is, whether land improved by embodied capital appropriates just rent or some combination of rent and interest.

Marx makes recognition of calculations which equate rent with interest in his introductory discussion of ground rent ([1894] 1976, ch. 37). He rejects it as an ideological attempt to mask the contradictions between industrial capital and landed property. Marx identifies them not only as different forms of surplus value, but as the revenue of different classes (landowning and capitalist, respectively). For Marx, the conversion of rent to interest is a means to determine the price of land, but such calculation does not mean that rent is determined in the same way as interest; nor, therefore, does it mean that the price of land determines rent. For Marx, the identification of rent in the value sphere means that rent and interest must not be conflated.

To clarify this distinction, Marx introduces the concept of *la terre-capital* ([1894] 1976, 756)—fixed capital incorporated in land, such as irrigation and farm buildings. Interest or ''lease price'' will be paid by the tenant of land for the use of this fixed capital. But while this payment appears to be rent, insofar as it is paid by the tenant to the landowner, Marx contends it is actually interest, paid in addition to "ground rent proper" ([1894] 1976, 762). Here, Marx follows the analysis of Ricardo ([1817] 1953, 67).

THE INCONSISTENCY

A contradiction is apparent here for Marx (though not for Ricardo) in this attempt to differentiate rent from interest. While Marx wishes to pose these payments on fixed capital as separate from rent, his argument is clearly different from that posed in relation to differential rent. Thus, in the context of differentiating rent and interest (i.e., *la terre-capital*), tenants' payments on fixed capital are interest, apart from and in addition to ground rent and, moreover, a deduction from average profits (itself a puzzling proposition). But in the context of differential rent type II, these same payments are seen as part of ground rent, paid out of surplus profits. Thus, within value calculations, man-made improvements in land are being treated inconsistently.

Yet even if Marx's comments in the context of differential rent II is seen as cursory and not deserving undue emphasis, the category of differential rent II indicates that rent and interest are not clearly separate. Indeed, despite the firm statements in his introductory chapter, Marx actually concedes this at two subsequent points. The first occasion is when he mentions that interest on *la terre-capital* may in certain circumstances disappear, "for instance where there is competition for new lands of greater natural fertility" ([1894] 1976, 756n).

But this is a circumstantial proposition: it does not resolve a theoretical problem. Moreover, it only serves to highlight the need for value theory to provide a means to examine the relationship between man-made and natural fertility, in order to understand the circumstances in which *la terre-capital* remains operative.

However, Marx cannot resolve the problem because *la terre-capital* is a Ricardian category, inconsistent with Marx's own theory of value. For Ricardo, rent is paid on the natural characteristics of the soil and interest paid on the products of actual labor. Hence the difference between rent and interest is clear, even though it is, for Marxism, resolved by means of a flawed theory of value. For Marx's theory of value, by contrast, only socially necessary labor produces value. The quantity of actual labor is, in this context, immaterial.

The problem for Marx is that if all identical output is to share the same value, and all capitalist farmers (assumed to be identical "enterprises") are to achieve the same rate of profit, areas of identical fertility must command an identical charge. Yet one area may embody capital improvements while in the other fertility is purely natural. So how do we value the embodied capital?

If the answer is that it has no value (because the existence of land of identical natural fertility indicates that such capital is not socially necessary), there can be no explanation as to why such investment does indeed occur in some circumstances. If the answer is that it does have a value (i.e., it is "socially necessary"), then as capital it must be paid interest, not rent. The implication is that the owner of a naturally occurring dam receives rent for the use of that dam, while the owner of an identical man-made dam receives interest! Marx's critique of Ricardo's value theory thereby precludes him from following Ricardo's simple solution.

Marx recognizes this very issue on the second occasion, where he withdraws from the sharp distinction between rent and interest. In a brief notebook entry which Engels includes at the end of volume III of *Capital* ([1894] 1976, 879–81), Marx recognizes explicitly that "so-called permanent improvements . . . almost all boil down to giving a particular piece of land . . . characteristics that other land somewhere else possesses by nature." He then asks, in effect, the following question: by what criterion can labor involved in the production of *la terre-capital* be adjudged "socially necessary'' when its effect is simply to improve the fertility of some land to a level already existing naturally in other land?

This appears to be the unsolved problem of Marxist rent theory, for Marx's own answer is incomplete, and quite contradictory with his concept of *la terre-capital*. Either, he contends, we must ''assume that all land in a country requires this capital investment,'' or, as an alternative view, the interest on capital invested in land becomes differential rent as soon as the capital is amortized.

The first option assumes away the problem of comparing natural and produced fertility, and thus reconciling rent and interest. The second gives no indication as to how interest is determined: that is, there is no explanation of how capital fixed in land should be treated before it is amortized; no consideration of the rate of value transfer in the process of its amortization; and no explanation as to why such capital is assumed to contribute to fertility after it is amortized.[4]

These contradictions and limitations suggest that we should not expect from Marx's own writings a fully coherent theory of rent. Where these critical questions of rent theory are being posed, Marx's notebooks are quite fragmented and disjointed. Yet what still remains to be resolved in a Marxist theory of rent is the relationship between rent and interest and the contribution of capital invested in land to the value of commodities produced on the land.

For Marx's value theory, the concept of *la terre-capital* earning interest is an artificial and arbitrary construct, since rent is paid for the use of land of particular fertility, irrespective of whether that fertility is ''natural'' or ''produced.''

This suggests that the approach adopted by Marx in the context of differential rent turns out to be the more fruitful of the two. Even though the relationship between natural and man-made attributes of land appears there as an unresolved issue, it is being posed in terms of central Marxist categories: the formation of prices of production in agriculture. This involves the process in which competition between capitals, in securing an equalization of the rate of profit, imposes conditions on both the necessary minimum productivity of land and the maximum costs of ''producing'' land which can sustain that productivity.

The gap in the analysis is that, while capital investment and the ''natural'' attributes of land are recognized to be substitutable to some degree, Marx's prices of production are actually calculated with respect to capital only. Within this calculation, natural fertility then appears to determine just the level of differential rent and the fact of substitutability drops out of the calculation.

A recognition of substitutability requires that natural fertility and capital investment be commensurable. This would require a concept of fertility on the same terms as capital in which, for the calculation of prices of production, there must be some ''norm'' of fertility, just as there must be a ''norm'' of capital investment. This would obviously be an abstract notion, just as is the commensurability of different units of capital in the formation of a technical ''norm'' of production. It remains an area for further exploration.

CONCLUSION

Marxist rent theory is left with a problem inherited directly from Ricardo. While (in Marx's terms) Ricardo provided a false solution, Marx can be seen to be still asking a Ricardian question, which Marxian categories are not designed to answer. His own categories require that the question be radically reformulated.

Marx's value theory precludes simply attributing rent to the natural powers of the soil, and interest to capital, because of the criterion of socially necessary labor in determining the value of capital and thus the extent to which it is transferred to the value of agricultural output. But what this same criterion can establish, within value calcu-

[4]Harvey (1982, 337) raises the issue of the relation between rent and interest in relation to capital invested in land, but appears satisfied with Marx's amortization argument. Harvey's main focus is on the relationship between rent and interest in the price of land; quite a separate issue.

lations, is a basis for the commensurability of naturally occurring and man-made attributes of land. *La terre-capital* differentiates natural and man-made attributes (a Ricardian concern), but without providing a means of commensurability.

This commensurability can be achieved if all fertility is understood by reference to capital, rather than, as Marx would have it, all capital in land is understood by reference to (natural) fertility. In this conception, high natural fertility is understood as comparable with an advanced new machine, whose own production may involve little labor, but it embodies the same amount of socially necessary labor as other lesser machines. The effect of this approach is to reduce all fertility to capital and all rent to interest (strictly, to profit of enterprise).[5]

Why did Marx not adhere to this simple proposition? For Marx, it is because his starting point is within the theory of class, and the distinction between a landlord class and a capitalist class. For Marx, the former is parasitic and imbued with its feudal origins; the latter may be exploitative, but it is progressive. This perspective dictates that their revenues be constituted as distinct categories.

This is, perhaps, a conception appropriate to the period of transition to capitalism (more generally, the co-existence of capitalist and pre-capitalist modes of production), but of doubtful applicability to the era of fully developed capitalism. In this era, capitalists invest actively in both land and industry, and capital moves freely between the two. In other words, in the epoch of capitalism the very concept of a distinct landlord class must be questioned.

If we subsume land ownership into capital, the need to differentiate rent from interest disappears, as does Marx's theoretical dilemma addressed above. Put simply, Marx's theory of rent is attempting to include a pre-capitalist conception of land into a theory of capitalist calculation (i.e., the law of value). It should not be surprising that it does not work. We can be sympathetic to Marx's exercise, for it was a depiction of his contemporary era where the dominant form of land ownership still adhered to what might be called "pre-capitalist calculation." Our own era faces no such constraint. The application of Marxist value theory to land does not need a distinct theory of ground rent.

Nor does this mean that Marx's chapters on rent should be forgotten. The different attributes of different units of land raises conspicuously a general problem for the (any) theory of capital: how do we understand the returns to the owners of capital of different productive capacity—that is, a theory of monopoly? Within the theory of differential rent, Marx develops his theory of monopoly ([1894] 1976, part 6). While it is formulated in the context of, and with direct reference to, ground rent, it is entirely consistent with his theory of capital generally.[6]

Following the propositions developed in this paper, this is of no surprise. Just as land should not be seen as distinct from capital, so there are issues of ground rent addressed by Marx which have applicability for the theory of capital generally. Neoclassical economic theory has divorced the concept of rent from land and attached it to a general conception of monopoly. Marxist theory could well do the same.

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[5]In this process, we do not end up with a neoclassical concept of capital defined simply as an asset earning a stream of income because the condition of socially necessary labor, as a distinctively Marxist unit of calculation, ensures that the value of the capital component of land, like the value of capital in other spheres, is determined by labor values; not by actual embodied labor, but by a calculation of its equivalence to a socially defined norm of production.

[6]For a discussion of Marx's theory of monopoly found within his theory of rent, see Bryan (1985) and Shaikh (1978).

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