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Rent and the Critique of Capitalist Political Ecology: From the Appropriation of Nature to Uneven Development

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ABSTRACT



Recently, critical scholars interested in the political ecology of contemporary capitalism have highlighted rent as a key category for the analysis of nature–capital relations. However, this ecological dimension is not adequately integrated in the concept mobilised in most rent analysis. This paper argues that theorising the exteriority of nature to capital, a key point of contention in recent debates within ecological Marxism, is crucial for this, and develops a concept of rent defined through its double basis (material and class bases). This definition helps define its specificity vis-à-vis other forms of value and nature appropriation, and understand how capital's appropriation of nature determines its uneven development.

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1. Introduction

In the last decades, calls for critical geographers and political ecologists to put value at the centre of the relationship between capital and nature (Kay and Kenney-Lazar 2017; Robertson and Wainwright 2013) have led to a debate about the adequacy of Marx's labour theory of value for this endeavour (Huber 2017; Kallis and Swyngedouw 2018; Walker 2017). More specifically, Greco and Apostolopoulou (2020) singled out rent as the key category for value-theoretical analysis of nature under capitalism. However, with a few exceptions (e.g. Huber 2022; Vlachou 2002), this ecological dimension is not satisfactorily integrated in most contemporary interpretations of

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Marx's rent theory, which fail to locate rent in the context of the metabolic relation between capital and nature: on the one hand, the connection between rent and nature appropriation is disregarded in its more popular operationalisations (Christophers 2019; Harvey 2012); on the other, recent contributions seeking to focus on "value-grabbing" through rent to understand the political ecology of capitalism (Andreucci et al. 2017), and its importance to understand the extractive logic defining contemporary capitalism (Gago and Mezzadra 2017; Mezzadra and Neilson 2017), erase the distinctiveness of rent as a value form different from profits, wages and interest (Manning 2022).

This is all the more unfortunate considering the solid arguments developed by authors such as Paul Burkett (1999) and Kohei Saito (2017) about the importance of Marx's criticism of Ricardian rent theory for the development of his larger critique of capitalist political ecology. However, discussions about the theoretical development of ecological Marxism, particularly since the publication of Jason Moore's (2015) book, have crystallised in a debate about the "dialectic of nature and society" (Foster 2016). Having retreated towards philosophical discussions about the ontological status of nature–society relations, these debates within ecological Marxism have occurred largely in parallel to the revival of rent theory among critical geographers and political ecologists, without any meaningful dialogue between the two bodies of literature.

To address this gap, this article proceeds as follows. Section 2 revisits the recent debate within ecological Marxism. Section 2.1 argues that differences between dualism and hybridism are depicted more clearly when considered, rather than as two divergent ontological positions, as alternative critiques of capitalist political ecology, offering significantly different analyses of the role of nature in capital accumulation. From this perspective, Section 2.2 identifies rent as a key dividing line, occupying a central place in Burkett's dualist analysis of the relationship of capital to nature, but being (necessarily) absent from Moore's and Smith's critiques of capitalist political ecology, which disregard the exteriority of nature to capital as an abstraction.

On this basis, and to address the inadequate integration of the ecological dimension of rent in the literature reviewed in Section 3.1, Section 3.2 builds on the work of Argentinian Marxist Juan Iñigo Carrera (2017) to put forward a concept of rent defined through its double basis: the material basis, referring to the historically determined exteriority of certain natural conditions that escape the control of and are not reproducible by capitalist production, which nevertheless depends on them; and its class basis, referring to the relations that enable the natural conditions appropriated in the production process to be objectified in surplus profits captured by the landowning class as a distinct value form.

The key contention of this paper is that, beyond ontological debates, the exteriority of nature to capital is a crucial determination of the specific value

form (i.e. rent) that the appropriation of the former takes within the historical unfolding of the latter. Rent, I will argue, is thus necessarily absent from Smith's and Moore's critiques of political ecology: Smith's "production of nature" thesis negates the material basis of rent, whereas Moore's location of capitalist appropriation of nature as external to commodity production and the value form (albeit internal to value relations) negates its class basis. This rent-focused reappraisal of the hybridist v dualist debate also has important implications for critical analyses of the political ecology of contemporary capitalism. The concept of rent developed in this paper helps define the specificity of rent vis-à-vis other forms of value and nature appropriation (Section 4.1) and demonstrate how capital's appropriation of nature determines its uneven development (Section 4.2).

2. Debates Within Ecological Marxism: Nature and Capital Accumulation

2.1. Assessing Ontological Differences

Debates within ecological Marxism have tended to polarise in two self-distancing camps. Moore criticises existing ecological readings of Marx's critique of political economy, particularly the metabolic rift perspective developed by Foster and his colleagues, for reproducing a "Nature/Society dualism" he denounces as "Cartesian" (2016, 29), an ideological expression of the violence associated with the modern capitalist world. Foster has rejected the dualist label, and places Moore's work within a "hybridist" and "hyper-social-constructionist" tradition within Marxian thought (2016, 397), together with geographers such as Neil Smith, characterised by the rejection of an analytical distinction between the human/social and the natural. Shortly after, Andreas Malm defended the need for a dualist perspective and frontally rejected hybridism (2018; 2019) on political grounds: in a time of capitalogenic climate change, distinguishing between natural changes to the climate and those caused by a particular social arrangement of human activity is a necessary pre-condition to our ability to intervene in the present crisis.

In Moore's own formulation, a key difference between his and the dualist perspective is whether nature and society are reified into interacting wholes, or they are mutually constituted in their interaction instead (2015, 18). In an effort to concretise this distinction, Moore argues for the need to conceptualise how "the most elementary forms of differentiation – let us say, class, race, and gender (...) – unfold as bundles of human and extra-human natures" (2015, 20), instead of regarding them "as relations between humans first, and, only subsequently, as interactions with the rest of nature" (51). I argue, however, such perspective is adopted by dualist authors in their mobilisation of socio-ecological relations for concrete

historical analysis, evidencing that an ontology based on the mutually constitutive relationships between socially organised humans and the wider environments they are part of represents a point of convergence between the dualist and the hybridist positions. Saito, for instance, explicitly theorises the role of nature in configuring changing social relations (2017, 70–71), analysing the emergence of class relations as an enlargement of the metabolic relation of humans with the rest of nature; while Malm (2016) analyses changes in the metabolic relation with nature (such as the substitution of water by coal as the key energy source in industry) as central to both the constitution of the English working class and capital's efforts to control and exploit it in increasingly mechanised production processes.

Dualists and hybridists can thus agree that changing relations between humans and nature are a key vector of transformation of relations between humans themselves. Yet an important question when assessing the mutual constitution of nature and society is the extent to which nature itself is shaped by those social relations – the extent to which, paraphrasing Neil Smith's (2008) famous thesis, nature is produced. This requires us to specify the different meanings bestowed upon nature in this debate, for as Smith has rightly noted, “Marx did not have a single, coherently elaborated concept of nature at all, rather he used “nature” in a variety of ways” (2008, 50).

The convergence between the dualist and hybridist positions extends to humans' role in constructing nature, under a notion of the latter I describe as *nature qua environment*. Moore (2015, 36) argues that “if humans are a part of nature, historical change (...) must be understood through dialectical movements of humans making environments, and environments making humans”, whereas Saito often substitutes “nature” when talking about the “metabolic interaction of humans with their environment” (2017, 64). Even Malm, a card-carrying dualist warning against the dangers of hybridism, admits that “society also has the singular ability to affect aspects of nature so as to touch off a crisis” (2018, 70), implicitly referring to a notion of *nature qua environment*, i.e. nature as changed by human activity throughout history.

More generally, however, Malm theorises the construction of the environment as a result of “combinations” of human activity throughout history with the “material substrata” offered by nature (2018, 168), adopting Soper's definition of the latter as “those material structures and processes that (...) are not a humanly created product (...) and whose forces and causal powers are the necessary conditions of every human practice” (quoted in 28). The distinction between *natura qua environment* and this ontologically prior notion of nature, which I label *nature qua substratum*, is central to the dualist position and intrinsic to the concept of social metabolism: it conceptualises “humans and nature in their concrete reciprocity” (Saito 2017, 60) by posing matter in motion as the shared substance that

connects them, “but not as a symmetrical or neutral baseline” (Malm 2018, 67). From this perspective, then, society and nature (qua environment) are mutually constituted through historically specific forms of their metabolic interaction, but always in an asymmetrical relationship that assigns ontological primacy to nature (qua substratum).

A key contention present in Smith’s (2008) and Moore’s (2015) work is the critique of the ontological separation between “Nature” and “Society” as the ideological expression of a historical separation of humans from nature that is necessary for the establishment and reproduction of capitalist relations of production. This separation, Moore argues, is an abstraction that is both violent and *real* (2015, 55). This important insight is compatible with the dualist framework, which argues “nature and humanity ha[ve] to be conceived in historical terms, that is, in their making” (Foster, quoted in Hedlund, Longo, and Clark 2022, 462): i.e. the “boundaries between societies and the planetary ecosystems from which they emerge and within which they are rooted” are historically specific and “relative, but real” (Hedlund, Longo, and Clark 2022, 462). Ultimately, however, whereas from a dualist perspective society and nature (qua environment) are mutually constituted through historically specific forms of their metabolic interaction, but always in an asymmetrical relationship that assigns ontological primacy to nature (qua substratum); hybridists critique this asymmetry as an abstraction from the historical development of capitalism.

Driven by his refusal “to accept capital’s ontology” (Moore 2015, 55), Moore’s world ecology seeks precisely to illuminate capitalism as “a way of organising nature” (87), the latter understood as both “producers/products of historical change, internal to the movements of historical change” (56). “Geology”, as an example of “nature in general”, “is real enough”, Moore concedes, but the object of critique should be to demonstrate how “it becomes geo-history through definite relations of power and production in which geological dispositions are immanent” (2015, 52). In his analysis of capital’s role in making nature (qua environment), Moore therefore tends to abstract from this ontologically prior nature (qua substratum) whose existence he concedes (2015, 122–124). He acknowledges, for instance, the “asymmetrical relations” between the biosphere and capital (2015, 87), only to dismiss the analytical and political relevance of this asymmetry: “[i]t would be mystifying to say that the limits of capitalism are ultimately determined by the biosphere itself, although *in an abstract sense this is true*” (69 [emphasis added]).

Smith, in turn, analyses the social as emerging from the historically changing forms taken by the unique role of labour as mediating human’s interactions with the rest of nature, in the course of which a process of differentiation within nature itself emerges, as “second nature is produced out of first nature” with the historical development of relations of production

(2008, 65). Under the capitalist mode of production, however, “[t]he distinction between a first and second nature is therefore increasingly obsolete” (Smith 2008, 83): as more dimensions of the material world are increasingly produced and shaped by the logic of capital accumulation, “this material substratum is more and more the product of social production” (49). Similarly to Moore, Smith concedes the existence of some “natural substance [that] has not previously been altered by human activity”, such as “substantial parts of the geological substratum” or “the solar system”, while confining them to “an ideal, *abstract nature* of the imagination” (2008, 80–81 [emphasis added]). Despite recognising its existence, Smith abstracts from the ontological primacy of nature (qua substratum) to analyse capital’s production of nature (qua environment) on the basis of what he argues is the historical specificity of capitalism as a mode of production: the transformation of the *totality* of nature as an instrument in the service of the production and accumulation of value (2008, 65–83).

In this sense, ontology is not a particularly useful level to evaluate debates within ecological Marxism, as recognised by Moore’s own assessment of the schism: “Foster and I agree on the key point: human organisations unfold with a biosphere that shapes human sociality and is shaped by it. There are crucial differences in method of abstraction and historical method” (2017, 312). For reasons of space, this article cannot explore these methodological differences, which have been analysed elsewhere in detail (Hedlund, Longo, and Clark 2022), but will focus instead on the application of these alternative methodological propositions to the analysis of the relation between nature and capital accumulation, that is, exploring their differences as alternative critiques of capitalist political ecology.

2.2. Nature and Capital Accumulation: Alternative Critiques of Capitalist Political Ecology

For Smith, the relationship of nature to capital accumulation is a completely internal one: under capitalism, “nature becomes a universal means of production in the sense that it not only provides the subjects, objects, and instruments of production, but is also in its totality an appendage to the production process” (2008, 7). Accordingly, despite some poignant denunciation of “nature as accumulation strategy” for capital (Smith 2007), the question of the role of the production of nature within capitalism is addressed from the perspective of the built environment, in which “[c]apital is continually invested (...) in order to produce surplus value and expand the basis of capital itself” (Smith 2008, 6). On the one hand, the historical development of the productive forces resulting from “[t]he concentration and centralisation of capital in the built environment (...) leads towards a levelling of natural differences, at least insofar as they determine the location of

economic activity” (Smith 2008, 141). On the other hand, the “necessity [of] the perpetual circulation of capital as value” dictates capital is not only “continually invested” but also “continually withdrawn from the built environment so that it can move elsewhere and take advantage of higher profit rates” (Smith 2008, 6). Uneven development is thus an inherent tendency of capitalism, “as the geographical expression of the more fundamental contradiction between use value and exchange value” (Smith 2008, 6).

Since capital produces the totality of its conditions of production, Smith considers the role of “colonialism” to “function as some sort of ‘external spatial fix’” as a “transitory” and historically superseded possibility (2008, 187). In contrast, for Moore the reliance of capital on natural and spatial conditions it hasn’t produced is not exclusive to an early phase of capitalist development, but a “constitutive” feature of this mode of production (2015, 60, 125): “[e]very act of exploitation (of commodified labour-power) therefore depends on an even greater act of appropriation (of unpaid work/energy)” from “women, nature, and colonies” (64). Moore thus argues that the extraction of surplus value from exploited wage-labour relies on “a rising stream of low-cost food, labour-power, energy, and raw materials”, comprising the four elements of “Cheap Nature as an accumulation strategy” (2015, 63). This means capitalism relies on “two forms of labour-in-nature”, including both “paid work within the commodity system” and “unpaid work outside direct commodity production but within the capitalist division of labour” (2015, 230).

Moore’s mobilisation of this framework for concrete historical analysis is variegated, and not always consistent with the philosophical discussion of nature–society relations reviewed above. In some passages, Moore follows Marx closely to analyse the appropriation of Cheap Nature as an internal moment in the production of relative surplus value (2015, 25–26, 74–78). At the *theoretical* level, however, Moore puts forward a particular “reading of the law of value” (2015, 207), which for him is “unworkable historically without strategies of appropriating Cheap Nature” (67), to “connect the production and accumulation of surplus value with its necessary conditions of reproduction” (74). Moore theorises the internalisation of nature into capital accumulation by expanding value relations beyond the commodity, arguing for “the historical and logical non-identity between the value form and its necessarily more expansive value relations” (2015, 64), which “encompass[...] the relation value/use value in a way that necessarily extends beyond the immediate process of production” (71). Moore thus establishes a parallel between the dialectic of exploitation and appropriation that defines his expansion of value relations and the *external* dialectic of value and use value that defines his reformulation of the law of value: whereas exploitation under wage-labour refers to the production of value, use value “is “produced” through the zone of appropriation – the condition

for value – encompassing the unpaid work/energy of human and extra-human natures” (2015, 79). Nature’s contribution to capital accumulation is thus relegated to the moment of “appropriation”, remaining external to the moment of exploitation in the production process, since “[a]ll of these de- and un-valued forms of work are (...) *outside the value form* (the commodity)” (Moore 2015, 73 [emphasis added]).

In contrast to Moore, Marx “emphasises nature’s distinct contribution to wealth by not subsuming production under labour” (Burkett 1999, 27). The basic contradiction Marx identifies in the political ecology of capitalism – namely that while natural and labour are the sources of all wealth, under capitalism the production of use values is subordinated to the accumulation of value, to which only socially necessary human labour contributes (Huber 2017) – thus necessitates a dualist understanding of the metabolic relation between humans and nature. According to Burkett, Marx’s “materialist and social-relational investigation of the tensions with use value in general and nature in particular that are *built into the value form*” culminates in the category of rent (1999, 80 [emphasis added]). Foster has criticised Moore on the basis that he “simply ignores rent” (in Foster and Angus 2016), and Huber has recently criticised Moore’s notion of “unpaid work” by failing to “acknowledge” rent as “a (surely insufficient) payment for the differential qualities of nature” (2022, 1097). This paper contributes to these criticisms by showing *rent must be absent from the critique of capitalist ecology put forward by both Moore and Smith*,¹ as a necessary consequence of their rejection of the exteriority of nature to capital.

Under Smith’s production of nature thesis, nature is always already internal to capitalist production, thereby negating one of the requirements of rent, which for Marx relies on monopoly control over useful natural conditions that cannot be “established by the production process of the capital itself” (quoted in Burkett 1999, 74–75). On the other hand, for Moore the appropriation of nature is always already internal to value relations, albeit external to commodity production, which negates the necessity of rent as the value form which objectifies “the contradiction between determination of exchange value by labour time and the fetching of positive market prices by natural conditions not objectifying any human labour” (Burkett 1999, 90), determining the “false social value” of agricultural commodities (Marx 1981, 799). In the language of the argument developed in the next section, rent is absent from Smith’s analysis of the capitalist appropriation of nature because its critique of capitalist political ecology negates its material basis; whereas the absence of rent in Moore’s world ecology results from his location of capitalist appropriation of nature as external to

¹Smith’s (2008) book does consider rent, but only in relation to the urban environment.

commodity production and the value form, thereby negating the class basis of rent.

3. Grounding Marxist Rent Theory in the Critique of Capitalist Political Ecology: The Double Basis of Rent

3.1. *The Missing Ecological Dimension of Rent*

The transition from a rural to an urban economy switched the focus of Marxist rent theory from agricultural production and land to real estate and the built environment (Ward and Aalbers 2016, 1765), in whose critiques the connection of rent to the capitalist appropriation of nature disappeared (e.g. Haila 1988, Harvey 1974). This tendency has only intensified in the 21st century, wherein “the challenge” of Marxist rent theory “looks to be to take the categories of rent beyond land in the analysis of a capitalism increasingly reliant on flows of rentier income” through different value-capturing mechanisms (Ward and Aalbers 2016, 1780). Unsurprisingly, nature, and its appropriation, is again largely absent from the contributions that have emerged in this regard (e.g. Birch 2020; Christophers 2022). Brett Christophers, one of the most popular authors in this literature, defines rent as “income derived from the ownership, possession or control of scarce assets and under conditions of limited or no competition” (Christophers 2019, 308–309). The work of David Harvey, who has contributed to the development of Marx’s work in relation to geographic and spatial questions like few others, illustrates this trajectory. In 1982, he dedicates a full chapter to develop Marx’s concept of rent in relation to capital’s dependence on land as “a non-reproducible asset” (2018, 360–361), which, being “variegated in terms of its qualities of fertility, location, etc.” can therefore “never be entirely stripped of its monopolistic aspects” (374–375). In the following decades, Harvey’s (1996) insightful reflections on capital’s relations to nature have been formulated in separation from his analysis of rent, which he has come to define as “a return to the monopoly power of private ownership of some crucial asset” (2012, 94).

As Manning has recently noted, contemporary approaches such as Christophers’ or Harvey’s disregard “the specific importance of land *qua land*”, and the exteriority to capital of this very particular type of (natural) asset which “is not a commodity for it cannot be produced” (2022, 82). Similarly, Huber has recently criticised the overstretch of Marx’s concept of rent, prompting critical scholars “to retain an analytical distinction between land-owners as rentiers and capital as owners of the means of production” (2022, 1101–1102). In so doing, Huber explicitly builds on earlier calls to centre rent as “a crucial and under-theorised aspect of the political ecology of contemporary capitalism” (Andreucci et al. 2017, 41), because “most of the

instruments that bring about the economic valuation of nature are not vehicles for the production of value but for the extraction of rent” (Greco and Apostolopoulou 2020, 48).

Yet while Andreucci et al. rightly bring attention to rent relations as “struggle[s] over the appropriation and distribution of surplus value” (2017, 31–32), they do not offer a concept of rent as a form of surplus value distinct from profits and interests (Manning 2022). For Marx, under capitalism rent constitutes “an independent component of the price of [the] commodity” (1981, 890), representing an “excess over and above the average profit, i.e. over and above the proportionate share of each individual capital in the total surplus value that the total capital produces” (918). However, since Andreucci et al.’s “value-grabbing”, defined as “the appropriation of (surplus) value produced elsewhere” (2017, 30), constitutes a necessary condition for the formation of a general rate of profit across branches of production where capital operates with different turnover times and organic compositions, their conceptualisation of rent as “deriv[ing] from values produced elsewhere” misses crucial determinations of this value form.

In a debate that has shaped contemporary approaches to Marxist rent theory (Robertson 2024), Michael Ball (1977) and Ben Fine (1979) rightly analysed rent in the context of the transformation of values into prices in agriculture, necessarily emerging as part of the formation of an average rate of profit in a sector where competition is shaped “by the existence of landed property” (Fine 1979: 242). In conceptualising “rent as the economic form of a social relation” (Ball 1977: 381), however, both sides of the debate disregarded its ecological dimension.

3.2. The Material and Class Bases of Rent

Iñigo Carrera’s (2017) interpretation of Marx’s rent theory takes as its starting point a deeply ecological understanding of Marx’s concept of labour as mediation of the metabolic interaction of humans with the rest of nature. For the Argentinian author, “all production, regardless of its concrete materiality, consists of exercising control over certain natural processes”; a control which is necessarily determined by the history of capital accumulation, at a given moment of which natural conditions exist which “*escape the normal control of capital*” (2017, 3–4 [emphasis added]).² This is particularly consequential in agriculture, in relation to which Marx develops his theory of ground rent, where nature’s particular contribution to these production processes bestow a particular form upon capital’s general development of the productive forces (Harvey 2018, 363–364; Marx 1981, 916).

²All quotes from this source are my own translation from the Spanish original.

Iñigo Carrera has theorised this in terms of the contrast between “the material structures of industrial capitals in general”, constituted by “technical unities, blocks of processes, which, only as such, are able to mobilise a given labour productivity”; and the mediation of this “technical unity” of agrarian capital “by the intensive investment of successive portions of capital on land, each of which mobilises its own labour productivity”, as a result of “advancing in the control of successive natural conditionings” (2017, 10–11).

I argue that this exteriority of these natural conditions that “escape” (Iñigo Carrera 2017, 3) or “are not reproducible by” (Vlachou 2002, 175) capitalist production, yet contribute to this process, define what Marx called “natural basis” (1981, 786) of rent – or its “material basis”, in Iñigo Carrera’s formulation:

the capitalist ground rent (...) is the historically specific *social form emerging from this material basis* in so far as these specific natural conditionings are subjected to private appropriation under the capitalist mode of production [... through ...] the monopoly over the piece of land on which said conditions operate. (2017, 4–5 [emphasis added])

For Marx, there is thus a material as well as a “class basis for rent appropriation in capitalism” (Vlachou 2002, 173), which enables the natural conditions appropriated in the production process to be objectified in surplus profits captured by landlords as a distinct value form. On the one hand, this requires the existence of surplus profits to be appropriated, which itself points to the “the value-theoretic foundations of rent – the divergent formation of values and prices” (Purcell et al. 2020, 441) and the general profit rate as “as the overall regulator of production” (Marx 1981, 918) as necessary historical conditions. On the other hand, this requires a system of landed property, which “presupposes that certain persons enjoy the monopoly of disposing of particular portions of the globe as exclusive spheres of their private will to the exclusion of all others” (Marx 1981, 752), requiring capitalists to pay rent to landowners to be able to produce in their lands.

Marx’s analysis of ground rent proceeds from the peculiar pricing mechanism that governs agricultural commodities, determined by the way natural conditions shape competition in this branch of production (1981, 799; Vlachou 2002, 178). As Iñigo Carrera puts it, “[i]n so far as there exist natural conditions that are not under the control of labour productivity, which imply capital’s extensive and intensive application to the land with different productivities, agrarian commodities cannot be sold simply at their average market value” (2017, 147). Since capital won’t be invested unless it can expect to be valorised at the normal rate, the price of land-based commodities needs to be at a level such that the capitalists operating in the worst land obtain the average rate of profit (Harvey 2018, 367–368). Capitals in the more productive lands therefore sell their commodities at

market prices that are not only higher than their value – the higher productivity of labour employed in better lands does not lead to an increase in value, but in the total volume of use-values produced (Caligaris 2016, 67) – but also higher than the corresponding prices of production that would enable them to valorise at the normal rate. Therefore this gives rise to the emergence of surplus profits that are appropriated by the owners of these lands as *differential* ground rent.

Following Ricardo, Marx begins his analysis of differential rent by focusing on “the varying productivity of equal capital investments on equal land areas of different fertility” (1981, 812), which gives rise to what Marx terms differential ground rent of the first type (DRI) (1981, ch. 39). In his critique of Ricardian rent theory, Marx identifies a second form of differential rent (DRII), as the surplus profits generated “by different capitals invested successively on the same piece of land” (1981, 816) the landlord appropriates. As Ball rightly notes, however, “Marx repeatedly states that DRII cannot be treated in isolation from DRI” (1980, 310), which he regarded as “[i]ts basis and point of departure, not only historically but as far as concerns its movement at any given point in time”, materialising in “the simultaneous application alongside one another of different components of the total agricultural capital to tracts of land of differing quality” (Marx 1981, 815; see also Harvey 2018, 379–382).

I thus conceptualise DR and DRII, rather than as two autonomous forms of rent, as two moments in the unfolding of a single of rent (differential rent) whose *material basis* is the uneven distribution of fertility, “an objective property of the soil” that is nevertheless mediated by “an economic relation, a relation to the given chemical and mechanical level of agricultural development” (Marx 1981, 790). This conception, which follows closely Marx’s own analysis of ground rent in relation to the specificity of agrarian capital, does not relegate differences in natural fertility to some original moment, later being determined exclusively by unequal levels of investment. On the contrary, inequalities in natural qualities of the land affect the productivity increases that result from *successive* capital investments, aiming to bring different natural conditions of production under the control of normal agrarian capital; fertility thus being determined by the permanent interaction of distinct yet dialectically constituted natural (DRI) and produced (DRII) conditions of production.

Having explained the determinations of landlords’ appropriation of differential rents in the better lands, Marx again goes beyond Ricardo to argue capitalist production in the worst land will only take place if the landlord is able to appropriate a rent from it as well, because “legal ownership of land” enables the landowner “to withdraw his [*sic*] land from cultivation until economic conditions permit a valorisation of it that yields him [*sic*] a surplus” (1981, 889). Marx refers to this as *absolute rent* when it increases

the price of agrarian commodities to a level at or below its value content (landlords thereby appropriating surplus value that would have flown to other sectors with a higher organic composition of capital as part of the formation of a general rate of profit), in contraposition to “rent depending on an actual monopoly price”, itself “determined neither by the price of production of the commodities nor by their value, but rather by the demand of the purchasers and their ability to pay” (1981, 898–899). In both cases, however, it is “[l]anded property [which] has produced this rent itself” (Marx 1981, p. 898): emerging “by virtue of [landlords’] class monopoly over a non-reproducible (...) asset” (Ramírez 2009, 87), absolute and monopoly rent are thus also determined by their material and class bases.

4. Implications of the Double Basis of Rent

The concept of rent developed in this paper has important implications for critiques of capitalist political ecology, helping define the specificity of rent vis-à-vis other forms of value and nature appropriation and understand how capital’s appropriation of nature determines its uneven development.

4.1. The Specificity of Rent

Its material basis helps distinguish rent as a distinct value form vis-à-vis surplus profits. Throughout *Capital*, Marx assumes surplus profits accruing to capitalists mobilising better-than-normal conditions of production to have a necessarily ephemeral nature, as the innovations behind this higher productivity become generalised: “[t]he reason for the surplus profit in this case is thus *inherent in the capital itself* (...) and nothing inherently prevents all capital in the same sphere of production from being invested in the same way” (1981, 783 [emphasis added]). As part of this process, the innovations come to constitute the new normal conditions of production, the basis for the formation of the socially necessary labour time that will determine the commodities’ new value and price.

When introducing the concept of ground rent, however, Marx starts by considering the surplus profits that would accrue to a capitalist who, by using a waterfall as energy source, in contrast to the coal-powered steam engines that conform the normal conditions of production in their industry, is able to achieve a higher level of labour productivity. In this case, Marx notes,

[t]he increased productivity of the labour he (sic) applies arises (... from ...) a *monopolizable natural force* which (...) is available only to those who have at their disposal particular pieces of the earth’s surface and their appurtenances. (1981, 784 [emphasis added])

As a result of this non-reproducibility, the surplus profits it originates have a permanent character, in the sense that they cannot be eroded by the generalisation of this productivity-enhancing natural force through competition. “The permanence of excess profits”, Harvey insightfully notes, still depends on the premise that the capital that uses the waterfall is more productive than the one using coal-powered steam engines, and “must therefore be judged relative to the general processes of technological change” (1982, 363–363). Marx thus concludes: “[u]nder these conditions [of landed property], the surplus profit is transformed into ground rent, i.e. it accrues to the owner of the waterfall” (1981, 784). If rent is to retain its potential as a category in the ecological critique of capitalism, this distinctiveness vis-à-vis other forms of “value-grabbing” (Andreucci et al. 2017), such as surplus profits, needs to be preserved.

Its class basis, in turn, helps illustrate why not every usage of natural forces exterior to capital generates ground rent, but only those that enable the generation of a surplus profit. As Marx argues, “the manufacturer who operates with the steam-engine also applies natural forces which cost him nothing but which make labour more productive”, since the capitalist “pays for the coal, but not for the ability of water to change its aggregate state and transform itself into steam nor for the elasticity of steam, etc.” (1981, 782). But since “any capital can transform water into steam” by using coal, any “capital [can] call into being this natural condition of greater labour productivity”, and hence does not generate either surplus profit or rent (Marx 1981, 782). The difference between these two forms of capitalist appropriation of nature is obscured by Moore’s externalisation of capitalist appropriation of Cheap Nature outside the commodity form, which prevents his analytical framework from distinguishing the different ways natural conditions appropriated by capital may contribute to its valorisation.

4.2. The Appropriation of Nature and Uneven Development

While a particular strength of Moore’s and Smith’s work is the analysis of uneven development in relation to capital’s appropriation of nature, the absence of rent prevents their critiques of capitalist political ecology from unveiling the immanence of this relation.

Smith’s emphasis on the circulation of capital through the built environment to create its own conditions of production limits his understanding of the determinations of the spatial organisation of production processes. He heralds the petroleum industry, for instance, as an example of the historical emancipation of capitalism from external natural conditions, since the spatial organisation of “all but the first of these labour processes (...) is determined by the location of the productive forces and not at all by nature”

(2008, 141). Smith's framework, abstracting from these natural features and conditions, disregards the determinations of the geographically uneven distribution of deposits and their different qualities for competition and the distribution of value in the industry (Bridge 2008; Labban 2008). In fact, it is these natural features that capital cannot produce and remain external to its control that enable the appropriation of ground rent as part of the exploitation of oil under capitalism, the struggle over which has shaped the industry (Bina 1989; Masaraat 1980) as well as oil-producing states (Coronil 1997). These blind spots are particularly relevant after the "material turn" among resource geographers (Bakker and Bridge 2006) and the increasing attention paid to the influence of natural conditions on labour and capital dynamics within supply chains (Baglioni and Campling 2017).

Writing in the Marxist tradition established by Iñigo Carrera, Charnock and Starosta also criticise Smith for failing to understand that "[t]he foundation of the uneven differentiation of capitalism as a totality (...) must therefore be searched in the global, historical transformation of the material forms of the capitalist production process" (2018, 336). From this perspective, the New International Division of Labour (NIDL) that comes to define global capitalism in the second half of the 20th century results from capital's global search "for the most profitable combinations of relative cost and qualities/disciplines resulting from the variegated past histories of the different national fragments of the working class" (Charnock and Starosta 2018, 337). Yet, *contra* Smith (2008, 141), the uneven investment of capital that results from this global circulation *mediates*, rather than *eliminates*, differences in natural conditions of production (Charnock and Starosta 2018, 340): "[w]hat may be called the international division of nature", Coronil (1997, 29) artfully puts it, "provides the material foundation for the international division of labour".

This is most evident in what Coronil calls "nature-exporting societies": peripheral regions which "due to particularly favourable and non-reproducible natural conditions that enhance the productivity of labour, continue to participate in the planetary production of relative surplus value through the provision of cheapened raw materials, staple foods or energy sources to the world market" (Charnock and Starosta 2018, 340). Moore's world ecology, while adequately noting the centrality of the appropriation and export of these "cheap Natures" for the cheapening of labour power and "productivity advance within the commodity zone" (2015, 38), fails to understand the determinations of rent – the particular value form taken by the appropriation of these natural resources (Coronil 1997: 6) – for the accumulation of capital in these territories. As Andueza has recently argued, rent relations constitute the "structural basis" for the reproduction of the particular "form" (class configurations, socio-political developments, cultural and

ideological values, etc.) taken by the capitalist “socio-ecological metabolism” across Latin America (2021, 1107–1112).

In highlighting “rent as *the* key concept toward a global analysis of nature, capital, and the subordination of resource producing region”, Huber is critical of analyses relying on “the resource curse” as an analytical framework, which, “tends to blame Global South states for what are historical products of imperialism and unequal exchange” (2022, 1099–1100). Yet it is unclear how the unequal exchange perspective, the basic tenet of which is that value flows *out* of peripheral countries as a result of the specialisation of their productive structures in the export of primary commodities, can account for their status as rent-bearing commodities, surplus value flowing from the territories that import them into the ones that export them (Iñigo Carrera 2018). Coronil, in fact, argues “unequal exchange theory has paid insufficient attention to the role of natural resources” (1997, 41), calling for “a shift of focus from the unequal flow of value to the unequal structure of international production” (32).

Coronil’s insightful conjectural analysis of capital accumulation in Venezuela, however, is not translated into a satisfactory value-theoretical critique of uneven development (Larsen 2003). Coronil offers a *description* of the general differentiation between “societies in which revenues derive predominantly from the commodification of labour” and “societies in which revenues depend on the commodification of nature,” driven by some indeterminate “underlying principle[s]” of “value creation” and “rent capture”, respectively (1997, 32); rather than a *demonstration* of this unevenness as a necessary expression of the distinct *national forms* of capital accumulation through which the *global unity of relative surplus production* is reproduced (which would entail grasping “rent capture” in the periphery as an internal moment of capital’s global “value creation” production processes). This ultimately requires a critique of unequal exchange theory, instead of simply a “shift” in perspective, in order to show precisely how the unequal structure of international production is reproduced through the global flows of value: the task, Caligaris (2016, 64) specifies, is to demonstrate “how the release of surplus value to the raw-material producing countries on the part of global total social capital transforms into its opposite, that is, into the recovery of this surplus value”.

In its global expansion to these “nature-exporting societies”, capital seeks “to overcome this barrier to its accumulation capacity by reshaping those spaces of valorisation in order to recover part of that surplus value”, their “qualitative specificity” becoming “determined as a source of ground-rent recovery for global capital” (Charnock and Starosta 2018, 340). One of the key mechanisms for this recovery is the protection of the domestic market through taxes and other subsidies as a favourable space for the valorisation of different branches of total social capital operating exclusively in it, which

in turn reproduces the underdevelopment of the productive forces in these national spaces of accumulation, as the higher costs associated with the reduced scale of their operation are compensated by the re-appropriated ground rent (Caligaris 2016).

5. Conclusion

This article has argued that rent is a crucial category to understand the immanent connection between capital's appropriation of nature and its uneven development, building on the work of Juan Iñigo Carrera and other authors associated with his Marxist tradition to critically engage with debates within ecological Marxism and the growing analyses of rent appropriation.

I have argued the stakes of considering the asymmetry of nature–society relations appear more clearly when, instead of framing it as an ontological debate, its determinations for a critique of capitalist political ecology are explored. Hence, far from an abstraction, as argued by the hybridists, the exteriority of nature to capital is a crucial determination of the specific value form that the appropriation of the former takes within the historical unfolding of the latter: rent. Accordingly, on the basis of the definition of rent on a double basis (material and class) it has developed, this article argues that rent must necessarily be absent from hybridist critiques of political ecology, which are ill-positioned to pose the question of how these external natural conditions on which capitalism relies but it cannot profitably reproduce are internalised for the production and accumulation of value: in defining capitalism by its ability to produce its own natural and spatial conditions of production, which are therefore always already *internal to the historical process of capital accumulation*, Smith negates the material basis of rent; in considering the appropriation of Cheap Natures to be always already *internal to value relations*, but external to commodity production and the value form, Moore negates the class basis of rent.

While other critical scholars have argued that rent is “redefining the very meaning of profit” (Gago and Mezzadra 2017, 587), which “takes more and more the shape of ‘rent’, precisely due to its reliance on resources that are not intrinsic to capital’s turnover” (Mezzadra and Neilson 2017, 188), the definition of rent through its double basis this article has developed may be helpful precisely in defining its specificity as a value form vis-à-vis other instances of capitalist appropriation of nature and/or value. This is particularly important as the circulation rent within and across the circuits of capital enables social subjects other than the landowning class to appropriate ground rent (Arboleda and Purcell 2021, 2023; Purcell et al. 2020),

supporting particular forms of capital accumulation that result from, and reproduce, the uneven development of global capitalism.

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