Seeing the "Invisible" and Blurring the Line: Labor, Nature and Social Reproduction

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Abstract:
In this paper, I explore the relationship between reproductive labor and social reproduction. Employing the perspectives of Marxist and Feminist political economy, I pose the following questions. First, what is the relationship between social reproduction, nature and labor under neoliberalism? With the abdication of the state's role in social reproduction, the costs of social reproduction have been increasingly subsidized by unpaid gendered labor, other labor forms in the non-capitalist social strata, as well as what Jason Moore refers to as 'cheap nature'. I explore further, the processes through which cheap nature and different forms of cheap labor, including reproductive labor, influence each other. While questioning the nature-society duality, I pose a second question: has capitalism reached the limits of its exploitation of nature and labor and what are the implications for social reproduction? Accumulation crises have thus far been mitigated by commodifying solutions to the dual exhaustion experienced by nature and reproductive labor within capitalism. I argue that the impacts of the dual exhaustion is displaced more intensively on the working classes, people of color and lower castes, and gendered labor. Nevertheless, the regime of cheap nature has created a crisis of social reproduction for marginalized populations, which is unlikely to abate with the end of the era of cheap nature and labor. s

Keywords: ecological economics, feminist political economy, marxist economics, environmental crises, care work

JEL Codes: B51, B54, Q57

1. Introduction:

Class-based analyses often focus on the relationship between workers and capitalists. It is assumed that real wages are only determined by the consumption bundle and hence all consumption needs of workers and the working classes are satisfied through wages. While it is indeed true that class struggle inherent in the wage-capital relationship is integral to determining higher wages and hence potentially higher consumption levels, feminists and ecological economists have argued for the recognition of the work carried out by invisible household labor and nature respectively in determining the actual consumption bundle. There have also been attempts to understand unpaid work by nature and humans in conjunction with each other.

Yet, nature continues to be viewed as an external condition for the existence of human life and the economy (Swyngedouw 2011), and there is still much to be understood about the relationship between invisible labor and invisible nature. It is crucial to understand invisible nature and labor produced in the context of visible wage labor in the capitalist economy, not merely because the former provide a subsidy to capitalist production, but because they are crucial to the survival of the working classes. In this paper, I pose two questions. What is the relationship between waged labor, unwaged labor and nature in reproducing the working classes under capitalism? What are the limits on social reproduction that are posed and imposed by capitalism's appropriation of nature? This paper moves away from the narrow definition of the working classes as those engaged in wage labor. Instead, following Bhattacharya (2017) and Moore (2015) it employs a definition in which the working classes comprises all those engaged in work required to maintain the working classes, whether that work has been paid for by capital or remains unpaid.

2. Social Reproduction

2.1 The Basis for Capitalist Production: Reproduction of Labor

In the Marxian labor theory of value, all production is assumed to take the form of commodity production. While labor is a commodity, it is special in that its production and reproduction does not necessarily take place in the capitalist mode of production, and it is

produced and reproduced under conditions that are different for other commodities (Dickinson and Russell 1986). Nevertheless, as Marx also recognized the production and reproduction of labor is an indispensable condition for the production and reproduction of capital. Hence a part of capital, i.e., variable capital or the wage fund, is set aside to provide the means of subsistence for labor. In the basic expression of Marxian value which consists of three elements: $v + c + s$, v appears as necessary labor that is assumed to fulfill the daily and generational production and reproduction of labor and its value is expressed as wage. Fixed capital and surplus value are represented by c and s respectively.

But, do wages sufficiently cover the extent of necessary labor required to reproduce labor-power? Wages indeed pay for the consumption of goods and services produced by workers. In a capitalist society with a high degree of proletarianization it may also be the first engagement with the means of subsistence for the working classes. Yet, while "the reproduction of labour is *mediated* through the exchange of the capacity to labour for a wage, the *actual processes of reproduction* remain outside the value-producing economy" (Dickinson and Russell 1986, emphasis in original). The burden of operationalizing and fulfilling the actual processes of reproduction is instead borne by the family-household, which engages in (1) "the purchase and consumption of goods and services, i.e., the disposal of the wage on the necessities of life which appear in the commodity form; (2) the consumption of simple use-values and personal services produced on the basis of domestic labour within the household; and (3) the acquisition and maintenance of a private domestic sphere." (Dickinson and Russell 1986). This means that necessary labor is also expended in the family household even though it is unwaged and invisible in a capitalist economy. In a fully proletarianized economy in which wages are expected to cover all consumption needs of the laboring classes, the household-family still has to expend invisible labor in the utilization of wages in purchasing and consuming wage goods which appear in the commodity form.

Wages constitute the 'first form of proletarian subsistence', but its adequacy in the processes of 'self-managed reproduction' depends on workers' access to employment and decent wages (Dickinson and Russell 1986). In countries of the capitalist core the labor-capital accord and advocacy for the family-wage had ensured wages sufficient for a relatively high standard of consumption at least for some portions of the populations. For populations that did not benefit from the labor-capital accord due to their non-participation in wage labor, or due to inequities of

race and gender inherent in the labor market, the state stepped in to ensure some minimum levels of consumption through social welfare while still not fully dismantling the social structures that perpetuated these inequities.

The emphasis of the global economy on labor flexibility and the consequent lowered access to decent wages, as well as the rollback of the welfare state, however, may have widened the gap between consumption needed to reproduce the working classes and that which can be afforded by explicit participation of the working classes in the capitalist economy through the labor market. This fall in conditions for workers in the capitalist core and the corresponding rollback of the welfare state that are prominent features of neoliberalism has spurred growing literature on the conditions of social reproduction and efforts to resist re-privatizing social reproduction (e.g., Bakker and Gill 2003, Bhattacharya 2017).

But such an account does not provide us with a complete understanding of how the working classes can and have survived and thus provided a labor pool which capital can draw from. So we turn to countries of the global South where wage income has not always formed the basis of household consumption due to incomplete proletarianization and other factors. Barring a few exceptions these countries often experienced the work of welfare regimes rather than welfare states. A significant amount of labor in the working classes in these countries instead is invested in subsistence production which yield simple consumption use-values. Meillassoux (1977, cited in Cockcroft 1983) referred to these as ‘domestic economies’ (also Deere 1976). Labour expended in these activities constitute reproductive work that is often, but not exclusively, the bastion of women’s invisible work. In lieu of a family wage, domestic as well as care economies contribute significantly to household consumption. Expenditure of such invisible labor outside the realm of the labor market lowers the cost of reproducing the labor force and relative surplus population and reduces the share of total surplus generated in the economy that is diverted to social welfare. Thus, the sexual division of labor is integral to capital accumulation and capitalist social relations.

Yet, women’s participation in domestic economies or care work may not be wholly attributed to low economic growth. For instance, Naidu (2016) discusses the rise in the incidence of the maintenance of kitchen gardens among households in the lower income spectrum in India despite conditions of high economic growth and rising average incomes in the country. Further,

feminist economists have provided theoretical arguments and empirical evidence for the existence of unpaid and invisible engagement in both productive and reproductive work, including care labor**.** While some may argue that care labor consitutes reproductive work, it would beehove us to note the arguments in favor of blurring the distinction between productive and reproductive work, and understand under what conditions various forms of women's unpaid labor become integral to capitalist acummulation and the wellbeing of the working classes.

The existence and persistence of domestic and care economies particularly allows capitalists to expect the reproduction of labour despite the absence of a living wage and inadequate social welfare programmes. This constitutes the expansion of the scope of the production of simple use-values within the domestic sphere. Consequently, non-capitalist social formations of household and family labour shoulder a large proportion of the burden of meeting minimum consumption levels essential for daily and generational reproduction, and as Luxemburg (2003) suggests, continues to subsidize capital accumulation.

But in order to ensure that we are not mechanically extending Marx's theory, we need to recognize that the time spent on producing substitutes for market goods and services that may not have market substitues is dialectically related to the intensity of wage labor exploitation, labor market flexibility and the larger economic conditions that increase pressure on reproduction. The division of labor between wage labor and women's labor in production and reproduction within the household is historically dependent on the development of capitalism in specific economies. Yet, what is clear from feminist analyses is that labor performed within the household in social reproduction has a direct relation to the degree of subsidy obtained by capital though its manifestation changes over time, space, class and race. This invisible labor performed within the domestic sphere, whether it is in domestic economies or care labor, constitutes part of the necessary labor required for the reproduction of labor-power as a commodity.

2.2 Sustaining the Working Classes

In addition to providing a subsidy to capital, women's labor is also key to the survival of the working classes differentiated by race, ethnicity and caste. The family-household in its various incarnations has played a fundamental role in satisfying the tangible and intangible

consumption needs of the working classes. While proletarianization indeed implies a separation of workers from the means of production, in reality, not only is the process gradual, but it may be historically contingent on the needs of the capital. Even in contemporary capitalist economies a substantial proportion of goods and services are produced within the domestic sphere using household means of production, but as the next section discusses, freely available and uncommodified nature. Furthermore, the working classes not only undertake the reproduction of the current and future labor-pool, but also work in order to reproduce the relative surplus population. As Marx (1986: 603) noted, even though the reproduction of the laboring and relative surplus population, including pauperism, enters the '*faux frais*' of capitalism, it systematically shifts the burden on to the working classes and the lower middle-class.

From the perspective of the working classes wage-labor constitutes one of many acceptable ways to satisfy the reproductive needs of the household. Contrary to Dickinson and Russell (1986), Quick (2004) argues that wage labor arose as a way to supplement the inability of the working classes to fully provide the consumption and reproductive needs of the household only through household production. But even if wage labor is indeed the primary engagement with which to procure the means of subsistence, the existence of invisible and unwaged productive and reproductive labor which works toward satisfying the consumptive needs of the household allows capitalist employers to pay a wage lower than what would be required to reproduce the labor force and hence provides a subsidy that translates into greater capital accumulation. But how do we perceive the relationship between wage labor, on the one hand, and domestic and care economies, on the other?

The conventional perspective views household production as supplementing wage labor and hence playing a role in reducing the wage that would have been paid if all production were commodified. Whereas from the perspective of the working classes household production and reproduction may be much more central and wage labor may play a supplementary role (Quick 2004). The change in the proportion of wage labor relative to household labor may vary as a result of higher labor productivity that reduces necessary labor required to purchase wage goods as well as a rise in the substitution of commodities for goods and services within the domestic sphere (Quick 2004).

The role of subsistence wages determines the value of labor. However, in the course of valorization, the needs of capital from labor are antagonistic to the needs of labor. According to Marx the needs of labor for consumption operate at three different levels: physiological needs, which represent the use-values required as the means of subsistence, necessary needs (NN) that are governed by social norms and typically "underlies the concept of the value of labour-power in Capital" and social needs (SN) that constitute the "upper limit in needs for use-values in a commodity form" but are finite at any given point (Marx 1977: 276-277, 655 cited in Lebowitz 2004).

Although Lebowitz does not discuss this at length, one can infer that necessary needs encompass physiological needs, social needs encompass necessary needs. He recognizes that necessary needs depend both on physical needs and historically determined social needs and the centrality of class struggle in determining necessary needs. The implicit assumption of Lebowitz's discussion is that the institutions of capitalism, including wage employment and social welfare mechanism, sufficiently provide for the socially determined necessary needs of the working classes. Therefore, he defines the degree of immiseration or the measure of deprivation and poverty as the distance between necessary and social needs, i.e., (SN-NN)/NN (Lebowitz 2004). This describes the situation in many core capitalist countries thus far.

But how does one characterize economies of the global south and increasingly even some core capital countries in which necessary needs and even physiological needs may be unsatisfactorily unfulfilled? It is crucial to note that necessary needs, which include physiological needs, may be socially determined. For instance, access to cellphones or cars may be a precondition to participation in the labor market rather than a luxury. Also, physiological needs itself may change temporally and spatially based on social perception of what is required to subsist as well as due to the quality of access to nature, and nature's ability to provide goods and services under conditions of capitalist exploitation. Are physiological needs necessarily satisfied as the working classes begin to satisfy other needs characterized as necessary? In India, it would seem that the working classes are satisfying other necessary needs at the expense of physiological needs as caloric consumption declines even as total incomes are increasing. Some researchers have explained this phenomenon as a "consumption squeeze" in which non-discretionary spending on fuel and other necessary needs are edging out expenditure on food (Basole and Basu 2015). So we might consider Lebowitz's (2004) definition of deprivation as

relative immiseration, which does not fully capture the absolute immiseration faced by the laboring classes in India and elsewhere.

2.3 Consumption and the Working Classes

The politics of sustaining the working classes then is a politics of consumption in which the household is the primary institution that realizes consumption. In a renewed emphasis on social reproduction, Bhhatacharya (2017b) contends that it is essential that we envision a circuit of social reproduction. However, the emphasis in her formulation is on money such that society starts with some amount of money M and in the process of reproducing labor finally ends up with the same level of money M. If we were to describe the main goal of work for the laboring classes in a circuit that describes the production and reproduction of labor, we would have to recognize the primacy of consumption rather than money. Modifying Bhhatacharya's (2017b) formulation I offer the following:

$$C_g - P_l - L_p - V - C$$

Where C_g denotes goods and services consumed in a process of production P_l to produce a unique commodity, labor power (L_p), which is sold to capitalists for wages V and then used to purchase a set of commodities C. This describes the circuit only as it operates within the capitalist production system. But this is not a closed loop circuit. Instead, it requires a constant infusion of invisible labor and nature in order to make it functional for the working classes. Cg includes not only consumption of commodities produced in the market, but all goods and services afforded by invisible labor and nature and which are unacknowledged in the workplace as well as the economic system. The wage fund, V, then does not fully represent the necessary needs of the working classes and hence C is likely to be lower than Cg which tracks socially determined necessary needs (NN).

With increased commodification of previously invisible nature and household labor, the magnitude of C may rise and therefore decrease the divergence between actual consumption Cg and consumption afforded by wages, V, but this may also require a higher V in the process.

Increased commodification, as is discussed in the next section, while it offers new avenues for surplus generation, also represents a contradiction in that it can raise the necessary labor required within capitalist production in order to sustain the labor pool.

The process of commodification and higher wages to afford consumption for reproduction may not necessarily signify a higher standard of living if the only change constitutes a substitution of commodities for domestic production. And in the case of India, higher wages and incomes may have contributed to higher ostensible standard of living but lower ability of households to satisfy basic food requirements. In other words, wages are insufficient to keep up with socially determined necessary needs and the simultaneous commodification of nature and labor.

Even under periods of capitalism where wages are high such that even if they are, as Dickinson and Russell (1986) suggest, the 'first form of proletarian subsistence', there is still a high reliance on invisible household to actually convert wages into consumption goods and services, and on invisible nature to sustain the working classes. The social relations that make the consequent subsidy to the capitalist production process possible thus are an integral part of capitalist social relations. While all energy and effort expended outside the workplace from the perspective of capitalist production may be viewed as reproduction, from the perspective of the working classes the distinction between work undertaken for production vis-à-vis work undertaken for reproduction is irrelevant.

Work determines human existence in many ways (Ghosh 2009). But, work does not merely constitute energy expended in the labor market and other capitalist institutions. The working classes may allocate labor time between wage, domestic and care economies with the goal of surviving and flourishing within the constraints imposed by the capitalist economy. The value of labor-power then is intertwined with the amount of unwaged labor required to satisfy physiological, necessary and social needs. Workplace struggles over wages in this perspective may not merely be viewed as a struggle over surplus value, rather as a struggle over the satisfaction of socially determined necessary needs and a desire to acquire other social needs (also Mohandesi and Tietelman 2017). As Dickinson and Russell argue the family household not only appears as the primary institution of individual consumption, but deceivingly "as an island of self-determination in an otherwise very large ocean of externally-manifested hierarchical

power and discipline relations." This role played by the family household may therefore, at least in part, explain the varying degree of importance in different capitalist societies even if the specific form of the heteronormative family has undergone significant changes.

3. Waged Work, Unwaged Work and Nature

Like labor expended in the domestic sphere, nature is essential for surplus generation by creating the conditions needed for capitalist exploitation of labor power. In the course of primary accumulation and expanded reproduction of capital, production and consumption processes extract resources from and expel waste into nature, thus benefiting from what ecological economists call the source and sink functions of nature respectively. The capitalist mode of production is not unique in its tendency to control nature, however, this proclivity is intensified under the systemic requirement for continuous accumulation and expansion (Naidu and Manolakos 2009). But nature also constitutes the chief means of reproduction for the working classes and hence in this section we explore the interrelationship between nature, the working classes and capitalism.

The role of nature in capitalist production is rendered invisible, nevertheless, nature plays a crucial role in creating value. In elucidating the role of nature in capitalist production and hence making it visible, Moore (2015) argues for an understanding of nature and capitalism as co-produced and act on each other and refers to this as 'double internality'. In other words, he urges an understanding of history in which capitalism compels nature to "work harder and harder – for free, or at very low cost." (Moore 2015: 13). This is in contrast to the stance adopted by ecological economists in which nature is acted upon by the economic sphere or more specifically by capitalism. Analyses then abound on the impact of the economy on nature and the environment and solutions to internalize costs so as to minimize or manage environmental destruction. Moore (2015:13), on the other hand, suggests that "[i]nverting the problem of degradation shifts our initial premise on to working through nature". He argues that the current conjuncture has made it very difficult for nature to work harder for capitalism and thus raises questions about the limits of putting nature work for the future of capital accumulation. Thus, despite his approach of "double internality" he ends up with a discussion of limits to capital similar to ecological economics. This issue will be taken up further below.

Moore's 'double internality' approach, nevertheless, allows a rethinking of value as that which "operates through a dialectic of exploitation and appropriation that illuminates capitalism's peculiar relation with, and within, nature" (Moore 2015: 13). Moore deviates from Marx and uses the notion of appropriation not to describe exploitation of labor, but rather to refer to refer to the "extra-economic processes" that induct unpaid work into the circuit of capital. This is consistent with Luxemburg's (2003) discussions on the importance of the non-capitalist strata in securing the conditions necessary to capitalist accumulation. She illustrates the 'primitive' conditions in the non-capitalist realm of production that facilitate a far more ruthless path of accumulation than could be tolerated under purely capitalist conditions. This non-capitalist stratum is dominated by forms of labor that are unwaged. The recognition of its articulation to capitalist accumulation compels an acknowledgement of the forms of labor that enables its reproduction outside of the wage labor relation as critical to capitalism. Mies (1998) classifies this stratum into women, nature, and colonies to highlight both unwaged labor but also unrecognized nature and all that it provides to enable capitalist accumulation. Moore (2015: 14) further elucidates the role of invisible and unwaged labor and energy of labor and nature in expanding reproduction of abstract social labor which produce value as "cheap" labor and "may be capitalized – as in commodified labor-power via the cash nexus – or it may be appropriated via non-economic means…or some forms of social reproduction". Cheap labor, however, is only one component of the appropriation of what he refers to as "Four Cheaps" of power, food, energy, and raw materials – all of which realize higher labor productivity and a rising rate of exploitation. Or as Moore notes "[v]alue does not work unless most work is not valued" (Moore 2017: 54).

This interrelationship between waged labor, unwaged labor and nature could prove to be beneficial to capitalist production so that workers are not wholly reliant on wage labor, but not sufficiently independent from wage employment (Perelman 2007). Such a sentiment is reflected in the following proposal of a 1800 issue of the Commercial and Agricultural Magazine:

> . . . a quarter acre of garden-ground will go a great way toward rendering the peasant independent of any assistance. However, in this beneficent intention moderation must be observed, or we may chance to transform the labourer into a petty farmer; from the most beneficial to the most useless of industry. When a labourer becomes possessed of more land than he and his family can cultivate in the evenings . . . the farmer can no longer depend on him for

constant work, and the hay-making and harvest . . . must suffer to a degree which . . . would sometimes prove a national inconvenience. (cited in Perelman 2007).

Access to land and the ecological bounty it has to offer in terms of the means of production and reproduction, in addition to labor expended in household production, care and petty commodity production, provides agricultural employers a subsidy in the form of a cheaper labor force (Perelman 2007; Quick 2004). Many livelihoods analysis scholars positively refer to the condition in which the laboring classes maintain multiple income sources as livelihood diversification. Nevertheless, such diversification is likely closely associated with economic insecurity. Access to land allows the workers to spend their "free" time and investment in providing for themselves outside of the market, thereby leaving workers to produce a higher surplus value in wage labor (Moyo and Yeros, 2005). Further, the existence of land as a fallback, however inadequate, also means that the laboring classes can always be pushed back to the land when no longer needed (Breman, 2000: 241). While the incidence of petty commodity production and domestic economies has declined in core capitalist countries over the last two centuries, they still constitute a high proportion of the total value of imputed income for low-income households in the Global South. In India, even after nearly three decades of economic liberalization, the degree of semi-proletarianization is low and the incidence of petty commodity production in agricultural and non-agricultural sectors is increasing (Harris-White 2012).

The predication of capital accumulation on Cheap Natures, however, has the potential to impinge on the survival and flourishing of the working classes. Capital operates in blurring the boundaries of the commodified and uncommodified. Even as it depends on the unwaged human and extra-human labor and energy to subsidize reproduction of the labor-force, there is also an incentive to commodify them in the process of capital accumulation. This has been variously referred to as appropriation (Moore 2017), accumulation by dispossession (Harvey 2005), ongoing accumulation (Patnaik, YEAR). This commodification allows capital to price the means of reproduction. Under conditions of higher real wages, market-bought goods and services can substitute for that which was previously unpaid, unwaged and freely available. This process, on the one hand, allows some fractions of capitalists to benefit from extending the commodity frontier and the potential for surplus generation. On the other hand, breaching the commodity frontier undermines the ability to control the value of labor power. Commodification makes it

increasingly difficult to pass on the costs to unwaged work performed by human and extra-human natures. Instead, the costs of sustaining the labor-pool have to be met by wages.

But, how does appropriation either by commodifying unpaid human or extra-human work affect the survival of the working classes? To answer this question, I revert back to the discussion of needs. Physiological needs are those basic needs required for the biological reproduction of the working classes. At low levels of economic growth and relatively low standards of living, it is possible that physiological needs are relatively coincident with necessary needs. Once economic progress translates into higher standards of living, however, there may be a divergence between physiological and necessary needs. Further, if higher economic progress leads to increasing levels of wealth and income inequality, we might also observe a significant divergence between necessary and social needs.

The value of labor-power is determined by the socially necessary labor-time that established the commodities necessary for the reproduction of the workers. However, only part of this socially necessary labor-time is capitalized and hence waged, whereas the other part is appropriated work and hence is unwaged and unpaid (Moore 2017). Elucidating the nature of unpaid human labor, which is primarily undertaken to ensure the survival of members of the households, but incidentally also subsidizes capitalist production, we might think of it as fulfilling the realm of necessary needs. Such labor might manifest either in the form of producing goods that are essential for the daily reproduction of individuals in the working classes and may be characterized as subsistence production, or in the form of care labor that is essential both for the daily and long-term survival of members of the working classes, and may be combined with wage work depending on prevailing and historical conditions. In other words, necessary needs are met as a result of shifting configurations of paid and unpaid work (Smith and Wallerstein 1992). While Smith and Wallerstein suggest this to be true in semi-proletarian households, this could be just as true in proletarian households. For instance, we observe significant differences in different capitalist countries in North America and Europe in the amount of care labor provided by household labor in the absence of socialized care provided by the state. Similarly, Moore (2015) provides examples of the maintenance of vegetable gardens among proletarian households in the US in the early part of the 20th century, presumably to supplement household consumption. The extent to which reproduction of workers and the working classes is dependent

on unwaged and unpaid work is co-determined by a host of factors, including the role of the state, the availability of nature and the quality of nature available etc.

Equitable access to nature and the quality of nature would affect households of all classes as well as capitalist production. Ecological economists have offered the terms full and empty world economies to describe the limits posed to human activity by nature. If we were to move away from the nature-society duality, we would recognize that the limits to nature and capitalism are co-produced and that full-world and empty world economies are contingent on the historical development of capitalist exploitation of nature and labor and the social relations they have engendered.

But as Burkett (2009) argues limits do not necessarily mean an end to capitalist accumulation, and in fact can become a source for capitalist expansion as is evident from the rise of green market environmentalism. The issue that is pertinent for the purpose of this paper is the impact of such degradation, commodification and privatization on social reproduction and the labor expended to sustain human life. If the capitalist sector has seized on the opportunity to offer market solutions to the negative impacts of capitalist production on nature, the amount of what ecological economists describe as defensive expenditures such as purchase of water and air filters or the purchase of bottled water would increase in order to mitigate the negative consequences of environmental degradation. This increases the monetary costs of sustaining the working classes through the increase in necessary goods required for consumption. This is in addition to the market solutions to global environmental problems such as climate change, which are likely to rake in enough profits under the right conditions. Moore (2015) suggests that frontiers once appropriated and commodified are no longer frontiers. While this may very well be true, the commodification of what was previously frontiers allows for expanded reproduction of capital thus opening yet another source of continuous surplus generation.

But in this paper I am not interested merely on the interrelationship between labor and capital or capital and nature, rather I am interested in the survival and sustenance of the working classes, including those who do not constitute the active labor force. The inability of nature to work harder for capitalism wrought by decreasing marginal returns of production not only impinges on capitalist production as Moore (2015) suggests, it also affects the ability of the working classes to engage in subsistence production and self-provisioning either due to the

appropriation of either the source or the sink functions performed by nature. This appropriation could manifest in the following ways. a) Commodification of nature could force working class households to purchase from the market what was previously freely available. B) Appropriation of nature for could be for purposes that yield a higher return to capital, for instance, dispossession of populations for mining of hydroelectric projects. This could result in lower or little access to means of production and reproduction thus lowering the ability of working class households to engage in unpaid labor to increase household consumption. C) Appropriation could also manifest in the form of competing uses of nature, particularly in terms of the services that humans and society depend on such that higher production activities result in lower air quality or reduced capacity of nature to produce products obtained from foraging. This could mean higher amount of labor expended in the production of direct use values or forced shift to market substitutes. D) Increased expenditure of care labor as a result of the impact of environmental degradation on human health. E) Some combination of the above. While appropriation of nature impacts working classes in all economies, it particularly hits hard in the economies in which the actual consumption financed through wages may be lower than physiological needs and invisible human labor performed within the household depends on invisible work performed by nature. Incidentally or deliberately, and either could be debatably true, appropriation of nature by capital constitutes another layer of control over the laboring classes. Separation of workers from the means of production subjects workers to the mercy of the capitalists. Appropriation of nature completes this process and separates workers both from the means of production as well as reproduction.

4. Discussion

This paper discusses the significance of the relationship between waged work, invisible labor and invisible nature under contemporary capitalism and offers the following. First, work is a condition of the existence of the laboring classes. In order to ensure that necessary needs of the household are met, work has to be allocated between waged labor and unwaged invisible labor. Irrespective of the centrality of one form of labor over the other, the total time allocated in work is correlated with the conditions of capitalism, the conditions of nature and the conditions of social relations of production.

Second, even as commodity frontiers expand, there is no incentive to acknowledge the role of the domestic sphere in either capitalist production or in the wellbeing of the laboring classes. There is also no incentive to visibilize nature on which invisible labor relies on significantly. This lack of visibility of nature and domestic labor and its interrelationship with wage labor means that changes in nature wrought by capitalist incursions make it harder for the survival of the laboring classes. Further, this relationship between invisible labor and invisible nature is classed. Retaining their invisibility benefits capital in terms of the subsidy offered while at the same time allowing for its commodification and thus expanding the frontiers of surplus generation.

Third, the growing inability of capitalist production processes to absorb the current pool of labor nor adequately provide for the reproduction of the working class households at the same time that expanding commodity frontiers related to nature are maturing in technological possibilities means that access of the working classes to means of reproduction may be declining. On the other hand, wage labor required to replace that which has been freely acquired from nature may be increasing at a time in which wage employment may be unable to fully satisfy the necessary needs of the working classes. This may lead to a situation of total exhaustion (Moore 2015), or absolute immiseration.

Despite the relative silence on matters on reproduction Marx recognized that what is necessary for production/reproduction is socially rather than biologically determined. Improvements in standard of living have been a result of class struggle, which is integral to the social relations of capitalist production. But class struggle does not preclude the historically determined conditions of the sexual division of labor and human-nature relations. Therefore, both household production/reproduction and specific environmental conditions must be included in an analysis of the state of the working classes under capitalism.

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