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# Women, Nature & Capital in the Industrial Revolution

JOHN BELLAMY FOSTER & BRETT CLARK

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# Women, Nature, and Capital in the Industrial Revolution

JOHN BELLAMY FOSTER AND BRETT CLARK

The remarkable rise in recent years of “social reproduction theory” within the Marxist and revolutionary feminist traditions, identified with the studies of such figures as Johanna Brenner, Heather Brown, Paresh Chattopadhyay, Silvia Federici, Susan Ferguson, Leopoldina Fortunati, Nancy Fraser, Frigga Haug, David McNally, Maria Mies, Ariel Salleh, Lise Vogel, and Judith Whitehead – to name just a few – has significantly altered how we look at Karl Marx’s (and Frederick Engels’s) treatment of women and work in nineteenth-century Britain.<sup>1</sup> Three conclusions with respect to Marx’s analysis are now so well established by contemporary scholarship that they can be regarded as definitive facts: (1) Marx made an extensive, detailed examination of the exploitation of women as wage slaves within capitalist industry, in ways that were crucial to his overall critique of capital; (2) his assessment of women’s working conditions was seriously deficient with regard to housework or *reproductive labor*;<sup>2</sup> and (3) central to Marx’s (and Engels’s) outlook in the mid-nineteenth century was the severe crisis and threatened “dissolution” of the working-class family – to which the capitalist state in the late nineteenth century was compelled to respond with an ideology of protection, forcing women in large part back into the home.<sup>3</sup>

Although all the above points are now conclusively established, a larger synthesis integrating these results with each other and with what decades of intensive historical research have taught us about women and work in the Industrial Revolution is still lacking. By examining the historical specificity of the condition of women in England in the early to mid-nineteenth century, we can better understand the assumptions regarding gender, family, and work influencing the writing of Engels’s *The Condition of the Working Class in England* and Marx’s *Capital*.<sup>4</sup> This synthesis would throw light on such difficult problems as: (1) Why did Marx not extend his critique to reproductive work within the household, which at times he seemed on the threshold of doing?; and (2) How, if we follow Marx’s argument that capital denies (commodity) value to housework and subsistence activity, is it possible to speak of the *expropriation* of reproductive labor?<sup>5</sup>

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Furthermore, since both nature and women's reproductive work are treated by classical political economy, and by Marx in his critique of capital, as "a free gift...to capital," a historical and theoretical synthesis of the kind that we propose here opens a wider conception of the robbing of both women's reproductive work and nature – as realms external to the value circuit of capital, in its ideal conception.<sup>6</sup> This analysis enables us to understand more fully the connections between social reproduction feminism and socioecological reproduction theory, associated in particular with Marx's theory of metabolic rift, in which natural cycles and flows are disrupted or even ruptured and species are depleted.

Ultimately, the crucial issue today is how capital as a system engages in the creative destruction of the entirety of the social and ecological conditions sustaining human existence – including the family, the constitution of human beings (identity, the body), culture, the economy, and the environment – and how this makes the revolutionary expansion of human freedom through the reconstitution of society at large an absolute necessity for present and future generations.

### **The 'Woman Question' in Marx's Day**

As Federici points out, "the 'woman's question' of the time" in which Marx was writing had to do primarily with "the conditions of women's factory work in the industrial revolution."<sup>7</sup> In contrast to popular conceptions of a male-dominated factory workforce, the Industrial Revolution in England was initially founded on the labor of women and children. Symbolic of this, the spinning jenny was originally invented for use by a young girl, with its horizontal wheel placed in a way that made it extremely difficult for an adult worker to use for any length of time.<sup>8</sup> From the late eighteenth century through the mid-nineteenth century, nearly all working-class women – daughters, mothers, wives, and widows – were compelled to enter the paid labor force. As historian Maxine Berg observes, "When we talk of industry in the eighteenth and early nineteenth centuries, we are talking of a largely female workforce." Women workers were so dominant in the cotton, wool, silk, flax, lace, and other textile sectors at the core of industry, that up until the mid-nineteenth century they constituted the main source of surplus value for the emerging industrial capitalist class. "It was the female, and not the male, workforce," Berg notes, "which counted in the most important high productivity industry of the period – textiles." Many of these women workers were concentrated in proto-industrial occupations, where the female labor force outnumbered the male by four to one or even eight to one.<sup>9</sup>

In the early nineteenth century, more than 60 percent of married working-class women had a recorded occupation or positive earnings, primarily in industry or domestic service. These numbers were extremely conservative with respect to female labor participation in the workplace since enumerators frequently under-reported the occupational designations of married women, while the employment of young girls and women in such proto-industrial sectors as “modern domestic industry,” occurring in homes of employers or so-called “mistresses’ houses,” were quite clearly seriously undercounted. Additionally, unmarried adult working-class women were not able to live without employment.<sup>10</sup> As Joyce Burnette has shown, based on the 1833 factory report of Dr. James Mitchell, who collected data from over two hundred factories across England, 56.8 percent of all factory workers on average in the industries sampled (cotton, wool, flax, silk, lace, potteries, dyehouse, and paper) were female. Women also dominated domestic service in the homes of the middle class and the wealthy by a very wide margin.<sup>11</sup> Indeed, the available data suggests that working-class women in the late eighteenth and early nineteenth century were employed on as high or on an even higher level than working-class men – once rural industries such as agriculture and mining and the urban trades (constituting a relatively privileged sector of the labor force still engaged in traditional crafts) and general commerce were excluded.<sup>12</sup> Given that female workers received much lower wages (one-third to one-half of that of males), they were hired preferentially in the new industries as factory operatives and in proto-industrial sectors.<sup>13</sup> In fact, for a while women’s wages were so low that it was cheaper to pay them to pull barges along canals than to have horses do it, given the costs of maintaining the latter.<sup>14</sup>

The reality that both sexes in proletarian families were equally part of the labor force was a mere given in Marx’s day, and was not normally considered something that needed to be established. When the subject came up, it mainly had to do with contemporary demands to force women workers out of industry. Thus John Stuart Mill, writing in the *Examiner* in 1832, argued that “we should wish to see a law established, *interdicting altogether* the employment of children under fourteen, and *females of any age*, in manufactories.” Marx and Engels always strongly opposed restrictions on employment for adult women, an idea nonetheless supported by parts of the male workforce.<sup>15</sup>

But while the general reality of women’s employment in industry was not in doubt in Marx’s day, he did, with his usual thoroughness, carefully examine the available statistics on the gender division within industry. Relying on the 1861 census for England and Wales, he factored out

the upper classes; urban workers in skilled trades; commercial workers, “unproductive” workers generally (using scare quotes to indicate that this was by capitalist criteria); “groups, such as members of the government, priests, lawyers, soldiers, etc.”; those too old or young to work; and the pauperized part of the population.<sup>16</sup> He was thus able to make rough estimates of the gendered division of the working class among those employed as productive workers in core industries or as domestic servants – both of which were central to proletarianization. Looking at textiles, the largest sector by far within manufacturing, he showed that only 27.6 percent of the workers were adult males. (Although not directly indicated by Marx, the 1861 census revealed that female workers greatly predominated over male workers in the textile industry *at every age, including children.*)<sup>17</sup> Likewise, among domestic servants only 11.4 percent were adult males. In contrast, in metal works and metals manufacturing, a considerably smaller sector, women were only about 8 percent of the total. Marx’s figures thus suggested that overall the industrial (manufacturing) workforce in the urban centers was predominantly female. Moreover, this was also true of domestic servants (considered unproductive workers in capitalist accounting since paid out of surplus value), who clearly constituted part of the proletarianized workforce. In emphasizing the severe oppression of young women in domestic service, Marx angrily observed that they were referred to “in common parlance” as “little slaveys” – indicating that this was indeed close to the truth.<sup>18</sup>

Although the Victorian censuses have been criticized in contemporary scholarship for underestimating the overall level of female employment and exaggerating the total number of domestic servants, none of this seriously undercuts Marx’s main conclusions, which point to: (1) the greater number of working-class women than working-class men employed in urban industry, excluding the trades and commerce; (2) the much higher employment of women than men in textiles, the most important industry (and leading source of surplus value) in the Industrial Revolution; (3) the huge proportion of the nation’s labor force dedicated to domestic service in the houses of the well-to-do, where women servants enormously outnumbered men; and (4) the slave-like conditions imposed on these female servants, who typically worked eighteen-hour days for almost no pay, under the most degrading conditions.<sup>19</sup>

As recent literature has confirmed, Marx devoted substantial portions of *Capital* to describing the brutal working conditions of women in industry, whom he saw as far more heavily exploited than men. Women workers predominated in modern domestic industry, often working in “mistresses’ houses,” which Marx associated with what he called the

“stagnant” portion of the industrial reserve army, because of the precariousness of the labor.<sup>20</sup> Modern domestic industry (like “modern manufacturing” or modern handicraft) was largely unregulated, even after the passage of the Factory Acts and the Ten-Hour-Day Bill. Pointing to “the horrors” in this sector of production, Marx highlighted the death of the twenty-year-old Mary Anne Walkley, who had been employed in one of the better seamstress establishments or mistresses’ houses. She had been forced to work continuously for 26.5 hours in a room packed with thirty other young women, making dresses for a ball in honor of the new Princess of Wales. They had only one-third of the necessary air in cubic feet per person – not unusual at the time. Looking at data on over 600 female patients treated in Nottingham General Dispensary, all of them lacemakers and most between the ages of seventeen and twenty-four, Marx found that the numbers of those contracting tuberculosis had increased phenomenally in less than a decade, from one in forty-five workers in 1852 to one in eight in 1861 – a measure of rapidly deteriorating working conditions and the severe compromising of workers’ health.<sup>21</sup>

Given that male workers (often husbands and fathers) were generally unable to earn wages sufficient to meet the subsistence needs of the family (including the social reproduction of labor power), and that adult women workers were often paid only a third of male wages, capitalism in the mid-nineteenth century, Marx emphasized, was increasingly propelling all members of the proletarian household into the workforce, simply to keep a single family afloat: “In place of the man who has been dismissed by the machine the factory may employ, perhaps, three children and one woman!... [Hence] four times as many workers’ lives are used up as there were previously, in order to obtain the livelihood of one working family.”<sup>22</sup> The consequence was the abolition of disposable time (even time for consumption and for sleeping) on the part of *all* the members of the family, who frequently worked six or even seven days a week, often for twelve or more hours a day. These conditions contributed to the almost complete disintegration of the working-class family.

This situation was especially evident in the condition of women, who, then as now, were considered the main caretakers in the household. According to one contemporary account, reported by a factory inspector in 1844 as a typical case, a married factory operative had

Half an hour to dress suckle her infant and carry it out to nurse; one hour for household duties before leaving home; half an hour for actually travelling to the mill; twelve hours’ actual labor; one and a half hours for meals; half an hour for returning home at night; one and a half hours for household duties and preparing for bed, leaving six and a half hours for

recreation, seeing and visiting friends and sleep; and in winter, when it is dark, half an hour extra time on the road to the mill and half an hour extra on the road home from the mill.<sup>23</sup>

In the mid-nineteenth century, as Margaret Hewitt observes in *Wives and Mothers in Victorian Industry*, “the married textile operative was absent from her home before six o’clock in the morning till after six o’clock at night – sometimes later if she was working for an unscrupulous employer.” The effect on children was horrendous. “‘What do they do,’ asked Charles Dickens of the Rector of a parish in a large English town, ‘what do they do with the infants of the mothers who work in the mills?’ ‘Oh,’ replied the clergyman, ‘they bring them to me, and I take care of them in the churchyard [cemetery]!’”<sup>24</sup>

In some localities, the mortality rate among infants under age two whose mothers were factory operatives was reported to be 50 percent or higher.<sup>25</sup> The major industrial districts, such as Manchester, Stockport, and Bradford, as Marx explained based on the *Sixth Report of Public Health* (1864), had mortality rates for children alive and less than one year of age of over 25 percent on average within one year. “The high death rates...apart from local causes” were “principally due to the employment of mothers away from their homes, and to the neglect and maltreatment arising from their absence,” including frequent poisoning of the infants with opiates.<sup>26</sup> In Lancashire in the mid-1850s, the portion of all married women operatives with children less than one year old averaged 21 percent. According to the 1851 census, 50 percent of women in their prime (many of whom were also mothers) had no husband to support them, and hence were part of the active labor force. As a result, even in the second half of the nineteenth century, when conditions improved somewhat, overall infant mortality in industrial districts ranged from around 19 to 25 percent. Wet-nursing of infants was unaffordable for the working class, and cow’s milk was prohibitively costly and frequently contaminated. Instead infants in the working class were most often spoonfed a pap made with bread soaked in water and sometimes sweetened with sugar. As Hewitt writes (and Marx had noted), “To soothe the distressed cries of the infants,” who were undernourished and suffering, often seriously, from an inappropriate diet, “nurses were in the habit of administering gin and peppermint and certain other nostrums, such as Godfrey’s Cordial, Atkinson’s Royal Infants’ Preservative, and Mrs. Wilkinson’s Soothing Syrup,” along with opium (or laudanum, or morphine), which was “an ingredient of all.”<sup>27</sup>

The poor care of infants reflected the deficient diet and outright poverty of the urban working class in general, as well as the almost complete elimination of time for necessary tasks of recuperation and social

reproduction within the working-class family. The working-class diet consisted mainly of “tea and bread, bread and tea,” sometimes supplemented by potatoes and various condiments. Milk and meat of any kind were rarities, as were most vegetables. Adult workers ate about ten pounds of bread a week on average, all of it purchased from bakers, and all of it seriously adulterated.<sup>28</sup> Domestic cooking facilities and implements were limited, and fuel was expensive. Water, often extremely polluted, had to be carried into the household, generally for long distances, and most frequently by women. There were no sanitary facilities. Sickness was widespread and epidemics frequent. The workers in industrial centers lived in overcrowded rented rooms and hovels, consisting usually of a single room, with only the barest of furniture, a bed, a table, and several chairs.<sup>29</sup> Most significant was the expropriation of nearly all the time necessary for the social reproduction of the proletarian family even at a bare level of existence—a condition that could scarcely continue. “The women who worked 14-hour days in the Midland factories during the 1830s,” Caroline Davidson grimly writes in *A Woman’s Work Is Never Done*, “could survive without doing much housework at all. They and their families existed off wheaten bread and potatoes, washed down with tea or coffee, and lived, for the most part, in filthy houses.”<sup>30</sup>

Working-class families, Marx and Engels observed, were in a severe state of crisis and “dissolution,” with the old patriarchal family structure collapsing amid the breakdown of the home as the center of production, followed by the massive entry of women into the labor force. The hope among early English radicals was that a new more egalitarian family structure based on equality between the sexes would emerge within the working-class struggle, a political aspiration that had appeared in the Owenite movement, but had largely subsided in the Chartist era.<sup>31</sup> In the meantime, however, it was clear that the working-class family needed protection, given the murderous conditions with which it was then confronted. While eventually some protection was provided on bourgeois terms by the factory legislation and the Ten-Hour-Day Bill, the larger answer for Marx remained worker’s self-organization and equality in the workplace, constituting the seeds of the new society. As Marx wrote in 1880, “The emancipation of the producing class involves all human beings without distinction of sex and race.”<sup>32</sup>

One reason for Marx’s silence on the subject of women’s reproductive work in the household, Federici suggests, was the “near absence” of such reproductive work “in proletarian homes at the time of Marx’s writing, given that the entire family was employed in the factories from sun-up to sun-down.” She adds: “Marx described the condition of the industrial



proletariat of his time as he saw it, and women's domestic labor was hardly part of it.... Although from the first phase of capitalist development, and especially in the mercantilist period, reproductive work was formally subsumed to capitalist accumulation, it was only in the late nineteenth century that domestic work emerged as the key engine for the reproduction of the industrial workforce."<sup>33</sup> Commenting on the shutting down of U.S. cotton mills during the Civil War, Marx observed that this at least had some positive effect for the women, who now "had sufficient leisure [that is, time away from the factory] to give their infants the breast, instead of poisoning them with 'Godfrey's Cordial' (an opiate)."<sup>34</sup> For Marx, "the collective working group," which

is composed of individuals of both sexes and all ages must under the appropriate conditions turn into a source of humane development, although in its spontaneously developed, brutal, capitalist form, the system works in the opposite direction, and becomes a pestiferous source of corruption and slavery, since here the worker exists for the process of production, and not the process of production for the worker.<sup>35</sup>

Most of these conditions were to abate in later years. The late eighteenth to mid-nineteenth century proved to be a "major discontinuity" with respect to women's work role, distinct both from earlier household-based production and the later "separate spheres" regime of the Victorian era. The share of so-called "occupied women" fell by an average of 0.7 percent a year in the second half of the nineteenth century. "From levels recorded as high as the 67.5 per cent of married women working in Cardington in the 1780s, participation rates of married women in the whole country fell to 10 per cent in 1911."<sup>36</sup> Much of this change was due to factory legislation, the ten-hour day, rising wages, and the now official bourgeois ideology of the male breadwinner and the female housewife. The last served to strictly define gender roles in the newly emerging era of monopoly capitalism, in which relative surplus value, as opposed to absolute surplus value, was dominant.<sup>37</sup> Having run up against "insuperable natural obstacles" in its annihilation of time for the entire working-class family, capital subsequently introduced a new regime of a family wage, whereby an adult man alone could theoretically earn enough to support his whole household. This wage was kept down, however, by women's increased social reproductive work in the household, which served as a free gift to capital. Moreover, the family wage was only ever applicable to male "breadwinners" in a privileged sector of the working class.<sup>38</sup>

Already by 1884, in *The Origin of the Family, Private Property, and the State*, Engels argued that women's emancipation required a new push to free women from confinement to the household, and the revolutionary

“re-introduction” of women into the labor force, to break down the new bourgeois patriarchy and to establish the conditions for a more equal family:

Today, in the great majority of cases, the man has to be the earner, the breadwinner of the family...and this gives him a dominating position which requires no special legal privileges. In the family, he is the bourgeois; the wife represents the proletariat.... The peculiar character of man’s domination over woman in the modern family, and the necessity, as well as the manner, of establishing real social equality between the two, will be brought out into full relief only when both are completely equal before the law. It will then become evident that *the first premise for the emancipation of women is the re-introduction of the entire female sex into public industry*; and that this again demands that the quality possessed by the individual family of being the economic unit of society be abolished [italics added].<sup>39</sup>

### Reproductive Work, Nature, and Valorization

However necessary it is to acknowledge Marx’s understanding of the crisis and dissolution of the working-class family of his day – associated with the full participation of family members (including married women and extending to children) in the labor force at the time – this cannot entirely account for the absence in his work of a detailed examination of social reproduction in the household. A deeper explanation lies in the very structure of his critique of capitalist political economy. Here it is crucial to understand that Marx’s *Capital* was a *critique*, meant to uncover the inner logic and contradictions of the capitalist mode of production. The categories used, such as those associated with the labor theory of value – which Marx adapted and developed from classical political economy, and which he believed allowed for the scientific examination of capital as a system – were not, for him, universal, but rather historically specific categories to be transcended along with the revolutionary transcendence of the capital system itself. Moreover, Marx, as is well known, structured his critique of bourgeois political economy in the form of successive approximations, moving from the more abstract analysis in volume one of *Capital* to increasingly concrete levels of analysis in the unfinished second and third volumes.<sup>40</sup> *Capital* itself was originally conceived as simply the first of what would have been five different books, including volumes on landed property, wage labor, the state, international trade, and the world market and crisis.

The incomplete nature of Marx’s project, given that even *Capital* was unfinished, has constituted a major problem for later Marxian theorists attempting to build on his dialectical social science. As Michael Lebowitz has brilliantly argued, the unwritten book on wage labor would necessarily have been devoted to what Marx called “the political economy of

labor,” as opposed to the critique of “the political economy of property.”<sup>41</sup> Logically, this would have required the incorporation of a detailed analysis of the social reproduction of labor power—of a kind which Marx seemed at times to already be on the threshold of providing—but which lay analytically beyond the immediate critique of capital.<sup>42</sup>

At the root of this analysis was Marx’s understanding of the capital relation itself, as depicted in classical bourgeois political economy. The inner logic of capital as a system of valorization and accumulation, as he explained in the *Grundrisse* of 1857–58, runs roughshod over all other inherited social and natural relations and conditions of production, which remain external to its own mode or production.<sup>43</sup> The development of the state is itself in part a product of the need to manage the “alienated mediations,” not only internal to the class system, but also between capital and the larger realm of existence, of which it is a part.<sup>44</sup> Capital, in its process of unlimited expansion, is presented with “insuperable natural obstacles,” including those imposed by the limits of the human body itself, resulting in “the sheer robbery of every normal condition needed for working and living.”<sup>45</sup> Constantly seeking to overcome but never able to transcend such natural obstacles, the system is periodically confronted with crises of accumulation, which, while seemingly resolved at each step of its progress, forever increase in scope.

This aspect of Marx’s critique, related to the boundary conditions of the system, is seen most readily in what he referred to—in a qualified deference to classical bourgeois political economy—as “so-called primitive [primary] accumulation,” but which he preferred to treat as the problem of *expropriation*.<sup>46</sup> This stood for capital’s necessary and continuing attempt to transcend or readjust its boundaries with respect to its external conditions of production, to further enhance the accumulation process.<sup>47</sup> Industrial capitalism requires as its initial basis the expropriation and monopolization of the land, essential for the generation of a proletarian labor force and for the development of capitalist landed property and farming. While, in a wider sense, the constant need for expropriation to create and recreate the basis of its rule, making the continuing exploitation of labor possible, stands for the reality that the capital system exists invariably in nature’s midst and emerges out of prior household-based modes of production.<sup>48</sup> Driven to transcend its external and natural conditions of production, and treating them not as boundaries but as barriers to overcome, capital constantly seeks to expropriate what it can from its natural and social environment while also externalizing its costs onto realms outside its inner circuit of value. Especially in his theory of metabolic rift, but elsewhere as well—for example, his later ethnological

studies of the family – Marx moved more and more toward embracing the contradictions of the inner and outer determination of capital as a system.<sup>49</sup> This reflected capitalism’s own course of development, which increasingly raised the question of “the activation of capital’s absolute limits” – in relation to the family, the nation-state, and the environment.<sup>50</sup>

Nevertheless, the critique of capital as a social relation had to be approached initially from the standpoint of its own ideal conception and intrinsic process, as presented in classical political economy, and in terms of its inner logic of (commodity) value generation or valorization. This ideal conception of capital had to be subjected to a full critique at the outset, on an abstract level (as in the first volume of *Capital*). It was only then in Marx’s project that the reality of concrete, historical capitalism could be approached, moving to lower levels of abstraction and hence a more comprehensive historical analysis. At the concrete level of historical capitalism, it became clear that the system required as a product of its own internal logic, and in order to maintain its drive to capital accumulation, the control of the boundaries – represented by the terms of expropriation of the wider conditions of production – that defined the overall system. In this sense, Rosa Luxemburg’s emphasis on the dependence of capitalism as an imperial system on the constant expropriation of external areas reflected this same logic.<sup>51</sup> Capital’s formation of the nation-state and its control of immigration and emigration were likewise means of controlling and managing the boundaries of its labor force, along with its natural and social boundaries in general.

Still, from the system’s own standpoint of the generation of value through commodity production, those areas outside commodity production, including both the reproduction of labor power and what could be expropriated from nature, were considered “free gift[s]...to capital” and were excluded from the value (and income) calculus – a reality of *the system* that is as true today as when Marx was writing.<sup>52</sup> Hence, as Marilyn Waring has noted, “the treatment of Mother Earth and the treatment of women and children in the system of national accounts have many fundamental parallels” – significantly, neither is included in “value added.”<sup>53</sup>

Marx himself defined wealth in terms of the production of use values; however, bourgeois political economy, in what he characterized as its greatest contradiction, is interested only in exchange value, and increasingly reduces wealth merely to value generated in commodity production.<sup>54</sup> Use values derived from nature, natural processes, and the costs of the social reproduction of the household are therefore treated by the system as merely *gratis*, to be freely expropriated in its expansion. Here, in contrast to exploitation, there is no equal exchange, even on

a formal basis, but actual robbery—usurpation, expropriation, dependence, enslavement.<sup>55</sup>

This contradiction between capital accumulation and its conditions of production underlies Marx's entire analysis. The exploitation at the heart of the system, whereby surplus value is extracted from labor (variable capital), can ultimately proceed only through the destruction of the life and body of the laborer—either in absolute or relative terms—as well as the removal of the worker from the means of production (in particular the earth). The annihilation of time and the damage to workers' physical and mental health, coupled with the outright "robbery system" through which nature itself is expropriated with no concern for its reproduction, have devastating effects on the household and the wider metabolic relation to the environment.<sup>56</sup> Exploitation and expropriation thus have a dialectical relation in Marx's analysis—neither can be understood without the other. Capturing this succinctly, Eleanor Marx wrote that "women... have been expropriated as to their rights as human beings, just as the labourers were expropriated as to their rights as producers. The method in each case is the only one that makes expropriation at any time and under any circumstances possible—and that method is force."<sup>57</sup> As Karl Marx himself put it, capital, in its process of self-valorization "usurped [expropriated] the family labor necessary for consumption."<sup>58</sup>

The logic of Marx's critique of political economy thus strongly suggests that necessary unpaid reproductive work forms the basis for the necessary paid labor (the wage) provided to the worker. The use values produced in the household and the time used up in their production—where reproductive work is not simply annihilated, threatening the dissolution of the family as in Marx's day—becomes appended to the system of capitalist exploitation. This expropriation of social reproductive work within the household helps decrease the value of labor and, particularly under monopoly capitalism, also promotes the realization of surplus value. Not only is this consistent with Marx's whole argument, and foreshadowed (but not actually analyzed with respect to housework) in *Capital*, but, more importantly, it constitutes the *reality* of capitalist production. Industrial capitalism splits the old, preindustrial, patriarchal household economy, in which all work was regarded as essential and on a more or less equal footing, and divides it into a sphere of invisible household labor and "public" commodity-producing labor, both exploiting labor in industry and expropriating social reproductive work in the household. The actual division of labor between these two spheres—the capitalist workplace proper and housework—has historically been affected by the needs of capital accumulation as a whole, the size of the industrial reserve army of labor at a

given time, the regulatory apparatuses of states, social inequalities, and social movements. Any understanding of reproductive-productive labor in capitalism must consider these dialectical relationships.

Marx at various times indicates that capitalism's definition of *productive* labor as that which contributes to the production of value/surplus value is historically specific to capitalism itself, and should not be confused with the wider productivity of human labor in general. For Marx, there is no doubt that non-commodity-producing labor (contrary to capital's own accounting) is also *social labor* – or else social labor historically would simply be confined to capitalist commodity relations. Moreover, it is only insofar as social labor generates *use values* (and not exchange values) that one can speak of *real work*, in Marx's terms. He was absolutely clear (though unfortunately too brief) about the main contradiction related to the family and production in his time – that capital usurped the “free labor for family sustenance” by turning women into wage slaves within industry, while also subject to the patriarchal head of the household.<sup>59</sup>

In the mid-nineteenth century, as we have seen, it was women workers who generated both the highest rates of surplus value for capitalists and the maximum absolute amount of surplus value. This is in fact implicit throughout Marx's analysis. As Chattopadhyay writes: “Throughout the discussion of value determination by the quantity of abstract labour time going into a commodity, Marx refers to ‘human [*menschliche*] labour and not male [*männliche*] labour.’ In other words, commodity-producing (abstract) labour, for Marx, is gender-neutral.”<sup>60</sup> Marx is clear that women are more exploited within commodity production than men; but additionally, given the dynamics of the capital system and social mores, their social reproductive work in the household is expropriated (through the expropriation of time used for the production of use values and/or in consumption work for the realization of surplus), perpetuating much of the dependent condition imposed on women in the patriarchal family. The expropriation of nature and of social reproductive labor lying in the “other hidden abodes” outside the sphere of commodity production, as Fraser puts it, becomes crucial to Marx's entire understanding of capital as a system.<sup>61</sup> Engels later observed that capital in Germany was able to maintain lower wages for workers because larger portions of the cost of reproducing labor power were carried out unpaid in the household – in effect producing higher rates of exploitation and higher profits by indirectly expropriating non-commodity labor.<sup>62</sup>

### Regimes of Social Reproduction

Building on the foregoing analysis, a comprehensive account of the capital system necessitates addressing the “background conditions of

possibility,” which includes the underlining relationships and conditions associated with social reproduction and ecological reproduction. As Fraser writes, “social reproduction is an indispensable background condition for the possibility of economic [commodity] production in a capitalist society,” where social reproduction and economic production are constituted as separate spheres.<sup>63</sup> Likewise, “nature’s capacity to support life and renew itself constitutes another necessary background condition for commodity production and capital accumulation.”<sup>64</sup> She stresses that these background conditions of capitalist valorization have a distinct “character of their own,” but they interact and change with the historical development of the capital system, which manifest in distinct regimes of social reproduction.

The late István Mészáros, drawing upon Marx, illuminates the alienated relationships that emerge with these historic transformations of capital. As Marx explained, human beings, by necessity, mediate their relationship to nature through labor. In this metabolic relationship, in which substances are exchanged and in the process changed, humans both confront the nature-imposed conditions of the processes operating in the material world and influence these circumstances through labor and the associated structure of production. Capitalist class society, however, produces a set of second-order mediations (what Marx called “alienated mediations”) connected to commodity exchange, which result in the estrangement of humanity, labor, and nature.<sup>65</sup> According to Mészáros: “The *primary* social metabolic functions without which humanity could not possibly survive even in the most ideal form of society – from the biological reproduction of the individuals to the regulation of the conditions of economic and cultural reproduction – are crudely equated with their capitalist varieties [second order mediations], no matter how problematical the latter may be.” The specific forms of domination associated with these second-order mediations – for example, the double day imposed on women and the pervasive destruction of ecosystems – are then misrepresented as “‘natural’ and insurmountable,” defying the mounting hardship and crises they entail.<sup>66</sup>

All this is associated with the splitting of production and reproduction, and operates through the twin processes of exploitation and expropriation. For Fraser, “expropriation is an ongoing, albeit unofficial [in terms of capitalist accounting], mechanism of accumulation, which continues alongside the official mechanism of exploitation.”<sup>67</sup> This process is evident in the historic transformation of social reproduction and the patterns of expropriation.

As detailed earlier, during the Industrial Revolution in England, the conditions for social reproduction within the working-class family, which

enabled the operation of the capitalist economy, were collapsing. “So dire was this situation,” Fraser notes,

that even such astute critics as Marx and Engels mistook this early head-on conflict between economic production and social reproduction for the final word. Imagining that capitalism had entered its terminal crisis, they believed that, as it eviscerated the working-class family, the system was also eradicating the basis of women’s oppression [if revolutionary social change arose and triumphed]. But what actually happened was just the reverse: over time, capitalist societies found resources for managing the contradiction – in part by creating “the family” in its modern, restricted form; by inventing new, intensified meanings of gender difference; and by modernizing male domination.<sup>68</sup>

The splitting of reproduction and production becomes part of the constitution of the capital system – producing an alienated second-order mediation. While production depends on social reproduction, the latter is pushed to the boundary – the background – and serves as a realm of expropriation, on which the general system of capital accumulation depends.<sup>69</sup> The potential dissolution of the working-class family becomes a severe contradiction at the boundary of the system, as the social reproduction of workers is undermined. Fraser contends that efforts to address this key contradiction within the capital system led to three successive regimes of social reproduction following the early Industrial Revolution in England. “In each regime...the social reproductive conditions for capitalist production have assumed a different institutional form and embodied a different normative order: first ‘separate spheres,’ then ‘the family wage,’ now the ‘two-earner family.’”<sup>70</sup>

The second half of the nineteenth century, in Fraser’s account, saw the rise of a regime of “liberal competitive capitalism,” in which the “separate spheres” of social reproduction and production are firmly established for the first time. The dissolution of the working-class family served as a boundary, creating a problem for the capital system, which was then in a volatile phase. A series of social and political changes took place to try to “protect” families, while securing further accumulation. Middle-class reformers, disturbed by what they saw as the “de-sexing” of working-class women and the societal “leveling” of the sexes caused by women’s employment as factory operatives, pushed for legislation to protect women and children. During this period, social reproduction and economic production were defined by the system as separate spheres. Fraser explains that in “splitting off reproductive labor from the larger universe of human activities, in which women’s work previously held a recognizable place,” it was reduced to “a newly institutionalized ‘domestic sphere,’



where its social importance was obscured.”<sup>71</sup> These efforts were accompanied by ideological justifications of male domination, in which it was asserted that men were the breadwinners and women were housewives. This position further amplified “the fact that women had to share a subordinate position in every social class without exception.”<sup>72</sup>

Legislation such as the Ten-Hour-Day Bill and various Factory Acts made limited attempts to mitigate the exploitation of women and children in industry, which also played into the patriarchal ideology of the time. However, state legislation for protection was fraught with contradictions, given the larger context of economic production and the fact that the whole regulatory apparatus needed to establish a fully developed family-wage system had not yet been developed.<sup>73</sup> The establishment of “separate spheres” was problematic given racial, ethnic, gender, and class divisions. Wages for industrial workers (men and women) remained low, and the absence of additional wages further undermined social reproduction, which was further exacerbated by industrial pollution and poor-quality food. Lost wages were not replaced by additional support from the state, limiting actual changes in the conditions families confronted. The regime of liberal competitive capitalism was thus defined in part by the formal, but not real, subsumption of reproductive work to the needs of the capitalist system.<sup>74</sup>

For Mies, whose analysis in *Patriarchy and Accumulation on a World Scale* provides a global counterpart to the same argument, the “housewifization” – the creation of the separate spheres of “breadwinner” and “housewife” – in this period was intimately connected to the emergence of imperialism and superexploitation on a truly global scale, traditionally associated with the transition from competitive to monopoly capitalism. This involved expropriating additional wealth to be concentrated at the center of the system, part of which was used to support a better paid labor aristocracy and the whole emerging family-wage system. These changes included destroying the integrated reproductive-productive relations of indigenous peoples, decimating the productive capacities of colonies to create new markets for British textiles, maintaining systems of slavery as long as possible to enrich European capitalists, and establishing a system of unequal ecological exchange to continue the robbing of the global South.<sup>75</sup>

What Fraser calls the regime of “state-managed capitalism,” but which is better understood in terms of monopoly capitalism, mainly arose after the Great Depression and Second World War and was characterized by the family wage.<sup>76</sup> During the monopoly capitalist period, the state in the global North played a larger role in regulating economic production and social reproduction, creating or expanding an array of “social welfare” programs and other forms of public spending (frequently in response to pressure

from labor and other social movements), which institutionalized the “male-breadwinner/female-homemaker model of the gendered family.” These reforms were directed toward bolstering the conditions of social reproduction, following a long period of mass unemployment, extreme labor exploitation and conflict, poor education, and familial hardships. It involved distributing some of the surplus generated during a period of unusually high rates of economic growth and business unionism. At the same time, an overarching concern of monopoly capitalism was the realization of surplus value, especially given the increasing scale of commodity production and the mechanization of production in general.<sup>77</sup> This was the context in which the family wage became the norm, at least in relatively privileged, largely white sectors of the working class, particularly in the United States.

During the mid-twentieth century, monopoly capital greatly expanded and developed the sales effort.<sup>78</sup> Figures like Harry Braverman and Susan Strasser highlighted how monopoly capitalism, in the words of the former, transformed households, as it “penetrated into the daily life of the family and the community.”<sup>79</sup> The expansion of the capital system created the universal market, whereby household provisioning and food production – and eventually recreation, entertainment, elderly care, clothing, services, etc. – were increasingly obtained through the marketplace. Batya Weinbaum and Amy Bridges explain that with the separation of spheres and the establishment of a family wage, “the reproduction of labor in *capitalist* societies requires that the products and services produced with a view to profit be gathered and transformed so that they may meet socially determined needs.” In this way, capital sought to qualitatively transform social reproductive work to aid in the realization of surplus value, adding “consumption work for women.”<sup>80</sup> Given the gendered division of labor in households, the increased “free” time allotted to women for social reproduction ended up realizing surplus value, serving the needs of a system of capital faced with saturated markets, rather than fulfilling human needs. Fraser emphasizes that “social-reproductive activity is absolutely necessary to the existence of waged work, the accumulation of surplus value and the functioning of capitalism as such.”<sup>81</sup> Yet under monopoly capitalism, socially reproductive work is much more geared to the realization of surplus value than toward meeting the elemental needs of the family.

Here there is a shift towards the real subsumption of social reproductive work made possible by the institutionalization, for a time, of the family wage for relatively privileged sectors of the working class.<sup>82</sup> Clearly, for many families of color in the United States, this condition never really applied: “Women of color found low-waged work raising the children and cleaning the homes of ‘white’ families at the expense of their own.”<sup>83</sup>

The resources that helped support the family wage and social entitlement programs were also reliant upon the “ongoing expropriation from the periphery (including the periphery within the core).” The lands of indigenous peoples throughout the world were expropriated to support “development projects,” such as the construction of dams. Additionally, throughout the global South, capital engaged in the superexploitation of labor and expropriation of social reproductive work, given the position of “semiproletarianized” households, such as families with access to small parcels of land to grow food to help meet reproductive needs not met by wages – essential to many migrant labor systems.<sup>84</sup>

The most recent social reproduction regime depicted by Fraser, the two-earner family, emerged in relation to “globalized financialized capitalism.” This period of global monopoly-finance capital and neoliberalism is marked by privatization of public goods and the erosion or elimination of many of the social programs that supported social reproduction. It has involved the reincorporation and recruitment of relatively privileged working-class women into the paid workforce, in part due to inflation, declining real wages for working-class families, and increasing household debt, as well as to shifts in social norms inspired by feminist movements. Less privileged working-class women, who always had to work, find additional jobs in the expanding service and care sectors.

More hours of paid work are thus required to support families, causing a pinch on the time available for domestic labor. Fraser notes that a consequence of this “is a new, *dualized* organization of social reproduction, commodified for those who can pay for it and privatized for those who cannot, as some in the second category provide care work in return for (low) wages for those in the first.”<sup>85</sup> Rather than closing the care gap, this situation creates a deficit, reminiscent of mid-nineteenth-century capitalism. Working-class women are caught in the double day, whereby they bear the responsibility both for earning wages and for unpaid household work.<sup>86</sup>

Efforts to address this “care gap” have been heavily racialized, as migrant workers “take on reproductive and caring labor previously performed by more privileged women. But to do this, the migrants must transfer their own familial and community responsibilities to other, still poorer caregivers, who must in turn do the same,” and so on throughout the global hierarchy of nations.<sup>87</sup>

All these processes are “intensifying capitalism’s inherent contradiction between economic production and social reproduction.”<sup>88</sup> In contrast to the previous social reproduction regimes, whereby the state was used as means of social protection, the state is firmly under the thumb of monopoly-finance capital. Social reproduction is being transgressed in a

way that is “systematically expropriating the capacities available for sustaining connections.” Hence Fraser stresses that “the boundary dividing social reproduction from economic production has emerged as a major site and central stake of social struggle” – leaving open the question of what may emerge from this current care crisis.

### Social and Ecological Metabolisms

The logic of capital accumulation is that of a system that systematically expropriates its natural and social conditions of production while externalizing its costs on everything outside the circuit of capital – including its own conditions of production.<sup>89</sup> This is manifested in a continual, if shifting, *care crisis* in the realm of social reproduction and a deepening *metabolic rift* with respect to ecological reproduction. Moreover, both increasingly take on more global-imperial dimensions. This is recognized by Fraser, who sees the “boundary struggles” of capitalism entailing not only the expropriation in various ways in different periods of social reproductive labor, but also “the free-riding on nature.” As she puts it:

Structurally, capitalism assumes – indeed, inaugurates – a sharp division between a natural realm, conceived as offering a free, unproduced supply of “raw material” that is available for appropriation [expropriation], and an economic realm, conceived as a sphere of value, produced by and for human beings.... Capitalism brutally separated human beings from natural, seasonal rhythms, conscripting them into industrial manufacturing, powered by fossil fuels and profit-driven agriculture, bulked up by chemical fertilizers. Introducing what Marx called a “metabolic rift,” it inaugurated what has now been dubbed the Anthropocene, an entirely new geological era in which human activity has a decisive impact on the Earth’s ecosystems and atmosphere.<sup>90</sup>

These struggles over social as well as ecological reproduction – along with those over global-imperial hegemony – are what Mészáros was primarily concerned with in raising the question of the system of social metabolic reproduction. Today this problem is brought to the fore by the “activation of capital’s absolute limits,” with respect to the system’s fundamental boundaries: the microcosm of the household, the imperial system, and the Earth System. As a creatively destructive metabolic order, the capital system expropriates its own conditions of production, externalizing the costs onto its social and natural environment. In this way, progress turns into retrogression. Both social reproduction theory and Marxian ecology have discovered this in different ways. Both point to the fact that, as Mészáros emphasized, we need to replace the current alienated system of social metabolic reproduction with an entirely

different one aimed at substantive equality.<sup>91</sup> A similar view is offered by Salleh, who argues that crises of social reproduction and the metabolic rift are intrinsically related, and that working-class women's struggles over social reproductive labor, when joined with what might be called the emergence of an "environmental proletariat" – a broad, unified coalition of working humanity in revolt against ecological degradation and social exploitation – constitutes the key to constructive revolutionary change. Here we can see an emerging synthesis in Marxist and revolutionary feminist theory, centering on "the human-nature metabolism."<sup>92</sup>

## Conclusion

In the normal operations of capitalist production, according to Marx,

Every sense organ is injured by the artificially high temperatures, by the dust-laden atmosphere, by the deafening noise, not to mention the danger to life and limb among machines which are so closely crowded together, a danger which, with the regularity of the seasons, produces its list of those killed and wounded in the industrial battle. The economical use of the social means of production, matured and forced as in the hothouse by the factory system, is turned in the hands of capital into systemic robbery of what is necessary for the life of the worker while he is at work, i.e. space, light, air and protection against the dangerous or the unhealthy concomitants of the production process, not to mention the theft of the appliances for the comfort of the worker.<sup>93</sup>

This robbery of the male and female worker's health within the workplace naturally carries over into the realm of the household and the social reproduction of labor power. In Marx's day, the demands put on the workers in industry tended to annihilate whatever time there was for the reproduction of labor power. By the late nineteenth century, however, capital had at least formally created separate, alienated spheres of housewife and breadwinner – firmly establishing the two realms of housework and paid work outside the home – thereby altering the conditions in both spheres. This transformed the family itself under monopoly capitalism, resulting in the relative rather than absolute expropriation of time within the household – though giving way in the most recent neoliberal period to new forms of absolute expropriation. Likewise, capital dealt with its first ecological crises (the degradation of the soil and rapacious deforestation) by means of new alienated mediations (synthetic fertilizers), which in the long run were to reappear as crucial aspects of a global metabolic rift that degrades nature even further.

What is required in these circumstances is a struggle that will challenge capital's subjection of reproductive labor, its colonization of the people

of the planet, and its degradation of the earth itself.<sup>94</sup> In this view, if the revolutionary struggle for socialism in the past failed, it is because it was not revolutionary enough, and did not take on the capital system and its particular social metabolic reproduction as a whole. It did not demand the reconstitution of human labor based on a society of associated producers and a world of creative labor—aimed at the fulfillment of human potential, while rationally regulating the human metabolism with nature so as to protect the earth for future generations. It did not embrace the full diversity of human life and of the natural environment.<sup>95</sup> In our age, the revolutionary Anthropocene, such a mistake cannot be repeated.

## Notes

1. See especially Silvia Federici, *Revolution at Point Zero* (Oakland, CA: PM, 2012), "Notes on Gender in Marx's Capital," *Continental Thought and Theory* 1, no. 4 (2017): 19–37; Susan Ferguson and David McNally, "Capital, Labour-Power and Gender or Relations: Introduction to the Historical Materialism Edition," in Lise Vogel, *Marxism and the Oppression of Women* (Chicago: Haymarket, 2013), xvii–xl; Shahrzad Mojab, ed., *Marxism and Feminism* (London: Zed, 2015), especially the essays by Frigga Haug and Judith Whitehead; Tithi Bhattacharya, ed., *Social Reproduction Theory* (London: Pluto, 2017)—including essays by Ferguson, Nancy Fraser, McNally, and Vogel; Heather A. Brown, *Marx on Gender and the Family* (Chicago: Haymarket, 2012); Paresh Chattopadhyay, "Women's Labor Under Capitalism and Marx," *Bulletin of Concerned Asian Scholars* 31, no. 4 (1999): 67–75; Leopoldina Fortunati, *The Arcane of Reproduction* (Brooklyn: Autonomedia, 1995); Maria Mies, *Patriarchy and Accumulation on a World Scale* (London: Zed, 2014); Johanna Brenner, *Women and the Politics of Class* (New York: Monthly Review Press, 2000); Ariel Salleh, "Ecological Debt, Embodied Debt" and "From Eco-Sufficiency to Global Justice," in Salleh, ed., *Eco-Sufficiency and Global Justice* (London: Pluto, 2009).

2. The very term "reproductive labor" raises complex questions within Marxian theory. Marx, following classical political economy, often distinguished work in general and social labor in general, both of which were seen as directed at the production of use values, from wage labor (and more specifically value-generating productive labor) under capitalist commodity production, which has the promotion of exchange value and capital accumulation as its alienated object (see Karl Marx, *Capital*, vol. 1 [London: Penguin, 1976], 998–99). Here Engels added a useful note to *Capital*, vol. 1 (left out of the Penguin edition), in which he

stated that "The English language has two different expressions for these two different aspects of labour: in the Simple Labour process, the process of producing Use Values, it is *Work*; in the process of creation of Value, it is *Labour*, taking the term in its strictly economic sense." See Karl Marx and Frederick Engels, *Collected Works*, vol. 35 (New York: International Publishers, 1975), 196. Work in its general meaning, for Marx, thus transcends the capitalist system entirely, as does the concept of social labor (i.e., labor in general, distinct from its historical specific form in capitalist production)—both of which are related to the production of use values and the primary mediation of human needs. When Marx discusses "family labor" or reproductive labor in the household, he has in mind a certain kind of social labor, referred to here as "reproductive labor," which, insofar as it is family labor, is unpaid and external to the valorization process of capital (see Marx, *Capital*, vol. 1, 517–18). Most of *Capital*, however, is devoted not to the analysis of social labor in its many aspects and historical forms, but rather to the analysis of labor exploitation in the context of capitalist commodity production. Such value-generating wage labor under capitalism, then, needs to always be understood as a specific historical form distinct from work (in general) and social labor (including family labor), which transcend the narrow confines of capitalist valorization and are external to it. Nevertheless, with the further development of the capitalist system, as we shall see, even the social labor involved in the reproduction of the family increasingly becomes appended to the needs of commodity production as a whole.

3. The concept of the "dissolution of the family" was fundamental to Marx and Engels's work from the beginning. See Marx and Engels, *Collected Works*, vol. 5, 180. The idea of "the dissolution of the family" in ethical terms, related to

education, was first introduced by Hegel. But this concept was to be given an entirely different meaning, as the following analysis will show, in the development of Marx and Engels's materialist analysis. See G. W. F. Hegel, *The Philosophy of Right* (Oxford: Oxford University Press, 1952), 117–19.

4. Engels, *The Condition of the Working Class in England* (Oxford: Oxford University Press, 2009).

5. The concept of expropriation, which Marx used as his central category in Part VIII of *Capital*, vol. 1, on "So-Called Primitive Accumulation," clearly had a wider significance in relation to enclosures, imperial conquest, enslavement, the expropriation of reproductive labor, the destruction of superexploited labor, and the rifts created by the plundering of the earth itself—all forms of robbery which were external to capital's pure value logic based on equal exchange. For a number of years, we have been developing an approach employing the concept of expropriation to refer to Marx's critique in this way. See, for example, John Bellamy Foster, Brett Clark, and Richard York, *The Ecological Rift* (New York: Monthly Review Press, 2010), 62, 435; John Bellamy Foster, "Foreword," in István Mészáros, *The Necessity of Social Control* (New York: Monthly Review Press, 2015), 10–14. Fraser has independently developed the same analytical approach—proceeding, however, from social reproduction theory rather than metabolic rift analysis. See especially Nancy Fraser, "Expropriation and Exploitation in Racialized Capitalism," *Critical Historical Studies* 3, no. 1 (2016): 163–78.

6. Marx and Engels, *Collected Works*, vol. 37, 732–33.

7. Federici, "Notes on Gender in Marx's Capital," 21. It should be noted that in this article we are primarily concerned with what Federici called "the woman's question" in the time that Marx was writ-

ing, in the early to mid-nineteenth century, and the implications of this for our own time, which necessarily requires a brief look at subsequent developments, primarily in the advanced capitalist countries, from the late nineteenth century to the present day. We do not address here the question of reproductive labor in earlier periods of capitalism, such as the era of primary accumulation (the mercantilist stage of capitalism). The most important work on gender and the family in the period of primary accumulation is undoubtedly Silvia Federici, *Caliban and the Witch* (Brooklyn: Autonomedia, 2004).

8. Maxine Berg, "What Difference Did Women's Work Make to the Industrial Revolution?" *History Workshop* 35 (1993): 34; Melanie Reynolds, *Infant Mortality and Working-Class Childcare* (London: Macmillan, 2016), 77.

9. Berg, "What Difference Did Women's Work Make," 29; Maxine Berg, "Women's Work and the Industrial Revolution," *Re-Fresh* 12 (1991): 3.

10. Joyce Burnette, "Women Workers in the British Industrial Revolution," Economic History Association, <http://eh.net>, November 12, 2017; Sally Alexander, *Becoming a Woman* (New York: New York University Press, 1995), 7. Some earlier studies, such as the work of Louise Tilly and Joan Scott, insisted that married women were "only a small proportion of all female factory operatives" and that, "at its height, in the 1870s" only "about one-third of the British textile industry's women employees were married or widowed." However, the 1870s were not the height of female employment in the Industrial Revolution, but considerably beyond it and the inclusion of large numbers of children among the total of "female workers" distorts the overall results. More recent research, going beyond the limits of the census data, has emphasized in fact that large numbers of married and widowed women were employed at all levels of the industrial labor force—working as factory operatives and other operatives. In some localities, more than two-thirds of married and widowed women were in the labor force. See Louise A. Tilly and Joan W. Scott, *Women, Work and Family* (New York: Holt, Winhart and Winston, 1978), 124; Berg, "What Difference Did Women's Work Make," 37–39.

11. Burnette, "Women Workers in the British Industrial Revolution."

12. In their otherwise insightful introduction to Lise Vogel's *Marxism and the Oppression of Women*, Ferguson and McNally mistakenly state that "female participation rates in paid employment stabilized at around 25 percent across the nineteenth century." Their sole source for this is an article written by Jane Humphries in the *Cambridge Journal of Economics* in 1977, where Humphries

provides the same number and cites as her source Geoffrey Best's 1972 book, *Mid-Victorian Britain*, where the same number is provided. Best indicates that his source is an article by Charles Booth in the *Journal of the Royal Statistical Society* in 1886. Booth's figures drawn from census data, however, are now seen in the historical research of the last few decades to be vastly understated in precisely this respect, reflecting an undercounting of women employed during the Industrial Revolution. This is significant to the present argument since Humphries claimed that Marx was wrong about the threatened dissolution of the working-class family associated with the high labor participation of all family members—arguing instead that around three-quarters of all women in Britain throughout the nineteenth century (here including all classes and rural as well as urban regions) were outside the paid labor force—a conclusion that today's historians have shown to be incorrect, particularly in its implications with regard to working-class women. See Ferguson and McNally, "Capital, Labour-Power, and Gender-Relations," in Vogel, *Marxism and the Oppression of Women*, xxx–xxx; Jane Humphries, "Class Struggle and the Persistence of the Working-Class Family," *Cambridge Journal of Economics* 1, no. 3 (1977): 251; Geoffrey Best, *Mid-Victorian Britain* (New York: Schocken, 1972), 100; Alexander, *Becoming a Woman*, 7–9; Edward Higgs and Amanda Wilkinson, "Women Occupations and Work in Victorian Census Revisited," *History Workshop* 81 (2016): 17–38.

13. Berg, "Women's Work and the Industrial Revolution," 3.

14. Marx, *Capital*, vol. 1, 517.

15. John Stuart Mill, "Employment of Children in Manufactories," *Examiner*, January 29, 1832, 67–68; Karl Marx, *On the First International* (New York: McGraw-Hill, 1973), 93. Under the influence of his wife Harriet Taylor, Mill later reversed his view that women should be excluded from employment in manufacturing industry and emphasized their right to competition in the labor market. See John Stuart Mill, *Three Essays* (Oxford: Oxford University, 1975), 458.

16. In our explanation, we have elaborated slightly on Marx's method of factoring various groups out of the numbers in order to focus on the proletarian sectors, based on examination of the 1861 census to which he was referring. In using the census data here, Marx was primarily concerned with two things: the gender construction of the proletarian workforce and the high numbers of domestic servants. The key to his method here seems to have been to focus on three of the six "Classes" of occupations/conditions in the census: the Agricultural, Industrial

and Domestic classes, excluding altogether the Professional, Commercial, and Indefinite and Non-productive classes, as stipulated in the census. Mining was a subcategory of Industrial. Mining, like agriculture, was a largely rural activity, separated from the urban proletariat. Marx made the point, based on the 1861 census, that the number of domestic servants (most of whom were female) exceeded that of textile workers (largely female) and employees in mining put together (*Census of England and Wales for the Year 1861, Population Tables*, vol. 2 [London: Her Majesty's Stationary Office, 1863], Table XVIII, xl; Marx, *Capital*, vol. 1, 575). See also B. R. Mitchell, *Abstract of British Historical Statistics* (Cambridge: Cambridge University Press, 1962), 60–61.

17. Not all the figures that Marx provides precisely match the data in the published 1861 census, though the results are extremely close, and the differences are so slight as to have no real bearing on his conclusions. For example, Marx's figures for male domestic servants (by which he clearly meant adult males) come out to 11.4 percent of domestic servants, while the census, as published in 1863, reports 12.5 percent. The one area where there seems a notable difference is in the designation of ages differentiating children from adults. In Marx's data, the cutoff in the textile industry is age thirteen, while in the 1861 census as published in 1863 the data is divided into those above and below twenty years of age. All of this suggests that Marx may have been using a slightly different, perhaps preliminary, or summary version of the census—or that the census was revised (*Census of England and Wales*, Table XVIII, xl).

18. Marx, *Capital*, vol. 1, 574–75; "Occupations: Census Returns for 1851, 1861 and 1871," Victorian Web, <http://victorianweb.org>; Brown, *Marx on Gender and the Family*, 77. The Victorian censuses did not record employment and unemployment as a situation, which inevitably distorted the data.

19. Marx, *Capital*, vol. 1, 575; Deborah Valenze, *The First Industrial Woman* (Oxford: Oxford University Press, 1995), 171–80.

20. Marx, *Capital*, vol. 1, 796–97.

21. Marx, *Capital*, vol. 1, 364–66, 595–99.

22. Karl Marx, *Wage-Labour and Capital/Value, Price and Profit* (New York: International Publishers, 1935), 46–47 (*Wage Labour and Capital*).

23. Margaret Hewitt, *Wives and Mothers in Victorian Industry* (London: Rockliff, 1958), 22.

24. Rev. J. Elder Cumming, "On the Neglect of Infants in Large Towns," *Transactions of the National Association for the Promotion of Social Science* (1874):

723-24; Hewitt, *Wives and Mothers in Victorian Industry*, 29, 99.

25. Hewitt, *Wives and Mothers in Victorian Industry*, 106-10.

26. Marx, *Capital*, vol. 1, 520-22.

27. Hewitt, *Wives and Mothers in Victorian Industry*, 102, 136-37, 141; Reynolds, *Infant Mortality and Working-Class Child Care, 1850-1899*, 2-3, 74, 146.

28. Anthony S. Wohl, *Endangered Lives* (Cambridge, MA: Harvard University Press, 1983): 50-52; John Bellamy Foster, "Marx as a Food Theorist," *Monthly Review* 68, no. 7 (December 2016): 1-8.

29. Ivy Pinchbeck, *Women Workers and the Industrial Revolution, 1750-1850* (London: Cass, 1969), 310; Bridget Hill, *Women, Work, and Sexual Politics in Eighteenth Century England* (London: Blackwell, 1989), 105-15. On epidemics and the social epidemiology of the Industrial Revolution, see Howard Waitzkin, *The Second Sickness* (New York: Free Press, 1983).

30. Caroline Davidson, *A Woman's Work Is Never Done* (London: Chatto and Windus, 1982), 184.

31. Marx, *Capital*, vol. 1, 620-21; Ferguson and McNally, xxix-xxx; Brown, *Marx on Gender and the Family*, 95-96; Chattopadhyay, "Women's Labor Under Capitalism and Marx," 69, 74; Fortunati, *The Arcane of Reproduction*, 91, 170-71. On Owenism and the struggles of working-class women, see Barbara Taylor, *Eve and the New Jerusalem* (New York: Pantheon, 1983). The destruction of the working-class family was already a central thesis adopted in 1845 in Frederick Engels, *The Condition of the Working Class in England*, 140.

32. Marx and Engels, *Collected Works*, vol. 24, 340. Translation quoted in Lise Vogel, *Marxism and the Oppression of Women*, 75.

33. Federici, *Revolution at Point Zero*, 94; Federici, "Notes on Gender in Marx's *Capital*," 27.

34. Marx, *Capital*, vol. 1, 517-18.

35. Marx, *Capital*, vol. 1, 621.

36. Sara Horrell and Jane Humphries, "Women's Labour Force Participation and the Transition to the Male Breadwinner Family," *Economic History Review* 48, no. 1 (1995): 93; Berg, "Women's Work and the Industrial Revolution," 4.

37. Federici, *Caliban and the Witch*, 98-99.

38. Marx, *Capital*, vol. 1, 599; Brown, *Marx on Gender and the Family*, 90.

39. Frederick Engels, *The Origin of the Family, Private Property, and the State* (Moscow: Progress Publishers, 1948), 74.

40. Paul M. Sweezy, *The Theory of Capitalist Development* (New York: Monthly Review, 1970), 11-20.

41. Marx, *On the First International*, 10; Michael A. Lebowitz, *Beyond Capital* (New York: St. Martin's, 1992).

42. For example, Marx writes: "Since certain family functions, such as nursing and suckling children, cannot be entirely suppressed, the mothers who have been confiscated by capital must try substitutes of some sort. Domestic work, such as sewing and mending, must be replaced by the purchase of ready-made articles. Hence the diminished expenditure of labour in the house is accompanied by an increase expenditure of money outside." See Marx, *Capital*, vol. 1, 518. See also Federici, "Notes on Gender in Marx's *Capital*," 26-27; Ferguson and McNally, "Capital, Labour-Power and Gender-Relations," xxvii-xxviii. Such statements in Marx's analysis were almost invariably included in footnotes or in talks to workers, like *Wage Labour and Capital*. This has led to the criticism that he gave them little importance. However, in Marx's dialectical critique such points logically were meant to be addressed later, along with the concrete determination of wages themselves—which is never fully addressed in his analysis. His practice therefore was always to place such points in endnotes, as a way of raising more concrete questions to be dealt with later. See Kenneth Lapiques, *Marx's Wage Theory in Historical Perspective* (Tucson: Wheatmark, 2008), 210-35.

43. Karl Marx, *Grundrisse* (London: Penguin, 1973), 334-35, 409-10.

44. Karl Marx, *Early Writings* (London: Penguin, 1975), 261, 409-10.

45. Marx, *Capital*, vol. 1, 599.

46. Marx, *Capital*, vol. 1, 871. In referring to the concept of primary or prior accumulation, Marx was explicit that this category was taken chiefly from Adam Smith. Marx, however, indicated reservations about the concept, not only in referring to "so-called primitive [primary] accumulation" but also in his using scare quotes in relation to it. His solution was to focus rather on expropriation as the key to boundary conditions of capitalism—not only in relation to its origins but implicitly in all of its stages, including "modern colonialism." See Marx, *Capital*, vol. 1, 775, 873, 939. On the importance of conceiving Marx's analysis as "primary accumulation" rather than "primitive accumulation," and its applicability to all stages of capitalism, see Harry Magdoff, "Primitive Accumulation and Imperialism," *Monthly Review* 65, no. 5 (October 2013): 13-25. On the origins of the concept in classical political economy, see Michael Perelman, *The Invention of Capitalism* (Durham: Duke University Press, 2000). For the relation of primary accumulation to the restructuring of gender and traditional patriarchal family relations with the rise of capitalism, see

Federici, *Caliban and the Witch*. On the connection between expropriation and the "background 'conditions of possibility' for exploitation," see Nancy Fraser, "Behind Marx's Hidden Abode: For an Expanded Conception of Capitalism," *New Left Review* 86 (2014): 55-72.

47. The concept of "conditions of production" and its role in Marx's analysis, addressing such aspects as the external environment and the conditions of reproduction in the household, was brought to the fore by James O'Connor in his pioneering work in ecological Marxism. See James O'Connor, *Natural Causes* (New York: Guilford, 1998), 144-57.

48. Jason W. Moore uses the term "appropriation" to refer to the human extraction of the "unpaid work" of nature—which he calls "the web of life." In Marx's analysis, however, the "free appropriation" of nature and natural processes—as well as the social appropriation of reproductive labor—could not be materially transcended, any more than it would be possible to materially transcend the condition of human beings as objective beings, having their object—their means of existence—outside themselves. It is only the *alienated mediation* of the human relation to the web of life, that is, *expropriation* of nature/natural processes, subsistence labor, reproductive labor—all that lies outside the value circuit of capital—that is subject to transcendence through revolutionary struggle in history. The only answer to the regime of capital, for Marx, is to expropriate the expropriators, as the first step in the creation of new order of what István Mészáros calls "social metabolic reproduction." See Jason W. Moore, *Capitalism in the Web of Life* (London: Verso, 2015), 17, 29, 54, 70, 101-02, 146-47; Marx, *Early Writings*, 389-90, *Grundrisse*, 87-88, *Capital*, vol. 1, 929; István Mészáros, *Beyond Capital* (New York: Monthly Review Press, 1995), 39-71.

49. On the theory of metabolic rift and the dialectic of barriers and boundaries (which Marx took from Hegel), see Kohei Saito, *Karl Marx's Ecosocialism* (New York: Monthly Review, 2017); Foster, Clark, and York, *The Ecological Rift*, 73, 284-86. On Marx's later work on the ethnology of the family, see Brown, *Marx on Gender and the Family*, 176-209.

50. Mészáros, *Beyond Capital*, 142-253.

51. Rosa Luxemburg, *The Accumulation of Capital* (New York: Monthly Review Press, 1951).

52. Marx and Engels, *Collected Works*, vol. 37, 732-33; See also Paul Burkett, "Nature's 'Free Gifts' and the Ecological Significance of Value," *Capital and Class* 23 (1999): 89-110. The mistaken view that Marx erred in not attributing commodity value to women's unpaid labor in the household in capitalist conditions



still frequently appears in the literature. What is not understood in such criticisms, as Chattopadhyay notes, is that "in his formulation of wage determination Marx was not offering any prescriptive formula, far less his own desideratum in this regard. He was only rigorously showing how wage determination arose from the reality of capitalism itself." See Chattopadhyay, "Women's Labor Under Capitalism and Marx," 73. For recent examples of the continuing confusion in this regard see Rohini Hensman, "Revisiting the Domestic Labour Debate: An Indian Perspective," *Historical Materialism* 19, no. 3 (2011): 7-8; Peter Custers, *Capital Accumulation and Women's Labour in Asian Economies* (New York: Monthly Review Press, 2012), 46-47, 88; Fortunati, *The Arcane of Reproduction*, 8-11, 69-98, 157.

53. Marilyn Waring, *Counting for Nothing* (Toronto: University of Toronto Press, 2009), 204.

54. Karl Marx and Frederick Engels, *Selected Correspondence* (Moscow: Progress Publishers, 1975), 180; Marx, *Capital*, vol. 1, 132, 134.

55. In *The German Ideology*, Marx and Engels refer to "the latent slavery in the family." See Marx and Engels, *Collected Works*, vol. 5, 46. In referring to slavery in this context, Marx and Engels clearly had in mind not chattel slavery, but ancient slavery, and the common designation of women in the patriarchal (particularly aristocratic) family as occupying the status of slaves, in the sense of the disposal over their labor power by others. For a detailed analysis of this and its implications with respect to Marx's analysis see G. M. E. de Ste. Croix, *The Class Struggle in the Ancient Greek World* (London: Duckworth, 1981), 98-111.

56. The notion of capitalism as a robbery system in relation to the soil was introduced by Justus von Liebig and taken over by Marx. See John Bellamy Foster, *Marx's Ecology* (New York: Monthly Review Press, 2000), 147-63.

57. Eleanor Marx-Aveling and Edward Aveling, *Thoughts on Women and Society* (New York: International Publishers, 1987), 17.

58. Marx, *Capital*, vol. 1, 517-18; Chattopadhyay, "Women's Labor Under Capitalism and Marx," 69-70.

59. Chattopadhyay, "Women's Labor Under Capitalism," 68, 71-72. Marx quotation from Chattopadhyay's translation.

60. Pares Chattopadhyay, *Marx's Associated Mode of Production* (London: Palgrave Macmillan, 2016), 87; "Women's Labor Under Capitalism," 72.

61. Fraser, "Behind Marx's Hidden Abode," 62.

62. Frederick Engels, *The Housing Question* (Moscow: Progress Publishers,

1979), 14-15; Marx and Engels, *Selected Correspondence*, 358-59. In Marx and Engels's analysis this increase in surplus value through the cheapening of variable capital by means of substitution of subsistence/household labor was known as "profits by deduction." See John Bellamy Foster, "A Missing Chapter of *Monopoly Capital*," *Monthly Review* 64, no. 3 (July-August 2012): 13-15.

63. Nancy Fraser, "Crisis of Care? On the Social-Reproductive Contradictions of Contemporary Capitalism," in Bhattacharya, ed., *Social Reproduction Theory*, 23.

64. Fraser, "Behind Marx's Hidden Abode," 60, 63, 70.

65. Marx, *Early Writings*, 261.

66. Mészáros, *Beyond Capital*, 137.

67. Fraser, "Behind Marx's Hidden Abode," 60.

68. Fraser, "Crisis of Care?" 26.

69. Fraser, "Crisis of Care?" 21, 24-25; Martha Gimenez, "Capitalism and the Oppression of Women: Marx Revisited," *Science and Society* 69, no. 1 (2005): 11-32.

70. Fraser, "Crisis of Care?" 26.

71. Fraser, "Crisis of Care?" 24, 26-29.

72. Mészáros, *Beyond Capital*, 203.

73. Fraser, "Crisis of Care?" 27-29.

74. The notion of the shift from the formal to the real subsumption of reproductive labor follows Marx's famous distinction with respect to productive (commodity) labor in "The Results of the Immediate Process of Production." See Marx, *Capital*, vol. 1, 101-9, 138. See also Salar Mohandesi and Emma Teitelman, "Without Reserves," in Bhattacharya, ed., *Social Reproduction Theory*, 60-62.

75. Mies, *Patriarchy and Accumulation on a World Scale*, 74-81; Fraser, "Crisis of Care?" 28; Harry Magdoff, *The Age of Imperialism* (New York: Monthly Review Press, 1969), *Imperialism* (New York: Monthly Review Press, 1978); John Bellamy Foster and Hannah Holleman, "The Theory of Unequal Ecological Exchange: A Marx-Odum Dialectic," *Journal of Peasant Studies* 41, no. 2 (2014): 199-233.

76. Fraser, "Crisis of Care?" 29-31.

77. Paul A. Baran and Paul M. Sweezy, *Monopoly Capital* (New York: Monthly Review Press, 1966).

78. Baran and Sweezy, *Monopoly Capital*; Michael Dawson, *The Consumer Trap* (Urbana: University of Illinois Press, 2003).

79. Harry Braverman, *Labor and Monopoly Capital* (New York: Monthly Review Press, 1998), 188-191; Susan Strasser, *Never Done* (New York: Pantheon, 1982), 242-312.

80. Batya Weinbaum and Amy Bridges, "The Other Side of the Paycheck: Mo-

nopoly Capital and the Structure of Consumption," *Monthly Review* 28, no. 3 (1976): 96.

81. Fraser, "Behind Marx's Hidden Abode," 61.

82. Mohandesi and Teitelman, "Without Reserves," 60-62.

83. Fraser, "Crisis of Care?" 30-31.

84. Immanuel Wallerstein, *Historical Capitalism* (London: Verso, 1983), 39; see also Wilma Dunaway, ed., *Gendered Commodity* (Stanford, CA: Stanford University Press, 2013); Joan Smith and Immanuel Wallerstein, eds., *Creating and Transforming Households* (Cambridge: Cambridge University Press, 1992); Mies, *Patriarchy and Accumulation on a World Scale*, 112-44.

85. Fraser, "Crisis of Care?" 32-34.

86. Pat Armstrong and Hugh Armstrong, *The Double Ghetto* (Toronto: McClelland and Stewart, 1978).

87. Johanna Brenner points out that this racial and class division is firmly entrenched within the United States. She explains that "the most well-explored instance of race/gender intersectionality has been the different locations of white women and women of color in the work of social reproduction. Historically and today, whether in the private household (domestic servant and her employer) or in the public sphere (hotel maids/nurses/aides/kitchen workers and professional/supervisors/administrative support staff) women of color do the most menial and dirty work" (Brenner, *Women and the Politics of Class*, 295). On the care gap, see Nancy Folbre, *The Invisible Heart* (New York: New Press, 2001).

88. Fraser, "Crisis of Care?" 33-35.

89. Foster, Clark, and York, *The Ecological Rift*, 207-11; John Bellamy Foster, "The Age of Planetary Crisis," *Review of Radical Political Economics* 29, no. 4 (1997): 124-34.

90. Fraser, "Behind Marx's Hidden Abode," 63; John Bellamy Foster, "Marx's Theory of Metabolic Rift," *American Journal of Sociology* 105, no. 2 (1999): 366-405.

91. Mészáros, *Beyond Capital*, 142-253; Foster, Clark, and York, *The Ecological Rift*, 401-22.

92. Salleh, "Ecological Debt, Embodied Debt" and "From Eco-Sufficiency to Global Justice," 1-40, 291-312.

93. Marx, *Capital*, vol. 1, 552-53.

94. Fraser, "Crisis of Care?" 36.

95. All these conditions of socialism were in fact stipulated by Marx. See Marx, *Capital*, vol. 3 (London: Penguin, 1981), 754, 911, 948-49; John Bellamy Foster, "The Meaning of Work in a Sustainable Society," *Monthly Review* 69, no. 4 (September 2017): 1-14.