

## NOTES TO A MARXIST PHENOMENOLOGY: THE BODY AND THE MACHINE IN ENGELS' *THE CONDITION OF THE WORKING CLASS IN ENGLAND*

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**ABSTRACT.** In his *The Condition of the Working Class in England*, Friedrich Engels outlines systematically the miseries of the workers in England in the context of industrialization. A key to his argument concerns the interface between the human body and the machine. In this article I argue that Engels provides a kind of a phenomenology of the body in his analyses of the relation of the worker to the new machines. The limited secondary literature on Marxism and phenomenology has not been attentive to the detailed attention that is given to the body of the worker in this book.

**Keywords:** *handwork, machines, technology, Industrial Revolution, Friedrich Engels, factory work*

In 1845 Friedrich Engels published *The Condition of the Working Class in England* at the age of 24.<sup>1</sup> The work has become a classic study of the social conditions created by the Industrial Revolution. It is the fruit of meticulous research that Engels did while working in his father's factory in Manchester for almost two years, from November 1842 to September 1844. The book's documentation has stood the test of time and holds up well to the scrutiny of modern research. On its pages one can sense the zeal of a young man who had recently converted to the cause of communism. This work was an important inspiration for Marx in the development of his theory of political economy.

*The Condition of the Working Class in England* is a powerful indictment of the effects of the Industrial Revolution that had radically transformed society over a historically short period of time. In his Preface, Engels explains to his fellow

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<sup>1</sup> Friedrich Engels, *Die Lage der arbeitenden Klasse in England. Nach eigener Anschauung und authentischen Quellen*, Leipzig: Otto Wigand, 1845. (English translation: *The Condition of the Working Class in England*, ed. by David McLellan, Oxford: Oxford University Press, 1993.)

countrymen that it is important to study the condition of the workers in England since this was where the Industrial Revolution started and where in his time it had advanced the furthest. It is especially important to understand the dynamics at work in this context so that it will be possible to identify them when they come to Germany, which was then just beginning the process of industrialization. Only with an understanding of this process will it be possible, he claims, to avoid the most negative consequences of industrialization. Further, Engels notes critically that the German theoreticians of socialism and communism are largely uninformed about the actual conditions of the workers. For this reason, their theories risk being overly abstract and not addressing the actual problems encountered in industrial labor. Engels thus presents a detailed and colorful picture of the many ills from which the working class in England suffered.

One of the most important features of the Industrial Revolution is that handwork was replaced by machines.<sup>2</sup> This shift had monumental consequences for the workers and society in general. With industrialization many kinds of handwork became superfluous over time, leaving countless craftsmen in a dire situation since they could no longer earn a living by their trade. They were thus obliged to flock to the large manufacturing metropolises in hope of finding employment in the factories whose machines had replaced their labor. Since the machines required little physical strength, their introduction opened the workforce for women and children. This was a double boon for the factory owners since women and children could be paid considerably less, and the increase in the size of the available workforce drove down the wages of the male workers. Engels' study documents clearly the exploitation of the female workers and the horrors of child labor.

In works such as the *Grundrisse*, that is, the *Foundations of the Critique of Political Economy* and *Capital*, Marx draws on Engels' study in order to develop a comprehensive theory of capitalism. He too traces the movement from handwork to machine manufacture and outlines how the machines created an entirely new form of labor which was detrimental to the workers themselves on many levels. Like Engels, Marx goes into elaborate detail, tracing step-by-step the way in which the machines were created and how the workers interacted with them in the production process. It should be noted that these works by Marx all draw on Engels' *The Condition of the Working Class in England*, which brought the issue to his attention.

Some work has been done trying to connect the Marxist tradition with the later development of phenomenology. Most of this research dates from the last

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<sup>2</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 167f. (*The Condition of the Working Class in England*, pp. 144f.)

decades of the Soviet Union and the Cold War in the 1970s and 1980s,<sup>3</sup> and interest in this connection has tapered off in recent years with only a few notable exceptions, such as the recent anthology, *Marxism and Phenomenology: The Dialectical Horizons of Critique*.<sup>4</sup> Most of the studies that try to link the two traditions focus on social theory. Taking this research as my point of departure, I wish to argue that Engels provides a kind of a phenomenology of the body in his analyses of the relation of the worker to the machine in *The Condition of the Working Class in England*. To date the secondary literature has given little detailed attention to the body of the worker in the writings of either Engels or Marx, and no attention has been given to the phenomenological dimension of this early work by Engels.

One pioneering work on the general topic of the connection between the two traditions is the article by Husserl's student, Ludwig Landgrebe, entitled "The Problem of Teleology and Corporality in Phenomenology and Marxism."<sup>5</sup> In this work Landgrebe connects Husserl's account of the experience of the body as movement and motion (in Husserl's jargon, *Kinästhesie*) with Marx's notion of sensuous activity.<sup>6</sup>

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<sup>3</sup> William McBride, "Marxism and Phenomenology," *Journal of the British Society for Phenomenology*, vol. 6, no. 1, 1974, pp. 13-22. Thomas Nemeth, "Capital and Phenomenology," *Studies in Soviet Thought*, vol. 16, nos. 3-4, 1976, pp. 239-249. Marx W. Wartofsky, "Consciousness, Praxis, and Reality: Marxism vs. Phenomenology," in *Interdisciplinary Phenomenology*, ed. by Don Ihde and Richard M. Zaner, Dordrecht: Springer, 1977 (*Selected Studies in Phenomenology and Existential Philosophy*, vol. 6), pp. 133-151. Bernhard Waldenfels, Jan M. Broekman, Ante Pažanin (eds.), *Phänomenologie und Marxismus*, vols. 1-4, Frankfurt am Main: Suhrkamp, 1977-1979. (Partial English translation as *Phenomenology and Marxism*, trans. by J. Claude Evans Jr., London: Routledge & Kegan Paul, 1984. Shirley R. Pike, *Marxism and Phenomenology*, London and Sydney: Croom Helm, 1986. A forerunner of this research was the work of the Vietnamese philosopher Trần Duc Thao, "Marxisme et phénoménologie," *La Revue internationale*, no. 2, 1946, pp. 168-174. (English translation: "Marxism and Phenomenology," trans. by Nicolas de Warren, *Graduate Faculty Philosophy Journal*, vol. 30, no. 2, 2009, pp. 327-335.)

<sup>4</sup> Bryan Smyth and Richard Westerman (eds.), *Marxism and Phenomenology: The Dialectical Horizons of Critique*, Lanham: Lexington Books, 2020.

<sup>5</sup> Ludwig Landgrebe, "Das Problem der Teleologie und der Leiblichkeit in der Phänomenologie und im Marxismus," in *Phänomenologie und Marxismus*, ed. by Bernhard Waldenfels, Jan M. Broekman, Ante Pažanin, vol. 1, Frankfurt am Main: Suhrkamp, 1977, pp. 71-104. (English translation: "The Problem of Teleology and Corporality in Phenomenology and Marxism," in *Phenomenology and Marxism*, ed. by Bernhard Waldenfels, Jan M. Broekman, Ante Pažanin, pp. 53-81.) See also Noé Expósito and Agata Bąk, "Phenomenology and Marxism according to Landgrebe: On 'The Problem of Teleology and Corporeality in Phenomenology and Marxism,'" *Analecta Hermeneutica*, vol. 12, 2021, pp. 1-14.

<sup>6</sup> This refers to the first and fifth of the "Theses on Feuerbach," where Marx criticizes Feuerbach of dwelling in abstract thinking and failing to grasp practical, human-sensuous activity. Karl Marx, "Thesen über Feuerbach," in *Marx-Engels-Werke*, vols. 1-46, ed. by the Institut für Marxismus-Leninismus, Berlin: Dietz, 1956-2018, vol. 3, pp. 5-7. (English translation: "Theses on Feuerbach," in *The Marx-Engels Reader*, ed. by Robert C. Tucker, New York and London: W.W. Norton & Company, 1978, pp. 143-145.)

As the title indicates, he tries to establish a necessary link between teleology and corporality both of which appear in the work of Marx and Husserl. Landgrebe singles out Husserl's late unfinished work, *The Crisis of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy* and *Ideas for a Pure Phenomenology*, among others for comparative analysis with Marx's early works and *A Contribution to the Critique of Political Economy*. The article is primarily about Husserl, and the comparison with Marx is quite limited, covering only the last few pages. Landgrebe focuses primarily on Marx's conception of nature and fails to recognize the importance of the accounts of the interaction between the human body, tools, and machines that are given by Engels and Marx. The connection that he wants to establish between phenomenology and Marxism is not grounded in any close reading of the texts and remains little more than a suggestion.

The Czechoslovak philosopher Jan Patočka was inspired by Landgrebe's attempt to connect Marx with Husserl's later philosophy.<sup>7</sup> He saw Husserl as a possible tool to explain and correct the development of Marxism into ideology and absolutism in the Soviet Union. He believes that Marx did not sufficiently develop a theory of subjectivity, which can be found in Husserl. His criticism was that Marx unfortunately remained within the Hegelian paradigm of seeing everything in terms of a historical process.<sup>8</sup> Thus, Marx conceived of the idea of the nature and the experience of work as something determined by this process. If the workers were conceived as an immanent part of a historical development, then there was no transcendent aspect, which would be necessary for the development of freedom and subjectivity. Patočka thus echoes Husserl's criticism of Hegel's historicism.<sup>9</sup> According to Patočka, Husserl's concept of transcendence is what is needed as a corrective for Marx. As was the case with Landgrebe, there is no real attempt to explore Marx's analyses of the tool or the machine, and no real mention of Engels' contribution at

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<sup>7</sup> For a useful overview see Ian H. Angus, *Groundwork of Phenomenological Marxism: Crisis, Body, World*, Lanham: Lexington Books, 2021, pp. 165-168.

<sup>8</sup> Jan Patočka, "Intellectuals and Opposition," in *Thinking After Europe: Jan Patočka and Politics*, ed. by Francesco Tava and Darian Meacham, London: Rowman and Littlefield, 2016, pp. 15-18. See also Jan Patočka, *An Introduction to Husserl's Phenomenology*, trans. by Erazim Kohák, Chicago and La Salle: Open Court, 1996, pp. 165-168. Jan Patočka, *Body, Community, Language, World*, trans. by Erazim Kohák, Chicago and La Salle: Open Court, 1988, pp. 71-76, pp. 85-86. Jan Patočka, *Heretical Essays in the Philosophy of History*, trans. by Erazim Kohák, Chicago and La Salle: Open Court, 1996, p. 27, pp. 144-147. See also Francesco Tava, "The Heresy of History: Patočka's Reflections on Marx and Marxism," in *Thinking After Europe: Jan Patočka and Politics*, ed. by Francesco Tava and Darian Meacham, London: Rowman and Littlefield, 2016, pp. 183-200.

<sup>9</sup> See Jon Stewart, "Hegel's Phenomenological Method and the Later Movement of Phenomenology," in the *Palgrave Handbook of German Idealism and Phenomenology*, ed. by Cynthia D. Coe, Cham: Palgrave Macmillan, 2021, pp. 457-480.

all. Instead, the connection that is made is rather general. In a sense it can be said that Patočka's goal is not to establish a relation between phenomenology and Marx but just the opposite, that is, to show how they are fundamentally at odds with one another. By contrast, I wish to explore in more detail the role of an *avant la lettre* phenomenology of the body in the thinking of Engels and Marx as a supplement to the previous research on the connection of phenomenology and Marxism.

A more important and more recent study is Ian H. Angus' *Groundwork of Phenomenological Marxism: Crisis, Body, World*.<sup>10</sup> In order to establish the connection between phenomenology and Marxism, this work compares bodily movement or kinaesthetic action, as understood in Husserl's phenomenology, with the idea of living labor as understood by Marx. In contrast to Landgrebe, Angus sees the importance of the role of technology in the discussion. He refers to this as Marx's "ontology of labor."<sup>11</sup> Angus' account is very rich and insightful. However, he devotes his analysis exclusively to the first volume of Marx's *Capital* and fails to recognize the importance of Engels' discussion of industrialization in *The Condition of the Working Class in England* as a phenomenological analysis. This will thus be my focus in the present article.

The interest in Marxism and phenomenology might in some ways seem *natural* since both Marx and Engels were in Berlin in their youth and were zealous readers of Hegel.<sup>12</sup> They were both familiar with Hegel's *Phenomenology of Spirit* and were influenced by his account of the lord and bondsman relation in the "Self-Consciousness" chapter. However, the relation between Hegel's conception of phenomenology and that of the later tradition of Husserl and others is by no means a straightforward matter.<sup>13</sup> So it does not follow that the interest in Hegel's phenomenology means that Marx and Engels can be automatically associated with

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<sup>10</sup> Ian H. Angus, *Groundwork of Phenomenological Marxism: Crisis, Body, World*, Lanham: Lexington Books, 2021.

<sup>11</sup> *Ibid.*, e.g., pp. 161ff., pp. 178ff.

<sup>12</sup> See Jon Stewart, *Hegel's Century: Alienation and Recognition in a Time of Revolution*, Cambridge: Cambridge University Press, 2021, pp. 143-178, pp. 258-281.

<sup>13</sup> See Jon Stewart, "Hegel's Phenomenological Method and the Later Movement of Phenomenology," in the *Palgrave Handbook of German Idealism and Phenomenology*, ed. by Cynthia D. Coe, pp. 457-480. Jon Stewart, "Hegel's Philosophy of Religion as a Phenomenology," vol. 75, no. 5, 2020, *Filozofia*, pp. 386-400. Alphonse De Waelhens, "Phénoménologie husserlienne et Phénoménologie hégélienne," *Revue Philosophique de Louvain*, tome 52, no. 34, 1954, pp. 234-249. Frank M. Kirkland, "Husserl and Hegel: A Historical and Religious Encounter," *Journal of the British Society for Phenomenology*, vol. 16, no. 1, 1985, pp. 70-87. Quentin Lauer, "Phenomenology: Hegel and Husserl," in *Beyond Epistemology: New Studies in the Philosophy of Hegel*, ed. by Frederick G. Weiss, The Hague: Martinus Nijhoff, 1975, pp. 174-196. Tanja Staehler, *Hegel, Husserl and the Phenomenology of Historical Worlds*, London and New York: Rowman & Littlefield, 2019.

Husserl's phenomenology. For the purposes of this paper, when I talk about phenomenology here, I am thus using the term in the sense of Husserl and his twentieth-century followers and not that in Hegel's sense.

The interest in Marxism and phenomenology might also in some ways seem quite *unnatural*. The historical orientation of the theories of Engels and Marx, which they inherited from Hegel, would seem completely antithetical to Husserl's approach (as Patočka is keen to point out). Husserl wanted to bracket things such as the social or historical context in order to study the phenomena themselves as we experience them. By contrast, for Marx and Engels, seeing phenomena such as the industrialization of labor, alienation, exploitation, etc. in their historical context is precisely the key to understanding these things. From this perspective, it would seem that we are dealing with two incompatible methodologies and paradigms of understanding. However, I submit the descriptions of labor and the body given by Engels can be understood as phenomenological. The key question is the temporal perspective. If our focus is on the development of the modalities of labor over time, this would seem to preclude a Husserlian analysis. However, if we stick to the descriptions given by Engels of the experience of the worker abstracted from the temporal or historical process, then this can be seen as something approaching a Husserlian methodology. Of course, I do not deny both elements are present in Engels and, indeed, in this article. First, Engels contrasts the nature of labor from the time *before* the industrial revolution, which was dominated by craftsmanship, and the time *after*, when labor was organized into factory systems. This aspect corresponds to the social-historical perspective. But, second, he also gives a detailed analysis of the experience of the factory worker on its own terms, which can be abstracted from the social-historical side. This aspect would amount to something closer to a phenomenological analysis. If we focus on this side, I wish to show that an *avant la lettre* phenomenology of the body can be found in Engels and also in Marx. This is an exploratory paper in the sense that I wish to see how far this thesis can be pushed, while of course being well aware of its limitations.

In *The Condition of the Working Class in England* Engels outlines systematically the miseries of the workers in England in the different spheres. A key to his argument concerns the interface between the human body and the machine. It might seem at first glance that the shift from handwork to machine work was an unqualifiedly positive development, marking a vast improvement with regard to the amount of labor expended to make a given product, but in fact the working conditions created by the factory system meant that there was much *more* work for those fortunate enough to have a job at all. More importantly for our purposes,

it also meant that the nature of the work was transformed,<sup>14</sup> which thus changed the immediate phenomenological experience of work. Industrialization resulted in unhealthy and dangerous work conditions, which had an immediate effect on the body of the worker.

In the book Engels takes a systematic approach to the subject. He begins by examining the conditions of the different kinds of industrial proletariat. This is the logical place to start since the creation of manufacture and factories was the reason for all the changes. Once industrialized manufacture was established, it had a knock-on effect in many other areas as well. The rapid increase in machine-manufactured goods created an insatiable need for large quantities of raw materials that were necessary for production. Thus, the number of workers employed in coal and metal mines in turn vastly expanded to meet the increased need. This is the second topic that Engels treats. These factors in turn had an impact on agricultural production, which Engels explores next. Finally, the need for increased labor in the different spheres caused a wave of immigration from Ireland as Irish workers precipitously rushed to try to find employment in the new factories that had quickly sprung up.<sup>15</sup> In the following I will focus on Engels' analysis of the use of machines and factory work. This means that it will be necessary to omit an account of the other troubling spheres of labor in the nineteenth century that Engels also treats, such as mining or agriculture. I will supplement his account by analyses of the same topics from different texts from Marx, highlighting his special focus on the human body and demonstrating how he too was attentive to the phenomenological aspects of what it is to inhabit a body and to experience the changes in the body caused by working with machines. At the end of the article, I will offer some brief reflections on the relevance of Engels for future research in phenomenology.

### **I. The Replacement of Handwork by Machines**

All forms of production require specific instruments, the most basic of which is the human hand. After the hand come simple tools, then more complex tools, and then machines of increasing complexity. In all these cases the tools and machines supplement and enhance the limited abilities of the human body. This movement

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<sup>14</sup> Karl Marx, *Das Kapital. Kritik der politischen Oekonomie*, Erster Band, Buch I: *Das Produktionsprozess des Kapitals*, 2<sup>nd</sup> improved edition, Hamburg: Otto Meissner, 1872 [1867], p. 483. (English translation. *Capital: A Critique of Political Economy*, vol. 1, *The Process of Capitalist Production*, trans. by Samuel Moore and Edward Aveling, New York: International Publishers, 1967, p. 461.)

<sup>15</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 32. (*The Condition of the Working Class in England*, p. 32.)

would seem to be a natural progress that does not change anything fundamental regarding the nature of the work itself. A machine is simply a particularly complex tool or instrument. Engels, however, shows that this is a mistaken view. At the beginning of *The Condition of the Working Class in England*, he traces the origins of the Industrial Revolution and how it radically transformed the nature of labor. Machines introduced into the textile industry in the second half of the eighteenth century were irresistible since they made it possible to produce products far more quickly and efficiently, resulting in production on a vast scale theretofore unseen. For Engels, the key shift was between the immediate handwork of the preindustrial era, where master craftsmen worked directly with the raw materials with their own hands, and the use of the new machines, which worked on the materials, while the role of the worker was relegated to one of attending to the machines. According to Engels, this was the very root of industrialization that changed everything.

Machines were created by observation of the practices of the craftsmen working with their tools. The inventors tried to come up with ways to mechanize the movements of the craftsmen during their work. In *Capital* Marx explains, the “machine is only a more or less altered mechanical edition of the old handicraft tool.”<sup>16</sup> The act of a person working with a saw is mirrored by a sawing machine, and the act of a person using a knife is mirrored by a chopping machine, etc. In this way “[t]he machine proper is therefore a mechanism that, after being set in motion, performs with its tools the same operations that were formerly done by the workman with similar tools.”<sup>17</sup> As machines were further developed and increased in size, the mirroring of the work of the craftsman, although less recognizable, was still present:

The operating part of the boring machine is an immense drill driven by a steam-engine....The mechanical lathe is only a cyclopean reproduction of the ordinary foot-lathe; the planing machine, an iron carpenter, that works on iron with the same tools that the human carpenter employs on wood; the instrument that, on the London wharves, cuts the veneers, is a gigantic razor; the tool of the shearing machine, which shears iron as easily as a tailor’s scissors cut cloth, is a monster pair of scissors; and the steam-hammer works with an ordinary hammer head, but of such a weight that not Thor himself could wield it.<sup>18</sup>

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<sup>16</sup> Marx, *Das Kapital*, Erster Band, p. 387. (*Capital*, vol. 1, p. 373.)

<sup>17</sup> Marx, *Das Kapital*, Erster Band, p. 387. (*Capital*, vol. 1, p. 374.)

<sup>18</sup> Marx, *Das Kapital*, Erster Band, p. 401. (*Capital*, vol. 1, p. 385.)

The enormous scale of these machines gave them the appearance of giants, but in the end the basic functions that they were performing were derived from the work of the craftsman and his basic tools. It is now the machine that possessed and operated the tools, while the humans were reduced to looking on.

When the tool is taken out of the hand of the craftsman and made a mechanism of a machine, the dynamic of the interface between the individual and the external object that helps him in the production is changed radically. By giving up his tools, the worker is also obliged to hand over to the machine his skill to operate the tool, thus depriving him of what was once his most important asset on the labor market.<sup>19</sup> All of the workers are leveled to the same low value. Now specialized skills merely amount to minding different machines. Humans become necessary parts for the smooth and continuous running of the machines. Marx explains, "Machinery... transform[s] the workman, from his very childhood, into a part of a detail-machine [*in den Theil einer Theilmaschine zu verwandeln*]."<sup>20</sup> Workers become readily replaceable without any interruption of the production. The individuality of the worker is lost, and the idea that workers are human being gives way to the idea that they are interchangeable parts of the overall factory system, like screws, nails, sheets of metal, etc.

The machine itself has a body that, although it looks like something very different, is modelled on the human body and its capabilities to use tools. The machine has, so to speak, arms and hands for cutting, sawing, weaving, etc. The tools, by contrast, were equipped with handles, and grips suitable for use by the human hand, and therefore it was natural to see them as extensions of the human appendages. However, with machines this was no longer necessary, and the tools could be activated mechanically with no attention to the requirements and limitations of the human hand. As will be seen below, this attempt to match the movement of the human body to create a machine later becomes inverted as the workers were forced to model their movements on the requirements of the machines. In the first instance the human body had a defining impact on the design of the machines, and then later the machines had a defining impact by changing the physical body of the worker compelled to attend it.<sup>21</sup>

An individual craftsman was limited in the number of tasks that he could perform at the same time. His limitation consisted in the fact that his body had only two hands and two feet. By contrast, mechanisms could be built with multiple "hands" doing several tasks simultaneously. Moreover, the human body represented

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<sup>19</sup> Marx, *Das Kapital*, Erster Band, p. 441. (*Capital*, vol. 1, p. 420.)

<sup>20</sup> Marx, *Das Kapital*, Erster Band, p. 443. (*Capital*, vol. 1, p. 422.)

<sup>21</sup> Marx, *Das Kapital*, Erster Band, p. 444. (*Capital*, vol. 1, p. 422.)

a natural limit to the amount of time that the craftsman could work. He always needed to stop, rest, eat, drink, and sleep. By contrast, the machine, run by water or steam power, never grew tired and could continue indefinitely. The body of the machine was thus infinitely more powerful and durable than the human body could ever be. The machine could have multiple mechanisms, each performing specialized tasks simultaneously. This eliminated the previous division of labor among the craftsmen who were specialized experts for the individual jobs. The use of ever larger machines with increasing abilities to perform individual parts of the job meant that the hands of the craftsmen were no longer relevant for the production, and the owners could thus cut expenses by employing fewer workers whose jobs had been rendered superfluous. In the world of machines, the specialized skills of the old craftsmen no longer had any market value.

From the perspective of the entrepreneur, the goal was to turn the raw materials into a product that was suitable for sale. The challenge was how to do this at a cost that was as low as possible. In the preindustrial era, this process was under the control of the craftsman and his family. In industrial manufacture, this is taken out of the hands of the craftsman and given to machines and the complex system surrounding their use in the factory. Marx explains this transformation as follows in the *Grundrisse*,

But, once adopted into the production process of capital, the means of labour passes through different metamorphoses, whose culmination is the machine, or rather, an automatic system of machinery...set in motion by an automaton, a moving power that moves itself; this automaton consisting of numerous mechanical and intellectual organs, so that the workers themselves are cast merely as its conscious linkages.<sup>22</sup>

It is the machines that work and actually create the product, and the job of the humans is simply to keep them running. Marx continues,

In no way does the machine appear as the individual worker's means of labour. Its distinguishing characteristic is not in the least, as with the means of labour, to transmit the worker's activity to the object; this activity, rather, is posited in such a way that it merely transmits the machine's work, the machine's action, on to the raw material—supervises it and guards against

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<sup>22</sup> Karl Marx, *Grundrisse der Kritik der politischen Ökonomie*, in *Marx-Engels-Werke*, vol. 42, p. 592. (English translation: *Grundrisse, Foundations of the Critique of Political Economy*, trans. by Martin Nicolaus, London: Penguin, 1993, p. 692.)

interruptions. Not as with the instrument, which the worker animates and makes into his organ with his skill and strength, and whose handling therefore depends on his virtuosity.<sup>23</sup>

There is thus a fundamental difference between the craftsman's relation to his tools and the factory worker's relation to the machines. The machine is not a tool under the direct control of the worker. Rather, the machine is the master that dictates and determines the activity of the worker. The active agent has changed from human to machine.

The hands of the machine, so to speak, replaced the hands of the worker. Prior to the introduction of machines, the textile business was the domain of self-employed individuals and their families: "Wife and daughter spun the yarn that the father wove or that they sold, if he did not work it up himself."<sup>24</sup> This provided a comfortable living and a large degree of freedom since the weavers could work as much as they wanted and take time off when they pleased. They had complete control over the production process. Moreover, they usually lived in the countryside and worked at home under healthy conditions. There was no need to spend time travelling to their workplace. The development of large machines and factories, however, led to centralization and urbanization. This meant that workers streamed to the large cities in search of employment. As a result, they ended up in overcrowded workers' ghettos with very poor, unsanitary living conditions. They were obliged to live in shabby dwellings near the factories since, given the large number of workers required, there was a scarcity of available housing. The low wages of the workers also limited what they could afford to pay in rent, thus forcing many to take lodgings that were very small or dilapidated.

The beginnings of the process of industrialization can be found in the spinning machine of John Wyatt that was invented in 1735. This allowed weavers to spin without using their fingers. This efficiency of this was increased with the creation of the spinning jenny in 1764. The work of spinning was usually carried out by a single weaver with a spinning wheel that had a single spindle. The spinning jenny, by contrast, had as many as eighteen spindles, which worked on their own, with only an operator of the machine.<sup>25</sup> Now it was possible to produce yarn quickly and cheaply, and this more effective form of production led to a drop in prices of

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<sup>23</sup> Marx, *Grundrisse der Kritik der politischen Ökonomie*, pp. 592f. (*Grundrisse, Foundations of the Critique of Political Economy*, p. 692.)

<sup>24</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 11. (*The Condition of the Working Class in England*, p. 15.)

<sup>25</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 14f. (*The Condition of the Working Class in England*, pp. 17f.)

textiles. Due to their low prices, textile products became increasingly popular, resulting in an increased demand. Alone, the craftsmen could not compete with the quicker and more efficient machines run by a group of operators. The capitalists reduced the number of operators by making use of waterpower as the source of energy to run the machines. Marx explains, "Another explanation of the difference between tool and machine is that in the case of a tool, man is the motive power, while the motive power of a machine is something different from man, as, for instance, an animal, water, wind, and so on."<sup>26</sup> This replaced the human labor which was previously required since the spinning wheel and the loom were operated by hand. But a single spinner with a single spinning wheel and a finite amount of physical strength and energy was no match for the spinning jenny run by waterpower.

Further inventions such as the spinning throstle, the power loom and the steam engine increased productivity and minimized the need for actual weavers even more. Engels explains,

With these inventions, since improved from year to year, the victory of machine-work over handwork in the chief branches of English industry was won; and the history of the latter from that time forward simply relates how the handworkers have been driven by machinery from one position after another.<sup>27</sup>

As machines became larger and more sophisticated, capable of performing an increasing number of tasks, it was clear that there was no way back for the craftsmen, whose way of life had been rendered antiquated. The craftsman's perception of himself and his own body was changed from being something positive and capable to being something negative and useless. His skilled hands and personal creativity no longer possessed any value. In the world of machines, he struggled to redefine himself in a positive manner.

## II. The Dehumanization of the Workers

The rise of manufacture had a polarizing effect of dividing people into the rich and the poor, while the middle class slowly disappeared.<sup>28</sup> With its need for a large workforce, industrial manufacture created a clearly defined working class with

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<sup>26</sup> Marx, *Das Kapital*, Erster Band, p. 385. (*Capital*, vol. 1, p. 372.)

<sup>27</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 17f. (*Condition of the Working Class in England*, p. 21.)

<sup>28</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 35. (*The Condition of the Working Class in England*, p. 34.)

its own distinct problems and interests—the proletariat.<sup>29</sup> By contrast, the owners of the machines and the factories made large profits and became increasingly wealthy. They thus came to form a much smaller, but no less well-defined social class. Society became split, and class antagonisms arose. The introduction of machines thereby transformed the social order, reconfiguring society as a whole.

The new class of proletariat lived an impoverished existence since the wages that they were obliged to accept were so low. There was no chance of social mobility, and the workers were condemned to an existence in the factories.<sup>30</sup> Since the factory owners were the ones who possessed the machines, they held all the cards. It was impossible for a factory worker ever to save up enough money from his low wages to dream of buying a machine of his own and setting up his own factory. The workers were thus trapped in a miserable cycle of perpetual poverty and uncertainty of employment that was impossible to break out of.

Engels recounts in hard numbers the vast increase in the production of different kinds of textiles that took place in Britain in the second half of the eighteenth century. This brought with it an enormous amount of capital since the products, now readily available at cheap prices, were sold in vast quantities on the large domestic and foreign markets. Correspondingly, the number of people employed in the textile industry grew exponentially during this period. This would all seem to be a development worthy of praise and admiration, a great victory for technology, but there was a heavy human price to be paid for this success.

We tend to think of humans as the creators of tools which they use as means to further specific ends. The tools are extensions of the human body and allow us to do things that the body alone would be incapable of. For the handworker this was also the case. But an inversion takes place when machines are introduced. It is in this context where the phenomenological aspect of Marx and Engels comes out most clearly. Marx explains as follows in *Capital*,

it is not the workman that employs the instruments of labour, but the instruments of labour that employ the workman. But it is only in the factory system that this inversion for the first time acquires technical and palpable reality. By means of its conversion into an automaton, the instrument of labour confronts the labourer, during the labour process...that dominates, and pumps dry, living labour power.<sup>31</sup>

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<sup>29</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 28. (*The Condition of the Working Class in England*, p. 29.)

<sup>30</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 28f. (*The Condition of the Working Class in England*, pp. 29f.)

<sup>31</sup> Marx, *Das Kapital*, Erster Band, pp. 445f. (*Capital*, vol. 1, p. 423.)

When a craftsman is working with a tool, he has control over it and is the *subject* who determines its use, qua *object*, in the work. The situation is reversed with the worker's relation to the machine. The machine becomes a subject, and, as Marx explains, "it is the machine which possesses skill and strength in place of the worker, [and] is itself the virtuoso, with a soul of its own in the mechanical laws acting through it."<sup>32</sup>

An important part of this dynamic concerns the need to establish long working hours. The machines are very costly and thus represent the central outlay and asset of the entrepreneur. They regularly become outdated and need to be replaced by new, more efficient models. Thus, from a cost-benefit perspective, it is in the capitalist's interest to get the maximum use from each machine that is purchased. Since the machines depreciate, time is the enemy. This means that there is a strong financial incentive to keep all the machines constantly running. Moreover, when stopped, they are not producing, and, in addition to the depreciation of the machines, the capitalist is losing potential revenue. The need to keep the machines running gave rise to extremely long working hours and the creation of the night shift, which allowed production to continue around the clock. Owners and managers were reluctant to stop the machines even for a short time to clean them, which meant that the workers were obliged to do so while the machines were running. This resulted in numerous accidents and injuries to the workers.

Since the imperative was to keep the machines running, it was the machines themselves and their needs, so to speak, that dictated the work. The workers had to adapt themselves to the machines. The workers were now the means that the machine needed to fulfill its end. Marx explains, "The worker's activity, reduced to a mere abstraction of activity, is determined and regulated on all sides by the movement of the machinery, and not the opposite."<sup>33</sup> The workers were no longer regarded as humans, but rather their bodies were seen as an extension of the machine. This is just the opposite of the earlier, more intuitive principle of handwork, where the tools were extensions of the human body. Marx explains, that while for the handworker "the movements of the instrument of labour proceed from him, here [sc. in industrial manufacture] it is the movements of the machine that he must follow... In the factory we have a lifeless mechanism independent of the workman, who becomes its mere living appendage."<sup>34</sup> The body of the workers is

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<sup>32</sup> Marx, *Grundrisse der Kritik der politischen Ökonomie*, p. 593. (*Grundrisse, Foundations of the Critique of Political Economy*, p. 693.)

<sup>33</sup> Marx, *Grundrisse der Kritik der politischen Ökonomie*, p. 593. (*Grundrisse, Foundations of the Critique of Political Economy*, p. 693.)

<sup>34</sup> Marx, *Das Kapital*, Erster Band, p. 444. (*Capital*, vol. 1, p. 422.)

used by the machine just like another cog or lever. Humans become an accessory to the machines. Engels explains, “The industrial revolution...[made] the workers machines pure and simple, taking from them the last trace of independent activity.”<sup>35</sup> The dehumanization of the workers is an important element in industrial production.

The factory system was complex and involved a number of different elements working together: the regular acquisition of the raw materials, the purchase of the machines, the management of the workforce, the transport of the product to the markets, etc. From the perspective of the owners all these elements needed to be attended to at all times. It was an elaborate system, and with each rubric the owners needed to assure themselves that they were keeping their expenses down as much as possible. This means that the workforce, that is, human labor was reduced to a part of the calculation. Engels writes, “the human being, the worker, is regarded in manufacture simply as a piece of capital for the use of which the manufacturer pays interest under the name of wages.”<sup>36</sup> Human labor is thus regarded as just an expenditure, and this reduces humans to a specific price that accords with the availability of the number of workers on the labor market. This dynamic encourages the owners to disregard the workers as fellow human beings and to think of them more in terms of a monetary calculation. This naturally leads the owners to be generally indifferent to the fate of the workers or their own wishes regarding the work itself. All of this is simply wasted breath for the owners who are best served by docile and obedient workers who operate the machines for the long hours required and never make a complaint about the difficulty of the work or the low wages. In short, the best situation for the owners would be if the workers could be as much like the machines as possible. The health and safety of the workers were not regarded as an imperative but instead as a part of the overall calculation of expenditures and profits. If safety measures were too costly, then the owners were tempted to cut down on them by dropping them from the budget, regardless of the consequences for the workers.

Since the workers lost control over their work and became the slaves to the machines, they felt a sense of alienation towards the machines which confronted them as “an alien power.”<sup>37</sup> This is a part of Marx’s well-known theory of alienation.<sup>38</sup> The machines were not like tools, extensions of the human body that were

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<sup>35</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 14. (*The Condition of the Working Class in England*, p. 17.)

<sup>36</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 33f. (*The Condition of the Working Class in England*, p. 33.)

<sup>37</sup> Marx, *Grundrisse der Kritik der politischen Ökonomie*, p. 593. (*Grundrisse, Foundations of the Critique of Political Economy*, p. 693.)

<sup>38</sup> See Stewart, *Hegel’s Century: Alienation and Recognition in a Time of Revolution*, pp. 150-154.

*zuhanden* in Heidegger's terminology. Tools were used by the craftsman in an immediate and unreflective manner. Heidegger's frequent use of the handworker using tools to illustrate his concept of *Zuhandenheit* is well known. By contrast, the machines were rather *vorhanden*, the objects of curiosity, puzzlement, and reflective thought. The individual worker was dwarfed by the machine, and his work appeared tiny and insignificant in the big picture. As an individual he no longer had control over his work, which now appeared completely meaningless since his contribution to the final product was so small.

### III. The Machine and the Human Body

It is highly stressful for the workers to keep up with the machines, which never grow weary. One dares not miss a beat, lest one fall behind in feeding or attending to the machine. Engels explains the tyranny of the machine as follows,

Moreover, he [sc. the machine operator] must not take a moment's rest; the engine moves unceasingly; the wheels, the straps, the spindles hum and rattle in his ears without a pause, and if he tries to snatch one instant, there is the overlooker at his back .... This condemnation to be buried alive in the mill, to give constant attention to the tireless machine is felt as the keenest torture by the operatives, and its action upon mind and body is in the long run stunting in the highest degree.<sup>39</sup>

Engels explains in detail the extensive system of fines and penalties that the factory owners imposed on workers for a vast number of seemingly minor infractions.<sup>40</sup> Many of these were aimed at keeping the machines running at all times. Fines were thus exacted for workers who left the machines unattended by taking unauthorized breaks or stepping away for a moment to relieve themselves. Female workers in an advanced state of pregnancy were fined for sitting down to take a brief rest.<sup>41</sup>

#### A. The Physical Effects

Engels did extensive research to document the vast array of health problems that workers experienced as a result of the poor working conditions. What is

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<sup>39</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 216. (*The Condition of the Working Class in England*, p. 185.)

<sup>40</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 218-221. (*The Condition of the Working Class in England*, pp. 187-189.)

<sup>41</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 220f. (*The Condition of the Working Class in England*, p. 189.)

particularly interesting for our purposes is that in the interface between machines and workers, the machines in effect *reshaped* the human body. By making constant repetitive movements over long hours, the workers developed serious health issues that literally changed the form of the natural human physiology. Engels cites multiple labor reports and testimonies from physicians about the negative physical effects of working in the factories. He describes how working with machines for long hours resulted in contortions of the skeleton, leaving large numbers of workers crippled: "This distortion usually consists of a curving of the spinal column and legs."<sup>42</sup> Engels recounts how his own personal experience squares with the official medical records of experts asked to report on the health risks of factory workers: "I have seldom traversed Manchester without meeting three or four of them [sc. crippled workers], suffering from precisely the same distortions of the spinal columns and legs as that described, and I have often been able to observe them closely."<sup>43</sup> Engels describes in detail how the factory work had changed the form of the human body:

It is evident, at a glance, whence the distortions of these cripples come, they all look exactly alike. The knees are bent inward and backwards, the ankles deformed and thick, and the spinal column often bent forwards or to one side... Other deformities also have proceeded from this overwork, especially flattening of the foot.<sup>44</sup>

By adapting their movements to the needs of the machines, the worker suffered irreparable physical damage. Simple tools are made to conform to the structure and limitations of the human body. This allows the one using the tool to remain in control. When working on one's own, one can put down a tool at any time. However, machines have their own demands and make no allowance for the natural form of the human body. It is the humans who must adapt themselves to the machines. In the preindustrial system the craftsman could simply take a break or stop when he got tired; however, in the factory system the worker was forced to work long hours with only a very small number of short breaks. With no possibility of stopping, the human body was not given the chance to recover from the disabling movements, and over time they produced fixed physical distortions. For the worker, this was a new experience of the body that came with industrialized labor.

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<sup>42</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 188f. (*The Condition of the Working Class in England*, p. 162.)

<sup>43</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 190. (*The Condition of the Working Class in England*, p. 163.)

<sup>44</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 190f. (*The Condition of the Working Class in England*, p. 163.)

The deformities are only one part of the many negative physical symptoms that result from working in the factories:

In cases in which a stronger constitution, better food, and other more favourable circumstances enabled the young operative to resist this effect of a barbarous exploitation, we find, at least, pain in the back, hips, and legs, swollen joints, varicose veins, and large, persistent ulcers in the thighs and calves. These afflictions are almost universal among the operatives.<sup>45</sup>

Although the symptoms in these cases fall short of outward deformity, nonetheless they also evidence that the work with the machines changed human physiology. The work stunted the growth of the child workers who were most all underweight.<sup>46</sup> This was not just a problem with the delicate bodies of children but also with young adults, who, at the height of their physical prowess, could not escape these symptoms and the long-term consequences for their health. The cause of these ailments was the need to stay on one's feet for long hours and to match one's movements to those of the machine. With all these health problems, factory workers were rarely able to continue working after the age of 45.<sup>47</sup> With the workers thus forced into early retirement, their financial future after this time was highly precarious.

Working with machines likewise took a serious toll on the female workers, again causing numerous physical deformities. Engels explains,

The influence of factory work upon the female physique also is marked and peculiar. The deformities entailed by long hours of work are much more serious among women. Protracted work frequently causes deformities of the pelvis, partly in the shape of abnormal position and development of the hip bones, partly of malformation of the lower portion of the spinal column.<sup>48</sup>

As a result of this, the female workers suffered from more difficult pregnancies and childbirth. They had a greater incidence of miscarriage than women who did not work in factories. Pregnant women also felt obliged to continue to go to work up

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<sup>45</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 191. (*The Condition of the Working Class in England*, p. 164.)

<sup>46</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 196. (*The Condition of the Working Class in England*, p. 168.)

<sup>47</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 197. (*The Condition of the Working Class in England*, pp. 168f.)

<sup>48</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 198. (*The Condition of the Working Class in England*, pp. 169f.)

until the last minute before delivery since they could not afford the loss of wages or feared losing their jobs completely if they were gone for too long. Likewise, they were pressured to return to work as quickly as possible after giving birth.

Engels also recites a long list of abnormalities in the growth and development of girls who worked in the factories.<sup>49</sup> His account clearly demonstrates how the deformities and injuries of the girls mirror the machine's requirements:

Another effect of flax-spinning is a peculiar deformity of the shoulder, especially a projection of the right shoulder-blade, consequent upon the nature of the work. This sort of spinning and the throstle-spinning of cotton frequently produces diseases of the kneepan, which is used to check the spindle during the joining of broken threads. The frequent stooping and the bending to the low machines common to both these branches of work have, in general, a stunting effect upon the growth of the operative.<sup>50</sup>

For each requirement of the machine, there arises a corresponding physical change in the young girls charged with operating it over long periods. In all these cases of men and women, the work with the machines gave them an immediate experience of their bodies that they had not previously known. The new industrial work conditions changed the phenomenology of the body.

Newton's third law of motion states that "To every action, there is opposed an equal reaction."<sup>51</sup> This could be seen in the changes to the body that were suffered by all the workers. The design and structure of the machine required certain specific forms of assistance from the worker, pulling levers, feeding the machine, etc. In themselves these were not particularly complex or difficult; however, when these movements were repeated at length over several hours, the body could not keep up. When the workers, despite their fatigue and bodily pain, were nonetheless forced to continue with the work by the overseers, then what began as aches in the arms or legs became permanent deformities of the body.

The most dramatic changes to the body came not over time but immediately in the form of industrial accidents that took place precisely in the interface of the machine and the human body. Engels recounts instances of workers losing fingers,

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<sup>49</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 199f. (*The Condition of the Working Class in England*, p. 171.)

<sup>50</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 201f. (*The Condition of the Working Class in England*, pp. 172f.)

<sup>51</sup> *Sir Isaac Newton's Mathematical Principles of Natural Philosophy and his System of the World*, vols. 1-2, trans. by Andrew Motte, ed. by Florian Cajori, Berkeley: University of California Press, 1934, vol. 1, p. 13.

arms, legs, and feet to the machines.<sup>52</sup> It was not uncommon for laborers to die from being maimed in the gears. Child workers were especially vulnerable to get caught up in moving straps that carried them at high speeds, throwing them into the machines or against walls, resulting in immediate death. The incidence of these kinds of accidents was very high, which made the factory as dangerous a workplace as a mine. In cases where the worker was maimed and thus incapacitated for any further labor, the owner initially had no legal responsibility to offer them compensation, and the disabled workers were left without any means to support themselves.

### B. The Mental Effects

The negative results of working with machines not only concerned the body but also the mind. Although Engels spends less time on it than on the physical problems resulting from industrial labor, he nonetheless recounts several serious mental health issues that also arose among the workers. As noted, the laborer's mental experience of work in a factory was substantially different from what it had been in preindustrial times. The handworker took pride in his product and was motivated to do his best job in making it, thus demonstrating his particular skill and expertise. The handworker's product thus reflected the personal effort of the maker, which was in itself a gratifying reward for the labor. In a word, the worker can identify with his product. By contrast, with machine work, the worker is alienated from the final product since his contribution to it is negligible.<sup>53</sup> Moreover, it does not belong to him as something that he can use, sell, or dispose of as he likes. The handworker was thus naturally more interested and engaged in the work than any machine attendant could be.

The nature of the work with the machines demands little mental power. It does not facilitate the development of the mind or the cultivation of new skills. Engels explains,

The supervision of machinery, the joining of broken threads, is no activity which claims the operative's thinking powers, yet it is of a sort which prevents him from occupying his mind with other things... Thus it is, properly speaking, not work, but tedium, the most deadening, wearing process conceivable. The operative is condemned to let his physical and mental powers decay in this

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<sup>52</sup> Engels, *Die Lage der arbeitenden Klasse in England*, pp. 202f. (*The Condition of the Working Class in England*, pp. 173f.)

<sup>53</sup> Karl Marx, "Ökonomisch-philosophische Manuskripte aus dem Jahre 1844," in *Marx-Engels-Werke*, vol. 40, p. 512. (English translation: "Economic and Philosophical Manuscripts of 1844," in *The Marx-Engels Reader*, ed. by Robert C. Tucker, p. 72.)

utter monotony, it is his mission to be bored every day and all day long from his eighth year.... There is no better means of inducing stupefaction than a period of factory work.<sup>54</sup>

Working with machines over long periods of time diminishes the mental capacity of the workers. It requires just enough attention that one cannot step away from it for even a moment, yet it requires no intelligence or power of thought that would make it interesting and engaging. Marx describes it as a kind of “torture, since the machine does not free the labourer from work but deprives the work of all interest.”<sup>55</sup> The factory system treats humans like milling mules, whose lives are spent walking in a circle every day, and not being allowed a moment’s break, constantly being urged on by the whip of the overseer.

Working in factories had an especially pernicious effect on children since they never developed the mental habits of learning and thinking and ended up physically incapacitated and mentally burnt out at an early age. Engels mentions attempts of the government to impose requirements on the owners that children employed in their factories receive some minimal form of education with a specific number of hours of schooling each week. But little was done to enforce this, and the owners could easily set up *pro forma* schools where the children just whiled away the time or were “taught” by wholly unqualified and even analphabetic instructors.<sup>56</sup> All that was necessary to meet the official requirements was a signed paper by one of the owner’s lackies testifying that the child had been in school for the required number of hours each week.

Mental health was also an issue when it came to the uncertainty of the work in the factories. In contrast to the work of the independent craftsman, which could be continued for so long as he had the desire and the energy, the work of the machine operator was more precarious. Since work in the factory was not skilled labor, there was a large potential workforce for the owners to choose from. This meant that the owners could readily fire people, always knowing they would easily find replacements. Even in the best cases, the factories were known to have periodic layoffs of workers, due to the introduction of new machines which made numerous jobs redundant.<sup>57</sup> There was thus a great competition for even the worst of positions with the lowest pay. The tenuousness of the worker’s situation understandably caused stress and

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<sup>54</sup> Engels, *Die Lage der arbeitenden Klasse in England*, p. 216. (*The Condition of the Working Class in England*, p. 185.)

<sup>55</sup> Marx, *Das Kapital*, Erster Band, p. 444. (*Capital*, vol. 1, p. 423.)

<sup>56</sup> Marx, *Das Kapital*, Erster Band, p. 418. (*Capital*, vol. 1, p. 400.)

<sup>57</sup> Marx, *Das Kapital*, Erster Band, p. 485. (*Capital*, vol. 1, p. 462.)

anxiety about the future, which led to a general sense of demoralization. Here too it is evident that industrial labor radically changed the phenomenological experience of work.

#### **IV. Engels' Phenomenology of the Body**

It should be noted that Marx and Engels, despite their condemnation of the working conditions in the factory, were not critics of technology or the factory as such. They were neither Romantics nor Luddites who wished to return to a preindustrial era. Their goal was rather to make use of the new technological developments for the benefit of all and not just for the class of owners. They believed that if the factories could be collectively owned and run by the workers themselves, then the horrors of industrial labor could be eliminated. This would develop into more meaningful work that the workers could enjoy and identify with. In a communist society no one would be obliged to work long hours for meager pay under very dangerous work conditions.

The theories of Marx and Engels are often written off today as irrelevant. It has been claimed that the collapse of the Soviet Union has conclusively demonstrated the unviability of the social-economic model that they proposed. It has also been argued that their understanding of capitalism was based primarily on the nineteenth-century model of factory labor, which has largely disappeared. In most places the greatest evils that they describe, such as child labor and long working hours, have been eliminated due to more rigorous legislation and enforcement. The critics ask then if Marx and Engels have anything to say that pertains to the world as we know it today. This topic is, of course, far too broad to be addressed here. However, I do believe that their ideas are relevant for the ever-growing field of modern phenomenology.

We can see in Engels' *The Condition of the Working Class in England* and the subsequent works of Marx a phenomenology of the body in their analyses of the experiences of industrialized labor. Specifically, their attentiveness to the shift from the work experience of the craftsman to that of a factory worker is insightful with respect to the immediate perception and lived experience of the body. The analysis of the changing role of the hand in the work process suggests a useful supplement to the current research in the phenomenology of the body.

It might be argued that today the term "phenomenology" is attached to most everything. There are books written on the phenomenology of pregnancy, drug addiction, poverty, architecture, colonialism, etc. While some scholars might be understandably worried about a deflation of the term, there can be no doubt

that the extension of the phenomenological methodology into certain areas such as religion, education, and media studies has proven highly fruitful and insightful. This broader use of phenomenological approaches accounts in large part for the enormous expansion of the field in recent decades. The phenomenology of the body has proven to be one of the most valuable of these approaches. In this context, it is clear that Engels has something to contribute with his first-hand experience with and acute observation of factory workers and machines in his own time. This is an area that will, I believe, pay rich dividends for future research.

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