

KARL MARX

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(Rough Draft)

Translated with a Foreword
by Martin Nicolaus

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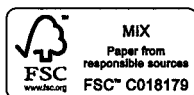
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accordingly in the most populous countries where there are most idle men that it is always most abundant. It is not called into action by a scarcity of men, but by the facility with which they are brought together.' (loc. cit.)⁷⁸

'Division of machines into (1) machines employed to produce power; (2) machines whose purpose is simply to transmit power and to perform the work.' (Babbage, Notebook, p. 10.)⁷⁹ 'Factory signifies the cooperation of several classes of workers, adults and non-adults, watching attentively and assiduously over a system of productive mechanisms, continually kept in action by a central force . . . excludes any workshop whose mechanism does not form a continuous system, or which does not depend on a single source of power. Examples of this latter class among textile factories, copper foundries etc. . . . In its most rigorous sense, this term conveys the idea of a vast automaton, composed of numerous *mechanical and intellectual organs* operating in concert and without interruption, towards one and the same aim, all these organs being subordinated to a motive force which moves itself.' (Ure, 13.)⁸⁰

The labour process. – Fixed capital. Means of labour. Machine. – Fixed capital. Transposition of powers of labour into powers of capital both in fixed and in circulating capital. – To what extent fixed capital (machine) creates value. – Lauderdale. Machine presupposes a mass of workers.

Capital which consumes itself in the production process, or fixed capital, is the *means of production* in the strict sense. In a broader sense the entire production process and each of its moments, such as circulation – as regards its material side – is only a means of production for capital, for which value alone is the end in itself. Regarded as a physical substance, the raw material itself is a means of production for the product etc.

But the determination that the use value of fixed capital is that which eats itself up in the production process is identical to the

78. Ravenstone, *Thoughts on the Funding System*, p. 45.

79. Babbage, *Traité sur l'économie des machines et des manufactures*, pp. 20-21.

80. Andrew Ure (1778-1857; Scottish doctor, chemist, astronomer, apologist for the factory system of the early nineteenth century and opponent of the Factory Acts), *Philosophie des manufactures*, Brussels, 1836 (French translation of the 2nd edition, London, 1835), Vol. I, pp. 18-19.

proposition that it is used in this process only as a means, and itself exists merely as an agency for the transformation of the raw material into the product. As such a means of production, its use value can be that it is merely the technological condition for the occurrence of the process (the site where the production process proceeds), as with buildings etc., or that it is a direct condition of the action of the means of production proper, like all *matières instrumentales*. Both are in turn only the material presuppositions for the production process generally, or for the employment and maintenance of the means of labour. The latter, however, in the proper sense, serves only within production and for production, and has no other use value.

Originally, when we examined the development of value into capital, the labour process was simply included within capital, and, as regards its physical conditions, its material presence, capital appeared as the totality of the conditions of this process, and correspondingly sorted itself out into certain qualitatively different parts, *material of labour* (this, not raw material, is the correct expression of the concept), *means of labour* and *living labour*. On one side, capital was divided into these three elements in accordance with its material composition; on the other, the *labour process* (or the merging of these elements into each other within the process) was their moving unity, the product their static unity. In this form, the material elements – material of labour, means of labour and living labour – appeared merely as the essential moments of the labour process itself, which capital appropriates. But this material side – or, its character as use value and as real process – did not at all coincide with its formal side. In the latter,

(1) the three elements in which it appears before the exchange with labour capacity, before the real process, appeared merely as quantitatively different portions of itself, as quantities of value of which it, itself, as sum, forms the unity. The physical form, the use value, in which these different portions existed did not in any way alter their formal identity from this side. As far as their formal side was concerned, they appeared only as quantitative subdivisions of capital;

(2) within the process itself, as regards the form, the elements of labour and the two others were distinct only in so far as the latter were specified as constant values, and the former as value-positing. But as far as their distinctness as use values, their

material side was concerned, this fell entirely outside the capital's specific character as form. Now, however, with the distinction between circulating capital (raw material and product) and *fixed capital* (means of labour), the distinctness of the elements as use values is posited simultaneously as a distinction within capital as capital, on its formal side. The relation between the factors, which had been merely quantitative, now appears as a qualitative division within capital itself, and as a determinant of its total movement (turnover). Likewise, the material of labour and the product of labour, this neutral precipitate of the labour process, are already, as *raw material* and *product*, materially specified no longer as material and product of labour, but rather as the use value of capital itself in different phases.

As long as the means of labour remains a means of labour in the proper sense of the term, such as it is directly, historically, adopted by capital and included in its realization process, it undergoes a merely formal modification, by appearing now as a means of labour not only in regard to its material side, but also at the same time as a particular mode of the presence of capital, determined by its total process – as *fixed capital*. 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* (system of machinery: the *automatic* one is merely its most complete, most adequate form, and alone transforms machinery into a system), 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. In the machine, and even more in machinery as an automatic system, the use value, i.e. the material quality of the means of labour, is transformed into an existence adequate to fixed capital and to capital as such; and the form in which it was adopted into the production process of capital, the direct means of labour, is superseded by a form posited by capital itself and corresponding to it. 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 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. Rather, it is the machine which possesses skill and strength in place of the worker, is itself the virtuoso, with a soul of its own in the mechanical laws acting through it; and it consumes coal, oil etc. (*matières instrumentales*), just as the worker consumes food, to keep up its perpetual motion. 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. The science which compels the inanimate limbs of the machinery, by their construction, to act purposefully, as an automaton, does not exist in the worker's consciousness, but rather acts upon him through the machine as an alien power, as the power of the machine itself. The appropriation of living labour by objectified labour – of the power or activity which creates value by value existing for-itself – which lies in the concept of capital, is posited, in production resting on machinery, as the character of the production process itself, including its material elements and its material motion. The production process has ceased to be a labour process in the sense of a process dominated by labour as its governing unity. Labour appears, rather, merely as a conscious organ, scattered among the individual living workers at numerous points of the mechanical system; subsumed under the total process of the machinery itself, as itself only a link of the system, whose unity exists not in the living workers, but rather in the living (active) machinery, which confronts his individual, insignificant doings as a mighty organism. In machinery, objectified labour confronts living labour within the labour process itself as the power which rules it; a power which, as the appropriation of living labour, is the form of capital. The transformation of the means of labour into machinery, and of living labour into a mere living accessory of this machinery, as the means of its action, also posits the absorption of the labour process in its material character as a mere moment of the realization process of capital. The increase of the productive force of labour and the greatest possible negation of necessary labour is the necessary tendency of capital, as we have seen. The transformation of the means of labour into machinery is the realization of this tendency. In machinery, objectified labour materially confronts living labour as a ruling power and as an active subsumption of the latter under itself, not only by appropriating it,

but in the real production process itself; the relation of capital as value which appropriates value-creating activity is, in fixed capital existing as machinery, posited at the same time as the relation of the use value of capital to the use value of labour capacity; further, the value objectified in machinery appears as a presupposition against which the value-creating power of the individual labour capacity is an infinitesimal, vanishing magnitude; the production in enormous mass quantities which is posited with machinery destroys every connection of the product with the direct need of the producer, and hence with direct use value; it is already posited in the form of the product's production and in the relations in which it is produced that it is produced only as a conveyor of value, and its use value only as condition to that end. In machinery, objectified labour itself appears not only in the form of product or of the product employed as means of labour, but in the form of the force of production itself. The development of the means of labour into machinery is not an accidental moment of capital, but is rather the historical reshaping of the traditional, inherited means of labour into a form adequate to capital. The accumulation of knowledge and of skill, of the general productive forces of the social brain, is thus absorbed into capital, as opposed to labour, and hence appears as an attribute of capital, and more specifically of *fixed capital*, in so far as it enters into the production process as a means of production proper. *Machinery* appears, then, as the most adequate form of *fixed capital*, and fixed capital, in so far as capital's relations with itself are concerned, appears as *the most adequate form of capital* as such. In another respect, however, in so far as fixed capital is condemned to an existence within the confines of a specific use value, it does not correspond to the concept of capital, which, as value, is indifferent to every specific form of use value, and can adopt or shed any of them as equivalent incarnations. In this respect, as regards capital's external relations, it is *circulating capital* which appears as the adequate form of capital, and not fixed capital.

Further, in so far as machinery develops with the accumulation of society's science, of productive force generally, general social labour presents itself not in labour but in capital. The productive force of society is measured in *fixed capital*, exists there in its objective form; and, inversely, the productive force of capital grows with this general progress, which capital appropriates free

of charge. This is not the place to go into the development of machinery in detail; rather only in its general aspect; in so far as the *means of labour*, as a physical thing, loses its direct form, becomes *fixed capital*, and confronts the worker physically as *capital*. In machinery, knowledge appears as alien, external to him; and living labour [as] subsumed under self-activating objectified labour. The worker appears as superfluous to the extent that his action is not determined by [capital's] requirements.

The Chapter on Capital (continuation)

The full development of capital, therefore, takes place – or capital has posited the mode of production corresponding to it – only when the means of labour has not only taken the economic form of *fixed capital*, but has also been suspended in its immediate form, and when *fixed capital* appears as a machine within the production process, opposite labour; and the entire production process appears as not subsumed under the direct skilfulness of the worker, but rather as the technological application of science. [It is,] hence, the tendency of capital to give production a scientific character; direct labour [is] reduced to a mere moment of this process. As with the transformation of value into capital, so does it appear in the further development of capital, that it presupposes a certain given historical development of the productive forces on one side – science too [is] among these productive forces – and, on the other, drives and forces them further onwards.

Thus the quantitative extent and the effectiveness (intensity) to which capital is developed as fixed capital indicate the general degree to which capital is developed as capital, as power over living labour, and to which it has conquered the production process as such. Also, in the sense that it expresses the accumulation of objectified productive forces, and likewise of objectified labour. However, while capital gives itself its adequate form as use value within the production process only in the form of machinery and other material manifestations of fixed capital, such as railways etc. (to which we shall return later), this in no way means that this use value – machinery as such – is capital, or that its existence as machinery is identical with its existence as capital; any more than gold would cease to have use value as gold if it were no longer *money*. Machinery does not lose its use value as soon as it ceases to be capital: While machinery is the most appropriate form of the use value of fixed capital, it does not at all

follow that therefore subsumption under the social relation of capital is the most appropriate and ultimate social relation of production for the application of machinery.

To the degree that labour time – the mere quantity of labour – is posited by capital as the sole determinant element, to that degree does direct labour and its quantity disappear as the determinant principle of production – of the creation of use values – and is reduced both quantitatively, to a smaller proportion, and qualitatively, as an, of course, indispensable but subordinate moment, compared to general scientific labour, technological application of natural sciences, on one side, and to the general productive force arising from social combination [*Gliederung*] in total production on the other side – a combination which appears as a natural fruit of social labour (although it is a historic product). Capital thus works towards its own dissolution as the form dominating production.

While, then, in one respect the transformation of the production process from the simple labour process into a scientific process, which subjugates the forces of nature and compels them to work in the service of human needs, appears as a quality of *fixed capital* in contrast to living labour; while individual labour as such has ceased altogether to appear as productive, is productive, rather, only in these common labours which subordinate the forces of nature to themselves, and while this elevation of direct labour into social labour appears as a reduction of individual labour to the level of helplessness in face of the communality [*Gemeinsamkeit*] represented by and concentrated in capital; so does it now appear, in another respect, as a quality of *circulating capital*, to maintain labour in one branch of production by means of *co-existing labour* in another. In small-scale circulation, capital advances the worker the wages which the latter exchanges for products necessary for his consumption. The money he obtains has this power only because others are working alongside him at the same time; and capital can give him claims on alien labour, in the form of money, only because it has appropriated his own labour. This exchange of one's own labour with alien labour appears here not as mediated and determined by the simultaneous existence of the labour of others, but rather by the advance which capital makes. The worker's ability to engage in the exchange of substances necessary for his consumption during production appears as due to an attribute of the part of *circulating capital*

which is paid to the worker, and of circulating capital generally. It appears not as an exchange of substances between the simultaneous labour powers, but as the metabolism [*Stoffwechsel*] of capital; as the existence of circulating capital. Thus all powers of labour are transposed into powers of capital; the productive power of labour into fixed capital (posited as external to labour and as existing independently of it (as object [*sachlich*])); and, in circulating capital, the fact that the worker himself has created the conditions for the repetition of his labour, and that the exchange of this, his labour, is mediated by the co-existing labour of others, appears in such a way that capital gives him an advance and posits the simultaneity of the branches of labour. (These last two aspects actually belong to accumulation.) Capital in the form of circulating capital posits itself as mediator between the different workers.

Fixed capital, in its character as means of production, whose most adequate form [is] machinery, produces value, i.e. increases the value of the product, in only two respects: (1) in so far as it *has* value; i.e. is itself the product of labour, a certain quantity of labour in objectified form; (2) in so far as it increases the relation of surplus labour to necessary labour, by enabling labour, through an increase of its productive power, to create a greater mass of the products required for the maintenance of living labour capacity in a shorter time. It is therefore a highly absurd bourgeois assertion that the worker shares with the capitalist, because the latter, with fixed capital (which is, as far as that goes, itself a product of labour, and of *alien labour* merely appropriated by capital) makes labour easier for him (rather, he robs it of all independence and attractive character, by means of the machine), or makes his labour shorter. Capital employs machinery, rather, only to the extent that it enables the worker to work a larger part of his time for capital, to relate to a larger part of his time as time which does not belong to him, to work longer for another. Through this process, the amount of labour necessary for the production of a given object is indeed reduced to a minimum, but only in order to realize a maximum of labour in the maximum number of such objects. The first aspect is important, because capital here – quite unintentionally – reduces human labour, expenditure of energy, to a minimum. This will redound to the benefit of emancipated labour, and is the condition of its emancipation. From what has been said, it is clear how absurd Lauderdale is when he

wants to make fixed capital into an independent source of value, independent of labour time. It is such a source only in so far as it is itself objectified labour time, and in so far as it posits surplus labour time. The employment of machinery itself historically presupposes – see above, Ravenstone – superfluous hands. Machinery inserts itself to replace labour only where there is an overflow of labour powers. Only in the imagination of economists does it leap to the aid of the individual worker. It can be effective only with masses of workers, whose concentration relative to capital is one of its historic presuppositions, as we have seen. It enters not in order to replace labour power where this is lacking, but rather in order to reduce massively available labour power to its necessary measure. Machinery enters only where labour capacity is on hand in masses. (Return to this.)

Lauderdale believes himself to have made the great discovery that machinery does not increase the productive power of labour, because it rather replaces the latter, or does what labour cannot do with its own power. It belongs to the concept of capital that the increased productive force of labour is posited rather as the increase of a force [*Kraft*] outside itself, and as labour's own debilitation [*Entkräftung*]. The hand tool makes the worker independent – posits him as proprietor. Machinery – as fixed capital – posits him as dependent, posits him as appropriated. This effect of machinery holds only in so far as it is cast into the role of fixed capital, and this it is only because the worker relates to it as wage-worker, and the active individual generally, as mere worker.

Fixed capital and circulating capital as two particular kinds of capital. Fixed capital and continuity of the production process. – Machinery and living labour. (Business of inventing)

While, up to now, fixed capital and circulating capital appeared merely as different passing aspects of capital, they have now hardened into two particular modes of its existence, and fixed capital appears separately alongside circulating capital. They are now two particular kinds of capital. In so far as a capital is examined in a particular branch of production, it appears as divided into these two portions, or splits into these two kinds of capital in certain proportions.

The division within the production process, originally between means of labour and material of labour, and finally product of

labour, now appears as circulating capital (the last two) and fixed capital [the first].¹ The split within capital as regards its merely physical aspect has now entered into its form itself, and appears as differentiating it.

From a viewpoint such as Lauderdale's etc., who would like to have capital as such, separately from labour, create *value* and hence also *surplus value* (or profit), fixed capital – namely that whose physical presence or use value is machinery – is the form which gives their superficial fallacies still the greatest semblance of validity. The answer to them, e.g. in *Labour Defended*, [is] that the road-builder may share [profits] with the road-user, but the 'road' itself cannot do so.²

Circulating capital – presupposing that it really passes through its different phases – brings about the decrease or increase, the brevity or length of circulation time, the easier or more troublesome completion of the different stages of circulation, a decrease of the surplus value which could be created in a given period of time without these interruptions – either *because the number of reproductions grows smaller*, or because the quantity of *capital continuously engaged in the production process* is reduced. In both cases this is not a reduction of the initial value, but rather a reduction of the rate of its growth. From the moment, however, when fixed capital has developed to a certain extent – and this extent, as we indicated, is the measure of the development of large industry generally – hence fixed capital increases in proportion to the development of large industry's productive forces – it is itself the objectification of these productive forces, as presupposed product – from this instant on, every interruption of the production process acts as a direct reduction of capital itself, of its initial value. The value of fixed capital is reproduced only in so far as it is used up in the production process. Through disuse it loses its use value without its value passing on to the product. Hence, the greater the scale on which fixed capital develops, in the sense in which we regard it here, the more does the *continuity of the production process* or the constant flow of reproduction become an externally compelling condition for the mode of production founded on capital.

In machinery, the appropriation of living labour by capital

1. The manuscript has: '... now appears as circulating capital (the first two) and fixed capital'.

2. Hodgskin, *Labour Defended*, p. 16.