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Bruno Tinel

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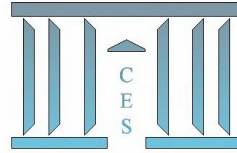


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Labour process and the division of labour, a reading¹

Bruno TINEL
Centre d'Économie de la Sorbonne
Université Paris 1 Panthéon-Sorbonne
bruno.tinel@univ-paris1.fr

Abstract

This article proposes an analysis of the labour process and the division of labour in capitalist production through a reading of Marx and a few others like Babbage and Braverman. The distinction between labour and labour power is used to expose the specificity of the labour process. Cooperation constitutes the fundamental form of capitalist production, which entails a double-sided command (coordination to produce use-values and despotism to extract surplus-value). Formal subordination, i.e. the threat of lay-off, is historically and logically the primitive moment of labour's subordination to capital. The effect of the division of labour on productivity is only temporary. It principally deprives workers of their professional skills, increases real control by management, reduces labour power's value and prepares its replacement by machinery. There is an incessant struggle between labour and management over the control of the labour process and over skills.

Procès de travail et division du travail, une lecture

Résumé

Cet article propose une analyse du procès de travail et de la division du travail dans la production capitaliste à travers une lecture de Marx et de quelques autres comme Babbage et Braverman. La distinction entre travail et force de travail est utilisée pour présenter la spécificité du procès de travail. La coopération constitue la forme fondamentale de la production capitaliste, ce qui confère un double aspect au commandement (coordination pour produire des valeurs d'usage et despotisme pour extraire la plus-value). La subordination formelle, c'est-à-dire la menace de licenciement, est historiquement et logiquement le moment primitif de la subordination du travail au capital. L'effet de la division du travail est seulement temporaire. Principalement, elle prive les travailleurs de leurs connaissances du métier, elle accroît le contrôle réel par le management, elle réduit la valeur de la force de travail et prépare son remplacement par la machine. Il y a une lutte incessante entre les travailleurs et le management concernant le contrôle du procès de travail et les compétences.

Keywords

Labour process, Babbage principle, division of labour, formal/real subordination, cooperation

Mots clés

Procès de travail, principe de Babbage, division du travail, subordination formelle/réelle, coopération

JEL codes

B14, B51, D20, J24, L23, M11

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Marx's discussion of the labour process is complex and sophisticated involving numbers of concepts that draw upon, refine and develop, his value theory, in addressing how production proceeds and evolves under capitalism. His analysis cuts across general observation on the nature of production through to its specific characteristics under capitalism, and it incorporates both empirical and theoretical content. And, it remained both unfinished and much of it unknown until the appearance of the so-called missing appendix to Chapter 6 of *Capital I*. This inspired a Marxist labour process literature that is addressed in the final section before which I lay out some of the basis concepts and ideas deriving from Marx himself.

Labour and labour power

The relationship between labour and labour power is a simple, crucial but overlooked distinction across non-Marxist political economy and, especially, mainstream economics. It lies at the heart of Marx's explanation for, and understanding of, exploitation under capitalism and heavily informs his vision of the capitalist mode of production itself. "Labour power" denotes the capacity to work and "labour" is the use value of labour power. The capitalist does not buy an agreed amount of labour but the labour power in order to use the labour of the worker over an agreed if contested period of time.

Through primitive accumulation, the capitalist mode of production transforms labour power into a commodity by putting working people in a situation that requires the sale of their labour power for the money wage, as the only means of accessing consumption. Marx identifies two conditions for this: first, the owner of labour power sells it only for a limited period (no slavery is involved); and, second, social survival depends upon this sale. This entails the treatment of labour power as a simple use value but it cannot be detached from the human subject that owns it and to which it is returned before being sold again. As subjects, humans are not commodities but, from the point of view of the buyer, the labour force should be deployed as such, available for passive use like an object like other productive inputs (for Marx, the terms "subject" and "subjective" refer to humans and the terms "object" and "objective" refer to things).² Outside of capitalism

² One of the main contradictions of this mode of production is indeed that, on the one hand, human, as labour-power, is considered as a commodity but, on the other, human beings are not produced to be sold on a market. From the point of view of the one who sells it, labour force has the will of realizing its

(and even within it if subordinate to other motives and the motives of others), work is not simply a means to obtain consumer goods but also an end in itself as a source of achievement and gratification as can also occur within limits within capitalist employment too. The situation for the capitalist as purchaser of labour power is different, although motives other than pure pursuit of profitability can arise, again within limits. Labourers, waged or otherwise, will then be liable to try and escape from situations that do not satisfy their own goals, however much these may be consciously defined and determined.

But, as labour power is the sole commodity with the use-value of creating value, the capitalist tries to extract as much surplus-value as possible by consuming it. It is necessary for work to be for longer than the social labour-time necessary to (re)produce the value of the labourer's means of subsistence. But these relations are not specified in the contract between the buyer and the seller. They are not apparent in the sphere of circulation, but reside in the hidden abode of production.

Labour process

Value is created by a labour process. By labouring, humans transform their material environment and also their own nature. Animals, like spiders or bees for instance, also act upon the material world in ways in part similar to a weaver or an architect. But the specificity of human labour is that “at the end of every labour-process, we get a result that already existed in the imagination of the labourer at its commencement”. (*Capital*, vol. I, chap. 7) Human production is oriented towards a purpose to which the labourer more or less consciously subordinates other purposes for a period of time. Whatever its social form, the labour process consists in transforming objects of labour, whether prepared by previous labour or not, by use of instruments of labour, “which the labourer interposes between himself and the [object] of his labour, and which serves as the conductor of his activity”. Resorting to instruments is a hallmark of human labour.

humanity. Hence, labour-force is an active and creative subject who looks for self-fulfilment through cooperation with the others. For Marx, individual autonomy is not understood as reluctance to do any kind of work but as the anthropological fact that human beings have the volition of realizing themselves. For them, work is therefore considered as not simply a means to obtain consumer goods but also as an end in itself because it can be a source of personal achievement. Labour-power will then necessarily try to escape from situations that do not satisfy its need of creation and self-fulfilment.

In the capitalist labour process, “the labourer works for the capitalist instead of for himself”. Hence, labour power is consumed to produce use-values embodying surplus value. The technology of production and the instruments of labour that already exist in the pre-capitalist era are not initially modified by the capitalist who is obliged to use the labour “as he finds it”. The subordination of labour to capital will lead to changes in the organisation and the methods of production only at a later period, see below.

Simple cooperation

Simple cooperation is not specific to the capitalist mode of production, and survives within capitalism itself outside the realm of formal work in the home or with friends combining in a common endeavour. It certainly existed in various pre-capitalist civilisations at different levels of development. When a large number of people are simultaneously working together at the same place towards the same common purpose, they are able to realise a more than proportionate addition to production or even to allow for products that would otherwise be impossible. The combination of their similar or closely related individual actions creates a specific social productive power, or collective labour. The more numerous the labourers working together, the more it is necessary to organise the simultaneity and sequencing of actions. Otherwise disorder could limit the productive effect of the collective. Like a conductor leading an orchestra, cooperation creates a specific need for direction to coordinate individual activities. Whereas “Egyptian kings and Etruscan theocrats” resorted to this specific power of the collective labourer only on occasion to build pyramids or temples, capitalists use it systematically.³ In contrast to scattered, weak and infrequent pre-capitalist forms, cooperation is considered by Marx as the “fundamental form of the capitalist mode of production” (*Capital*, vol. I, chap. 13). Gathering many wage-labourers under the direction of a single capitalist presupposes that the concentration of important means of production in a few hands occurred previously. Then, the primitive capitalist division of labour can develop. Initially, the employer, turned from a small master into a capitalist, takes on enough labourers to be relieved from manual, or execution, work and specialises in direction, conception and trading. Later, once the business has grown

³ “a greater number of labourers working together, at the same time, in one place (...), in order to produce the same sort of commodity under the mastership of one capitalist, constitutes, both historically and logically, the starting-point of capitalist production.” (*Capital*, vol. I, chap. 13)

enough, the supervisory function can be delegated to specialised functionaries, possibly wage-labourers themselves or, those rewarded in money-form.⁴

The double nature of command

As with the production process, capitalist command is double-sided.⁵ On the one hand, the social aspect of cooperation makes it necessary to coordinate individual actions to set collective labour in motion. The systematic use of cooperation in capitalist production gives the illusion of the “eternal necessity” of the capital of command, as an element of entrepreneurship, not least because the capitalist both rewards each worker individually and appropriates the benefits of collective labour. It is as if profit derives from such coordination, especially as it is entangled with other functions of the business such as marketing.

On the other hand, the capitalist requires labour power to yield surplus value during its time of hire, which entangles a different function of direction, disconnected from cooperation as such. This necessarily confers an authoritarian form to command since the labour has to be exploited, creating “the unavoidable antagonism between the exploiter and the living and labouring raw material he exploits”. Despotism changes form with the development of cooperation as it obviously creates a resistance among workers who not only try to preserve themselves from destruction by overexploitation but also try to extend their freedom of movement, or a degree of independence at work. Those labour force counter-pressures constantly oblige capital to renew the technology and the organisation of the labour process to circumvent any loss of control, and not simply to increase productivity. Indeed, the cooperating labourers’ resistance increases with their number and the struggle between labour and capital induces a continual evolution of the means of control implemented by capital to overcome workers’ resistance to its domination.

⁴ An important and too neglected aspect of cooperation concerns increasing returns to scale. Indeed, cooperation allows saving on fixed costs, which increase with the total value of constant capital (machines). Thus, increasing returns become more important through time with the development of capital accumulation, and hence with the development of the capitalist division of labour. They contribute to reduce monetary costs of production and prices of commodities, which reduces indirectly the value of labour-power by relative surplus-value.

⁵ “the control of the capitalist is in substance two-fold by reason of the two-fold nature of the process of production itself” (*Capital*, vol. I, chap. 13).

Does the capitalist command because of specialised knowledge of how to run industrial production? For Marx, the reverse holds: capitalists decide how to rule the labour process not because they do it well but because they have the power to do so through their command over the means of production.⁶

The Babbage argument

For Marx, the social and manufacturing divisions of labour are distinct but neither is purely technological and both derive from the relations of production. Social division of labour exists in all societies, it corresponds to the distribution of work, including crafts and specialities, for all production throughout society – who does what and how (as well as what is defined as “work” itself as has been emphasised by the feminist critique of the downgrading of women’s work in general and “domestic” labour in particular). Manufacturing division of labour corresponds to the subdivision of work into its constituent elements and the allocation of these to specific types of workers for the creation of specific final products. It becomes generalised only under capitalism before which workers would tend to create final products on their own account. Marx borrows from Charles Babbage (*Economy of Machinery and Manufacture*, 1832) the idea that minute division of labour and specialisation, i.e. the capitalist division of labour, has only a few temporary effects on productivity which weakens the appeal of Adam Smith’s argument based on dexterity, drawn from the example of a pin factory. Babbage reasons on the basis of monetary prices. He shows that dividing labour is mainly a means to reduce wage costs because it enables the manufacturer to select skill levels accurately and more cheaply. As dividing and specialising labour reduces the time and cost of apprenticeship, the master has an incentive to divide up the labour process: by requiring less and more readily acquired skills, minute specialisation induces a reduction in wages and increases the supply of the labour force available for any job. For Babbage, manufacturers introduce minute specialisation not principally for productivity reasons but for profitability. And simplifying tasks through division of labour also prepares the way for the replacement of human labour by machines. The rise of constant capital per labourer and technology enhancement are the decisive factors in

⁶ “It is not because he is a leader of industry that a man is a capitalist; on the contrary, he is a leader of industry because he is a capitalist. The leadership of industry is an attribute of capital, just as in feudal times the functions of general and judge, were attributes of landed property.” (*id.*)

productivity improvement. Marx closely follows and deepens Babbage's argument by reference to the notion of a "trade".

The subjective stage of the division of labour

A trade, *métier* in French, is made up of a set of various skills and techniques that are long to learn as a whole. It rests upon dexterity associated with several more or less specific and sophisticated manual tools. Craftsmen both conceive and carry out their own work. There is no separation between conception and execution. The trade enables the worker to control the labour process of an entire commodity. Craftsmen who possess their own means of production can then control the product and sell it on the market and, thereby, be independent. As will be seen, Marx explains how first the labourer is dispossessed of the control on the product, through *formal subordination* of labour to capital, and then by the control of the labour process, through *real subordination* where capital destroys trades and takes possession of professional knowledge and technology.

At the first stage of capitalist development, the small master becomes capitalist, ceasing to take part in the labour process as such. Wage-labourers engage in simple cooperation: they are still in control of the labour process itself, with the capitalist only concentrating authority over craftsmen themselves as opposed to their work itself. Workers remain in possession of their trade, and capitalists cannot dictate the labour process directly.

Subordination of labour to capital is purely "formal" (Marx, 1864): the capacity of the capitalist to constrain the workers rests only on their economic dependency. The threat of lay-off is historically and logically the primitive moment of labour's subordination to capital.

This formal coercion is decisive as a stepping stone to the "real" appropriation of the production process by capital. It is sufficient to enable capitalists to implement the first stage of the minute division of labour and specialisation. This phase corresponds to the *subjective* division of labour. It consists in breaking trade up and then destroying individual control over the production process by specialising workers on a limited range of tasks. The whole production process is recomposed on the basis of the tasks comprising it. This division of labour is considered as subjective in the sense that task separation and specialisation do not rest upon a material process but on a convention, or

an obligation, imposed on workers by the employer. After simple cooperation and before the rise of machinery, a new specialisation limiting individual skill takes place around the methods attached to trades. By increasing demand and concentration of capital, production intensification leads each operation to be subdivided in its turn, including tasks of conception and management. Compared to handicraft, the labour force becomes either specialised into a few tasks or not specialised at all if general labour.

The essence of minute division and specialisation for Marx is that, by transforming the complex labour of craftsmen into simple labour of unskilled workers, it reduces the necessary labour-time for the reproduction of labour power, which amounts to a reduced value of labour power. This split of handicraft into a set of simple tasks modifies distribution in favour of capital, not so much because of productivity increase as reduction in variable capital. Indirectly, the division of labour increases competition amongst workers at each level of the skill hierarchy because each job, being simplified and easier to perform, can now be fulfilled by a greater number of workers. Minute specialisation makes each individual worker more dispensable and more easily replaced. For Marx, following Babbage, the main economic effect pursued by capitalists with the division of labour is to reduce the bargaining power of workers.

But, in addition, the command of handicraft knowledge is progressively appropriated by (the representatives of) capital. It increasingly dominates all knowledge useful for production; by substantially separating conception from execution, the minute division of labour subjects workers to production, rather than the other way around, and increases their dependency. From that moment, the labour process is not primarily shaped by the producer (as craftworker) but by capital for production of surplus value. The worker is not only constrained by virtue of the threat of dismissal but also by the division of labour within production itself. The labourer is both *formally* dependent and placed in real subordination to capital by the remoulding of the production process.⁷

⁷ Like craftsmen's bodies, tools are transformed and adapted; they specialised and become more and more differentiated from one another. Those improvements, simplifications and increases in the number of tools fit the needs of minute labour and "It thus create[d] at the same time one of the material conditions for the existence of machinery, which consists of a combination of simple instruments" (*Capital*, vol. I, chap. 14).

Real subordination through objective division of labour

On the basis of the distinction between formal and real subordination of labour to capital, Marx in *Capital I* offers extensive theoretical (absolute and relative surplus value for example) and empirical analyses (illustrations from English industry) of how one gives way to the other in the evolution of the capitalist labour process. It involves the development of machinery within the factory system, what has been clumsily termed machinofacture. With real subordination, the division of labour becomes objective; it is embodied in machinery designed by capital for its specific purpose. For, once subdivision of tasks has taken place in workshops, individual and collective workers are replaced in factories by specialised tools, combined together with common energy sources, and incorporated into machines. Whilst machinery needs to be taken care of by unskilled labour, more skilled labour is also necessary to conceive and maintain it.

The diffusion of machinery tends to render specialised labour redundant as unskilled labour prevails. But as machinery production and use themselves require crafts and specialisms, these too are progressively transformed, with use of machinery itself increasingly becoming subject to factory production. With the generalisation of machinery, machines substitute themselves for others with obsolescence through technical change. Machinofacture, then, underpins segmentation of the labour force. Specialised workers are replaced by a relatively undifferentiated labour force, whilst a labour force specialised in production, maintaining and monitoring of machinery (and of workers) is required by capital. It forms a superior class of workers which Marx considers as liable to be numerically insignificant.⁸ But such segmentation is never fixed and involves an ongoing process which evolves as accumulation proceeds. Marx offers the hypothesis that the share of unskilled labour tends to rise, but labour force segmentation is complex, diverse and differentiated by its own internal organisation and characteristics as well as subject to factors external to the economy (access to skills and gendering for example) (Fine, 1998).

⁸ With machinery, the capital is not only able to manage without muscular force but also without the specialised worker of manufacturing; a superfluous population is created by machinery, increasing all the more the competition between workers and reducing once more the value of labour power. Factory workers become easily replaceable. Whereas manufacturing workers still controlled collectively the mastering of trades they had lost individually, the subjection to machinery definitively deprived labour of any control over the production process to the benefit of capital. Factories not only reduce wages but also make the labour force dependent on capital inside the production process.

Accordingly, the postulate that skilled labour becomes residual is unconvincing as an empirical trend as opposed to a contradictory tendency. For the labour/capital struggle in the production sphere is a struggle over the control of the labour process and equally over skills. Nothing in Marx's analysis can support the idea that capital has already won this struggle forever, and Marx himself considers that, at the beginning, new branches of production require skilled labour as do new technologies. Moreover, workers specialised in conception will tend to increase with capital accumulation in requiring more machine building and technological knowledge. As Duménil and Lévy show, capital requires increasing levels of skilled labour to fulfil management jobs; the functions of direction are themselves increasingly subject to a division of "labour". Finally, for Marx, technology is not given exogenously or by the imperatives of production narrowly conceived. Rather, embedded in (surplus) value production with its relations of command and control, it is also mobilised by capital to appropriate worker's knowledge and to render the labour force dependent and subordinate.

The role of technology and the labour process

For Marx, the division of labour constitutes one of the means by which the relations of production are established; technology is thus not given by nature but appears as a variable mobilised by capital to appropriate worker's knowledge and to make the labour force technically dependent.

Contrary to technological determinist approaches, Marx do not consider modern society "as issuing directly from smokestacks, machine tools, and computers" (see Braverman [1974], pp. 12-6). Different forms of relations of production coexist on the same technological basis, which gives simply the limits of possible social arrangements, and, in fact, the volume I of Capital shows how the capitalist relations, by unceasing accumulation, transform technology towards surplus-value extraction. Technology is hence socially produced in a given historical context and, in turn, conditions the development of subsequent social relations. It is not possible to deduce automatically from a technology its particular social use but the applications selected as "innovations" among all inventions are those than can directly be used to increase surplus-value and for capital valorisation.

Technology is an instrument that is used by capital both for production and for labour control, which is fortunately never absolute. It enables to create use values more efficiently by machinery improvements and to discipline labour-power, which seeks rather self-realisation than behaving like a passive performer, by objectively measuring, monitoring, inducing and constraining workers inside the labour process.

Technology is hence itself subject to the labour/capital struggle. Of course, a large majority of workers are progressively deprived of their trades, professional knowledges and skills by the development of the capitalist division of labour. But, as capital requires a continuous renewal of machinery and control devices, inventions and innovations are necessary for its development, which supposes to maintain and create enough high skilled labourers. Being only formally dependent, capital has to separate incessantly conception from execution, even in the sphere of invention. Capital has both to stimulate the emergence of new activities that it does not control at the beginning and to take them over progressively by applying to them its specific division of labour. The technical progress is biased: labour is progressively replaced by machinery in mature industries not the reverse. This happens not only in industry but also in services and intellectual occupations, as show by Braverman. As each labour process requires specific proportions of different skills and as labour is continually adapted to technology and machinery, the production factors are more complementary than substitutable, this is the basis of scale economies.

From Marx to Marxism

During the 1970's, authors like Coriat, Friedman and Marglin deployed this insight in different ways to address the history of the early capitalism, old and new management strategies, forms of worker resistance, etc. But the most fruitful and pioneering contribution belongs to Braverman. He shows how the principles of Taylor, though presented as "scientific", are nothing more than how best to control waged labour as Taylor "asserted as an *absolute necessity for adequate management the dictation to the worker of the precise manner in which work is to be performed*", p. 62. Three principles can be identified: first, the labour process is dissociated from the skills of the workers; second, execution is separated from conception as far as possible; third, management uses its monopoly over knowledge by a "systematic pre-planning and pre-calculation of

all elements of the labour process”, p. 81 “to control each step of the labour process and its mode of execution”, p. 82. Braverman shows through many concrete documented examples how the orderly application of those principles to industry and then to clerical labour throughout the 20th century leads to a massive deskilling of workers and then to their gradual displacement by machinery ensuing from a scientific-technological revolution that feeds the reserve army of labour at a high level. After Braverman, the so-called “labour process debate” gravitated around two different poles, one led by progressively-inclined empirical sociologists and the other by Foucauldian approaches, with each focusing upon contingent factors in the role of workers’ resistance and their individual subjectivities. Those academic contributions progressively critically distanced themselves from Braverman and Marxists concepts, ultimately with, “the neglect of objective relations [that] betrays acceptance of capitalism, and in turn, an acknowledgement of defeat in the struggle to free labour from the despotic rule of capital” (Spencer, 2000: 240). Turned against itself, labour process analysis is even used by management studies to formulate more effective strategies of control through acknowledgement and incorporation of labour’s subjectivity. But a new generation of Marxists has begun to rejuvenate the radicalism of Marx’s addressing different topics (job quality, subcontracting, class structure, etc.), and seeking to finesse the complexities of surplus value production as both a material (production) and a social (relations) process with both objective and subjective content.

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