Jacques GOUVERNEUR

THE FOUNDATIONS OF CAPITALIST ECONOMY

An introduction to the Marxist economic analysis of contemporary capitalism

Textbook with summaries and exercises

2005

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FOREWORD

Origin and purpose of the book

This is the final version of a textbook which I have been progressively perfecting in the course of an academic career of more than thirty years.

In the early seventies, a combination of favourable circumstances led me to teach the Marxist economic analysis of the capitalist system, first at the Catholic University of Peru, then at the Catholic University of Louvain. In both universities, pressure from students had induced the faculty authorities to agree to setting up such a course, and they entrusted me with teaching the subject.

My previous education had hardly given me any serious initiation into Marxism : here and there some brief résumés, followed by sketchy and facile critiques, whose simplistic and fallacious character completely escaped me at the time. I must add that my previous education had not fired my enthusiasm either : the divorce between theoretical sophistications and concrete realities had nourished a growing disenchantment with the dominant economic approach. When I began studying *Capital*, in 1970, I realized to what extent my views on Marxism were mere clichés passed on by the prevailing ideology ; I also realized how the Marxist approach made it possible to combine the rigour of scientific method with attention to the most concrete and topical problems.

Despite being the direct outcome of university research and teaching activities, my successive textbooks have never been intended for the exclusive use of students. As a matter of fact, my textbooks have been nourished as much by a great number of extra-university training activities, during which I have met all kinds of people : trade-unionists, teachers, members of political parties, militants of voluntary organizations, managers, or again « ordinary citizens », all of them anxious to better understand the current economic situation. I have written just as much for their benefit : as far as possible, I have tried to take their remarks and suggestions into account and have limited what might appear to be « gratuitous theorizing » to a strict minimum.

 The book is thus intended for a fairly wide readership, much wider than academic circles. The theoretical exposition has been progressively lightened : I have centred it on the essentials – which have been made more explicit – and have relegated to appendices a great number of arguments and debates which

could have mislead the reader rather than guide him in his exploration of economic realities.

However, whereas the purpose of the book is to explain realities of the present-day world, the first chapters (II and IV in particular) may seem very theoretical, with no direct link to day-to-day experience. Some readers, more eager for concrete considerations than for theory, might therefore feel lassitude or impatience. I would advise them to read the introduction, then go directly to chapters VII and IX, which analyse the basic tendencies and crises of the system. These two chapters, which are fully in touch with current problems, can be grasped intuitively from the start. Such an initial detour, even a rapid one, may actually prove useful to all readers : first, it may stimulate them to undertake a systematic study of the book ; second, when re-reading the chapters in question, readers will realize how much they have progressed in their understanding of the fundamental mechanisms of capitalist economy.

The alleged collapse of Marxism

Before expounding the Marxist economic theory, I would like to meet an objection which has been raised again and again. How is it possible to keep taking any interest in Marxism – and in Marxist economic theory in particular – after the political upheavals observed in Eastern Europe countries since 1989 ? Does not the return of these countries to the market economy clearly prove the breakdown of Marxism ?

This repeatedly raised question makes it necessary to distinguish at least three aspects of Marxism and clear up three common misunderstandings.

- The first aspect is well known : Marxism is a *political project* aiming to overthrow capitalism and construct a socialist society. This general principle has concrete implications which are less well known. After the capitalist regime has been overthrown, implementing the Marxist project implies that a social evolution with many complementary aspects be carried on unceasingly : on a political level, the people's power must be strengthened and made capable of resisting the pressure of both the former dominant classes and the new technocratic or bureaucratic élites ; on an economic level, the workers must gain an increasingly effective role in planning social production and in managing firms ; on an ideological level, a « cultural revolution » must be implemented in order to develop both the principles and practices of workers' participation, workers' creativity, people's power, etc.

In the ex-USSR and its satellite countries, the political leaders who succeeded one another in power from the 1960's on practically lost sight of this complex, long and far-reaching revolution. Their main objective was very different : to modernize the economy and society and catch up with the level of development of the advanced capitalist countries. For this reason, significant distortions developed with respect to the initial Marxist project : thus, the overthrow of the bourgeois parliamentary government did not allow a real democracy to be built ; the nationalization of firms was hardly followed by workers' participation and by forms of technical progress which would enable such participation ; and the principles of socialist ideology were more declared than applied.

The recent overturns in Eastern Europe took place in this context of an aborted social revolution (which had also entailed economic failures). Some social layers, backed by the world bourgeoisie, realized that returning to market and capitalist practices – at all levels – was actually the best and even the only way to continue the process of modernization while fostering their class interests. Such a return to capitalism, however, does not mean the failure of the Marxist project : it represents the failure of a pseudo-socialist project of modernization, a project implemented by élites who used to refer to Marxism in order to justify themselves in front of the people.

- Second aspect : Marxism is also a *scientific theory of history*, known as « historical materialism ». This theory seeks to understand the inner dynamics of each type of society or of one specific society (e.g. the dynamics of capitalism in general or in a particular country) as well as the transition from one type of society to another (e.g. the transition from capitalism to socialism in a given country).

The search for a scientific understanding of history has given rise to two competing theses, both of which appeal to Marx's authority. The first may be called the mechanical and linear thesis. It argues that the motor of history lies primarily in the development of productive forces, in the progress of knowledge and techniques : this development proceeds in a continuous and practically autonomous manner ; it is scientific and technical progress which drives social evolution more than any other factor ; and it accounts for the transition from one type of society to another, through a progression which appears to be practically necessary : slavery, feudalism, capitalism, socialism, communism. The second thesis, which accords better with Marx's thought as a whole, may be termed the dialectical thesis. It states that the motor of history lies, above all, in class

struggle, in the unceasing clashes between social groups whose fundamental interests conflict with each other : it is these struggles which shape the evolution of society (including, to a large extent, the evolution of productive forces themselves) ; and it is these struggles which also account for the success or failure of the transition from one type of society to another.

The return to capitalism in the Eastern countries clearly invalidates the mechanical and linear thesis. But it fully confirms the dialectical thesis focusing on class struggle : indeed, this return marks the defeat of the popular forces and the triumph of minorities backed by the world bourgeoisie. The analysis of how the Eastern countries have evolved in the last few decades will undoubtedly enrich the Marxist theory of history – in this case the transition *between* capitalism and socialism – by emphasizing the role of class struggle after the overthrow of capitalism.

- The third aspect, which is relevant to the contents of this book, is the role of *Marxist economic theory*. The latter is actually an integral part of the Marxist theory of history : it aims at understanding the *structure and dynamics of the capitalist economic system*, which is the field of analysis Marx and his followers have focused on. Contrary to current opinion, Marxist economic theory is by no means an economic theory of socialism or of planned economies ; it is an economic theory of capitalism, as is clearly pointed out by the very title of Marx's masterpiece : *Capital.*

This being so, the Eastern countries' return to capitalism does not invalidate Marxist economic theory in the least ; nor does it confirm it either. It simply implies a broadening of the geographical field of application of Marxist economic theory : the analyses of *Capital* have once again become relevant for studying the present-day realities of those countries as well.

Jacques Gouverneur
May the 5th, 2004

TRANSLATOR'S NOTE

This book is the English version of the third edition of *Les fondements de l'économie capitaliste* (2004).

As far as possible, it presents a literal translation of the original French text in an attempt to retain undisturbed the internal coherence and consistency of the author's theoretical framework. The meaning of concepts which are unfamiliar should become clear in the course of a systematic reading of the text (a glossary of terms is provided at the end of the book).

 For brevity's sake « he » and « his » have been systematically used in place of the more accurate « he/she » and « his/her ».

John Cronin

INTRODUCTION

What is the specificity of Marxist economic theory compared to current economic theories ? And what are the particular features of this textbook ? Section 1 presents one essential characteristic of the Marxist scientific approach, that is, the analysis of hidden realities underlying the observed economic phenomena. Section 2 shows the various perspectives of analysis of the book, as well as a variety of pedagogical devices placed at the reader's disposal.

1. A SCIENTIFIC STUDY OF CAPITALIST ECONOMY

1.1. Visible phenomena and hidden realities

If one wishes to understand any phenomenon whatsoever in a scientific way, one cannot look at visible facts only. Science, precisely, involves going beyond visible facts to discover a deeper – though not obvious – reality. This can be illustrated in a simple way by two examples taken from astronomy and psychology.

Observing the sky hour after hour, we get the sensation that the sun moves around the earth. But this feeling is erroneous : the science of astronomy proves that it is the earth which actually moves around the sun. The discovery of this essential reality was of course indispensable for understanding the real movement of the planets and turning this knowledge to our advantage (consider satellite launching for instance).

Similarly, observing an individual's external behaviour is not sufficient for understanding him. Psychoanalysis explains that our behaviours and reactions depend a great deal on an « unconscious zone » which is more or less covered up. Insofar as we uncover and explore part of this unconscious zone, a whole series of seemingly inconsistent exterior aspects of our personality can be given a coherent explanation ; we begin to better understand our « deep movement » and can therefore better guide it.

The same is true with respect to economics. If one wants to understand the inner reality and deep movement of the economy, one may not remain on the level of appearances, one must also uncover and explore the hidden face of phenomena. This can be made clearer by briefly examining three elementary

questions concerning production, prices and incomes. Such an examination will make it possible to immediately indicate some noticeable differences between Marxist economic theory and current economic theories**.**

1.2. *Some questions which deserve consideration*

1.2.1. *Where do products come from ?*

The objects we use and consume day after day (food, television, cars, etc.) obviously do not fall from heaven but must be produced. How are they produced ? Textbooks on economics offer a common sense answer : goods are produced through combining capital (i.e. means of production : machines, tools, buildings, etc.) and labour. Capital and labour are the two basic « production factors » that enterprises combine to produce goods.

This answer is not mistaken, but remains superficial. For the means of production used in enterprises do not fall from heaven either : they must be produced themselves !

If we consider all enterprises and enquire each time into the origin of capital, we discover that *all production ultimately rests on human labour alone*, which uses and transforms natural resources. This pre-eminence of labour will be proved in chapter I (§ 1.3.). It can be illustrated here, imagining and comparing two types of cataclysm. In the first one, all the means of production are destroyed while (at least some) natural resources and human beings are saved : resuming work, the survivors would be able to progressively reconstruct a full range of products. In the second case, all the means of production and natural resources are saved, while mankind disappears : no production is possible, and the means of production themselves would progressively break up and eventually disappear.

What can we learn from the foregoing ? That visible phenomena may hide a more basic reality. At first sight, all products result from a combination of capital and labour. More basically – but it is not obvious –, all products ultimately result from human labour alone.

1.2.2. *What do prices depend on ?*

Prices play a very important role in economic life, for they shape the producers' and consumers' choices. But what do they depend on ? Textbooks in economics offer a common sense answer here too, explaining that prices are governed by the « law of supply and demand » : they fluctuate when relations

between supply and demand change, they are stable (they are « equilibrium prices ») when the quantities supplied and demanded are equal.

This answer is clearly correct : an excess supply indeed brings prices down, a shortage raises them. But again, the answer remains superficial, for it does not explain the *level* of « equilibrium prices » : if supply is equal to demand for all products, why is the average price of cars, for instance, 50 or 100 times higher than the average price of bicycles or tyres ?

Actually, as will be proved in chapter II (§ 3.2.), these price differences are due above all to differences in the quantities of labour required to produce the different types of commodities (taking due account of the labour required to produce the means of production used in each case).

Commodities can be compared to icebergs, with a visible part and a hidden base. The visible part of the iceberg does not exactly reflect its hidden base : the former may be stretched out in one direction, the latter in another one. But the distance we see between two icebergs, as well as their visible movements in the ocean, depend on the distance and movements of the hidden bases. Similarly, commodities have two inseparable aspects : a visible one (their price) and a hidden one (the labour necessary to produce them). Prices do not exactly reflect the quantities of labour, but price differences and changes depend above all on differences and changes in the respective quantities of labour.

Here also visible phenomena (prices) may conceal a more basic reality (labour). Whereas current economic theories simply analyse the surface of things (prices), Marxist economic theory scrutinizes the more or less strict relation that exists between the price of commodities and the labour from which they derive.

1.2.3. Where do incomes come from ?

If I buy a lottery ticket at random and happen to win a certain amount of money (say $100), everybody will admit that I get this income by chance. But if chance thus enables me to *obtain* such income, did chance *create* it ?

If I lend money to an enterprise or the state, I earn some interest every year, which is the payment for the service rendered. But if the loan thus enables me to *obtain* an income, where was this income *created* ?

As a firm manager, it is in my interest to be more competitive than rival producers, to produce at a lesser cost : with this aim in mind I replace workers by machines. But if mechanization thus enables me to *obtain* more substantial incomes, were the latter *created* by the machines ?

These anecdotes and questions lead us once more to consider the two parts of the iceberg, to distinguish between visible phenomena and hidden realities.

The visible phenomena are the incomes *obtained* by different individuals or enterprises. The hidden reality is the way all these incomes are *created*. Whereas current economic theories usually limit themselves to recording and justifying different types of incomes *earned* (wages, profits, rents, etc.), Marxist economic theory scrutinizes the very source of all incomes**.**

Chance or lending do not create any income : they enable me to *perceive* part of the income created in the whole economy. Similarly, machines do not *create* any income ; but they enable more mechanized enterprises to *obtain* more profit than technically less advanced competitors. Actually, as will be proved in chapter II (§ 4.1.), all incomes are created by the labour of all those taking part in commodity production, and by their labour alone. And chapter III (section 1) will demonstrate that capitalist profit itself is created by the labour carried out by wage-earners, more precisely by the « surplus labour » they are obliged to provide.

1.3. First conclusion

The preceding paragraphs are sufficient to suggest – until we prove – that appearances do not necessarily correspond to more basic realities : contrary to what appears at first sight, human labour alone creates all products and incomes, labour basically determines price differences and price changes.

 If one remains on the level of appearances (products are created by capital and labour, prices depend on supply and demand, profit is created by machines), it is impossible to understand the inner reality and deep movement of the economy. To reach this goal, it is necessary to uncover and explore the hidden face of phenomena, that is human labour. By so doing, it will be possible to truly understand, and explain in a coherent way, a whole series of visible economic phenomena and tendencies.

As the reader will realize as he proceeds, the « labour theory of value » elaborated by Marx in *Capital* – and further developed by a large number of economists – proves to be extremely relevant and fruitful in the in-depth analysis of present-day realities : growth of mechanization and automation, increases in productivity, crisis and unemployment, concentration of economic power, recourse to subcontracting, invasion of advertising, export of capital, internationalization of the economy, etc.[1]

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[1] Adopting a « labour theory of value » does not involve dismissing the valuable aspects of current economic theories. The « law of supply and demand », for instance, provides many useful considerations concerning price fluctuations : these aspects should not be dismissed, but should

2. SOME PARTICULAR FEATURES OF THE BOOK

2.1. A plurality of perspectives

The book both distinguishes and combines a variety of viewpoints : static and dynamic, macro- and micro-economic, abstract and concrete.

The first six chapters adopt an essentially *static* point of view : they analyse the *structure* of the economy. The last three chapters, on the contrary, adopt an essentially *dynamic* point of view : they consider various facets of *growth,* such as increasing mechanization, concentration of economic power, expansion of waged labour and of commodity production, contradiction between the search for profit and the satisfaction of social needs, development of crises and unemployment, etc.

The book conducts the argument on an essentially *macro-economic* level. It aims at explaining *global* phenomena : the structure and growth of the economy as a whole (rather than the structure and growth of a particular enterprise or branch), wages and profit in general (rather than those in a particular enterprise or branch), the phenomenon of prices in general (rather than the price prevailing in a specific branch of production). This macro-economic approach is however complemented by several *micro-economic* analyses : thus, chapter I starts with an analysis of the individual production process ; chapter II explains – among other things – price differences between different commodities (cars and bicycles, for instance) ; chapter V explicitly considers competition within a given branch (between different steel factories, for instance)[2].

The book focuses on the functioning of the main sector of the economy, namely the sector of *capitalist enterprises*. But such analysis is complemented by an examination of *all other forms of production* : enterprises relying on self-employment, public enterprises, non-market public services, voluntary organizations, households. The book specifies the distinguishing features of these production units and examines their contradictory relationships with the capitalist sector. In so doing, it does not limit itself to analysing an abstract system but contemplates the actual diversity of a concrete society.

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rather be *integrated into a more basic approach* explaining the level around which such fluctuations take place.

[2] The same tools of analysis are used both in the macro- and in the micro-economic approach. This is in sharp contrast with respect to current economic textbooks, which, rather than unifying the two approaches, use different analytical tools for each of them.

2.2. A relative lack of empirical data

The book accounts for numerous contemporary realities, but hardly illustrates the latter with concrete examples or actual figures. For instance, it accounts for the growth of mechanization, of advertising, of industrial concentration, etc., but without giving examples or statistical data on these questions.

This omission is deliberate. As a matter of fact, the realities considered in the book are well known, if only through the mass-media ; moreover, they are given sufficient statistical consideration in a wide variety of publications. Rather than providing current illustrations doomed to become rapidly out-of-date, the book invites readers to establish the link between theory and realities themselves **:** this is the purpose of the third category of questions (« applied knowledge ») put forward at the end of each chapter (see hereafter, § 2.3.).

2.3. A great variety of pedagogical advantages

The book aims to develop the qualities of *precision* and *simplicity* as far as possible. Precision, in order to counteract the great deal of fuzziness which too often hovers, over even the most elementary concepts. Simplicity, in order to make the approach accessible to any receptive person, even without any previous knowledge of the subject.

Each chapter, as well as the conclusion, is complemented with a set of pedagogical devices. These include : a) a *summary* of the argument ; b) a list of the *new concepts* to be assimilated ; c) a selection of *exercises* aimed at successively checking the comprehension of fundamental principles (« basic knowledge »), the understanding of more specific points (« more advanced knowledge »), and the ability to establish the link between theory and present-day realities (« applied knowledge »).

All the concepts are brought together and defined again in the *glossary*. And the *clue to most exercises* is also given at the end of the book.

All these pedagogical devices should allow for a progressive, rigourous and personal study of the book. Three final observations should be considered before undertaking such study :

- The book is complemented with numerous *theoretical appendices*. These are rather intended for experienced readers or students : they provide a series of observations on particular topics and justify certain non-conventional viewpoints

adopted in the text. (The issues discussed there are simply mentioned in footnotes in the text, with due references to the corresponding appendices.)

- The *print* is not uniform : some *passages of the text*, as well as the *appendices*, are in smaller print ; moreover, the reference number of certain *footnotes* is put between brackets [ ] at the bottom of the page. The passages and footnotes in question can be omitted without jeopardizing the assimilation of the essential points : they are meant either for specialists or for readers interested in the particular topics considered there.

- As pointed out in the foreword, it may be useful to *start reading chapters VII and IX*. These chapters, which analyse the basic tendencies and crises of the system, are fully in touch with current problems. Readers might find there a stimulus to undertake a systematic study of the book ; moreover, when re-reading the chapters in question, they will realize how much they have progressed in their understanding of the fundamental mechanisms of capitalist economy.

CHAPTER I

THE BASIS OF GOODS AND SERVICES :
LABOUR

This chapter focuses on labour, that is on production activities. The two sections of the chapter consider labour from two distinct viewpoints.

The first section is devoted to the general *material* aspects to be found in any labour process. It highlights the fact that labour – in combination with nature – is the actual basis of the wealth of goods and services.

The second section is devoted to the *social* aspects of labour, which differ according to production units. It shows the various kinds of labour which contribute to producing all goods and services.

1. THE MATERIAL ASPECTS COMMON TO ALL LABOUR

1.1. *The labour process or production process*

Human beings – individually and collectively – live and reproduce themselves, making use of an extremely varied range of goods and services : water, air, food, energy, weapons, transportation, etc. All these goods and services are called *use-values*, i.e. means that are useful to satisfy such and such particular needs : transportation is used for moving things and persons, weapons are used for fighting, and so on[1].

Where do the use-values come from ? Some are supplied directly by nature, without human intervention : these are the « gifts of nature », like the air we

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[1] Two observations must be made concerning the concept of use-value :
a)From a grammatical viewpoint, goods and services can be considered either as *being* use-values (they are useful means to satisfy particular needs) or as *having* a use-value (they have the capacity to satisfy particular needs).

b) From a moral viewpoint, no judgement is made here on the needs the goods and services are meant to satisfy : bread has a specific use-value, a weapon simply has a different use-value.

breathe. But the vast majority of the use-values consumed have to be *produced* by human activity.

In every society, as well as in the life of every individual, we can, therefore, distinguish between *consumption activities* and *production activities*. The term *labour* stands for all *production activities*, as opposed to consumption activities.

$$\boxed{\text{labour = production}}$$

Production activities always require a certain time, a certain duration, to be carried out ; on the other hand, they imply a certain organization, a certain link between different operations. In order to suggest this twofold idea of duration and organization, the terms *labour process* or *production process* are commonly used.

Production activities will be analysed from two points of view successively. A *micro-economic* viewpoint is adopted in § 1.2. : the latter focuses on any *particular* labour process (production of steel, clothes, entertainment, etc.). A *macro-economic* viewpoint is adopted in § 1.3. : there we consider the *overall* production process, i.e. the whole set of particular production processes[2].

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[2]   *Macro-economics* consider economic phenomena from a *global* point of view, at the level of a country or a series of countries ; *micro-economics*, on the contrary, consider economic phenomena from a *particular* point of view, at the level of the individual, or an enterprise, or a branch of production. This simple distinction between macro- and micro-economics, however, must be qualified by the following two observations, the first referring to conceptual usages, the second to ideology :

a)When economic phenomena are considered at the level of a branch of production, several authors also use the concept of « meso-economics » (i.e. economy at an intermediate level). When phenomena are considered at the level of a whole country, all authors use the concept of « macro-economics » ; however, if we take into account that the country in question is only one element of a vaster set (European economy, world economy), phenomena concerning that country should be seen as micro-economic.

b) Current ideology suggests that the pursuit of one's particular interest by each individual or enterprise (or branch or country) is the best way of tending towards general interest. As a matter of fact, however, an action which is relevant from a micro-economic viewpoint may have completely adverse effects on a macro-economic level : thus, each enterprise or country considered separately benefits from wage cuts, since the latter improve its competitiveness and enable it to expand its production ; but a general wage reduction entails a reduction in aggregate demand and therefore a reduction in aggregate production (on this problem, see chap. IX, 3.1.2.).

In each case, we will consider both the *elements* used in the production process and the *results* of the production process.

1.2. The micro-economic production process

1.2.1. The products of labour

As far as products are concerned, any labour process leads to the creation of use-values. These are *goods* or *services*, which will be used either as *means of consumption* or as *means of production* (see table I.1.).

a) Goods or services

The distinction between goods and services can be made as follows. *« Goods »* are products of labour which are separable from their producer : they can be stockpiled and their consumption takes place after their production (for example : cars, books, medicines, hairbrushes). *« Services »*, on the other hand, are products of labour which are inseparable from their producer : they cannot be stockpiled and their consumption is simultaneous with production (for example : transport, education, medical care, a haircut).

b) Means of consumption or means of production

The goods and services produced constitute *means of consumption* if they are used by individuals in order to satisfy their needs. They constitute *means of production* if they are used with a view to producing other goods and services[3]. This second type of use will be considered immediately. It should be noticed here that identical goods or services can constitute either means of consumption or means of production, according to what they are used for (for example : electricity for home lighting or for industrial use).

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[3] The use of goods and services as means of production is also called « productive » or « intermediate » consumption (as opposed to «final» consumption when they are used as means of consumption).

1.2.2. The elements of the labour process

The labour process implies the use of labour-power and means of production (see table I.1.). What is meant here ?

a) Labour-power

Labour and *labour-power* must be clearly distinguished from one another. *Labour-power* is the sum of the physical and intellectual faculties which fit a human being for work, it is his *capacity* to work. *Labour* itself consists in the *use* of these faculties, of this capacity to work. The difference between the two concepts is similar to that which exists, for example, between nuclear *capability* and a nuclear *strike* (a bombardment) : the first is a potential, the second is the use of this potential.

Table I.1. : The micro-economic production process

Elements	Activity	Result
Worker(s) = *labour-power* + Means of production { *Means of labour* + *Objects of labour* }	Production (= *labour*)	*Product of labour* (= *use-values*) Goods or Services { Means of consumption or Means of production }

b) Means of production

The producer does not work in a void, he does not produce from nothing and without anything : in addition to his labour-power he uses *means of production*. The latter break down into two categories, *objects of labour* and *means of labour*. The objects of labour are the objects on which labour is carried out, they are the materials which are transformed by labour. The means of labour

are all the means utilized directly or indirectly to carry out this labour (tools and machines, buildings, etc.)[4].

1.2.3. Production site and production unit

Any labour process is necessarily carried out in some place of work or another, in some place which is technically and geographically determined : workshop in Newcastle, office in London, laboratory in Montreal, producer's home, customer's home, etc. This technical and geographical place is the *production site*.

On the other hand, any labour process necessarily takes place within some social entity which organizes production : steel factory, hospital, travel agency, government department, trade union, shop, household, etc. Each of these social entities constitutes a *production unit*.

1.3. The macro-economic production process

Table I.1. gives an overall view which can be applied to any labour process considered *in isolation*. If one wants to consider the *aggregate* production of an historical society, the table can be extended both to the left and to the right, starting in both cases from the means of production (see table I.2.).

As *elements* of the labour process, the means of production that are used do not fall from heaven : they themselves are produced by human labour in other production processes. As *products* of the labour process, the means of production that are produced are mere intermediaries : they will be used in subsequent production processes. Following this double line of reasoning, one realizes that the total production of goods and services ultimately rests on two basic « productive forces » (human labour-power and nature) and that it ultimately aims at satisfying consumption needs. Let us see all this more clearly.

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4   Two observations concerning the means of production :

a) In everyday language, as well as in standard theory, the term « means of production » refers only to the means of labour ; in Marxist theory it also covers the objects of labour.

b) The terms « objects of labour » and « materials » adequately apply to the production of typical material goods (wood transformed into chairs). For numerous services it is preferable to speak of a « point of application » of a service, or of a « reality » transformed by a service. This point of application or reality may be a material object (transporting goods, repair, sale, etc.), an individual (transporting persons, health care, education, etc.), an abstract reality (theoretical research for instance), etc.

Table I.2. : The basic productive forces and ultimate results
of aggregate production

Elements of production		Results of production	
Basic productive forces	⟵ Immediate elements	Immediate results ⟶	Ultimate products

Labour-power + Nature	LP
	   LP +
	  LP + ⟩ MP
	LP + ⟩ MP
	  + ⟩ MP
	... MP
		MC
		or MC
		MP ⟨ or ⟩ MC
		   MP ⟨ or MC
		    MP⟨ or
		     MP ...
			Means of consumption

Note : LP = labour-power ; MC = means of consumption ; MP = means of production

Nature provides raw materials : air, water, minerals, plants, animals... In a limited number of cases, these raw materials can be directly consumed, without the intervention of human labour : this is the case – already mentioned – of air. In the overwhelming majority of cases, human labour-power must transform the raw materials in order to obtain means of consumption.

In a few cases, this transformation of the raw materials into means of consumption is plain and straightforward (the fish eaten as it is caught). In most cases the means of consumption are only obtained after a more or less roundabout process : the raw materials are first transformed into means of production for other production processes (the fish caught and used in the tinned food industry, the ore mined and used in the metal industry) ; the products obtained are either means of consumption (the tinned food) or means of production which will be used as « inputs » for other production processes to eventually provide means of consumption (the metal is transformed into sheets and tools which are used to produce cars).

The global production of goods and services can thus be seen as a collective exploitation of nature by man. For this, man has produced and used an increasing number of varied and increasingly powerful means of production : this has made it possible to enhance his power over nature and to extract from it ever

more varied and abundant means of consumption[5]. As the means of production *used* are themselves the product of human labour, it appears that society's wealth in goods and services is based on human labour[6]. As the means of production *produced* are intermediaries meant to enhance the production of means of consumption, it appears that global production eventually leads to satisfying consumption needs.

2. THE VARIOUS SOCIAL ASPECTS OF LABOUR

After analysing the *material* aspects of labour, which can be found in any production process, let us now consider the *social* aspects of labour, which vary from one production unit to another.

In § 2.1., we analyse labour in the *professional sphere*, i.e. the sphere where production activies are carried out in principle *in order to obtain an income*. In § 2.2., we consider labour in the *non-professional sphere*, where most production activities are carried out *free of charge*[7]. Finally, § 2.3. synthesizes the various types of labour and production units, enabling readers to locate and analyse their own production activities (professional and non-professional) within the macro-economic production process.

2.1. Labour in the professional sphere

Labour in the professional sphere can be classified according to two basic social criteria : 1. whether the products are (or are not) intended to be sold : this criterion makes it possible to contrast *market production* and *non-market production*, *indirectly social labour* and *directly social labour ;* 2. whether the producers offer (or do not offer) their labour-power on the « labour market » : this criterion makes it possible to contrast *waged labour* and *non-waged labour*.

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[5]   This view of a collective and increasing use of nature by man will be considered critically in chap. VII (section 4).

[6]   Both on the level of each individual production process and on the level of aggregate production, standard economic theory puts two essential « factors of production » on the same footing : « labour » (i.e. labour-power) and « capital » (i.e. the means of labour). Such a presentation remains on the surface of things : it does not show that « capital » is itself a product of human labour. (In order to illustrate that all products are ultimately based on human labour, we may recall the comparison of two cataclysms presented in the introduction, 1.2.1.)

[7]   Exceptions are possible : unpaid labour can be found in the professional sphere (for example, the voluntary worker in a hospital) ; and paid labour can be found in the non-professional sphere (for example, the wage-earner employed by a voluntary organization) (see below, 2.2.2. and 2.3.1.).

2.1.1. Market production or non-market production

a) Market production and indirectly social labour

1. The sector of market production comprises a multitude of *enterprises*. These are production units which produce commodities, i.e. goods or services intended for sale.

Each enterprise freely decides the nature of its production (what to produce), the technique of production (how to produce), the volume of production (what quantity to produce), the site of production (where to produce), etc. : this is the principle of *free initiative*. Each enterprise, however, takes all its decisions *considering market signals*. The market comes in in two ways : for every enterprise enters the market not only to sell its products (for which it seeks the highest possible revenue) but also to purchase its machines, materials, etc. (the cost of which it seeks to minimize). As long as its revenue exceeds its cost by an amount which is judged sufficient, it need not change its production decisions ; but if its revenue becomes insufficient compared to its cost, it must revise its decisions (change the product, or the technique, or the quantity produced, or the production site, etc.). It can be said, therefore, that *the market validates* (approves of) *or invalidates* (disapproves of) *the entrepreneurs' initiatives*.

Each enterprise produces goods or services which are mainly purchased by people other than the producers themselves. The labour carried out in the enterprises is thus, in principle, *social labour*. By this is meant *socially useful labour*, i.e. labour the product of which is useful to people other than the producers themselves.

It is the market sale which signals the socially useful character of labour performed in an enterprise. If goods or services supplied on the market find a purchaser, this is proof that the labour used in producing them is useful to others than the producers. Such labour thus constitutes *indirectly social labour* : by this is meant all labour that has social usefulness recognized indirectly, by means of a market sale[8]. On the other hand, if goods or services supplied on the market do

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[8]   a) By sale we mean any transfer against payment, whether a transfer of rights of ownership (sale in the strict sense) or a transfer of rights of use (hiring, lending).

b) No moral judgement is made as to the « social usefulness » of the goods or services produced (food, drugs, arms, transportation, education...). In the theoretical discussion in this and subsequent chapters, any product whatsoever is « socially useful » provided it is considered as such either by the market (indirectly social labour) or by a public authority (directly social labour : see below, 2.1.1.b).

not find a purchaser, it would appear that the labour put in by the producers is socially useless labour.

2. Since they are market-oriented, enterprises *live from the sale of their products*, from the price paid by the customers : if they prove successful in selling their products in favourable conditions, then the realized proceeds enable them to pay the producers and carry on their activities.

On the other hand, enterprises are continuously *subjected to market laws* : on the one hand, to the law of demand (the goods or services produced must be demanded by purchasers), on the other hand, to the law of competition (the goods or services produced must be competitive with those of rival enterprises). Enterprises are continuously subjected to market risks (their customers may decide to purchase other products or buy the same products from rival enterprises) ; each of them faces the risk of automatic elimination through the mechanisms of demand and competition[9]. The labour performed in enterprises is, therefore, *heteronomous labour* : by this is meant labour whose reproduction is subject to external norms, in this case the market laws.

3. In most cases, market production initiatives stem from private persons (whether capitalists or self-employed : see below, 2.1.2.) : these entrepreneurs run *private enterprises*. In a certain number of cases, however, it is the public authorities which take the initiative of producing for sale : they run *public enterprises* producing for the market (the French Railways, for example, or the Post Office).

b) Non-market production and directly social labour

1. In addition to enterprises, the professional sphere also comprises *institutions of public interest* (which we will also call, for brevity's sake, *institutions*). These are production units which produce *collective non-marketed goods or services* : justice, public parks, national education or health care, registry services, etc. Such collective non-marketed goods and services are not intended for sale, but are in principle supplied free of charge to all citizens.

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[9]   This sanction by the market can be mitigated through the obtention of public subsidies. This is particularly relevant in the case of *public* enterprises, whose normal purpose is to provide everyone with goods or services considered indispensable.

Just like enterprises, institutions produce goods and services which are mainly used by people other than the producers themselves. The labour carried out in them is thus also *social labour*, or socially useful labour.

In the case of institutions, however, it is not market sale which recognizes the social usefulness of labour : the goods and services produced are considered useful from the start, by virtue of the public authorities' decision. The labour performed within them is thus *directly social labour* : by this is meant all labour that has social usefulness directly recognized by a public authority, independently of market sale.

2. Institutions of public interest *live*, not from the sale of goods or services, but *from public financing* : the public authorities raise taxes which make it possible to finance the activities carried out by institutions.

Institutions are subjected, not to market laws and risks, but to the laws and decisions taken by the public authorities which finance them. The latter have their own criteria concerning the creation, continuation or suppression of institutions. These criteria may be very diverse, taking into consideration the financial burden for the public authority, the social needs to satisfy, the partisan or personal interests of the politicians in power, etc. If some institutions disappear, it is not because they would not abide by market laws, but because they are not in conformity with the criteria dictated by public authorities. The labour carried out in the institutions in question is thus also *heteronomous labour* : its reproduction is subject to external norms, in this case the public authorities' criteria.

3. In most cases, initiatives in carrying out non-market production stem from the public authorities themselves : they run *public institutions*. In some cases, however, private persons initiate collective non-market production and get recognition and financial support from the public authorities : they run state-financed *private institutions* (for instance : most universities in Britain).

2.1.2. Waged labour or non-waged labour

The previous criterion divided the producers according to the market or non-market character of the *goods or services* which they help to produce by their labour : some help to produce goods and services intended for the market ; others, goods and services which do not come onto the market. The next criterion classifies these same producers according to the market or non-market character of the *labour-power :* some sell their labour-power (the wage-earners), while

others do not ; among the latter, some purchase labour-power (the capitalists), while others do not (the self-employed).

a) The wage-earners

Wage-earners are characterized by the following features : 1. They are *legally free* to work for someone else[10]. 2. If they work for someone else, they do so by passing through the *« labour market » :* there they offer their labour-power to possible employers in exchange for a wage[11]. 3. If they sell their labour-power against a wage, it is – in most cases – because they are *economically compelled* to do so : lacking the necessary *means of production* (land, plant and equipment), they cannot themselves produce and live on the direct consumption or sale of products ; lacking *transferable assets* (real estate, securities), they cannot live on property incomes either ; in order to ensure their livelihood or to obtain the incomes they seek, they cannot but sell their labour-power in exchange for a wage[12].

Wage-earners are by far the largest social category. This category includes all those selling their labour-power, irrespective of their legal status and actual tasks, irrespective of their employer, the length of the labour contract or the wage scale. It therefore includes blue and white collar workers, executives and

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[10]   This distinguishes wage-earners from workers who are legally obliged to work for someone else by virtue of personal links : this is the case of *slaves* (owned by their masters) or of *peasant-serfs* (subjected to their feudal landlords).

[11]   Since labour-power and labour are two distinct things (see above, 1.2.2.a), the market on which workers offer their labour-power should be called the « labour-power market » rather than the « labour market ». As to the transfer of labour-power, it is clearly not a *sale* in the strict sense (legally speaking, wage-earners do not become slaves but remain owners of their labour-power), but a transfer of rights to its use (in this sense, the term « hiring out » of labour-power would be more correct).

[12]   a) The historical process through which workers have lost their access to the means of production and consumption is called the process of proletarianization. The latter is at the same time the process of formation of a market for labour-power, and also the process of formation of a market for capitalist commodities (see chap. VII, 3.2.1.a and 3.3.1.a).

b) The fact of supplying labour-power in exchange for a wage does not rule out the wage-earner owning *some* means of production or transferable assets : the latter, however, are insufficient to ensure his livelihood or the living standard sought after, so that the sale of labour-power remains necessary.

c) In most countries, numerous rural and urban families are compelled, in order to ensure their precarious livelihood, to combine very small-scale production (plot agriculture, hawking) and the sale of labour-power : they are « semi-proletarian » families, as opposed to the proletarians proper who live only from the sale of labour-power.

officials, and also apprentices, temporary workers, as well as workers on youth employment schemes, job creation schemes, etc.

All these wage-earners can be divided into two groups, according to whether their employer and themselves work in the market production sector (indirectly social labour) or in the sector of institutions (directly social labour).

b) The capitalists

Capitalist producers are defined by two distinctive criteria. 1. They own means of production (enterprises) and ensure their livelihood, not by means of the sale of their labour-power, but by means of the sale of goods or services produced by their enterprises. 2. In order to produce goods or services in their enterprises, they buy wage-earners' labour-power[13].

The labour performed by capitalists basically consists in organizing, controlling and directing production activities. Two observations must be made, however, here. First, in many *small-scale* enterprises, capitalists also perform tasks which are normally reserved for the wage-earners. Second, in all *large-scale* enterprises, capitalists delegate a sizeable part of their organization, control and management tasks to a particular group of wage-earners especially employed to this effect : the executives (see chapter VII, 1.2.2.a).

All capitalists belong to the market production sector (indirectly social labour). They take part in it either *individually* (small capitalist leading an individually owned firm) or *associated* with other capitalists (board of directors of a limited company).

c) The self-employed

Self-employed or « independent » producers are also characterized by two features. 1. Like the capitalists, they own means of production (enterprises) and live, not from the sale of their labour-power, but from the sale of the goods or services produced in their enterprise. 2. Unlike the capitalists, they do not purchase wage-earners' labour-power in order to produce these goods or services, but produce them personally. (This does not rule out the self-employed

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13 Capitalists do not necessarily have the *legal ownership* of the means of production : they may lease buildings, land or plants (in the same way as they hire labour-power and borrow money). The important fact is that capitalists enjoy the « *real ownership* », that is the right of use and of disposal to their advantage over the means of production (and over the labour-power and money). The distinction between legal ownership and real ownership will be underlined on various occasions : see chap. VII, 2.2.1.a (on the concentration of capital) ; conclusion, section 1 (on « employee-shareholding ») ; appendix 12 (on social classes).

being helped by members of his family – « helpers » – but the latter's labour-power is not purchased on a labour market.)

All the self-employed also belong to the market production sector (indirectly social labour). In order to indicate the analogy with and difference from capitalists, they are also called *simple market producers :* « market », since they produce for sale ; « simple », insofar as they do not rely on the purchase of labour-power[14].

Like the capitalists, the self-employed take part in market production either as *individual* producers (artisans, shopkeepers, members of the liberal professions) or as *associated* producers (workers' co-operatives, partnerships between lawyers).

d) The rentiers

The last category to be mentioned is the *rentiers*, i.e. people living on their property incomes. Rentiers earn their living without performing any labour : they do not work as wage-earners or capitalists or self-employed, but simply transfer their assets to other people against payment. The assets in question may be landed property, buildings, money or securities representing money advanced (shares or bonds). The owners of such assets may lease or lend them (transfer of rights of use) or sell them (transfer of rights of ownership). They do so against payment of periodical rents (ground-rent, leasing interests, dividends) or of a lump-sum rent (selling price of the asset).

Wage-earners, capitalists and the self-employed may obtain part of their incomes in the form of rents. Such is the case, for instance, with wage-earners who deposit their savings with a bank and receive interests on them. Such is the case, above all, with capitalist companies which control considerable amounts of financial assets (securities) : they derive the corresponding interest and dividends and also make profits from speculative transactions. These rents, however, do not turn the wage-earners, capitalists or self-employed into rentiers : only rentiers earn their living without performing labour.

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[14] a) The so-called « self-employed » who employ wage-earners to produce part of the goods or services they sell are not truly self-employed : they are in actual fact small capitalists.

b) While the capitalists make up the *bourgeoisie*, the self-employed make up what is called the « *petty bourgeoisie* » : this term is ambiguous insofar as it may suggest that the true self-employed (who do not employ wage-earners) would be small capitalists ; but the term is currently used.

2.2. Labour in the non-professional sphere

The non-professional sphere rests on labour provided free of charge by the producers. A large part of this unpaid labour takes place within the *household :* it is *domestic labour*. This can be defined as labour performed by and for household members without monetary compensation. Such a definition does not imply that producers and beneficiaries necessarily belong to the same household : it also covers services rendered between different households.

Another part takes place in the framework of *voluntary organizations* (local committees, organizations for the defense of human rights, for the protection of environment, trade unions, political parties,etc.). These organizations depend on voluntary affiliation and unpaid labour on the part of their members ; they provide goods or services free of charge to the members themselves and/or to third parties. In contrast to enterprises, they do not live from the sale of products (except perhaps in a subordinate way, with a view to realizing the purpose of the organization) ; unlike institutions, they do not live from public subsidies (except, here also, secondarily).

In parallel with the analysis of labour in the professional sphere, we can briefly describe labour in the non-professional sphere in the following way.

2.2.1. Social labour or private labour, autonomous labour

In the non-professional sphere, the worker may very well produce goods and services which are useful to him alone : this is so in every household limited to one person and in the case of every hobby for personal use only. In all these cases labour is not social labour, but *private labour*, that is labour the product of which is useful only to the producer himself.

In voluntary organizations, however, the activities are generally carried out for the benefit of people other than the producers themselves : the latter perform *social labour*, i.e. socially useful labour.

Households and voluntary organizations essentially *live from voluntary contributions* : unpaid labour, and also subscriptions and private grants (to organizations). Labour in the non-professional sphere need not be validated by the market (insofar as it does not produce goods or services for sale), nor by public authorities (insofar as it does not depend on the public authorities' financing). It is *autonomous* labour, i.e. labour the reproduction of which is subject to its own, internal, norms : labour in the non-professional sphere can reproduce itself as long as the voluntary contributions on which it relies continue to exist.

2.2.2. Non-waged labour

The non-professional area relies on labour provided free of charge by the producers : the latter do not sell their labour-power in exchange for a wage, they provide *non-waged labour*. In many cases, however, organizations do engage and remunerate a certain number of professional members with a view to enhancing, co-ordinating or supporting the activities of the volunteers : in such cases, the members' voluntary labour is complemented by professional waged labour[15].

2.3. Synthesis and conclusion

2.3.1. An overall view of labour

Table I.3. gives a breakdown of all labour (professional and non-professional) according to the two social criteria put forward, namely : the *market* (or non-market) character of the goods and services produced and the *waged* (or non-waged) character of the labour provided. Going back to the concepts presented in the above analysis, it is possible to distinguish 8 categories corresponding to 8 types of production units (from A1 to D2)[16].

Table I.3. tells us nothing about the nature of the production which is carried out. In fact, the same production, defined by the nature of the product, can appear in two or more of the different rectangles, even in all of them : teaching and education, for example, are provided primarily in the area of *non-market production* (state education = C1, education at home = D2) but also in the area of *market production* (private lessons = B1 or B2, driving schools = A1). A given

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[15] The case of professional workers engaged by private households for child care, housework, etc. is different. These workers, who are not members of the household, obviously do not perform domestic labour in the sense defined above. But they should not be considered as wage-earners : despite the appearances of a waged relationship, they are rather independent producers selling services and providing indirectly social labour. (The same services can be sold to the households by specialized enterprises engaging wage-earners.)

[16] a)To complete the picture, we should add an item A3 referring to *non-profit private enterprises :* the latter produce for the market and use waged labour-power, just like capitalist and public enterprises ; they are privately owned (like capitalist enterprises) but can subsist without making profit (like public enterprises). It should be noted that the term « enterprise » refers to all the production units producing for the market, and to them only.

b)The so-called « public sector » comprises public enterprises (A2) and public institutions (C1). The « associative sector » comprises collective independent enterprises or « co-operatives » (B2) and voluntary organizations (D1). The « non-profit » sector extends to all units of production except capitalist enterprises (A1).

production can also shift from one rectangle to another following changes in political decisions (privatization of public enterprises = shift from A2 to A1 ; transformation of a municipal free day-nursery into one entirely financed by parents = shift from C1 to A1 or B2).

Table I.3. : A classification of activities and production units

	Market production	*Non-market production*

Waged labour	A. Enterprises using waged labour
	  A1. Capitalist enterprises
	  A2. Public enterprises
	
	(Live from sales)
	
	(Indirectly social labour,
	heteronomous labour)
		C. Institutions of public interest
		  C1. Public institutions
		  C2. Private institutions
		
		(Live from public subsidies)
		
		(Directly social labour,
		heteronomous labour)

Non-waged labour	B. Enterprises relying on self-
	  employment
	  B1. Individual independent
	    enterprises
	  B2. Collective independent
	    enterprises
	
	(Live from sales)
	
	(Indirectly social labour,
	heteronomous labour)
		D. Non-professional sphere
		
		  D1. Voluntary organizations
		
		  D2. Households
		
		(Live from voluntary contributions)
		
		(Social or private labour,
		autonomous labour)

As far as the social criteria are concerned, table I.3. is based on clear-cut theoretical distinctions, while things may be much more complex in reality. Indeed, the table rests on two simplifying assumptions.

- First, the table assumes that all labour performed in the professional sphere (rectangles A, B, C) is professional labour, and that all labour performed in the non-professional sphere (rectangle D) is labour provided free of charge.

In reality, labour provided free of charge can be found at various points in the professional sphere : for instance, independent individual enterprises (B1) often have recourse to unpaid labour provided by family members (« helpers » in the small retail trade, in family farming) ; in some countries the ministry of

National Defence (within C1) takes advantage of unpaid labour enforced during military service ; varied voluntary workers may also perform unpaid labour in institutions or enterprises (such is the case of voluntary workers in hospitals). Conversely, professional labour can be found within the non-professional sphere : such is the case of waged members of voluntary organizations (D1)[17].

- Second, table I.3. assumes that each unit of production has only one source of income or finance available to ensure its continuation : market enterprises (rectangles A and B) live from the sale of their products, from the *price paid by the customers ;* institutions (rectangle C) live from *public financing*, which implies compulsory levies ; households (D2) – considered as production units rather than consumption units – rely only on their members' *unpaid labour ;* and voluntary organizations live only from *voluntary contributions* (unpaid labour, subscriptions, grants).

Reality often differs from this scheme, as the same production unit may have several sources of incomes in varying proportions. Thus market enterprises may partly rely on public *subsidies* (railway companies for instance) and/or on member's *subscriptions* (football clubs), to say nothing of property *rents* (very important in the case of financial companies). Voluntary organizations may *sell* services to their members or to outside customers ; they may also take advantage of public *subsidies*. Various institutions require *individual payments* for services provided (education fees, registry office fees). And household production might possibly benefit from *public subsidies* (wages for housework).

All these exceptions show that actual realities are not as plain as theoretical distinctions. They show in particular that it may be difficult, or even impossible, to draw a clear dividing line between market and non-market production. Thus a day-nursery half financed by parents and half by local authority belongs equally to market and non-market production. An education centre belongs *predominantly* to non-market production if it is financed mainly by public

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[17]All these exceptions, however, do not affect the properties of labour performed in the respective spheres. Gratis labour performed in the professional sphere (helpers, servicemen, varied voluntary workers) is heteronomous labour : just like all the labour carried out in an enterprise or institution to which it belongs, it is subject to validation either by the market (indirectly social labour) or by public authorities (directly social labour). Conversely, professional labour performed in a voluntary organization and financed by the latter is autonomous labour : just like all the gratis labour carried out in the organization considered, it need not be validated either by the market or by public authorities.

subsidies, and *predominantly* to market production if financed mainly by private payment. And so on.

These discrepancies between mixed actual realities and clear-cut theoretical distinctions, however, hardly raise any problem in the perspective of this book. For it does not aim at studying the concrete features of any particular unit of production (micro-economic viewpoint) ; it aims at understanding the basic features of society considered *as a whole* (macro-economic viewpoint). From this global point of view, it is justified to assume that each specific unit of production shows typical features, and in particular that it clearly belongs either to market or to non-market production.

A complementary observation must be made here. Table I.3. classifies all the labour provided in society, but in principle shows *only* the labour, i.e. production activity (in the broadest sense of the word). It puts to one side consumption activity and, more generally, leisure time.

Whereas labour in most cases allows individuals to only develop a limited number of aptitudes, leisure time in principle allows them to fulfil different and varied aspects of their personality if they wish. If an extra rectangle were added to table I.3., representing leisure time, it could be said that development ultimately aims, on the one hand, at reducing the area for labour so as to extend that for leisure, and, on the other hand, at fairly distributing both labour and leisure opportunities among all individuals. The attainment of this goal involves increasing labour productivity (within all the rectangles in the table) as well as a general reduction in labour-time (so as to reach full employment). Capitalist logic induces productivity increases (see chap. VII, § 1.2.), but it impedes full employment through impeding a general reduction in labour-time (see chap. VII, 4.1.2., especially footnote 33).

It goes without saying that this clear-cut distinction between labour and leisure time, like all theoretical distinctions, contrasts with the nuances of reality. In some circumstances, professional or domestic work fortunately includes varied and creative elements through which the individual finds a means of developing manifold aspects of his or her personality : in such circumstances, work and leisure time tend to merge together. Labour in voluntary organizations (item D1) is probably where the distinction between work and leisure time is the least clear. This is because such activity falls outside of the usual constraints of professional labour and housework and in theory does not fall under the laws of the market nor of public authorities.

2.3.2. Introduction to the study of capitalist society

What makes capitalist society specific, what distinguishes it from every other society, is obviously the existence and the dominant character of *capitalist production* (item A1). Domestic labour (D2) and self-employed individual labour (B1) can be found in different degrees in practically every society, from the feudal to the centrally planned ; the same is also true of labour performed within voluntary organizations (D1). The prevalence of directly social labour (C1 + C2) would be typical of a centralized society ; the prevalence of public enterprises (A2) would indicate some form of « state capitalism » ; and that of workers' cooperatives (B2) would represent some kind of « market socialism ».

In order to gain an understanding of capitalist societies – which is what this book aims at – we have to begin by achieving a thorough understanding of what is specific to these societies, namely capitalist-type production. This will first be analysed *in itself*, disregarding the existence of the other types of production. The latter will be brought in later in the analysis, in chapter VI. We will then see in particular how domestic labour, independent enterprises and institutions of public interest interact with capitalist production as such.

Table I.3. brings out two essential and distinctive characteristics of capitalist production (item A1) : whatever the nature of the goods or services produced, capitalist production is production *intended for the market* and *carried out by wage-earners*. Two other essential features are well known : the search for *profit* and the pressure of *competition*.

Chapter II will exclusively consider the first of the above characteristics : it will analyse in detail the *production of commodities* (without taking the waged or non-waged type of labour into account). Waged labour and profit will be considered in chapter III, competition in chapter V.

PEDAGOGICAL DEVICES CONCERNING CHAPTER I

SUMMARY

1. Labour always shows some common *material aspects*. The latter refer both to the elements used and the results produced. In both cases, the micro-economic viewpoint must be complemented by a macro-economic one.

As far as the *elements* used are concerned, any *particular* production process makes use of labour-power and means of production (the latter include means of labour and objects of labour). Since the means of production used must themselves be produced, *aggregate* production ultimately rests on two basic « productive forces » : on the one hand, the human beings, who provide their labour-power ; on the other hand, nature, which provides raw materials.

As far as *results* are concerned, any *particular* production process produces use-values, i.e. useful goods or services ; these goods or services can be used either as means of consumption or means of production. As the means of production produced are intermediaries meant to enhance subsequent productions, the *aggregate* production of any society ultimately aims at satisfying consumption needs.

2. Labour shows a great variety of *social aspects*. Irrespective of the concrete nature of the elements used and the results produced, the various production units can be classified according to two basic social criteria : on the one hand, waged or non-waged labour (is labour-power purchased on the « labour market », or is it not ?) ; on the other hand, market or non-market production (are the products intended to be sold, or are they not ?). Following these two criteria, one can schematically distinguish (see table I.3.) : A. enterprises using waged labour (capitalist or public enterprises, and possibly non-profit private enterprises) ; B. enterprises relying on self-employment (individual or collective independent enterprises) ; C. institutions (public or private) ; D. production units belonging to the non-professional sphere (voluntary organizations and households).

All *enterprises* in principle live from the sale of their products. Labour performed within them (by wage-earners, capitalists or self-employed) is *indirectly social labour*, i.e. labour which is recognized as socially useful only in an indirect way, through the sale of the products on the market. Labour performed there is at the same time *heteronomous* labour, i.e. labour the reproduction of which is subject to external norms, the « market laws » (enterprises can only subsist if they meet the purchasers' demand and are competitive with respect to rival firms).

Contrary to enterprises, *institutions of public interest* produce non-marketed goods or services ; they do not live from the sale of their products, but from public financing. Labour performed within them (by wage-earners) is *directly social labour*, i.e. labour which is recognized as socially useful in a direct way by the public authority financing them. Labour performed there is also *heteronomous* labour, in the sense that institutions are subject to public authorities' decisions (they can only subsist if they meet the criteria established by the latter).

In the non-professional sphere, households and voluntary organizations in principle live from unpaid labour and voluntary contributions. The labour provided may be *social* (useful to others than the producers themselves) or *private* (useful to the producers alone). Labour is *autonomous*, insofar as these production units are not subject either to « market laws » or to public authorities' decisions. They can subsist as long as voluntary contributions are maintained.

Actual realities may be much more complex than the theoretical distinctions above. For instance, a given production unit may live partly from the sale of its products and partly from public financing, thus belonging to both market and non-market production. A micro-economic analysis (focusing on particular production units) must necessarily consider actual realities in all their complexity ; on the other hand, a macro-economic analysis (considering society as a whole) may be carried out assuming that each particular production unit corresponds to the theoretical criteria put forward.

CONCEPTS TO ASSIMILATE (see glossary)

Capitalist	Labour-power
Division of social labour	Macro-economics
Enterprise	Market production
Independent (simple market producer)	Means of consumption
Institution (of public interest)	Means of labour
Labour	Means of production
- autonomous labour	Micro-economics
- directly social labour	Non-market production
- domestic labour	Objects of labour
- heteronomous labour	Self-employed
- indirectly social labour	Use-value
- private labour	Wage-earner
- professional labour	
- social labour	

EXERCISES (answers at end of book)

A. Basic knowledge

1.1. What is the difference between micro-economics and macro-economics ?

1.2. What is meant by use-value ? Where do use-values come from ?

1.3. What is the difference :
    - between goods and services ?
    - between means of production and means of consumption ?
    - between means of production and means of labour ?
    - between labour and labour-power ?

1.4. Table I.1. considers the production process (or labour process) in any particular production unit (micro-economic viewpoint). From this table, explain the *elements* and the *results* of the production process.

1.5. Table I.2. considers production on an aggregate level (macro-economic viewpoint). From this table, explain why :
    a) labour-power and nature are the two basic productive forces of aggregate production ;
    b) aggregate production ultimately aims at satisfying consumption needs.

1.6. What is the difference :
    - between professional and non-professional labour ?
    - between social labour and private labour ?
    - between directly social and indirectly social labour ?
    - between heteronomous labour and autonomous labour ?
    - between waged labour and non-waged labour ?

1.7. In what aspects is the situation of a self-employed producer similar to that of a capitalist, and how does it differ ?

1.8. Table I.3. brings together the different types of labour and production units.
    a) On the basis of which criteria has the table been built up ?
    b) What are the differences and similarities :
    - between enterprises and the other production units ?
    - between capitalist enterprises and public enterprises ?
    - between public institutions and private institutions ?
    - between public enterprises and public institutions ?

c) Explain why labour is :
- indirectly social and heteronomous in enterprises (rectangles A and B) ;
- directly social and heteronomous in institutions (rectangle C) ;
- private or social, but autonomous, in the non-professional sphere (rectangle D).

B. More advanced knowledge

1.9. What is meant by « means of production » in standard economic theory as compared to the meaning used here ?

1.10. What is the difference between « productive consumption » (or « intermediate consumption ») and « final consumption » ?

1.11. Standard economic theory puts two essential « factors of production » on the same footing, namely « labour » and « capital ». What criticism(s) can be made against that presentation ?

1.12. Terminological and juridical observations :
a) Do capitalists and the self-employed necessarily *own* their means of production ?
b) Must enterprises necessarily *sell* their products for labour to be indirectly social labour ?
c) Do wage-earners *sell* their labour-power ?

C. Applied knowledge

1.13. Choose two production processes in which you are involved (preferably one in the professional sphere and one in the non-professional sphere). For each of them, specify the means of production used, distinguishing between means of labour and objects of labour.

1.14. Locate in table I.3. the following productions :
a) healthcare ;
b) black labour ;
c) activities in the informal sector ;
d) student work

1.15. Locate your production activities (professional and non-professional activities) within table I.3. Explain why your activities constitute private or social labour, directly or indirectly social labour, autonomous or heteronomous labour.
Note :
- In order to answer this question, it may be necessary to distinguish two or more production units within the same entity. For instance, a voluntary organization or an institution (public or private) may accessorily take part in market production (sale of

goods or services) ; it should be considered as an enterprise for that part of its activities.
- An answer to this question is provided at the end of the book as an example.

1.16. In the economic comments you read or hear – or make yourself –, see whether the approach is micro- or macro-economic.

CHAPTER II

THE BASIS OF PRICES AND REVENUES :
VALUE

Chapter I considered the *production of goods and services* in general. We noted that, apart from the «gifts of nature», goods and services *consumed* have to be first *produced*. *Labour* is precisely the set of activities *producing* goods and services, as opposed to *consumption* activities. Production activities were classified according to various criteria, in particular the market or non-market character of labour-power and of labour products (see synthesis in table I.3.).

Rather than focus on the production of goods and services in general, chapter II focuses on the production of goods and services intended for sale, i.e. on the *production of commodities* (rectangles A and B in table I.3.). Chapter II ignores all types of non-market production : it assumes that the whole of production consists of market production (non-market production will be taken into account from chapter VI onwards). Moreover, within market production, chapter II makes no distinction between waged labour and non-waged labour : the principles put forward are applicable in both cases (the specific features of waged market production will be considered in chapter III)[1].

Having defined the concept of *commodity* in a precise manner (section 1), the chapter shows the links between the visible phenomenon of prices and the invisible reality of value, i.e. of indirectly social labour : section 2 examines the nature and magnitude of *value*, section 3 examines the nature and magnitude of *prices*. The chapter leads to a fundamental conclusion : in a market society, the source of all *revenues* lies in labour devoted to commodity production (section 4).

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[1] In order to ignore the specific features of *waged* market production, it may be implicitly assumed that all goods and services are produced by simple commodity producers, i.e. by *self-employed* producers working on their own account.

1. THE CONCEPT OF COMMODITY

Commodities are products of human labour that are exchanged on the market. Two conditions have thus to be fulfilled for goods and services to be commodities. First, they must be the product of *human labour*, the result of *production* activities. Second, they must be exchanged on the market, they must be sold there[2]. These are the two *necessary*, but also *sufficient* conditions for goods and services to be commodities.

1.1. Two necessary conditions

Goods and services which do not fulfil one of the above requirements are not commodities. This is the case with the products of nature and with the products of human labour which are not intended for the market.

The *products of nature* (or « gifts of nature », or natural resources) are goods and services provided free by nature, *without the intervention of human labour*. Thus river water, virgin soil, fruit growing wild, etc., involve no human production and so are not commodities. (However, water piped into houses, tilled soil, fruit from orchards, etc., all involve some human activity and will be commodities if they are sold.)[3]

The *products of labour which are not intended for the market* include two types of goods and services :

- collective goods and services produced in the *institutions of public interest* (rectangle C in table I.3.) : these are financed by the community – through compulsory levies – and are made available without charge to users (e.g. a public park, free transport services, police services) ;

- goods and services produced in the *non-professional sphere*, i.e. households and voluntary organizations (rectangle D in table I.3.) : these rest on the producers' free labour and are also provided free of charge to users, outside the market.

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2   Do goods and services intended for sale *but not sold* constitute commodities ? It can be argued that products intended for sale simply « apply for commodity status » and only become actual commodities if and when they are sold (in the same way as value, as will be seen below, only becomes a reality if and when the products of labour are sold : see 2.1.2.b). We may here simplify the problem by assuming that products intended for sale are actually and immediately sold.

3   Some natural resources can be owned privately and exchanged (sold or leased out) at a certain price : this is the case, for instance, with an ore deposit not mined or virgin soil. But the existence of a price does not transform these natural resources into commodities in the sense defined. The principles developed in the chapter are, therefore, not applicable to them : see footnote 26b.

1.2. Two sufficient conditions

Any product is a commodity provided it is the result of human labour and is sold on the market. This principle applies to all goods and to *all services :* the latter must be analysed in the same way as the former.

Thus the transport services of a taxi-driver are commodities ; but to transport oneself or hitch-hikers in one's own car is not commodity production (the service here is not intended for sale). In the same way, a private lesson which is sold is a commodity ; but the same lesson delivered in a non-paying school is not a commodity[4]. The concrete contents of the services do not matter, no more than their more or less material or immaterial character : a philosophy lesson, for instance, is less material than steel transport, but both are commodities if they are sold.

2. THE HIDDEN FACE OF COMMODITIES : VALUE

2.1. The nature of value

2.1.1. The common denominator of commodities

One of the most visible phenomena in a market society is the exchange of commodities at a certain price. Each producer produces some specialized commodity, which he sells at a certain price on the market. In exchange, each of them purchases from other producers the commodities he needs for his consumption (food, clothing, etc.) or for his work (materials, machines, etc.).

If two dissimilar commodities (shoes and tables, for example) can be exchanged on the market, there must then be in these two kinds of objects a *common denominator relevant to the market*. In a similar way, if one can exchange eggs for meat in a diet, it is because the two foodstuffs contain a common denominator relevant to diet. A relevant common denominator is a property which is *common* to various things, which can be *quantified* and which fundamentally determines the exchange ratio between them. In the case of diet, the common denominator could be, for example, the proteins : these are contained in all foodstuffs, can be measured and determine the proportion of exchange. What then of commodities being exchanged on the market ?

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[4] The concept of commodity adopted here is broader than the concept traditionally adopted by most Marxist authors, which excludes a great number of services (even if they are sold) : see appendix 6.

a) Neither price, nor cost, nor utility

The first answer which comes to mind is no doubt that the common denominator of commodities is the *price*. This answer is obviously not wrong : all commodities have a price, prices are measurable magnitudes (for example : 1 unit of B = $ 1800, 1 unit of C = $ 300), and these prices determine the exchange ratio between commodities (1 B for 6 C). Such an answer, however, remains superficial and does not explain the price differences : why $ 1800 for B and $ 300 for C ? A more fundamental common denominator has to be found, which could explain the prices themselves and the differences between them.

Can the prices not be explained by *production costs ?* Indeed, all commodities have a production cost, which could be considered as the common denominator sought : if the price of B is 6 times that of C, it is because the production cost of B is itself 6 times that of C. This answer is fundamentally correct ... but it is circular ! For the production costs are themselves prices (price of the raw materials, price of the means of labour, producers' income) and thus need to be explained as prices themselves. The problem is simply carried forward.

Can the prices not rather be explained by the *use-value* of the commodities ? The use-value of a commodity is its capacity to be of some use or other, its usefulness or utility. All commodities have a use-value : a table is of use for putting things on, shoes for protecting the feet, water for cleaning or quenching thirst[5]. But the use-value cannot be the common denominator sought : it is *specific* to each kind of commodity and cannot be measured or compared (how are we to measure and compare the use-value of a table and a pair of shoes ?). Thus, we cannot explain prices and price differences in that way.

b) Abstract labour, indirectly social labour, value

Remembering that all commodities are products of human labour, we shall eventually recognize that the common denominator we are seeking is labour. The latter, however, can be considered from two distinct viewpoints : as *concrete labour* or as *abstract labour*.

Concrete labour is labour considered in its material, visible aspects : means of production used, operations carried out, etc. From this point of view, the labour of a carpenter cannot be compared to that of a shoemaker, the concrete labour of a steelworker cannot be compared to that of a bank clerk, and the

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[5]   On the concept of use-value, see chap. I, § 1.1. The concept of use-value is not reserved to commodities : the products of nature, as well as the products of human labour not intended for the market, have also a use-value. (As mentioned above – chap. II, footnote 3 – the concept of price is not reserved to commodities either : products of nature which are privately owned can also be sold for a certain price).

concrete labour of an unskilled worker cannot be compared to that of an engineer. Concrete labour differs from one commodity to another and from one category of workers to another, it is *specific* to each commodity and each category of workers.

Abstract labour is labour considered *in general*, disregarding all its specific aspects : we disregard the material aspects that constitute concrete labour (which differ according to commodities and workers), we also disregard the variable social aspects that define the status of the enterprise (capitalist, public, independent) and of the producer (self-employed, capitalist, executive, wage-earner without control over the production process, etc.). Abstract labour is labour taking into account only one social aspect (less evident but no less real), namely its characteristic as indirectly social labour. If the carpenter and the shoemaker, the unskilled worker and the engineer, the steel factory worker and the bank clerk contribute to producing goods or services sold on the market, they all perform *indirectly social labour*. This indirectly social labour is the common denominator of commodities. On the one hand, it is *common* to all commodities and comparable between them : in all cases professional labour has been performed, and its social usefulness has been recognized through the sale of the product. On the other hand, this common element can be *quantified :* in theory as well as in practice, it is possible to measure the number of hours of indirectly social labour embodied in any commodity (see further, 3.2.1., including footnote 21). And price differences between different types of commodities are due fundamentally to differences in the quantities of indirectly social labour needed to produce them (see below, 3.2.2.c).

Since indirectly social labour is the common denominator of commodities, these can be defined in a precise manner : *commodities* are the *products of indirectly social labour.*

Indirectly social labour – the *abstract labour* common to all commodities – is also called *value.* We can thus briefly say that the necessary common denominator of commodities is their value[6].

The visible phenomenon of prices thus conceals the reality of value. And commodity exchange conceals a more basic relationship : when buying and

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[6] Many Marxist authors distinguish between value and abstract labour : value is a property of *commodities*, namely their capacity of being exchanged for one another ; abstract labour is a specific type of *labour*, namely indirectly social labour. Using this terminology, we should say that commodities have value because their common denominator is abstract labour.

selling their commodities at a certain price, producers actually exchange their labour, more precisely, indirectly social labour or value[7].

2.1.2. Additional comments on the nature of value creation

Value has been defined as *indirectly social labour*, i.e. labour which is recognized as useful to society by virtue of the fact that the commodity finds a purchaser on the market. In different but equivalent terms, value can be defined as *labour devoted to producing a commodity which is then sold*. Creating value means performing indirectly social labour, i.e. taking part in the production of goods and services sold on the market. Two important consequences flow from this conception of value.

a) Value implies the production of commodities

Non-commodity products have no value. Thus the products of nature, insofar as they involve no human labour, do not have any value (though they may have a price if they admit of private ownership : see footnote 3). In the same way, directly social labour performed in the institutional sector does not create value, since it does not produce commodities. The same is also true of labour performed in the non-professional area (households and voluntary organizations), insofar as no commodities are produced either.

On the other hand, *all* labour performed in the market sector creates value, irrespective of the concrete nature of the commodities sold and the activities carried out, and irrespective of the social characteristics of the enterprises and producers : the commodities produced may be goods as well as services ; the activities carried out may have a technical or an administrative character, they may be more or less manual or intellectual, they may take place within any department of the enterprise (« production », « sales », « accounting », « general services », etc.) ; the enterprises may be capitalist, public or independent ; and the producers may be wage-earners, capitalists or self-employed. All the workers in the market sector thus take part in the production of commodities and value, and

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7   Indirectly social labour (abstract labour) may be considered as the *substance* of value of the commodities. The other constituent aspects of value are its *magnitude* and its *form* (or visible expression). These latter two aspects will be examined below : see § 2.2. for the magnitude of value, § 3.1. for the visible expression of value.

the production process carried out in the enterprises must be understood in a much broader sense than the mere process of transformation of input into output[8].

b) Value implies the sale of the commodities produced

As long as a commodity is not sold, it is not established that the labour expended in producing it is labour that is useful to society : the labour is therefore only a *potential* value. When the commodity finds a purchaser, it appears that the labour expended in producing it is labour useful to society : value, which until then is a mere potentiality, becomes a *reality*. The sale thus entails the *realization of value*. The latter can be defined as the *recognition by the market of the social character of the labour* expended in producing a commodity.

Let us stress that value implies both production *and sale*. Production by itself is not sufficient : before the commodity is sold, the labour-time expended in it does not count as value, but simply as private labour expecting social recognition. Only the sale of the commodity grants this social recognition and transforms the private labour embodied in a commodity into value. Thus, while it is correct to assert « no production, no value », it is equally necessary to add « no sale, no value »[9].

2.2. The magnitude of value

2.2.1. Concepts needed to study the magnitude of value

We have seen that value is indirectly social labour, or labour devoted to producing a commodity which is then sold. Having considered the *nature* of value, the problem now is considering the *magnitude* of value of commodities. We shall see that this requires adding *past value and new value ;* this also requires specifying whether one considers *individual values or social value,* and whether one considers *unit value or total value.*

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[8] Our conception of value-producing labour is broader than the traditional Marxist view : see the discussion on this issue in appendix 6. Both conceptions of value can be found in Marx.

[9] This insistence on the twofold role played by production *and by sale* constitutes the difference between value conceived of as « indirectly social labour » and value conceived of as « embodied labour » (independently of the commodity being sold).

a) Past value and new value

When producing a commodity, the producer makes use of his *labour-power* and of *means of production*, i.e. *objects of labour* (the materials that are processed by labour) and *means of labour* (tools and machines, plant, etc.) (see chapter I, 1.2.2.). In a market economy, the means of production are normally purchased from other producers, who themselves produced them using their own labour-power as well as other means of production.

The labour devoted to producing any commodity (tables, shoes, etc.) comprises thus *two distinct types of labour* : on the one hand, the labour-time which was needed (by others) to produce the means of production purchased (objects and means of labour) ; on the other hand, the labour-time devoted to producing the commodity itself, i.e. to processing the objects with the help of the means of labour[10].

Let us suppose, for example, that 10 hours are required to produce the materials and tools used in making a table and only 4 hours to produce the materials and tools used in making a coat, while the work of processing takes 8 hours for both commodities. In this case we will have :

$$\text{value of the coat :} \quad 4 \text{ hours} + 8 \text{ hours} = 12 \text{ hours}$$
$$\text{value of the table :} \quad 10 \text{ hours} + 8 \text{ hours} = 18 \text{ hours}$$

The labour-time required by other producers to produce the means of production purchased by the producer in question is known as *past labour* (or *dead labour*) ; the labour-time expended by the producer himself in the labour process is known as *present labour* (or *living labour*)[11].

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[10] If the producers themselves had to produce the means of production which they use, it is clear that we should include in the value of their respective commodities, not only the labour-time spent in carrying out the actual processing, but also the time spent in carrying out the « preliminary » operations required to produce the means of production. In practice, due to the division of social labour, the « preliminary » operations are carried out by other producers, from whom the means of production are bought ; but the time spent by these other producers must also be counted in the value of the commodities in question.

[11] The labour process actually includes all the operations carried out by the producer himself (as opposed to the operations carried out by the other producers from whom he buys the means of production). Where the producer himself produces part of the means of production he needs, the labour-time he spends in this production is included in the labour process and counts as present labour.

In the course of the labour process, the producer actually carries out two simultaneous functions. On the one hand, he *transfers* to the commodity (table, coat) *a past value*, that is, the value of the means of production purchased. (We can also say that he *conserves this past value :* if the joiner did not carry out the labour process, the raw material and the tools he purchased would eventually deteriorate and the labour previously expended in producing them would be *lost*). At the same time, the producer *adds* to this past labour his present labour : he *creates a new value*, which is added to the value of the means of production.

From the above, we deduce the following principle : *the value of any commodity is the sum of the past labour and the present labour necessary to its production,* or again *the sum of the past value transferred and the new value created by the producer*.

Regarding the past value (or value of the means of production bought), we must further note that it is transferred in different ways, according to whether we are dealing with *means of labour* or with *objects of labour* (raw materials) : the value of the *objects* used up is transferred *« in one go »* to the finished product, whereas the value of the *means of labour* used is only transferred *gradually* (in inverse proportion to their anticipated useful life) [12].

b) Social value and individual value

Taking up the preceding example, let us suppose that, for the majority of producers, the value of a table is equal to 18 hours, broken down into 10 hours of past labour and 8 hours of present labour. It is inevitable that, in reality, certain manufacturers expend more time than the majority, and others less, in making a similar table. These differences can apply to past labour as well as to present labour.

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[12] Let us consider for example the production of a wooden table, which involves the utilization of 20 kg of raw material (requiring 9 hours of labour) and of various tools and machines (requiring 10,000 hours of labour). The 20 kg of raw material can be used only for the production of a single table : all 9 hours of past value thus reappear in the table. In contrast, the tools and machines can be used for the production of a whole series of tables : let us suppose they are intended to secure the production of 10,000 tables (after which they would have to be replaced because they would be physically worn out or technologically out-of-date). In this case, the 10,000 hours of past value are only transferred in their totality in the complete series of 10,000 tables produced : so each single table only includes 1/10,000 of the total value of the machines and tools, say 1 hour. The total past value of a single table will therefore be 9 hours + 1 hour, say 10 hours.

Let us take, for example, a relatively inefficient producer Z, who produces in 22 hours instead of 18. These 22 hours could correspond, for example, to 10 hours of past labour and 12 hours of present labour : this means that producer Z uses the same tools and the same quantity of material as the other manufacturers but he is much slower in the process of working. These 22 hours could also correspond, for example, to 14 hours of past labour and 8 hours of present labour : this means that Z works as fast as the other manufacturers but that he uses more antiquated and more expensive tools or that he wastes raw materials.

The *social value* of a commodity (18h in the example) is the quantity of labour necessary *on average* to produce this commodity, that is, the labour-time required to produce it in *average conditions* (of technique, skill, intensity, etc.)[13]. In contrast, the *individual value* of a commodity (22h in the example) is the quantity of labour required by a *particular producer* to produce this commodity, in conditions (of technique, skill, intensity, etc.) which are specific to him[14].

c) Unit value and total value

This distinction is obvious, but it is important not to confuse the concept of *unit* value with that of *individual* value just considered above. By *unit value*, we understand the value of a unit (a litre, a ton, a piece, etc.) of a given commodity. By *total value*, we understand the value of a *set* of commodities produced (by one or several producers) during a certain period of time.

In the preceding example, the figure of 18 hours represents the *unit* social value of the table, the figure of 22 hours, the *unit* individual value for producer Z. If the production sold daily is 1000 tables for the producers as a whole, the *total* social value (of the commodities produced by the industry) is 18 000 hours ; if it is 10 tables for Z, the *total* individual value (of the commodities produced by Z) is 220 hours.

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13 The social value (or average value) of a commodity is obtained through dividing the total value of the commodities produced within a branch by the total number of these commodities. The *branch* (or *branch of production*) comprises all the enterprises producing the same type of commodity (steel, wheat, tables…).

14 Obviously, we are assuming that the producer succeeds in selling his commodity ; if this is not the case (if, for example, he puts in more time than his competitors and does not find a purchaser), his product is not a commodity and has no value (his private work is not recognized as socially useful).

d) Summary

Table II.1. brings together the main distinctions we have just set down. In each case, the quantity of labour required is measured by its *duration* (expressed in hours of labour-time).

Table II.1. : Distinctions concerning the magnitude of value

Labour (past and present) required → *to produce* ↓	*on average*	*by a particular producer*
one unit of a commodity	unit social value	unit individual value
a set of commodities	total social value	total individual value

In the continuation of this chapter and in subsequent chapters, the word « value » used without other qualifications will designate the unit social value, that is, the quantity of labour (past and present) required on average to produce one unit of a commodity.

2.2.2. Additional comments on the magnitude of value

Through their present labour, the commodity producers create a new value (which is added to the past value, i.e. to the value of the means of production purchased). One problem arises here : are all the producers on an equal footing as far as the *quantity* of value created is concerned ? Does not the labour of a particular producer, relying on more advanced technology, on greater skill or intensity, create more value than the labour of another producer, whose labour employs less advanced technology, is less skilled or less intensive ?

In order to answer that question, the definition of value must be recalled (see 2.1.1.b and 2.1.2.a) :

value = indirectly social labour = abstract labour

For value creation to take place, it is necessary and sufficient that labour be indirectly social labour, i.e. that it contribute to creating a product which is sold

on the market. This indirectly social labour is abstract labour, in the sense that one disregards (abstracts from) all the specific features of the producer and his labour : the type of enterprise (capitalist, public, independent), the social status of the producer (wage-earner, capitalist, self-employed), the nature of the products (goods or services), as well as the concrete characteristics of the activities carried out, are not taken into account. Since all the concrete characteristics of the activities carried out are disregarded, no account is taken – among other things – of the degree of mechanization, intensity and skill of labour.

Providing the products of labour are sold, we can therefore establish : 1h of labour of any worker = 1h of labour of any other worker = 1h of value. Thus the degree of skill and intensity of labour, the degree of mechanization of the production process, do not affect the quantity of *value created by present labour*[15].

2.2.3. Value and labour productivity

a) An inverse relationship

Unit value is the inverse of labour productivity : the unit value of a commodity is lower, the higher is labour productivity. For a *higher labour productivity* means that more commodities are produced by a given quantity of labour, or again that less labour is needed to produce one unit of a commodity : this results in a *lower unit value* of the commodity[16].

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[15]a) More advanced mechanization and/or more intensive work imply the use of more means of production (machines and/or materials), while more skilled labour implies the use of more « means of training » (books, studies, etc.). Insofar as these means of production and means of training have to be *purchased* from other producers (which is the case under the assumption of a pure market economy), 1h of more mechanized or more intensive or more skilled labour will result in *more past value* being transferred (to the commodities produced in 1h of present labour). This will affect the magnitude of value of the commodities produced (which is the sum of past value transferred and new value created), but does not mean that 1h of more mechanized or more intensive or more skilled labour would result in more new value being created.

b) Most Marxist authors have traditionally assumed that skill and intensity, as well as the degree of mechanization, do affect the quantity of value created by present labour : for a presentation and a criticism of these traditional views, see appendix 7.

[16] a) A higher labour productivity means that more *use-values* are produced *per hour of labour* and that the *value per unit of commodity* is lower. But it does not in any way mean that more *value* would be produced *per hour of labour :* 1h of indirectly social labour always creates 1h of value, irrespective of labour productivity (see above, 2.2.2.).

b) Appendix 4 provides many detailed observations on the concept and the measurement of productivity. Let us note here that the unit value of the commodity is the most comprehensive and

Labour productivity is influenced by a series of varied factors : natural conditions (more or less fertile soils, for instance), work organization, skill and efficiency of the workers, degree of mechanization (use of more and/or better machines). Most influential among all these factors is the degree of mechanization, which will be considered on various occasions in the book.

Labour productivity varies in *space* (between firms) and in *time* (from one year to another). Let us successively consider *changes* in productivity over time and productivity *differences* at a given time.

b) Changes in productivity and value

Labour productivity tends to increase over time, especially due to increasing mechanization ; as a result, the unit value of commodities tends to decrease.

An increase in labour productivity in a particular *enterprise* results in a decrease of the unit *individual* value of the commodities produced in that enterprise. An increase in the average productivity in a particular *branch* of production results in a decrease of the unit *social* value of the commodities produced in that branch. *An increase in general productivity* (i.e. in all branches of production) *results in a decrease of the unit social value of all commodities* : less and less labour-time is required on average to produce one unit of any commodity.

The influence of general productivity increases will be analysed in chapters IV (2.1.2.), VIII (§ 1.2. and 2.1.) and IX (2.2.2. and § 3.1.).

c) Differences in productivity and value

Labour productivity varies from one enterprise to another, especially due to differences in the degree of mechanization. These *productivity differences between firms result in differences in the unit individual value* of the commodity : the commodities produced in the more productive firms require less labour than the average (their individual unit value is lower than the social unit value), and conversely for the commodities produced in the less productive firms.

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appropriate concept to estimate productivity. This is so because unit value takes into account *both* the present labour *and the past labour* required to produce a commodity (see above, 2.2.1.a). Unit value thus expresses *both* the efficiency with which workers produce the commodity considered *and the efficiency with which the means of production* are produced and utilized (this second aspect is ignored by most productivity measurements, which calculate the quantity produced per worker or per hour of *present* labour).

The influence of productivity differences within a given branch of production will be analysed in chapter IV (2.1.3.) and chapter V (§ 1.1.)[17].

3. THE VISIBLE EXPRESSION OF VALUE : PRICES

3.1. *The nature of prices*

In paragraph 2.1. we started from the visible phenomenon of commodities being exchanged at a certain price and uncovered the hidden reality of value, i.e. indirectly social labour devoted to producing commodities. Here we reverse the approach : we start from the invisible reality of value and explain why the latter necessarily appears in the visible form of price.

The question is this : if value is by nature indirectly social labour, how does it come about that the value of commodities is actually expressed, not as a certain quantity of *labour*, but as a certain price, as a certain quantity of *dollars* (here the exact quantity is not important) ? Why do we say for example that a table is worth a certain quantity of *dollars* and not a certain number of hours of *labour ?*

In order to answer this question, let us first recall that the value of commodities only appears when the latter are sold : « no sale, no value », as we explained earlier (2.1.2.b). We must add that commodities are sold for money. Indeed, the exchange of dissimilar commodities between multiple autonomous producers does not take the form of a generalized barter, but implies that the latter be connected by a specific social bond, recognized and accepted by all of them. This social bond is provided by money (by the dollar, for instance), regardless of its concrete forms (metallic coins, banknotes, entries in bank accounts, etc.). Thus the producers exchange their commodities through the medium of money, through sales and purchases for a certain amount of money. The quantity of money for which a commodity can be exchanged constitutes the *price* of that commodity.

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17 It makes sense comparing *productivity* between different enterprises within a given branch (producing the same type of commodity), but it does not comparing productivity between different branches (producing different types of commodities) : it is possible to compare labour productivity in two steel factories, but it is impossible to compare labour productivity in a steel factory or the steel industry with that in a car factory or the car industry (between branches, it is only possible to compare the respective *rates of growth* in productivity). On the other hand, it makes sense comparing *unit values* both within a given branch and between branches : it is meaningful to compare the value of one ton of steel in two steel factories (differences in the unit individual values express productivity differences between the two enterprises), and it is also meaningful to compare the value of one ton of steel with the value of a car (but without drawing any conclusion concerning the respective productivity in the two industries).

Thus we understand why value has to express itself in the form of prices : the value of any commodity only appears when it is sold, and commodities are sold for money, for the payment of a certain price. The price of a commodity – irrespective of its magnitude – is always, therefore, the visible expression of the value of that commodity : it is the tangible manifestation that the labour devoted to producing the commodity actually is indirectly social labour.

3.2. The magnitude of prices

3.2.1. Concepts needed to study the magnitude of prices

a) First approach : price ratios

Let us consider two commodities whose unit social values are in the ratio of 3 to 1 (1B = 18h and 1C = 6h). The prices of these commodities may be in the same ratio (for instance 1B = $180 and 1C = $60) or in a different ratio (for instance 1B = $200 and 1C = $50).

Let us call *simple prices* the *theoretical prices which are exactly proportional to values*, i.e. the theoretical prices which are exactly in the same ratio as the social values. In the example above, the simple prices are $180 for B and $60 for C.

Let us call *actual prices* or *market prices* the prices that actually prevail on the market, i.e. the prices commodities are bought and sold at. Market prices may possibly be equal to simple prices : in that case, the ratio between market prices is equal to the ratio between values (3 to 1 in the example). In reality, various circumstances (examined below : 3.2.2.b) make market prices differ from simple prices to a variable extent : in that case, the ratio between market prices differs from the ratio between values.

b) Second approach : price levels

In the above example, the values of B and C are 18h and 6h respectively (ratio of 3 to 1), the simple prices are $180 and $60 (ratio of 3 to 1) and the market prices $200 and $50 (ratio of 4 to 1). The same price *ratios*, however, are compatible with an infinite number of price *levels*. Let us imagine, for instance, that the simple prices are $1800 and $600, the market prices being $2000

and $500 : the price ratios are the same as above, but the general level of prices is 10 times higher[18].

In order to account for the general level of prices, we must bring in a new concept : the « monetary equivalent of one hour of value » or, more briefly, the « money equivalent of value ». What is it ?

We know that commodities have two inseparable aspects : the visible aspect of the price (i.e. a certain number of monetary units : dollars, pounds, etc.) and the invisible aspect of value (i.e. a certain number of hours of indirectly social labour). The money equivalent of value – which will be represented by the symbol E – relates these two aspects : it signals what price corresponds to one hour of value, it gives the *accurate translation of one hour of indirectly social labour into monetary terms*. To say that the money equivalent of value is $10 per hour (E = $10/h) amounts to saying that one hour of value (of indirectly social labour) is expressed in an equivalent manner by a monetary magnitude of 10 dollars[19].

The money equivalent of value is a macro-economic magnitude which is specific to each country and is expressed in the country's national currency. This magnitude changes over time : table II.2. shows its recent evolution in a few countries[20]. When the money equivalent of value increases (for instance, from

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[18]To distinguish between the problem of price *ratios* and that of price *levels*, economic literature uses the concepts of relative prices and absolute prices. The *relative price* of a commodity is its price compared with the price of other commodities. The *absolute price* of a commodity is its own price considered in itself, without comparing it to other prices. During a period of general price increases, the relative price of a commodity decreases if its (absolute) price rises less than the (absolute) price of the other commodities. In the example of the text, all the absolute prices are multiplied by 10, so that their relative prices (both simple prices and market prices) do not change.

[19] The money equivalent of value, expressed by a certain number of pounds per hour, should not be confused with the hourly wage, which is also expressed by a certain number of pounds per hour. In the context of this chapter, which deals with market production in general, we are not considering the wage concept. We shall see later that the money equivalent of value is equal to the *revenue created* per hour of labour (chap. II, footnote 30) and that it is necessarily greater than the *wage earned* per hour of labour (chap. III, footnote 12.b).

[20] a) The method of calculation used is explained in appendix 3, § 3.1. Another method – more approximate – is suggested at the end of this chapter, in exercise 2.21 : the magnitude of E can be estimated from data on the *price of one hour of work* as *charged to customers* (the hourly rate charged to customers is obviously higher than the hourly wage paid to workers in the enterprises considered).

b) Given the creation of the European monetary union and the replacement of national currencies by one common money (the euro), the money equivalent of value is now calculated in euros/hour in the countries concerned.

E = \$10/h to E = \$100/h), the *same quantities of labour* are expressed by *higher prices* (10 times higher in this example).

Table II.2. : Evolution of the money equivalent of value (E) in four countries (1972-1992)

		1972	*1978*	*1984*	*1988*	*1992*
France	FF/h	21	49	108	145	173
Germany	DM/h	15	25	36	42	54
United Kingdom	£/h	1.3	3.2	6.6	8.6	12.5
USA	\$/h	7.1	12	18	21	26

No matter the magnitude of E, *simple prices* can be defined now as *theoretical prices obtained through multiplying the unit social value of commodities by the money equivalent of value* :

$$\text{simple price} = \text{value} \times E$$

The market price of every commodity can be broken down in a similar way :

$$\text{market price} = \text{simple price} \pm \text{deviation}$$
$$= (\text{value} \times E) \pm \text{deviation}[21]$$

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[21] In the argument of this chapter, we assume that we know both the value of the commodities and the magnitude of E : this makes it possible to infer the simple price of the commodities (value $\times$ E = simple price). In actual fact, values are hidden realities, whose magnitude is not known : the only observable realities are market prices. But is it also possible to proceed the opposite way, that is, to divide the market price of commodities by the magnitude of E (which can be calculated). By doing so, we obtain magnitudes which are expressed in hours of labour and approximate the value of the commodities concerned (market price $\div$ E = value $\pm$ deviation) : the less market prices deviate from simple prices, the closer we approximate the value of the commodities. This type of approximation will be used to estimate the wage-earners' « necessary labour » (chapter III, § 1.4.) and to measure the evolution of labour productivity (chapter VIII, 2.2.1., and appendix 4, 4.3.2.).

3.2.2. Differences between market prices and simple prices

a) The phenomenon of unequal exchange

Let us return to the initial example where the values of B and C are 18h and 6h and the simple prices $180 and $60 respectively.

If market prices *coincide* with simple prices, the commodities are exchanged in the ratio of 1 B to 3 C (1 B = 3 C = $180) or of 1 C to 1/3 B (1 C = 1/3 B = $60)[22]. We thus have an *exchange of equal values :* each producer sells a commodity which embodies a certain quantity of labour and buys other commodities which embody *the same quantity* of labour (1 B = 3 C = 18h and 1 C = 1/3 B = 6h)[23].

If market prices *differ* from simple prices (for instance, 1 B = $200, 1 C = $50), the commodities are exchanged in different ratios, in this case in the ratio of 1 B to 4 C (1 B = 4 C = $200) or of 1 C to 1/4 B (1 C = 1/4 B = $50). Here there is an « unequal exchange », i.e. an *exchange of unequal values :* the producer of B transfers a commodity which embodies a value of 18h and buys other commodities which have *more value* (4 C = 24h) ; conversely, the producer of C transfers a commodity which embodies a value of 6h and buys commodities having *less value* (1/4 B = 4.5h).

Table II.3. summarizes the preceding argument. It also mentions the reason why there is exchange of equal or unequal values, i.e. the fact that market power is equal or unequal between branches. This question will be examined below (3.2.2.b). But it is already worth noting that market prices depend on the combined influence of *productivity* in each branch (which determines the unit social value of commodities) and on the *balance of forces* between branches (which make market prices deviate from simple prices).

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[22] The various ratios of exchange and the various prices constitute the exchange-value of commodities. The concept of *exchange-value* – which must be distinguished from the concepts of *value* and *use-value* – can be defined in *real* terms or in *monetary* terms. In *real* terms, exchange-value is the *number of commodities that can be obtained* against a given commodity : in the example, the exchange-value of 1 B amounts to 3 C. In *monetary* terms, exchange-value is the *quantity of money* that can be obtained against a given commodity : in the example, the exchange-value of 1 B amounts to $180. As can be seen, exchange-value in monetary terms is equivalent to the price.

[23] In a system of simple commodity production, the exchange of equal values results in the average producers of the various branches obtaining *equal revenues* (see appendix 10, § 10.1.).

Table II.3. : Simple prices and market prices, equal exchange
and unequal exchange

Average productivity in each branch	Market power of the different branches (balance of forces)	
	Equal	Unequal
↓	↓	↓
Unit social values	Simple prices (= theoretical prices proportional to values)	Market prices (= actual prices higher or lower than simple prices)
1B = 18h 1C = 6h	1B = $180 1C = $60	1B = $200 1C = $50
	↓	↓
	Equal exchange 1B = 3C (= $180) 18h = 18h	Unequal exchange 1B = 4C (= $200) 18h < 24h

Notes :   1. Values being given, the level of prices depends on the magnitude of the money equivalent of value (E) : simple price = value × E ; market price = (value × E) ± deviation. In this example, E = $10 per hour.
2. On the reasons why market prices actually differ from simple prices, see 3.2.2.b.
3. On the reasons for assuming market prices to be equal to simple prices, see 3.3.3.

b) The reasons for unequal exchange

Why is there unequal exchange ? Why are market prices – to variable degrees – higher or lower than simple prices ? This is due to the fact that the various producers enjoy unequal *market power*, to the fact that they face a more or less favourable or unfavourable balance of forces on the market.

The more favourable the balance of forces to the advantage of some producers (the more positive their market power), the more they benefit from commodity exchanges : they sell their products at market prices that are higher than simple prices and/or purchase their means of production at prices that are lower than simple prices. The situation is exactly inverted for producers facing an

unfavourable balance of forces, a negative market power[24]. The factors that influence market power can be summarized as follows :

    - *Imbalances between supply and demand*. Market power is positive if there is excess demand or scarce supply (hence increases in market prices), it is negative in the opposite case (hence decreases in market prices). Should the occasion arise, producers deliberately influence supply or demand in order to safeguard or develop their market power : they may intentionally limit their supply (destruction of crops, fixation of production quotas) or artificially stimulate demand (through advertising).

    - *Intensity of competition*. Some branches enjoy situations of monopoly or oligopoly (one single enterprise or a small number of enterprises, with barriers to the entry of new producers), other branches, on the contrary, face situations of intense competition (numerous enterprises and easy entry of new producers). The first are able to fix « monopoly prices » higher than the corresponding simple prices, the second must be content with market prices below the simple prices.

    - *Pressure on public authorities*. Some branches are able to put economic or political pressure on the public authorities who regulate prices, while other branches have no such power. The first obtain favourable prices, the others do not.

    - *Differentiated products and customer preferences*. Within each branch of production – be it motor cars or hairdressing –, each producer tries to differentiate his product from the product of his competitors and to make known the specific qualities (real or imaginary) of his particular product : in such a way, each producer tries to establish and maintain a sort of monopoly on his particular product. The products thus differentiated may very well embody the same quantity of labour, of value (and hence have the same simple price) ; their market prices, however, will vary according to the specific qualities attributed to and recognized in each of them.

c) Unequal exchange and explanation of prices

    Let us return to the formula which breaks down the market price of every commodity :

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[24]In the capitalist system, the requirement of *equal rates of profit* for the average enterprises of the different branches result in *exchanges of unequal values* even in the case of equal market powers ; differences in market powers strengthen or weaken the original inequality of exchanges (see appendix 10, §10.2.).

$$\text{market price} = \text{simple price} \pm \text{deviation}$$
$$\text{market price} = (\text{value} \times \text{E}) \pm \text{deviation}$$

When market prices are *equal* to simple prices (deviation = 0), the prices of commodities are *entirely determined* by their value (for a given magnitude of E).

Insofar as market prices *diverge* from simple prices, their exact level must be explained taking *additional factors* into consideration : excess supply or scarcity of commodities, situations of monopoly or oligopoly, more or less favourable measures taken by public authorities or more or less successful differentiation of the product. But it would be illegitimate to claim that market prices are determined by the relations between supply and demand, by the intensity of competition among producers, by the public authorities' regulations or by consumers' preferences : all these factors only explain the extent to which market prices *deviate* from simple prices[25].

Since market prices are mere deviations from simple prices, and since simple prices are determined by values, market prices themselves are *basically* determined by values[26]. The differences between the market prices of different commodities (between the price of a tyre and that of a car, between the price of a bicycle and that of a plane, between the price of bread and that of a coat) are *basically* determined by value differences.

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[25] Let us consider, for instance, the influence exerted by the relation between supply and demand. Textbooks in economics show that the equilibrium price of a commodity is obtained when supply and demand curves intersect one another and that any change in the supply or demand of that commodity results in a change in its price. Those textbooks, however, do not explain why, when supply is equal to demand for every commodity, the price of B is $180 and that of C $60. Such differences in the equilibrium prices are actually due to differences in the value of the commodities (1B = 18h, 1C = 6h) : equilibrium prices (simple prices) are proportional to values. Imbalances between supply and demand obviously entail fluctuations in market prices ; but market prices do not fluctuate *in vacuo :* they oscillate around simple prices, corresponding to social values.

[26] a) *Non-reproducible commodities* (original works of art, rare postage stamps, etc.) are an exception to the rule. As they are produced only once and by a single producer, the concepts of *social value* (labour-time required on average) and simple price (social value × E) are not applicable to them. Their market price depends directly on relations between supply and demand.

b) *Products of nature* which are owned privately are not commodities (see section 1) : the concept of *value* is in no way applicable to them and their market price also depends directly on relations between supply and demand.

3.2.3. Reasons for assuming an equality between simple prices and market prices.

Although market prices normally deviate from simple prices, the chapters that follow will nearly always assume that they are equal. Such an assumption is not due to a mere concern for simplifying the argument and clarifying the exposition, but is justified on three theoretical grounds. Before examining each of them, let us once more recall the formulae which break down the simple price and the market price of each commodity :

$$\text{simple price} = \text{value} \times E$$
$$\text{market price} = (\text{value} \times E) \pm \text{deviation}$$

a) The macro-economic viewpoint

On the level of each particular branch, the market price normally deviates from the simple price, according to each branch's market power. On a macro-economic level, however, all these micro-economic deviations compensate each other. For what is gained by some producers through unequal exchange is by necessity lost by others : if market prices are higher than simple prices for some commodities, they are necessarily lower for other commodities, and the « sum total of market prices » is necessarily equal to the « sum total of simple prices ». We can thus state that on average market prices are equal to simple prices, or again that market price and simple price are equal in any « average » branch, representative of all branches.

These principles are illustrated and summarized in table II.4. Moreover, the meaning of the equality between the « sum total of market prices » and the « sum total of simple prices » is explained in footnote[27].

[27] Over a given period, the producers of the different branches create a total product whose magnitude is simultaneously given in physical terms (the whole set of the commodities produced), in value terms (the « sum total of values », i.e. the value of this set of commodities, expressed in hours of labour) and in price terms (the « sum total of prices », i.e. the value of this same set expressed in money terms). The magnitude of the total product *created* by all the producers necessarily determines the magnitude of the total product which will be *distributed* between them through commodity exchange. If the market price coincides with the simple price for every commodity, the total product is distributed on equal terms (exchange of equal values). If not, the total product is distributed to the advantage of the producers in some branches (those who enjoy market prices higher than simple prices, like the producers of commodity B in the example of 3.2.2.a) and to the disadvantage of the producers in other branches (those facing market prices

Table II.4. : Total product, sum total of values, sum total of simple prices
and sum total of market prices

Branches	Quantity produced	Values		Simple prices		Market prices	
		unit	total	per unit	× quantity	per unit	× quantity
	1	2	3 = 2 × 1	4 = 2 × E	5 = 4 × 1	6 = 4 ± dev.	7 = 6 × 1
A B C D ...	… 10 B 15 C … …	… 18h 6h … …	… 180h 90h … …	… $180 $60 ↓ equal exchanges	… $1800 $900 … …	… $200 $50 ↓ unequal exchanges	… $2000 $750 … …
All branches	Total product	—	Sum total of values	—	Sum total of simple prices	—	Sum total of market prices

Notes : - On a micro-economic level :   market price = simple price ± deviation
         - On a macro-economic level :   sum total of market prices = sum total of simple prices
         - In an « average » branch :   market price = simple price

b)The parallel evolution of simple price and market price

Both the simple price and the market price of every commodity are affected by the same two influences, namely the evolution of value and that of the money equivalent of value (E) : the unit social value of every commodity decreases with the increase in labour productivity (see 2.2.3.b), while the magnitude of E increases over time (this is illustrated in table II.2.). This combined influence of labour productivity and the money equivalent of value on both the simple price and the market price of each commodity is more essential than the variable deviation which always exists between them : in the long run, the simple price and the market price of each commodity move more or less in parallel to one another

lower than simple prices, like the producers of C in the same example). On a global level, however, the « sum total of market prices » necessarily coincides with the « sum total of simple prices ». This appears clearly if one considers that the two concepts refer to the same set of commodities. The « sum total of simple prices » is the monetary expression of the value of the *whole set* of commodities produced and exchanged during a given period (1 year, for instance), the value of *each* commodity being expressed by theoretical prices that would ensure equal exchange between producers. The « sum total of market prices » is the monetary expression of the value of this *same set* of commodities, the value of each commodity being expressed by market prices which differ from simple prices, thus entailing unequal exchange between producers.

(this is illustrated in appendix 3, figure A.1.). This is a second reason for assuming an equality between market price and simple price.

c) Searching for the basic source of revenues

Equality between market price and simple price in each branch implies that *the producers lack any market power* that would enable them to fix or obtain more favourable prices (see above, 3.2.2.b) : they do not enjoy situations of excess demand, monopoly or oligopoly, support by public authorities, or successful product differentiation. The producers' revenue must therefore be given a more basic explanation. Producers obtain revenue even if supply equals demand, if there is competition, if public authorities do not fix prices, if products are homogeneous within each branch : it is this « normal » revenue which has now to be explained (section 4).

4. THE BASIS OF REVENUES : NEW VALUE

4.1. The creation of revenues by present labour

4.1.1. Principles

The preceding pages have analysed *the value and the price of commodities*. Recalling two basic theoretical principles which have been put forward in that analysis, it is possible to bring out a third principle concerning the source of the *producers' revenue* in a market society.

1. First principle : the value of a commodity consists of *past value* (that is, the value of the means of production purchased or past labour) and *new value* (created by the present labour of the producer). Example : if a worker produces a commodity in a day of 8h (present labour) and with means of production worth 10h (past labour), the value of that commodity (if sold) = 10h + 8h = 18h.

2. Second principle : the value of a commodity is always expressed as a certain price ; in average conditions, the market price is equal to the simple price, which corresponds to the unit social value of the commodity. Example : if the

producer considered above is an « average » producer in an « average » branch[28], and if the money equivalent of value is \$10/h, we can write :

$$\text{price of commodity sold} = \text{value of commodity} \times E$$
$$= 18h \times E = \$180$$
$$\text{price of means of production bought} = \text{value of MP} \times E$$
$$= 10h \times E = \$100$$

3. Third principle : the revenue is created by the present labour devoted to commodity production.

In the above example, the producer obtains \$180 from the sale of the product. One part (\$100) enables him to recover the money he laid out in order to acquire the means of production. The other part (\$80) is a net revenue.

This net revenue superficially appears as the mere difference between the sale price of the commodity produced and the purchase price of the means of production used : this is the visible aspect of things. The latter conceals an invisible but essential reality : more fundamentally, the net revenue of \$80 is the *monetary equivalent of the new value created* in 8h of present labour. As a matter of fact, the producer simultaneously creates a new value (in h) and a new revenue (in \$) : thanks to his present labour (8h), the value of the product sold is higher than the value of the means of production purchased (18h > 10h) and the price of the product sold is therefore higher than the price of the means of production purchased (\$180 > \$100)[29]. We can thus write :

$$\text{revenue created} = \text{new value created} \times E$$
$$= 8h \times E = \$80$$

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[28]Productivity differences between producers within each branch and differences in market power between branches are disregarded here. These two questions are briefly considered at the end of this chapter (see 4.2.2.b and c) and will be given detailed attention in chapter V (§1.1. and 1.2.).

[29]In standard economic theory, the difference between the sale price of the product and its production cost is the « value added ». If the cost of production does not include the depreciation (of plant, equipment, etc.), we get a « gross value added » ; if it includes such depreciation, we get « net value added » (in the example, the \$80 represent a « net value added »). The « value added » thus understood is a *money* magnitude. In Marxist economic theory, on the contrary, value added is a magnitude expressed in hours of *labour* : it is the new value created by the commodity producer's present labour, new value which is added to the value of the means of production purchased (see above, 2.2.1.a) (in the example, value added amounts to 8h).

Figure II.5. illustrates these principles with the data from the above example. It shows the *two components* of the value of commodities (value of the means of production purchased + new value created) and of the price of commodities (price of the means of production + revenue created). It highlights the two essential theses of this chapter : 1. prices are the monetary expression of the value of commodities ; 2. revenues are the monetary expression of the new value created by the labour of commodity producers [30].

Figure II.5. : The two components of value and price

price of MP	net revenue created (« net value added »)	price of daily product
$100	$80	$180
10h	8h	18h
past labour, value of MP	present labour, new value created	value of daily product

Note : MP = means of production

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[30] We see that the *revenue created per hour of labour* coincides with the money equivalent of value (E) : in the example above, E = $10/h ; and the revenue created per hour is equal to $80/8h, i.e. $10/h. The money equivalent of value (E) therefore represents two things simultaneously :
- it provides the *«translation» into simple price of one hour of value*, of one hour of labour devoted to commodity production. To say that E = $10/h amounts to saying that one hour of value is expressed in an equivalent way by a monetary magnitude of $10.
- it represents the *monetary revenue created per hour of value*, per hour of labour devoted to commodity production. To say that E = $10/h amounts to saying that one hour of labour in commodity production *creates* a monetary revenue of $10. (This does not mean that the revenue *obtained* per hour of labour coincides with the revenue *created* per hour of labour or with E : on the differences between revenue obtained and revenue created, see below, 4.2.2.).

4.1.2. Additional comments on the creation of value and revenue

a) By commodity producers alone, not by the means of production

Cannot revenue be created – wholly or partly – by the means of production, by past labour ? Obviously the means of production are as indispensable as the producers' present labour for producing commodities. But the problem here bears on a different matter, i.e. the creation of value and revenue. Now the value of the means of production which have been purchased (10h in the example) is simply *transferred* and is found unaltered, without the slightest increase, in the value of the commodity produced. Similarly, the cost of the means of production ($100) is simply *transferred* (recovered) and is found unaltered, without the slightest increase, in the price of the commodity. The source of the increase in value and price (18h > 10h, $180 > $100), therefore, lies exclusively in the commodity producers' present labour. This present labour simultaneously ensures the *transfer* of the value and price of the means of production as well as the *creation* of new value and net revenue.

b) By all commodity producers, without exception

If present labour *alone* creates value and revenue, it should be added that *all* present labour performed in the sector of commodity production creates value and revenue. This question has already been examined with regard to value creation (see 2.1.2.a). Since the revenue created is simply the monetary equivalent of the value created, the same conclusions are applicable here.

The social characteristics of the enterprise and the producer do not matter : present labour creates value and revenue in all enterprises (capitalist, public or non-waged enterprises), irrespective of the producer's social status (self-employed, routine worker, executive or capitalist)[31].

The concrete nature of the commodities produced and the activities carried out is also irrelevant : the commodities produced may be goods as well as services ; the activities carried out may have a technical or an administrative character, they may be manual or intellectual, they may take place within any department of the enterprise.

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[31] The labour performed by capitalists is part of the total labour performed in the market sector (see chap. I, 2.1.2.b) ; provided the commodities produced are sold, it constitutes indirectly social labour and therefore creates value (see chap. II, 2.1.2.a) ; since it creates value, it also creates revenue. For additional observations on this question, see chap. III, footnote 8, and chap. VI, footnote 32.

c) By all commodity producers on an equal footing

If all the present labour performed in the sector of commodity production creates value and revenue, it should also be observed that all the producers are on an equal footing as far as the quantity of value and revenue they create is concerned.

This problem has also already been considered with regard to value creation (see 2.2.2.). The same argument can be briefly repeated here.

The labour which creates value and revenue is indirectly social labour. This concept disregards the concrete features (both material and social) of the labour : it does not consider the social characteristics of the enterprises and producers, or the nature of the products and activities, or the degree of mechanization, intensity, skill of labour, etc. We thus have (on condition that the products be sold) : 1h of labour of any commodity producer = 1h of value created = \$10 of revenue created (for E = \$10/h).

In 1h of labour, therefore, the wage-earner involved in commodity production creates as much value and revenue – neither more nor less – as the capitalist or the self-employed. In 1h of labour, the producer relying on more advanced technology, on greater skill or intensity, creates as much value and revenue – neither more nor less – as the producer whose labour employs less advanced technology, is less skilled or less intensive. The quantity of value and revenue created by different producers only depends on the length of their respective labour-time.

4.2. The creation and distribution of total revenue

4.2.1. The creation of total revenue

The total revenue of a market society is created by the present labour of *all* the commodity producers. It is the monetary equivalent of the new value created by the whole of present labour contributing to commodity production during a given period :

total revenue created= sum total of new value × E

If the society, for instance, is made up of 1000 commodity producers, each of them working 2000h per year, and if E = \$10/h, we have :

$$\text{total yearly revenue created} = (1000 \times 2000)\text{h} \times \text{E}$$
$$= \$20,000,000$$

The total revenue can be compared with a huge cake which is created by the present labour of all the commodity producers. The size of this cake depends on the *number of workers* in the sector of market production (rectangles A and B in table I.3.) and on the *labour-time* provided by each of them. Each producer contributes to the creation of the total revenue in proportion to the quantity of indirectly social labour he performs. In the same way, each branch of production (and each country) contributes to the creation of the total revenue in proportion to the quantity of indirectly social labour which is performed within each of them.

4.2.2. The distribution of total revenue

The producers, the enterprises, the branches (and the various countries) contribute to the *creation* of the total revenue in proportion to the quantity of indirectly social labour provided, but they do not participate in the same proportion in the *distribution* of the total revenue : the revenue *obtained* by each of them may be very different from the revenue *created*[32].

The sum total of the revenues distributed necessarily coincides with the total revenue created (the sum total of the shares of the cake coincides with the total cake prepared). But this equality, which is necessarily true at the global level, does not hold true for each producer, for each enterprise, for each branch (or for each country if one considers the world as a whole) : some obtain a

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[32] The distinction between revenue created and revenue obtained is analogous to the distinction between simple price and market price (chap. II, §3.2.). The *simple price* is the exact monetary equivalent of the unit social value (past and present) of a commodity ; the *market price* of each particular commodity normally differs from its simple price, but the « sum total of market prices » is necessarily equal to the « sum total of simple prices » (see footnote 27). We thus have :

    simple price   = value $\times$ E
    market price   = simple price $\pm$deviation
    sum total of market prices   = sum total of simple prices

Similarly, the *revenue created* is the exact monetary equivalent of the new value created by a producer, an enterprise, a branch ; the *revenue obtained* by each particular producer, enterprise or branch normally differs from the revenue created by each, but the total revenue distributed is necessarily equal to the total revenue created by the commodity producers (the « sum total of revenues distributed » is equal to the « sum total of revenues created »). We thus have :

    revenue created   = new value $\times$ E
    revenue obtained   = revenue created $\pm$ deviation (revenue transferred)
    sum total of revenues obtained = sum total of revenues created

revenue which is higher than the revenue they create, others, in compensation, must necessarily be content with a revenue which is smaller than the revenue they create (the former consume a share of the cake which is bigger than the one they produce, and conversely for the others).

Four cases of variations between revenue obtained and revenue created can be mentioned here. They will be analysed in more detail in later chapters.

a) The existence of a sector of non-market production

Let us depart for a while from the framework of analysis of chapter II and consider the professional activities carried out in the sector of non-market production (rectangle C in table I.3.). Since workers in the non-market sector do not produce commodities, they do not *create* value and revenue : in contrast to the case of market production considered above (see 4.1.1.), it is impossible to argue in terms of a difference between the value of commodities produced and the value of means of production purchased, between the price of the former and the price of the latter. However, the wage-earners in the non-market sector *obtain* a revenue : the latter derives from levies on the total revenue created in the sector of market production. (This redistribution of revenue towards the sector of non-market production will be examined in chapter VI, section 3).

b) Differences in market power between branches

Let us return to the initial framework of analysis (market production exclusively), while dropping for the moment the assumption of market prices being equal to simple prices. Let us assume that the producer considered in the initial example (see 4.1.1.) can manage to sell his commodity to other producers for more than $180 (e.g. for $210) or to purchase his means of production for less than $100 (e.g. for $70). In such cases, he will obtain a revenue of $110, which is more than the revenue created by him ($80) ; but this will occur to the detriment of other producers (those buying his finished product or those producing his means of production), who will have to be content with a revenue which is less than the revenue created by them.

If some branches can manage to buy or sell at favourable market prices while others cannot, it is because the different branches enjoy unequal market power, because they face a more or less favourable or unfavourable balance of forces on the market (see above, 3.2.2.b). The unequal exchange which results alters the distribution of the revenue created : the stronger branches are capable of seizing a larger share of the total revenue at the expense of the weaker ones. (This redistribution of revenue between branches enjoying unequal market power will be examined in chapter V, § 1.2.).

c) Differences in productivity between enterprises

Let us disregard differences in market power between branches (again suppose that market prices coincide with simple prices), while considering productivity differences between enterprises within the same branch. Let us assume that the average producer considered in the initial example (say producer M) competes with a more efficient producer (say A) and with a less efficient one (say Z). All three producers manufacture identical commodities, but their individual unit values are different (say for A : 9h + 6h = 15h ; for M : 10h + 8h = 18h ; for Z : 11h + 10h = 21h).

Inasmuch as present labour per unit differs according to enterprises, *value created* per unit differs, and so does *revenue created* per unit (revenue created = new value × E = $60 for A, $80 for M, $100 for Z). Competition makes the selling price of the commodities identical for the three producers (market price = simple price = unit *social value* × E = 18h × $10/h = $180). This identical price and the differing cost of the means of production determine the *revenue obtained* per unit by each of the three producers (revenue obtained = selling price – cost of the means of production ; for A : $180 – $90 = $90 ; for M : $180 – $100 = $80 ; for Z : $180 – $110 = $70). We see that competition changes the distribution of the revenue created : the more efficient producer obtains more revenue than he creates ($90 > $60), to the detriment of the less efficient producer, who obtains less revenue than he creates ($70 < $100). (This redistribution of revenue between unequally productive enterprises will be examined in chapter V, §1.1.).

d) The production of commodities by wage-earners

Let us disregard both differences in market power between branches and productivity differences between enterprises, but now consider the case where commodities are produced by *wage-earning producers*. An essential difference arises, at the very level of production, between revenue created and revenue obtained : the wage-earners *create* more revenue than they *obtain* in the form of a wage, the difference being the profit obtained by the enterprises. This question will be examined in the following chapter.

PEDAGOGICAL DEVICES CONCERNING CHAPTER II

SUMMARY

1. Commodities are products of human labour that are exchanged on the market. It does not matter whether these products are goods or services. The only conditions are that they be the products of human labour (not of nature only) and be sold on a market.

2. The exchange of commodities is made through sales and purchases at a certain price. Such exchange involves commodities having a *common denominator*, i.e. a common property that can be quantified and determines the exchange ratio between them. This common property is labour, considered not in its concrete aspects (which differ from one commodity to another) or in its variable social aspects (type of enterprise, status of the producer), but only in its aspect of *indirectly social labour* (which is common to all commodities). Labour considered in that way is labour devoted to market production in general, it is *abstract labour* ; it is also called *value*.

From a qualitative viewpoint, value is thus indirectly social labour. From that point of view, all labour performed in the market sector creates value, irrespective of the commodities produced and the activities carried out, and irrespective of the social characteristics of the enterprises and producers ; but the commodities produced must actually be sold (if they are not, there is no indirectly social labour).

From a quantitative viewpoint, the value of any commodity is the sum of the *past value transferred* (the value of the means of production purchased and used) and the *new value created* by the producer's present labour. A distinction must be made between the social value and the individual value of any commodity : the *social value* is the labour-time required on average to produce it (given average conditions of technique, skill, intensity, etc.), *individual value* is the labour-time required by a particular producer (given conditions of technique, skill, intensity, etc. which are specific to him). Another distinction must be made between *unit value* (or value of one unit of a commodity) and *total value* (or value of a set of commodities).

Still from a quantitative viewpoint, it is important to realize that differences in techniques (degree of mechanization) or in skill or intensity of labour do not affect the quantity of new value created by present labour : in all circumstances, 1 hour of indirectly social labour creates 1 hour of value. On the other hand, the differences in question do affect labour productivity (the number of commodities produced per hour of labour) and, therefore, the unit value of commodities (the number of hours of labour per unit of commodity) : the more productive labour is, the lower the unit value of a commodity is.

3. All commodities have two inseparable aspects : the invisible aspect of *value* (expressed in hours of labour) and the visible aspect of *price* (expressed in monetary units : pounds, etc.). The macro-economic link between both aspects is established by the *money equivalent of value* (E), which gives the accurate translation of one hour of value into monetary terms.

Two kinds of prices must be distinguished. *Simple prices* are theoretical prices which give the accurate translation of the unit social value of commodities into monetary terms (simple price = value × E). *Market prices* are prices that actually prevail on the market ; they normally differ from simple prices (market price = simple price ± deviation). If the producers of the various commodities enjoyed exactly equal market power, market prices would be equal to simple prices and commodity exchange between producers would be an exchange of equal values. But the various producers enjoy unequal market power, due to varied circumstances (imbalances between supply and demand, more or less intense competition, variable means of pressure on public authorities, more or less successful product differentiation) ; as a result, market prices diverge from simple prices and commodity exchange between producers is an exchange of unequal values (or « unequal exchange »).

The varied circumstances which give rise to unequal exchanges only account for deviations of market prices from simple prices. The magnitude of E being given, both the simple price and the market price of any commodity are basically determined by the value of that commodity : this determination of price by value is only perfect for simple prices, but it remains essential to explain the level of market prices.

Deviations between market prices and simple prices compensate each other on a macro-economic level : what is gained by some producers through unequal exchange (thanks to favourable market power) is by necessity lost by other producers (due to unfavourable market power). If we assume that market prices are equal to simple prices, we actually disregard market power and are led to search for the basic source of revenues.

4. The producers' revenue superficially appears as the mere difference between the sale price of commodities and the purchase price of the means of production. More basically, just as the price of commodities is the monetary expression of their value (past + new), the producers' revenue is the monetary expression of the new value created by their present labour. In 8h of present labour, the commodity producers create a new value of 8h and a net revenue of $80 (for E = $10/hour).

Commodity producers *alone* create value and revenue, not the means of production. *All* producers in the market sector take part in the creation of value and revenue (irrespective of the commodities sold and the activities carried out, irrespective of the social characteristics of the enterprises and producers). From a quantitative viewpoint, all

producers in the market sector contribute to creating value and revenue on an *equal* footing, in proportion to the length of their labour-time (irrespective of the degree of mechanization, irrespective of the skill and intensity of labour).

On a macro-economic level, the revenue distributed is by necessity equal to the revenue created. This equality, however, does not hold true on a micro-economic level : the different producers, enterprises, branches (and countries) contribute to the *creation* of total revenue in proportion to the quantity of present labour performed, but the revenue *obtained* by each of them may be very different from the revenue created. This is the case, among others, with wage-earners in the market sector : they create more revenue than they obtain in the form of a wage, the difference being the profit (see chapter III).

CONCEPTS TO ASSIMILATE (see glossary)

Commodity   Productivity (of labour)
Labour   Revenue
   - abstract labour   - revenue created
   - concrete labour   - revenue obtained
   - past labour   Value
   - present labour   - individual value
Market power   - new value
Money equivalent of value   - past value
Price   - social value
   - market price   - total value
   - simple price   - unit value
   - general level of prices   - realization of value

EXERCISES (answers at end of book)

A. Basic knowledge

2.1.   What is a commodity ? What are the necessary and sufficient conditions for goods or services to be commodities ?

2.2.   What is the difference between *concrete labour* and *abstract labour* ?

2.3.   « The necessary common denominator of commodities is value » :
a) What is meant by common denominator ? Why is a common denominator necessary ?
b) What is meant by value ? Why is value the common denominator of commodities ?

2.4.   What is the difference :
a) between *past value* and *new value*, between *past labour* and *present labour* ?
b) between *unit social value* and *unit individual value* ?
(Illustrate each time with examples different from those in the book).

2.5.   Explain :
a) The increase in productivity in the various branches of production results in a decrease in the unit social value of all commodities.
b) Within a given branch of production, a higher productivity in a particular enterprise results in a lower unit individual value of the commodities produced in that enterprise.

2.6.   What is meant by the *money equivalent of value* ?

2.7.   *Simple prices and market prices :*
a) What is meant by simple price ? by market price ?
b) If market prices are equal to simple prices, commodity exchange is an exchange of equal values ; if not, it is an unequal exchange. Explain both statements.
c) Why do market prices actually differ from simple prices ? (in other words : why do we actually have an exchange of unequal values ?)
d) Why is it justified to assume that market prices are equal to simple prices ?

2.8.   Using figure II.5., prove that revenue (in a market economy)
a) is created by the commodity producers' present labour ;
b) is not created by the means of production.

2.9.   Using the definitions of value (= indirectly social labour) and revenue created (= money equivalent of the new value created), explain why value and revenue are created :
a) by *all* producers in the sector of market production ;
b) by all those producers on an *equal* footing ;
c) *not* by producers in the sector of non-market production.

B. More advanced knowledge

2.10. Why can the price, the production cost or the use-value not be the common denominator of commodities ?

2.11. « The past value is transferred in different ways, according to whether we are dealing with means of labour or objects of labour (raw materials) : the value of means of labour is transferred gradually, that of objects of labour is transferred in one go ». Explain these statements and illustrate them making use of a personal example.

2.12. Explain why value must in practice express itself in the form of prices.

2.13. What is the difference between value, exchange-value and use-value ? What is the difference between exchange-value and price ?

2.14. To what extent do the « labour theory of value » and the « law of supply and demand » contribute to explaining the price of commodities ? Distinguish :
a) the general case : the price of reproducible commodities ;
b) special cases : the price of non-reproducible commodities and the price of products of nature.

2.15. Does a stock of unsold products embody labour ? Does it have value ? Why ?

2.16. « A product of nature (such as river water, fruit growing wild, etc.) always has a use-value, may have a price, but never has any value ». Comment on these three statements.

2.17. What are the reasons for the differences between revenue *created* and revenue *obtained* ?

C. Applied knowledge

2.18. Explain why the labour performed by the following persons does or does not create value :
- the house-wife or husband ;
- the civil servant ;
- the farmer ;
- the teacher ;
- the taxi-driver ;
- the union representative.

2.19. An enterprise produces 1,000 units of a commodity X each year, using :
- raw materials costing $ 1,000,000 ;
- machines costing $ 20,000,000 and depreciated over 10 years ;
- 10 wage-earners working 250 days per year and 8 hours per day.
Knowing that E (the money equivalent of value) amounts to $100/h, and assuming that all market prices are equal to simple prices, determine for that enterprise :
a) the total value of the annual product (distinguishing between *past* value transferred and *new* value created) ;
b) the unit value of commodity X (same distinction).

2.20. a) The average price of cars is obviously higher than the average price of bicycles. What is the reason for the price differences between these two kinds of commodities ?
b) The same enterprise produces several models of cars (or bicycles) and sells them at different prices. What is (are) the reason(s) for these price differences between different models ?
c) Has the average price of cars (or bicycles) increased or decreased over the last 20 years ? How can the observed evolution be explained ?

2.21. Estimate the magnitude of the money equivalent of value (E) in your country nowadays. To do so, one or two methods can be used :
a) For the countries appearing in table II.2., it is possible to extrapolate (i.e. extend, prolong) the data of the table on the assumption that the rate of growth of E after 1992 is similar to that prevailing from 1984 to 1992. Such extrapolation is acceptable provided that at least two conditions are fulfilled : 1. the period of extrapolation should not be too long (the longer the time elapsed since 1984-1992, the greater the risk of error in estimating E through an extrapolation of the 1984-1992 data) ; 2. the period of extrapolation should be characterized by inflationary conditions (i.e. rise in the general level of prices) fairly similar to those prevailing during the period 1984-1992 (if the subsequent rate of inflation is much higher, E will grow more rapidly ; and conversely if the subsequent rate of inflation is much lower than in the years 1984-1992).
b) For all countries, it is possible to estimate the magnitude of E in a given year through considering the hourly rate charged customers by « average » enterprises within branches of production characterized by a sufficient degree of competition. Concretely, the following operations should be realized successively :
1. notice and register the hourly rate charged by various enterprises : garages, cleaning enterprises, repair shops, psychologists, etc. ;
2. ask yourself about the hourly rate differences observed between enterprises and branches : more or less favourable or unfavourable market power, due to the relations between supply and demand, or to the intensity of competition in the sector, or the reputation of the enterprise, or the users' preferences (new fashions), or the location of the enterprises, etc. ;
3. among the hourly rates thus registered, retain those charged by enterprises and branches whose market power can be considered « average » ;
4. from the hourly rates thus retained, calculate an average hourly rate (even approximately) : this gives an estimate of the magnitude of E in the year considered.

CHAPTER III

THE BASIS OF PROFIT AND ACCUMULATION :
SURPLUS VALUE

Chapter II dealt with commodity production *in general*. It showed the links between the visible phenomenon of prices and the hidden reality of value. It also explained that all the revenues originate in the *present labour* of the commodity producers.

Chapter III focuses on *capitalist* commodity production. It explains that wages and profits originate in the *present labour of the wage-earners* who take part in commodity production, and more precisely that profits are based on these wage-earners' surplus labour (section 1). It then shows that most of the profit obtained is *accumulated*, i.e. reinvested with a view to expanding the scale of production and increasing profit (section 2).

The chapter is based on the following assumptions :

1. We consider a system comprising only *capitalist enterprises* (item A1 of table I.3.). We disregard non-market production, as well as market production carried out by non-capitalist enterprises.

2. We conduct our arguments on an aggregate, *macro-economic* level. We attempt to explain the basis of wages and profits *in general* rather than the actual differences in profits and wages (earned in a particular enterprise or branch of production, or by a particular category of workers) ; in the same way, we deal with accumulation *in general* rather than with accumulation in a particular enterprise or branch. Accordingly, the wage-earners, enterprises and branches considered in the examples are « average » in every respect, they are representative of all wage-earners, enterprises and branches.

Since we conduct our arguments on a macro-economic level, and assume « average » enterprises in « average » branches, market prices coincide with simple prices (see chapter II, 3.2.3.a) : the enterprises buy and sell commodities at prices which exactly express unit social values. This *equality between market prices and simple prices* implies that the *enterprises lack any market power* that would enable them to fix or obtain more favourable prices (see chapter II,

3.2.2.b) : they do not enjoy situations of excess demand, of monopoly or oligopoly, of support by public authorities, of successful product differentiation. Profit must therefore be given a more basic explanation. Enterprises make profit even if supply balances demand, if there is competition, if public authorities do not fix prices, if products are homogeneous within each branch : it is this « normal » profit which has to be explained.

1. THE SOURCE OF PROFIT : SURPLUS LABOUR

1.1. Theoretical demonstration

We saw in chapter II that, in every market society, revenue is created by the present labour devoted to commodity production. In a capitalist market society, this present labour is carried out by wage-earners. During a working day of 8h, a wage-earner who takes part in commodity production creates a new value of 8h and a net revenue of $80. This revenue is the monetary equivalent of the new value created by the wage-earner's present labour. We can write :

$$\text{revenue created} = \text{new value created} \times E$$
$$\$80 = 8h \times E$$

By virtue of the right of ownership over the enterprise and over all that is produced in it (commodities, value, revenue), the revenue created by the wage-earner belongs in its totality to the capitalist. The latter, however, must hand over part of this revenue to the wage-earner, for he needs him to produce commodities. Thus the revenue created by the wage-earner is divided into two parts : a wage for the worker, a profit for the capitalist.

The exact division of the revenue created between wage and profit depends on the balance of forces between workers and capitalists. Let us assume that the wage amounts to $50 and profit to $30. In a working day of 8h, the wage-earner creates more revenue than he obtains in the form of his wage ($80 > $50) : the difference is the profit ($30). We can write :

$$\text{revenue created} = \text{revenue distributed} = \text{wage} + \text{profit}$$
$$\$80 = \$80 = \$50 + \$30$$

The wage of $50 enables the worker to purchase means of consumption for a price of $50. Just as for commodities, this price of $50 is the monetary

expression of a certain quantity of value : it is the monetary expression of the value of the means of consumption purchased by the wage-earner (the monetary expression of what is traditionally called the « value of labour-power »)[1]. If the price of the means of consumption purchased is $50 and if E = $10/h, the value of the means of consumption (the « value of labour-power ») is equal to 5h : these 5h represent the labour-time (past and present) required by other wage-earners to produce (directly or indirectly) the means of consumption purchased by the wage-earner in question[2].

We can therefore break down the new value created by the wage-earner, as well as his present labour through which the latter is created, into two parts. The first part (5h) is the *corresponding value :* in 5h, the wage-earner creates an amount of value which corresponds (which is equal) to the value of the means of consumption he purchases (to the « value of his labour-power ») ; the part of present labour that creates the corresponding value is called *necessary labour*[3]. The second part (3h) is the *surplus value*, created by *surplus labour*. In an 8h working day, *the wage-earner provides more labour than is required by others to produce his means of consumption, he creates more value than he consumes* (8h > 5h) : the difference is the surplus labour provided, the surplus value created. We have :

new value   = corresponding value + surplus value
present labour = necessary labour   + surplus labour
   8h   =   5h   +   3h

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[1] Labour-power is traditionally considered to be a commodity and authors currently speak of the « value of labour-power ». Adopting this terminology will simply conform to a well established tradition. Appendix 5, however, criticizes this conventional view of labour-power being a commodity and underlines the fact that the wage level depends on the balance of forces.

[2] The 5h comprise past and present labour : the present labour is provided by the wage-earners who directly produce the means of consumption (in the food, textile, car industries, etc.) ; the past labour is provided by those who produce the means of production used by the former (in agriculture, metallurgy, etc.).

[3] The 5h represent necessary labour and corresponding value as well as the value of the means of consumption (the value of labour-power). These various concepts, however, do not refer to the same producers : necessary labour and corresponding value represent labour provided and value created *by the wage-earner in question*, whereas the value of the means of consumption (the value of labour-power) represents labour provided and value created *by other producers* (see fig. III.1.).

Figure III.1. : The source of profit

a) *Value and revenue created by the wage-earner*

    (2) $80 = revenue created

    (1)   8h = present labour = new value created

    (3)   wage received   profit,
                                       surplus revenue
                      $50 $30

                        5h   3h
                  necessary labour,   surplus labour,
    (6)   corresponding value   surplus value

b) *Value and revenue consumed by the wage-earner*

    (4)   wage spent = price of MC
                      $50

                      5h
    (5)   value of LP = value of MC

Stages in the argument :
(1) creation of new value by present labour
(2) expression of the new value in monetary terms (revenue created)
(3) division of the revenue created into wage and profit (surplus revenue)
(4) spending of the wage (purchase of means of consumption)
(5) determination of the value of the means of consumption
(6) division of the new value (present labour) into corresponding value (necessary
     labour) and surplus value (surplus labour)

Note : MC = means of consumption ; LP = labour-power

It appears thus that profit is based on the surplus labour provided by the commodity producing wage-earners. Just as the revenue created and distributed is the monetary equivalent of the new value created by the wage-earners' present labour ($80 = 8h × E), profit is the monetary expression of the surplus value created by the wage-earners' surplus labour ($30 = 3h × E).

The foregoing argument is summed up by figure III.1. We clearly see that the division of revenue into wages and profit conceals a more basic division into necessary labour (or corresponding value) and surplus labour (or surplus value) : the source of profit lies in the wage-earners' surplus labour, in the surplus value they create in the sector of market production :

> wage-earners' surplus labour → capitalist profit

1.2. General comments

1.2.1. Surplus labour and exploitation

When a social class performs surplus labour to the advantage of another class, who are the owners of the means of production, we speak of *economic exploitation* of the former by the latter. In the present case, it may be said that capitalists exploit wage-earners and that their profits arise from this exploitation.

The idea of wage-earners being exploited usually carries with it a deep emotional connotation. An example of running a mine makes it possible to approach the concept in a more objective way. Exploiting (running) a mine means drawing out of it what is of interest to its owner, namely ore (physical aspect) and profit (economic aspect). Similarly, exploiting a wage-earner means drawing out of him what is of interest to the employer, namely labour as a source of energy (physical aspect) and surplus labour as a source of profit (economic aspect). (On the twofold aspect of the wage-earners' exploitation – both physical and economic – see chapter IV, § 1.1.).

1.2.2. Appearances and reality

The statement that profit arises from free « surplus labour » by wage-earners certainly goes against common sense. It goes against two everyday « facts ». First of all, a wage-earner, paid at the rate of $6.25 an hour, earns $50 for a working day of 8 hours : where then is the surplus labour, supposedly « free », he gives the employer ? Secondly, highly mechanized or automated enterprises normally make a larger profit than rival enterprises which use a greater quantity of labour-power : is this not proof that profit is

due to mechanization, to technical progress, rather than to alleged « surplus labour » by wage-earners ?

These objections, based on straightforward common sense, are not decisive for anyone who wishes to look at the facts in a scientific way. As was already pointed out (see introduction, section 1), science involves going beyond « appearances » to discover the concealed « essence » of phenomena. The science of astronomy proves that, contrary to all appearances, it is the earth which moves around the sun ; it also explains how the contrary illusion arises. In the same way, it has just been proved that, *contrary to appearances*, profit comes from the surplus labour of wage-earners ; it remains to explain how and why this reality seems to be refuted by everyday appearances (see chapter III, 1.3.3.b and c, for an answer to the objection that all working hours are paid ; see chapter V, § 1.1., for an answer to the objection that profit is created by machines rather than by labour-power).

1.2.3. Other types of proof of surplus labour

The statement that profit arises from the wage-earners' surplus labour was demonstrated in purely *theoretical* terms in § 1.1. above. This theoretical proof can be complemented by a *statistical* proof and an *empirical* one.

A second way of bringing out the reality of surplus labour consists in documenting it with actual *statistics*. Although current statistics conceal the reality we are referring to (the data on hourly wages suggest on the contrary that all working hours are paid), it is nonetheless possible to use them to isolate the surplus labour and assess its importance. Data on the present magnitude of surplus labour will be provided later in this chapter (see § 1.4.).

The final proof consists in establishing the link between theory and *fact* : do observable facts confirm the theoretical link between surplus labour and profit ? A comparison with psychoanalysis can be useful here. Psychoanalysis attempts to locate a « deep core » of the personality in the unconscious : if it is successful, a whole series of seemingly inconsistent exterior aspects of the personality can be given a coherent explanation. In the same way, if the « deep core » of the economic system lies in the relation between surplus labour and profit, we should be able to understand and explain on that basis, and in a coherent way, a whole series of visible phenomena and tendencies of the system. We will actually see in chapters V to IX that the hidden relation between surplus labour and profit contributes to explaining a series of well-known phenomena, such as employers' resistance to the reduction of working hours, increase of productivity, state intervention in the economy, export of capital, subcontracting, etc.

Just like the statistical data, this empirical proof in its turn confirms the validity of the theoretical proof put forward at the start.

1.2.4. A comparison with other economic systems

Surplus labour is not a reality that would only exist under capitalism. It is practically universal, but its forms and significance vary according to the type of society. Let us consider, by way of example, surplus labour as it appeared in a typical feudal system and surplus labour in a socialist system in which the producers would collectively own the enterprises.

a) Surplus labour under feudalism

A feudal society is based upon two fundamental classes : the feudal lords and the peasant-serfs. The feudal lords are the owners of the landed estates, which constitute the principal means of production. Each feudal lord divides his estate into two parts : the *demesne* which he keeps for himself and the *plots of land,* the use of which he grants to those serfs dependent on him. The serfs can work these plots for their own needs, in return for which they are obliged to work for a part of the time on the feudal lord's demesne.

The serf's labour-time (for example, a 6-day week) is thus divided into two parts. The first part (3 days on the plot) allows the serf to ensure his and his family's subsistence : this labour is the necessary labour. The second part (3 days on the demesne) is the surplus labour, which ensures the subsistence and enrichment of the feudal lord : the serf produces means of subsistence which are either consumed by the lord or sold by the latter in order to acquire other means of consumption (luxury goods, for example).

The division of the labour-time into necessary labour and surplus labour is thus common to both feudal and capitalist society, but it appears under different forms in the two societies.

On the one hand, this division is perfectly visible in the feudal system considered : the peasant-serf works partly on his plot of land and partly on the demesne. In the capitalist system, on the contrary, it remains invisible : the wage-earner spends all his working time in the same enterprise.

On the other hand, every peasant-serf produces his means of consumption himself ; both on a micro-economic level (an individual serf) and on a macro-economic level (the class of serfs as a whole), necessary labour can be defined as the labour-time during which the peasant-serfs produce their means of consumption. In the capitalist system, on the contrary, the individual wage-earner does not himself produce his means of consumption but has to purchase them out of the wage he receives ; on a micro-economic level, therefore, the wage-earner's necessary labour must be defined as the labour-time corresponding to the labour devoted – by others rather than by himself – to producing the means of consumption he purchases (on a macro-economic level – and on that level

alone – necessary labour can be defined as the labour-time during which the wage-earning class produces its own means of consumption).

b) Surplus labour under socialism

Let us imagine a socialist system in which the producers collectively own the enterprises, a system in which they have the effective powers of decision-making (the *real ownership*, as against juridical ownership only) both on the micro-economic level (management of each enterprise) and on the macro-economic level (organization of the whole economy).

In such a system, the revenue created by the producers' present labour belongs to them in its totality. Part of this revenue is allocated to a consumption fund, the other part is allocated to an investment fund for further economic growth. Insofar as part of the revenue created is not consumed, we may consider that the producers provide surplus labour. The latter, however, is entirely different from what it is under capitalism.

On the one hand, the distribution between consumption fund and investment fund – and thus between necessary labour and surplus labour – is made, at least in principle, by the producers themselves in a democratic way. In the capitalist system, on the contrary, the distribution between wages and profit – and thus between necessary labour and surplus labour – is the product of the balance of forces between wage-earners and capitalists.

On the other hand, the investment decisions (what, where, and how to produce ?) are also taken, at least in principle, by the producers themselves in a democratic way. In the capitalist system, on the contrary, these decisions are taken by the capitalists authoritatively : being the owners of the enterprises, they decide how to use the profit created by the wage-earners. (On the use of profit, see section 2 below).

1.3. Theoretical observations

1.3.1. The distinction between profit and surplus revenue

In addition to the concept of profit used thus far, figure III.1. introduces the new concept of surplus revenue. What is meant here ? What is the relation between the two concepts ?

In general terms, *surplus revenue* is a revenue *created* (by the wage-earners), *profit* is a revenue *obtained* (by the capitalists).

In precise terms, *surplus revenue* is the *monetary equivalent of the surplus value produced* by a wage-earner or a group of wage-earners in an enterprise, a

branch of production, or a country[4]. As to *profit*, it is the *monetary income actually appropriated* by a capitalist or a group of capitalists in an enterprise, a branch, or a country[5].

In a system comprising only capitalist enterprises, the total profit necessarily coincides with the total surplus revenue created by the wage-earners. This equality, however, only applies at the macro-economic level and does not hold for each enterprise or each branch (or each country if we take a worldwide perspective). Each enterprise or branch (or country) contributes to the creation of total surplus revenue in proportion to the surplus labour provided by its wage-earners, but the profit obtained may be very different from the surplus revenue created : some enterprises and branches (and some countries) receive a profit that is higher than the surplus revenue created within them ; others, in compensation, must necessarily get a profit that is less than the surplus revenue created within them. As will be seen later, the distribution of the total surplus revenue essentially depends on the *degree of productivity of the various enterprises* (chapter V, § 1.1.) and on the *market power of the various branches* (chapter V, § 1.2.)[6].

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[4] Traditional Marxist terminology ignores the concept of surplus revenue. It uses the sole concept of surplus value to designate both the wage-earners' surplus labour (in hours) and the part of the revenue (in dollars) created by the wage-earners but accruing to capitalists.

[5] The distinction between surplus revenue and profit is analogous to the distinctions between simple price and market price (chap. II, § 3.2.) or between revenue created and revenue obtained (chap. II, § 4.2.) (see chap. II, footnote 32). The *surplus revenue created* is the exact monetary equivalent of the surplus value created by a wage-earning producer, an enterprise, or a branch ; the *profit obtained* by each particular enterprise or branch normally differs from the surplus revenue that is created in it, but the total profit distributed in a purely capitalist system is necessarily equal to the total surplus revenue created by the wage-earning producers (the « sum total of profits » is equal to the « sum total of surplus revenues »). We thus have :

surplus revenue   = surplus value × E
profit   = surplus revenue ± deviation (surplus revenue transferred)
sum total of profits   = sum total of surplus revenues

[6] If we drop the assumption of a purely capitalist system and take the *non-capitalist sectors of production* into account, differences between surplus revenue and profit appear even on the macro-economic level : 1. due to transfers of revenue from *self-employed producers*, profit is *greater* than the surplus revenue created by the wage-earners (chap. VI, 1.3.2.a) ; 2. due to the public levies aimed at financing the *institutional sector*, the available profit is *smaller* than the surplus revenue created (chap. VI, 3.3.1.).

1.3.2. Additional comments on the creation of surplus value and surplus revenue

We have seen in chapter II (4.1.2.) the principles that govern the creation of value and revenue in any market society : *the commodity producers alone* create value and revenue ; *all the producers* in the market sector take part in the creation of value and revenue ; and all of them participate in it *on an equal basis*. Identical or analogous principles apply to the creation of surplus value and surplus revenue in a capitalist system.

a) By wage-earning commodity producers alone, not by the means of production

We know that the means of production, while being indispensable for the production process, do not create value and revenue : their value and their price are simply transferred, without the slightest increase, to the value and the price of the commodities produced. The means of production, therefore, cannot create surplus value (the latter being a portion of the new value created) nor surplus revenue (which is a portion of the revenue created). Just as value and revenue are created solely by present labour, so surplus value and surplus revenue are created solely by that part of present labour consisting of surplus labour[7].

b) By all wage-earners in commodity production, without exception

All wage-earners working in the sector of commodity production in principle create surplus value and surplus revenue. Just as in the earlier analysis, the concrete nature of the commodities produced and of the activities carried out does not matter : the commodities produced may be goods as well as services ; the activities carried out may have a technical or administrative character, they may be manual or intellectual, and they may take place within any department of

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[7] According to an occasionally raised objection, profit could just as well be explained by the « surplus labour » of machines, by the difference between the length of time during which a machine is used (25,000 h, for instance) and the labour-time necessary to produce the machine (10,000 h, for instance). In reality, we are comparing here two things which are not comparable : 25,000 h of *machine* « labour » (it would be better to speak of the machine's 25,000 h of *operation*) and 10,000 h of *human labour* (past and present) required to produce the machine (10,000 h of *value*). In the foregoing analysis, on the contrary, we compared things which were actually comparable : *human* labour performed by the wage-earner (the *value* created by him) and *human* labour (past and present) required to produce the wage-earner's means of consumption (the *value* of the means of consumption). If we wish to make a relevant comparison involving machines, we can only compare the *value* they contain with the *value* they transmit to the finished product. But the value transmitted cannot be greater than the value they contain.

the enterprise. The social characteristics of the enterprises (capitalist or public) and the wage-earners are also irrelevant[8].

c) By all wage-earners in commodity production, in proportion to surplus labour provided

All wage-earners in the sector of commodity production are equal as far as the creation of value and revenue is concerned : in 1h of labour, any wage-earner creates 1h of value and $10 of revenue (for E = $10/h), no matter the degree of skill and intensity of labour or the degree of mechanization of the enterprise.

However, wage-earners are not necessarily equal as far as the length of labour-time and wage level are concerned. The wage-earners who work for a longer time and/or for a lower wage provide more surplus labour : they thus create more surplus value and surplus revenue than the other wage-earners[9].

1.3.3. The function and forms of the wage

a) The function of the wage

The wage obtained by the worker is a monetary magnitude (a certain number of pounds) : in order to underline this aspect, we can call it, more precisely, the *money wage*. The *function* of the money wage is to enable the worker *to purchase his means of consumption*. The number of means of consumption the worker can actually purchase constitutes the *real wage* or, more

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[8] As far as the capitalists are concerned, they create value and revenue, but they do not create surplus value or surplus revenue. Capitalists take part in aggregate production (see chap. I, 2.1.2.b). Their labour in the sector of commodity production contributes to the creation of the total new value and total revenue, on an equal footing with the wage-earning or self-employed producers (see chap. II, 4.1.2.b and c). (However, the capitalists' contribution to the total revenue created is very limited, since their labour is only a tiny part of the total present labour carried out in the sector of commodity production : see chap. VI, 5.2.1.) On the other hand, the revenue that capitalists create through their own labour accrues to them in totality : the concepts of surplus labour, surplus value and surplus revenue are thus not applicable to them.

[9] Some wage-earners may fail to provide any surplus labour, to create any surplus value and surplus revenue. In the example given at the start (§ 1.1. above), this would be the case if the worker earned $80 or more for a working day of 8h : the revenue created (8h × E = $80) would be equal to or lower than the revenue obtained, the value created would be equal to or lower than the value of the means of consumption he can purchase. Such a situation, however, cannot concern but a *limited* number of privileged wage-earners. On the contrary, the *average* wage-earner considered in the text, who earns a wage lower than the revenue he creates, is representative of *all* the wage-earners taking part in commodity production.

precisely, the wage-earner's *purchasing power*. It depends both on the level of the money wage and on the average price of the means of consumption (MC) :

$$\text{real wage} = \text{wage-earner's purchasing power} = \frac{\text{money wage}}{\text{price per MC}} \quad 10$$

Does the wage-earner's purchasing power coincide with his standard of living ? The standard of living depends on *all* the means of consumption the wage-earner can enjoy : not only those *purchased* through his wage, but also the *non-commodity* means of consumption available to him (goods and services supplied by institutions, as well as goods and services produced by households and voluntary organizations). It is only because we disregard these non-commodity means of consumption for the moment – up to chapter VI – that we can equate purchasing power with standard of living.

In the example above, the wage of $50 enables the worker to purchase means of consumption at a price of $50. Is it justified to establish such an equality between money wage and consumption expenditures ? Admittedly, the worker can sometimes spend more than his wage (thanks to consumer credit) or less (part of the wage being temporarily transformed into savings) : in other words, the purchases may anticipate the payment of the wage or they may be deferred. The important point, however, is that all the wages obtained by an average worker during the whole of his professional life are intended for purchasing means of consumption and not means of production. The purchase of means of production turns the wage-earner into a self-employed producer or capitalist : such a transformation can be observed in some isolated cases, which are not at all representative of the condition of wage-earners considered as a whole[11]. The equality between wages and consumption expenditures is therefore justified both from a dynamic and from a macro-economic perspective.

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[10]a) As the means of consumption are incommensurable, it is impossible to determine the magnitude of the real wage. However, it is possible to depict the *evolution* of the real wage by means of statistical indices : this is done by dividing the evolution of the money wage (in indices) by the evolution of the consumer price index (which represents the evolution of the average price of the means of consumption).

b) The *money wage* is also called the *nominal wage*, or again the *wage in current dollars*. The *real wage* or purchasing power is also called the *wage in constant dollars*.

[11] The opposite transformation of self-employed or capitalists into wage-earners occurs more frequently : see chapter VII, 3.2.1.b.

b) The forms of the wage

If the *function* of the wage is clearly to enable the wage-earner to purchase his means of consumption, the payment of the wage can take different *forms*, in particular the form of *wages per unit of time* (hourly wages, monthly wages) and that of *piece rates* (piecework payment). If the normal length of a working day is 8 hours, the wage of $50 will be expressed in the form « $6.25 an hour » ; if the normal output of a worker is 250 pieces per day, the same wage of $50 will be expressed in the form « $0.20 per piece ». In both cases, we have the impression that the wage is the price of labour provided (calculated in hours or per piece) and that all the labour provided is paid, that the wage-earner gives no surplus labour free of charge[12].

c) Two different theoretical viewpoints

Current economic theories emphasize the *form* of the wage (the hourly wage in particular), Marxist theory focuses on its *function* (see table III.2.).

Table III.2. : Different approaches regarding the wage

Focus on the form	*Focus on the function*	
wage = $50 = $6.25 per hour × 8h	wage = $50	= price of MC = value of MC × E = 5h × $10/h
surplus labour = nil	surplus labour	= 8h – 5h = 3h

Note : MC = means of consumption

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[12] a) The advantage of the form of hourly wages is not only *ideological* (hiding the reality of surplus labour) but also *pecuniary*. For this formula enables the employer to pay the wage-earner « by the hour » and to pay him less than $50 if he works for less than 8 hours : this lower wage partly makes up for the lower amount of surplus value created (thus for a working day of 4 hours, the revenue created is only $40, but the wage is limited to $25).

b) The revenue *created* per hour of labour ($80 / 8h = $10/h) coincides with E. But the revenue that the worker *obtains* per hour of labour, the hourly wage, is necessarily less ($50 / 8h = $6.25/h) : the difference represents the surplus revenue (per hour) created by the wage-earner and appropriated by the enterprise. Table III.3. illustrates with actual data the necessary difference between E and the average hourly wage.

In the current approach, the wage of $50 simply appears as the payment of 8 hours of labour at $6.25 an hour : from that point of view, *all* the working hours are paid, there is no surplus labour.

Marxist economic theory, on the contrary, focuses first on the *function* of the wage, which is to enable the worker to purchase his means of consumption. Irrespective of the form of the wage (hourly rates, piece rates, percentage commissions, tippings, etc.), a wage of $50 enables the worker to spend $50 on means of consumption. This price of $50 entails that the value of the means of consumption purchased is equal to 5h (assuming that E = $10/h) ; if the wage-earner works for 8h, he thus provides 3h of surplus labour.

1.4. Statistical evidence on surplus labour

The invisible reality of surplus labour has been hitherto demonstrated in purely theoretical terms. This theoretical demonstration can be supported by actual figures. Indeed, once we know the magnitude of E, we can use statistical data on the wage and labour-time to estimate surplus labour. How are we to proceed ?

Necessary labour (or the corresponding value) is equal to the value of the means of consumption purchased by the wage-earner. Just as for any commodity, the value of the means of consumption can be estimated by dividing their price by E (see chapter II, footnote 21). On the other hand, we have just seen that the consumption expenditures – i.e. the price paid for the purchase of the means of consumption – can in principle be equated with the worker's money wage. The value of the means of consumption can therefore be estimated by dividing the money wage by E. In short :

$$\text{necessary labour} = \text{value of MC} = \frac{\text{price of MC}}{E} = \frac{\text{money wage}}{E}$$

Surplus labour (or surplus value) is obtained by deducting necessary labour – calculated in the way just described – from the worker's labour-time (or present labour provided or new value created). In short :

$$\text{surplus labour} = \text{labour-time} - \text{necessary labour}$$

Table III.3. gives a recent estimate of the surplus labour provided (and of the surplus value created) by an average wage-earner over a period of one year and over a standard working day of 8h, for different countries. It also gives the

ratio of surplus labour to necessary labour, expressed in percentages. This ratio, which is called the rate of surplus labour, will be considered in the next chapter[13].

Table III.3. : Necessary labour, surplus labour and
rate of surplus labour in four countries
(per average wage-earner in the sector of commodity production in 1992)

	France	*Germany*	*United Kingdom*	*USA*
1. annual labour-time	1689 h	1588 h	1677 h	1679 h
2. annual wage (× 1000)	194 FF	57.4 DM	15.0 £	30.7 $
3. hourly wage (= 2÷1)	115 FF/h	36.1 DM/h	9.0 £/h	18.3 $/h
4. money equivalent of value (E)	173 FF/h	54.4 DM/h	12.5 £/h	26.0 $/h
5. necessary labour per year (=2÷4)	1127 h	1062 h	1205 h	1181 h
6. surplus labour per year (= 1 − 5)	562 h	526 h	472 h	498 h
7. necessary labour per day of 8h	5.3 h	5.3 h	5.7 h	5.6 h
8. surplus labour per day of 8h	2.7 h	2.7 h	2.3 h	2.4 h
9. rate of surplus labour (= 6÷5)	50 %	50 %	39 %	42 %

Notes :   - For the calculation of the money equivalent of value, see appendix 3, § 3.1.
           - For the rate of surplus labour (or rate of surplus value), see chap. IV.
           - For sources and methods, see Gouverneur J., « Productive labour, price/value ratio and rate of surplus value », *Cambridge Journal of Economics*, 1990, vol. 14, p. 19-21.

2. THE USE OF PROFIT : ACCUMULATION

Analysis of the source of profit in the previous section focused on the wage-earners' *present labour* and was limited to the *production process*. This section reintroduces *past labour* into the analysis and also considers the *operations of purchase and sale* which take place before and after the production process. By reintroducing past labour, we can show the *three components of the*

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[13]   a) The definition of the wage may be more or less broad : net wage, gross wage, wage-cost (see chap. VI, 3.3.1.). The concept used for the calculation of necessary labour is the broadest one, i.e. that of wage-cost.

b) Since the statistical data are not exactly homogeneous and comparable between countries, no conclusion should be drawn from the intercountry differences which appear in table III.3. The essential conclusion which can be derived from the table is that the invisible reality of surplus labour can be measured in each case (though approximately).

value and price of the commodities produced in capitalist enterprises. By considering the operations of purchase and sale, we can describe the *circuit of capital* and underline the essential role of accumulation, i.e. the reinvestment of profit.

2.1. The three components of value and price

Chapter II distinguished *two components* of the value and price of commodities. The value of commodities consists of *past value* (i.e. the value of the means of production purchased or past labour) and *new value* (created by the producers' present labour). Similarly, the price of commodities consists of the *price of the means of production* and the *revenue created*.

Analysing the new value and the revenue created in the framework of capitalist production, chapter III has just shown how both divide into two parts. The new value divides into *corresponding value* (or necessary labour) and *surplus value* (or surplus labour). The revenue created divides into *wage* and *surplus revenue*.

Taking this division of the new value and the revenue created into account, we can distinguish *three components* in the value and price of commodities. The value of commodities breaks down into *past value* (past labour), *corresponding value* (necessary labour) and *surplus value* (surplus labour). The price of commodities breaks down into the *price of the means of production*, *wages* and *surplus revenue* (or profit).

Figure III.4. illustrates this division of value and price into three components. It reproduces the data of figure II.5. (a commodity produced in a day of 8h and with means of production worth 10h) but considers now that the production is carried out by a wage-earning worker and assumes that the working day divides into 5h of necessary labour and 3h of surplus labour. Figure III.4. adds, in parentheses, data which refer to the *annual* production of an enterprise employing *100* wage-earners for 250 days : these wage-earners provide 200,000h of present labour (100 workers $\times$ 250 days per year $\times$ 8h per day) and use means of production worth 250,000h ($100 \times 250 \times 10$h).

Figure III.4. : The three components of value and price

price of MP	net revenue created (« net value added »)		price of the product(s) (« turnover »)
	wage	surplus revenue	
$100	$50	$30	$180
($2,500,000)	($1,250,000)	($750,000)	($4,500,000)
10h	5h	3h	18h
(250,000h)	(125,000h)	(75,000h)	(450,000h)
	nec. labour corresp. value	surplus labour surplus value	
past labour, value of MP	present labour, new value created		value of the product(s)
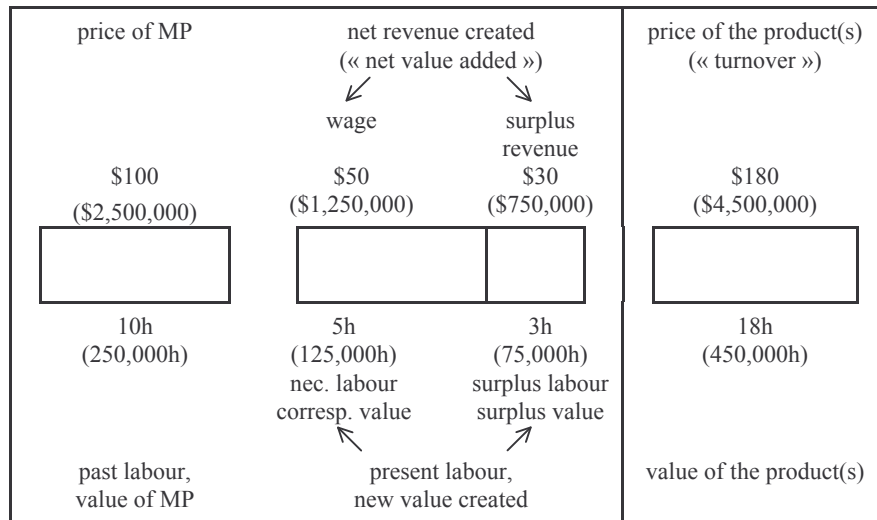
Note : MP = means of production

On the basis of the data of the numerical example, the value and price of the annual production of the enterprise in question can therefore be broken down in the following way[14] :

Price of the product	=	price of the means of production	+	wages	+	surplus revenue, profit
$4,500,000	=	$2,500,000	+	$1,250,000	+	$750,000
Value of the product	=	value of the means of production	+	corresponding value	+	surplus value
450,000h	=	250,000h	+	125,000h	+	75,000h

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14 Like figure II.5., figure III.4. considers an « average » enterprise in an « average » branch : the enterprise in question is assumed to represent the whole system (macro-economic viewpoint). On this macro-economic level, profit is equal to surplus revenue. In any particular enterprise or branch, however, profit differs from surplus revenue ; on this micro-economic level, the market price of the commodities produced must be broken down in the following way : price of the means of production + wages + *profit* (not surplus revenue).

2.2. The circuit of capital

2.2.1. General considerations

The circuit of capital is the whole sequence of the different operations of purchase, production and sale which are carried out in a capitalist enterprise ; it is also the whole sequence of the various forms that capital successively takes.

a) Description

The enterprise has at the start some *money-capital* available, i.e. a sum of money that can be invested with the object of obtaining a profit. This money-capital is used to purchase means of production and labour-power. In the example of § 2.1., the enterprise devotes $2,500,000 to the purchase of means of production and $1,250,000 to the purchase of labour-power[15]. The part of money-capital used for the purchase of the means of production is called *constant capital :* it is so called from the fact that the means of production merely transfer their own value (which remains constant) to the product, without creating any increase of value. The part of money-capital used for the purchase of labour-power is called *variable capital :* it is so called from the fact that labour-power creates surplus value, an increase of value in relation to the « value of labour-power » (to the value of the means of consumption purchased)[16].

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[15] For simplicity's sake, we assume that the means of production (means of labour and objects of labour) as well as the labour-power are purchased « in one go » at the beginning of the year and that their purchase has to be renewed « in one go » at the end of the year. As far as the means of labour (machines, plant) are concerned, this implies that they depreciate and are written off in one year only : their value is transferred completely to the value of the annual product, their purchase price is fully included in the selling price of the annual product.

[16] The distinction between *variable* capital and *constant* capital must not be confused with the distinction between *circulating* capital and *fixed* capital. The first distinction divides the elements of the production process according to whether or not they create surplus revenue ; the second distinction divides the elements of the production process according to whether they have to be constantly renewed or can be used for several production periods. Schematically, the two distinctions overlap in the following way (each arrow means « is used to purchase ») :
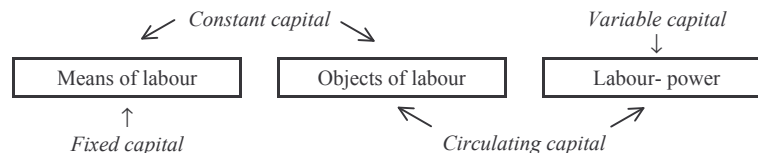
In purchasing means of production and labour-power, the enterprise transforms its money-capital into *productive capital :* the latter can be defined as the set of means of production and labour-power brought together in the production process.

In the production process the capital undergoes a new transformation : it sheds the form of productive capital and assumes the form of *commodity-capital* ready for sale. Owing to the surplus value created by the wage-earners (75,000h in the example), the value of this commodity capital is higher than the value of the means of production and labour-power used (450,000h > 250,000h + 125,000h).

The sale of the commodities produced restores the capital to its initial form of *money-capital*. In selling the annual product for $4,500,000 (total price corresponding to the value of the annual product), the enterprise recovers the money-capital invested at the beginning ($3,750,000) plus a profit ($750,000).

b) Synthesis

Let us symbolize the money-capital initially laid out by M, the money-capital recovered at the end (including the profit) by M^+, the productive capital by C_0 (MP for the means of production, LP for labour-power), the production process (where the wage-earners' present labour is performed) by P and the commodity-capital (which embodies the surplus value produced) by C_1^+. The circuit of capital can then be represented by the following formula :

$$M \rightarrow C_0 \text{ (MP, LP)} \rightarrow P \rightarrow C_1^+ \rightarrow M^+$$

This formula allows us to distinguish three categories of operations :
- first category : $M \rightarrow C_0$ (MP, LP) : the purchase of the means of production and labour-power ;
- second category : C_0 (MP, LP) $\rightarrow P \rightarrow C_1^+$: the utilization of the means of production and labour-power in a production process turning out a finished product ready for sale ;
- third category of operations : $C_1^+ \rightarrow M^+$: the sale of the finished product.

The first and third categories of operations consist in pure *juridical acts :* these are *instantaneous* acts which transfer, from one person to another, rights of ownership or usage (over the means of production, over the labour-power, over the finished product, over the money used in the exchanges). The second category of operations consists in the *production process* in the broadest sense,

including *all the labour performed* in the enterprise : irrespective of their specific activities, all the wage-earners take part in the production process and thus in the creation of value and revenue, of surplus value and surplus revenue[17].

2.2.2. Accumulation and the expanded reproduction of capital

Let us return to the example illustrating the circuit of capital. At the end of the circuit the enterprise recovers the constant and variable capital laid out at the start (M = \$3,750,000) and obtains a profit (M^+ – M = \$750,000).

The constant and variable capital recovered enable the enterprise to repeat the purchase of means of production and labour-power *on the same scale :* the same means of production and labour-power can be purchased afresh, or others costing as much.

As to the profit, it can be used in two ways : on the one hand, for the purchase of means of *consumption ;* on the other hand, for *accumulation*, i.e. for the purchase of *additional* means of production and labour-power[18].

In theory, capitalists could devote all their profit to consumption. In such a case the successive circuits of capital would go on repeating themselves on the same scale : we would have what is called the *simple reproduction of capital*.

In reality, only a fairly small fraction of the profit is consumed, the greater part is accumulated[19]. This is so for two reasons. On the one hand, competition pushes each individual enterprise into accumulating in order to improve or safeguard its competitive position. On the other hand, and more fundamentally, the search for profit is the very purpose of the system, and this search is endless : accumulation allows for a higher profit, the latter is accumulated with a view to bringing in still more profit, and so on. Due to accumulation, the successive

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[17] This conception contrasts with the traditional Marxist conception, according to which workers engaged in « circulation » activities (dealing with the juridical acts $M \rightarrow C_0$ and $C_1^+ \rightarrow M^+$) do not create any value or revenue. The two contrasting points of view are discussed in appendix 6.

18   The concept of *accumulation* is closely related to the usual concept of *net investment*. Both concepts consider investments that allow for an *expanded scale of production*. But the usual concept of investment (gross or net) is limited to the means of labour, whereas the concept of accumulation refers to all the means of production (means of labour + objects of labour) as well as to labour-power.

19   The fact that capitalists devote the greater part of profit to accumulation does not prevent them from enjoying a standard of living that is much higher than that enjoyed by wage-earners. In the above example, let us suppose that the capitalist devotes only 1/10th of the profit to the purchase of means of consumption : his consumption expenditures amount to \$75,000, that is 6 times the annual consumption expenditures per wage-earner (\$12,500). And accumulation will enable him to again increase his profit, hence his consumption...

circuits of capital go on repeating themselves on an ever increasing scale : we have an *expanded reproduction of production*, an *expanded reproduction of capital* under the various forms that the latter assumes in each of its successive circuits[20].

Let us return to the formula which depicts the circuit of capital : $M \rightarrow C_0$ (MP, LP) $\rightarrow P \rightarrow C_1^+ \rightarrow M^+$. If we disregard the fraction of profit destined for capitalist consumption, then the whole sum M^+ reappears at the starting point of the following circuit, which will enable the capitalist to recover a larger sum of money (M^{++}) : $M^+ \rightarrow C_0^+$ (MP^+, LP^+) $\rightarrow P \rightarrow C_1^{++} \rightarrow M^{++}$. The sum M^{++} will in its turn constitute the starting point of a new circuit, which will procure for the capitalist an even larger sum of money, and so on.

The original formula $M \rightarrow C_0$ (MP, LP) $\rightarrow P \rightarrow C_1^+ \rightarrow M^+$ therefore correctly describes the specific character of capitalist production :

- capitalist production is based on the *purchase of labour-power* (and not only on the purchase of means of production, as is the case of simple commodity production) ;

- money is more than a mere medium of exchange (for the purchase of means of production and labour-power and for the sale of the commodities produced) : it is also a *capital* to be increased (M must be transformed into M^+) ;

- the purposes of the system are *profit* and *accumulation :* production is directed by the search for profit rather than by the satisfaction of social needs ; and profit is accumulated with a view to obtaining more profit.

Since accumulation rests on profit, since the latter is created by the wage-earners' surplus labour, profit and accumulation have a same basis, i.e. the wage-earners' surplus labour, the surplus value and surplus revenue created by the wage-earners involved in commodity production[21].

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[20]   a) The concept of expanded reproduction is synonymous with *growth*.

b) This continuous increase in the scale of production is only strictly true if we consider the *whole* of production in the *long term* : there is nothing to prevent certain enterprises from stagnating and failing altogether ; and the aggregate production itself may decline during certain periods.

[21]   Liberal ideology stresses that profit gives rise to investment and investment to employment : profit $\rightarrow$ investment $\rightarrow$ employment. This sequence is not wrong (at least on a macro-economic level and in the long term), but it is incomplete and biased : it conceals the essential fact that profit and accumulation are based on the wage-earners' surplus labour. The complete sequence is actually as follows : employment $\rightarrow$ profit $\rightarrow$ investment $\rightarrow$ employment.

2.2.3. Contradictory aspects of the wage

In the circuit of capital $M \rightarrow C_0 \ (MP, LP) \rightarrow P \rightarrow C_1^+ \rightarrow M^+$, the wage-earners' labour-power (LP) is one of the elements of the production process that have to be purchased. The wages paid to the workers, just like the price paid for the means of production, are thus *production costs* for the enterprises. On the other hand, the successive circuits of capital imply that the commodities produced can be sold $(C_1^+ \rightarrow M^+)$: means of production are sold to other enterprises, means of consumption are sold mainly to the wage-earners. From this point of view, the wages paid to the workers constitute purchasing power, a *market* for the enterprises.

What is more, wages are not simply one type of cost and one type of market among others : they constitute the *basic production cost* of the system as well as its *essential and final market*. Indeed, as we saw in chapter I (§ 1.3.), the aggregate production of goods and services is ultimately based on human labour and ultimately aims at satisfying consumption needs. Now, in the capitalist system, human labour is essentially labour provided by wage-earners : the capitalists represent only a tiny fraction of total population and total labour ; in the same way, the consumption needs are essentially those of the wage-earners (even though the capitalists take a much higher part in total consumption than in total population and total labour)[22].

The workers' wages must therefore be considered from two distinct and contradictory points of view :

- since wages are a *basic production cost*, it is in the enterprises' interest to *limit* them in order to increase their surplus revenue and *profit* ;

- since wages constitute an *essential purchasing power*, it is in their interest to *increase* them in order to expand their *markets*.

If wages are low, the surplus revenue and profit are high, but markets are small. If wages are high, markets are large, but surplus revenue and profit are low. Now the enterprises require both high profits (this is what the system aims at) and large markets (the commodities produced must be sold)[23].

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[22]   Once more we are considering a purely capitalist system, without self-employed producers or a state. Taking them into account does not, however, significantly alter our argument.

[23] « Neo-liberal » economic theories (« supply » theories) consider wages above all as production costs. « Keynesian » economic theories (« demand » theories) consider them mainly as markets. It is actually most important to fully recognize the contradictory aspects of wag – simultaneously costs and markets – and to examine the conditions that must be fulfilled in order to overcome the contradiction.

Analysing the source of profit, this chapter has considered wages only as production costs. Further chapters will contemplate the contradictory aspects that wages assume. And we will see that the contradiction can be overcome if we adopt a dynamic perspective, taking productivity increases into account : actually, productivity increases enable enterprises to increase real wages (and thus markets), while also increasing their profits : wage-earners enjoy more purchasing power, while producing more surplus revenue (see chapter IV, 2.1.2., chapter VIII, § 2.1. and 2.2., chapter IX, 2.2.2. and § 3.1.).

PEDAGOGICAL DEVICES CONCERNING CHAPTER III

SUMMARY

1. Through their present labour, wage-earners in the sector of market production - in the same way as all commodity producers - create a new value and a net revenue. Thus, during a working day of 8h, a wage-earner creates a new value of 8h and a net revenue of $ 80 (for E = $ 10/h). The revenue created by the wage-earner is divided into two parts, whose proportions depend on the balance of forces : one part accrues to him in the form of a wage ($ 50 for example), which enables him to buy means of consumption for an equivalent amount ; the other part accrues to the capitalist in the form of profit ($ 30 in the example).

This visible division of the money revenue into wage and profit conceals a more basic division of the wage-earner's present labour : during part of the labour-time (5h of necessary labour), the wage-earner creates an amount of value which is equal to the value of the means of consumption purchased, he creates a revenue equal to the wage earned ; during another part of the labour-time (3h of surplus labour), he creates surplus value and profit.

In more accurate terms, the wage-earner's surplus labour creates *surplus revenue* (rather than profit). In the same way as we distinguish between revenue created (money equivalent of the new value) and revenue obtained, we must distinguish between surplus revenue created (money equivalent of the surplus value) and profit obtained. Profit obtained coincides with surplus revenue created on a macro-economic level, but it does

not on a micro-economic level : each enterprise or branch (or country) contributes to the creation of total surplus revenue in proportion to the surplus labour provided by its wage-earners, but the profit *obtained* by each one may be very different from the surplus revenue *created* in it (see chapter V).

Only wage-earners create surplus value and surplus revenue, not the means of production. *All* wage-earners in the sector of market production take part in the creation of surplus value and surplus revenue (irrespective of the commodities sold and the activities carried out, irrespective of the social characteristics of the enterprises and wage-earners). From a quantitative viewpoint, all wage-earners in the sector of market production contribute to creating surplus value and surplus revenue in proportion to the surplus labour provided, which depends on the length of labour-time and the wage received (but not on the degree of mechanization or the skill or intensity of labour).

The reality of surplus labour is concealed by the *form* of the wage : the hourly wage (or the piecework payment) gives the impression that all the labour provided is paid. Focusing on the *function* of the wage (to allow for the purchase of means of consumption) and having in mind the link between the price of the means of consumption and their value, it is possible to prove the reality of surplus labour provided free of charge. Such reality can also be statistically estimated using data on the money wage and the length of labour-time (provided the magnitude of the money equivalent of value, E, has been previously calculated).

2. The foregoing analysis focused on *present labour*. If *past labour* is again considered, we can show the *three components* of the value and the price of commodities. The value of commodities breaks down into past value (past labour or value of the means of production), corresponding value (necessary labour) and surplus value (surplus labour). The price of commodities breaks down into price of the means of production, wages and surplus revenue (or profit).

The foregoing analysis focused on the *production* process. If we also consider the *operations of purchase and sale* which take place before and after production, we can describe the *circuit of capital*. Capital successively takes the following forms : money-capital (constant and variable capital) → productive capital (means of production and labour-power) → production → commodity-capital (products intended for sale) → money-capital recovered through the sale, including a profit. Part of the profit is used to purchase means of consumption ; the greater part is used to accumulate, i.e. to purchase additional means of production and labour-power. This *accumulation* allows for an expanded reproduction of production and profit. Profit and accumulation – rather than the satisfaction of social needs – are the purposes of capitalist production ; both of them rest on the wage-earners' surplus labour.

In the circuit of capital, wages paid to workers are both a basic production cost (which enterprises need to reduce in order to increase surplus labour and profit) and an essential purchasing power (which they need to increase in order to enlarge their markets). This contradiction between the two aspects of the wages can be overcome thanks to productivity gains (see chapters IV, VIII, and IX).

CONCEPTS TO ASSIMILATE (see glossary)

Accumulation	Necessary labour
Capital	Profit
- circulating capital	Simple reproduction
- commodity-capital	Surplus labour
- constant capital	Surplus revenue
- fixed capital	Surplus value
- money-capital	Value of labour-power
- productive capital	Wage
- variable capital	- money wage
Corresponding value	- real wage
Expanded reproduction	

EXERCISES (answers at end of book)

A. Basic principles

3.1. Using figure III.1., prove that profit is created by the wage-earners' surplus labour in the sector of market production.

3.2. What is the difference between *profit* and *surplus revenue* ? Is the amount of profit equal to the amount of surplus revenue ?

3.3. What is the difference between *money wage* and *real wage* ? Does the wage-earner's purchasing power coincide with his standard of living ?

3.4. What are the common points and differences between figure II.5. (the *two* components of value and price) and figure III.4. (the *three* components of value and price) ? Does figure III.4. contradict figure II.5. ?

3.5. The circuit of capital is described by formula $M \rightarrow C_0 \ (MP, LP) \rightarrow P \rightarrow C_1^+ \rightarrow M^+$. Using this formula :
a) describe the 3 operations successively realized by the enterprise and the 4 forms successively taken by capital ;
b) show the specific features of capitalist production ;
c) explain the contradictory aspects of wages.

3.6. « Accumulation allows for an expanded reproduction of capital » :
- What is meant by *accumulation* ? by *expanded reproduction of capital* ?
- Is accumulation synonymous with *net investment* ? Is expanded reproduction of capital synonymous with *growth* ?
- Why are accumulation and expanded reproduction of capital *necessary* tendencies ?

B. More advanced knowledge

3.7. Figure III.1. shows the following *arithmetical* equality : necessary labour = corresponding value = value of LP = value of MC = 5h. Does this mean that we can establish the following *conceptual* equality : necessary labour = corresponding value = value of LP = value of MC ? Explain to what extent these concepts are equivalent or not.

3.8. Do capitalists create revenue ? surplus revenue ? Why ?

3.9. Do *all* wage-earners create surplus revenue ?

3.10. Show that the distinction between *constant* and *variable* capital does not coincide with the distinction between *fixed* and *circulating* capital.

3.11. Does the money invested in means of production proceed from constant capital or from profit ?

3.12. All theories start from identical observations concerning the money wage and the length of labour-time ($50 and 8h in the example of table III.2.). Using this example, explain how the reality of surplus labour is concealed by current economic theories and how it can be revealed.

3.13. « Profit gives rise to investment and investment gives rise to employment ». To what extent is this statement relevant, and to what extent is it not ?

C. Applied knowledge

3.14. Explain why the labour performed by the following persons does or does not create surplus value :
- the house-wife or husband ;
- the civil servant ;
- the farmer ;
- the teacher ;
- the taxi-driver ;
- the union representative.

3.15. Show with statistical data that the money equivalent of value (E) is necessarily higher than the average hourly wage.

3.16. Following the method of § 1.4., estimate the amount of surplus labour you are providing as a wage-earner. Concretely, the following operations should be realized successively :

1. estimate the magnitude of E, using one of the two methods described at the end of chapter II (exercise 2.21.) ;

2. calculate your annual labour-time (hours of actual presence within the enterprise, including extra hours, but excluding journeys to and from home) ;

3. calculate the annual wage-cost paid by your employer (gross wage + employer's contribution to national insurance + all legal or extralegal advantages) ;

4. estimate necessary labour per year, dividing the annual wage-cost by E ;

5. estimate surplus labour per year, subtracting necessary labour per year from the annual labour-time ;

6. calculate the proportions of necessary labour and surplus labour in the annual labour-time ; apply these proportions to a standard working day of 8h in order to obtain an estimate of the amount of necessary labour and surplus labour per day of 8h.

(Note : surplus labour can be calculated in that way both for wage-earners in the sector of market production and for those in non-market production : see answer to question 3.9.).

CHAPTER IV

THE BASIC ECONOMIC RATIOS

This chapter begins by recalling the three constituent parts of the price of commodities. From there it deduces and analyses three basic economic ratios : rate of surplus value, composition of capital, rate of profit.

The whole chapter is based on the same assumptions as chapter III :

1. We consider a system consisting of *capitalist enterprises only* : we disregard non-commodity production as well as commodity production carried out in non-capitalist enterprises.

2. We conduct our arguments on a basically *macro-economic level* : the wage-earners or enterprises considered in the examples are « average » in all respects and representative of all wage-earners and enterprises. In order to establish the link with the next chapter, we also examine to what extent the principles put forward are also applicable to the *micro-economic* level.

The two underlying assumptions enable us to establish an *equivalence* between the *surplus revenue created* by the wage-earners (the surplus value expressed in monetary terms) and the *profit obtained* by the enterprises. (We will see in chapters V and VI that profit differs from surplus revenue once one or the other of these assumptions is withdrawn.)

1. PRESENTATION OF THE THREE RATIOS

We know that the price of commodities comprises three distinct components : price of the means of production purchased, wages paid to workers, surplus revenue or profit resulting from the wage-earners' surplus labour (chapter III, § 2.1.). We also know that the money devoted to the purchase of means of production is called constant capital, while that devoted to the purchase of labour-power (to the payment of wages) is called variable capital (chapter III, 2.2.1.a).

Let us use letters to symbolize the various constituent elements of the total price (or turnover or gross receipts) :

C   =   constant capital = price of the means of production
V   =   variable capital = price of labour-power = wages (= price of the
        wage- earners' means of consumption)
S   =   surplus revenue
P   =   profit (P = S on the macro-economic level)

With the aid of these symbols, the total price of the commodities produced can be expressed concisely :

Total price = C + V + S = C + V + P

From this formula we can set out and analyse three basic ratios : the rate of surplus value (s'), the composition of capital (c') and the rate of profit (p'). We will illustrate these ratios with the aid of the numerical example of the preceding chapter (figure III.4.)[1].

1.1. The rate of surplus value (s')

It relates the surplus revenue created by the labour-power (S) to the variable capital spent on its acquisition (V)[2] :

$$s' = \frac{S}{V}$$ [1]

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[1] Just as in the preceding chapter (see footnote 15), we assume that the means of production and labour-power are purchased « in one go » at the beginning of the year and that their purchase has to be renewed « in one go » at the end of the year. In technical terms, economists say that both C and V have a *period of turnover* equal to one year (one year is necessary to recover both C and V) ; they also say that both C and V have a *rate of turnover* equal to 1 (both C and V are recovered once a year). This simplifying assumption will be maintained throughout the book. It enables us to establish an equivalence between the *money-capital invested* (C + V laid out at the start) and the annual *cost of production* (C + V included in the price of the annual product and recovered through the sale of this product).

[2] Strictly speaking, one should distinguish between the rate of surplus value (relating two amounts expressed in hours : surplus value created/value of labour-power) and the rate of surplus revenue (relating two amounts expressed in terms of money : S/V). As the two ratios are actually identical, we will conform to current terminology and define the S/V ratio as the « *rate of surplus value* ».

Thus, in the numerical example of figure III.4. :

$$s' = \frac{\$750,000}{\$1,250,000} = 0.60 = 60\,\%$$

As can be seen in the same numerical example, this *rate of surplus value* coincides with the *rate of surplus labour per wage-earner*, i.e. with the ratio of the surplus labour provided by an average wage-earner to his necessary labour (the latter being equal to the value of the wage-earner's labour-power, i.e. to the value of the means of consumption he can purchase)[3]. We can write :

$$s' = \frac{\text{surplus labour}}{\text{value of labour - power}} = \frac{\text{surplus labour}}{\text{necessary labour}} \qquad [2]$$

Thus, in the same example :

$$s' = \frac{3h}{5h} = 0.60 = 60\,\%$$

The rate of surplus value (or of surplus labour) expresses the *degree of economic exploitation* of the commodity producing wage-earners, i.e. the extent to which surplus labour, surplus value and surplus revenue are extracted from them.

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[3] Mathematically, the transition from formula [1] to formula [2] is made through dividing S and V by the number of wage-earners (L) and by the money equivalent of value (E). Dividing by L gives :

$$s' = \frac{S/L}{V/L} = \frac{\text{surplus revenue per wage - earner}}{\text{variable capital per wage - earner}}$$

The surplus revenue per wage-earner is the monetary equivalent of the surplus value created by the wage-earner's surplus labour (see chap. III, § 1.1. and 1.3.1.) : surplus revenue = surplus value $\times$ E = surplus labour $\times$ E. The variable capital per wage-earner is the average money wage. The latter is equal to the price of the means of consumption (chap. III, 1.3.3.a), which is the monetary equivalent of the value of the means of consumption (or value of labour-power) : money wage = price of MC = value of MC (value of LP) $\times$ E. Since the value of labour-power determines necessary labour (chap. III, §1.1.), we eventually get :

$$s' = \frac{\text{surplus labour} \times E}{\text{value of LP} \times E} = \frac{\text{surplus labour}}{\text{value of LP}} = \frac{\text{surplus labour}}{\text{necessary labour}}$$

The wage-earners' *economic exploitation* must be distinguished from their *physical exploitation*. Economic exploitation relates *economic* magnitudes which are *homogeneous* and comparable : either monetary magnitudes (surplus revenue, variable capital) or hours of abstract labour (surplus labour or surplus value, necessary labour or value of labour-power). From an economic point of view, wage-earners are all the more exploited as the rate of surplus value or of surplus labour is higher. Physical exploitation, on the other hand, refers to *material* elements which are *heterogeneous* and not comparable : on the one hand, the length, difficulty and intensity of labour (which determine the wear of labour-power and negatively affect the wage-earners' living conditions), on the other hand, the real wage obtained as a counterpart (which positively influences the ability to recover one's labour-power as well as the wage-earners' living conditions). From a physical point of view, wage-earners are all the more exploited as they work longer, harder and more intensively and consume less : in extreme cases, they are exhausted by their work while being reduced to starvation wages[4].

1.2. The composition of capital (c')

It relates constant capital (C) and variable capital (V) : it relates the part of money-capital used for the purchase of means of production (which produce no increase of value) and the other part used for the purchase of labour-power (productive of an increase of value) :

$$c' = \frac{C}{V}$$ [3]

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[4]   a) The degree of economic exploitation and that of physical exploitation may move in the same direction or in opposite directions. *In the same direction* : thus, an increase in labour-time or a decrease in the real wage contribute to raising both the degree of physical exploitation and the rate of surplus value or of surplus labour (on the influences affecting s', see below, § 2.1.). *In opposite directions* : thus, an increase in the real wage brings about a decrease in the degree of physical exploitation, but it may very well be accompanied by a rise in the rate of surplus value or of surplus labour (see below, § 2.1.) ; similarly, a higher intensity of labour raises the wage-earners' physical exploitation, but not necessarily their economic exploitation (on this point, see appendix 7, 7.2.3.).

b) From a socio-political point of view, wage-earners will react to the degree of physical exploitation rather than to the degree of economic exploitation : they immediately experience the former, while they may completely ignore the latter.

In our numerical example, we have :

$$c' = \frac{\$2,500,000}{\$1,250,000} = 2 = 200\ \%$$

The composition of capital reflects the *degree of mechanization* of the production process, the ratio between the number of means of production used and the number of wage-earners. (We will see in § 2.2. why *changes* in the C/V ratio can only *approximately* reflect changes in the degree of mechanization.)

1.3. The rate of profit (p')

It relates the profit obtained (P) to the *total* (constant and variable) capital laid out in order to acquire the means of production and labour-power. If we represent the total capital expended by K (K = C + V), we can write :

$$\boxed{p' = \frac{P}{K} = \frac{P}{C+V}} \qquad [4]$$

Thus in the example :

$$p' = \frac{\$750,000}{\$3,750,000} = 0.20 = 20\ \%$$

The rate of profit expresses the *degree of realization of the capitalist aim*, which is to obtain an increase of money (a profit) in relation to the capital initially laid out.

2. ANALYSIS OF THE FACTORS AFFECTING THE THREE RATIOS

2.1. Influences affecting the rate of surplus value

2.1.1. Development of the basic formula

Since surplus labour is the difference between present labour and necessary labour (the latter being equal to the value of labour-power), formula [2] can be rewritten in the following way :

$$s' = \frac{\text{present labour} - \text{necessary labour}}{\text{necessary labour}}$$

$$s' = \frac{\text{present labour}}{\text{necessary labour}} - 1 = \frac{\text{present labour}}{\text{value of labour - power}} - 1 \qquad [5]$$

We know that the value of labour-power is nothing but the value of the means of consumption purchased by the wage-earner (chapter III, § 1.1.). It is therefore equal to the *number* of means of consumption purchased (the real wage), multiplied by the *average value* of the means of consumption (the value per « means » of consumption). Formula [5] thus becomes :

$$s' = \frac{S}{V} = \frac{\text{present labour}}{\text{real wage} \times \text{value per MC}} - 1 \qquad [6]$$

This formula of the rate of surplus value is applicable both on the macro-economic and on the micro-economic level. But the conclusions that can be derived from it vary according to whether we consider *changes* in s' through time or *differences* in s' at a given time.

2.1.2. Changes in the rate of surplus value

Formula [6] shows us that the evolution of s' depends on the evolution of *three* variables : present labour (i.e. the length of labour-time), the real wage and the unit value of the means of consumption. How do these three variables evolve over time ?

The *value per MC* tends to *decrease*, due to advances in general productivity : productivity rises both in the branches producing means of consumption (cars, …) and in those producing means of production (metal, …) used by the former (which contributes to reducing the past value of the means of consumption)[5]. This decrease in the value per MC tends to *raise* s'.

The evolution of the *real wage* and the *length of labour-time* cannot be predicted, for they depend a great deal on the balance of forces. If the real wage

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[5]   On the relationship between changes in general productivity and changes in the unit social value of commodities, see chap. II, 2.2.3.b.

decreases or labour-time increases, s' gets higher. Conversely, if the real wage increases or labour-time decreases, s' gets lower[6].

We can therefore state the following conclusions :

- *advances in general productivity tend to raise the rate of surplus value* through reducing the unit value of the means of consumption ;

- *the evolution of the rate of surplus value cannot be predicted,* for the three basic influences may act in contradictory directions.

Among all the possible evolutions of the three variables and s', formula [6] reveals a combination which is worth underlining : *the rate of surplus value can remain constant, and even increase, in spite of both an increase in the wage-earners' level of consumption and a reduction in their labour-time* : for this to occur, it is necessary – and sufficient – that the production of the wage-earners' means of consumption register productivity increases that are strong enough to compensate the other two influences. *Productivity increases*, therefore, *make it possible to reconcile the contradictory aspects of the wage* which we underlined earlier (chapter III, 2.2.3.). Thanks to them, it is possible to simultaneously have a rise in real wages (which expands markets) and an increase in the quantity of surplus revenue produced (which increases profit) : wage-earners enjoy more purchasing power, while producing more surplus revenue (since the rate of surplus labour rises).

This theoretical compatibility between an increase in the rate of surplus value and an increase in real wages will be analysed in detail in chapter VIII ; it will be illustrated with concrete empirical data concerning the USA since 1948[7].

2.1.3. Differences in the rate of surplus value

Differences in s' (between branches, or enterprises or wage-earners) at any given time depend on differences in only *two* of the variables of formula [6], namely the length of labour-time and the real wage. For the value per MC

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6   The *real wage* tends to *rise* in advanced countries, at least on average and in the long run : this is one way of ensuring the expansion of markets which is required to match the expansion of production (see chap. VII, 3.3.1.b).

7   According to a current objection, improvements in the wage-earners' living conditions (substantial rise in real wages, reduction of labour-time) would mean the end of their being exploited. Analysis of formula [6] shows that this is not the case : first, improvements in living conditions admittedly contribute to lessening *physical* exploitation, but they may very well be accompanied by a rise of the rate of surplus value, thus by a strengthening of *economic* exploitation ; second, if economic exploitation diminishes, it is always necessarily present.

depends on *general* productivity and is therefore *external* to each branch, enterprise or wage-earner[8].

    We know that the real wage depends on the money wage and the price per MC (see chapter III, 1.3.3.a). Since the price per MC is also an *external* datum (identical for all wage-earners, enterprises and branches), differences in s' depend on differences in the length of labour-time and in the money wage.

    We can therefore state the following conclusions :

    - *productivity differences between enterprises do not result in differences in their respective rate of surplus value* [9] ;

    - *wages and labour-time being equal*, different branches, enterprises or wage-earners have an *equal rate of surplus value*.

2.2. Influences affecting the composition of capital

2.2.1. Development of the basic formula

    Constant capital (C) is the amount of money used for the purchase of means of production. It is equal to the *number* of means of production multiplied by their *average price*. Similarly, variable capital (V) is equal to the *number* of wage-earners multiplied by their *average wage*. Consequently, the composition of capital can be expressed in the following way :

$$c' = \frac{\text{number of MP}}{\text{number of wage - earners}} \times \frac{\text{price per MP}}{\text{wage per worker}}$$

    Assuming that the whole wage is devoted to the purchase (present, deferred or anticipated) of means of consumption (chapter III, 1.3.3.a), it is clear that the wage is equal to the total price of the means of consumption purchased, that is, to the *number* of means of consumption (the real wage) multiplied by their *average price*. We can thus write :

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[8]   More precisely : each enterprise or branch contributes only *marginally* to determining the value per MC (which depends on productivity in *all* enterprises and branches contributing to the production of means of consumption).

[9]   Productivity differences between enterprises result in differences in the unit individual value of their commodities : see chap. II, 2.2.3.c, and chap. V, 1.1.1.

$$c' = \frac{\text{number of MP}}{\text{number of wage - earners}} \times \frac{\text{price per MP}}{\text{price per MC}} \times \frac{1}{\text{real wage}}$$

Dividing the price per MP and the price per MC by E, we obtain the value per unit of means of production and of means of consumption respectively. Hence :

$$c' = \frac{\text{number of MP}}{\text{number of wage - earners}} \times \frac{\text{value per MP}}{\text{value per MC}} \times \frac{1}{\text{real wage}}$$

The ratio of the number of means of production to the number of wage-earners gives the number of means of production employed per wage-earner : it expresses the *degree of mechanization* of the production process[10]. Hence the following formula :

$$c' = \frac{C}{V} = \frac{\text{degree of mechanization} \times \dfrac{\text{value per MP}}{\text{value per MC}}}{\text{real wage}} \qquad [7]$$

This formula of the composition of capital is also applicable both on the macro- and on the micro-economic level. But again the conclusions that can be derived from it vary according to whether we consider *changes* in c' over time or *differences* in c' at a given time.

2.2.2. Changes in the composition of capital

Formula [7] shows that the evolution of c' depends on the evolution of *three* variables : the degree of mechanization, the real wage and the ratio between the value per MP and the value per MC. How do these three variables evolve over time ?

The *degree of mechanization* tends to increase directly due to competition between enterprises (see chapter VII, § 1.2.). This tends to *raise* c'.

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[10] The ratio between the number of means of production and the number of workers is often called the « *technical* composition of capital ». In contrast, the C/V ratio (which we have referred to as the « composition of capital ») could be called more precisely the « *price*-composition of capital ». Marxist literature also refers to the C/V ratio as the « *organic* composition of capital ».

The evolution of the other two variables cannot be predicted. As mentioned above (2.1.2.), the evolution of the *real wage* depends a great deal on the balance of forces. As to the ratio between unit values (value per MP/value per MC), it increases or decreases according to whether productivity rises more in the production of the means of consumption (which causes the value per MC to fall proportionately more than the value per MP) or in the production of the means of production.

We can therefore draw the following conclusions :

- *the evolution of the composition of capital does not adequately reflect the evolution of the degree of mechanization*, for it also depends on the evolution of the other two variables ;

- *the evolution of the composition of capital cannot be predicted*, for the three variables may influence it in contradictory directions.

2.2.3. Differences in the composition of capital

Differences in c' (between enterprises or branches) at any given time depend on differences in only *two* of the variables of formula [7], namely the degree of mechanization and the real wage. For the unit values of MP and MC depend on productivity in the *whole* sector of MP or MC and are therefore *external* to each enterprise or branch[11].

We can thus state the following conclusion : *wages being equal, differences in the composition of capital adequately reflect differences in the degree of mechanization* between enterprises or branches.

2.3. Influences affecting the rate of profit

2.3.1. On the macro-economic level

On the level of the *whole* economy – and still disregarding non-capitalist production – total profit is equal to total surplus revenue : P = S. We can therefore write :

$$p' = \frac{P}{C+V} = \frac{S}{C+V}$$

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11   Same observation as in footnote 8, concerning both the value per MP and the value per MC.

Dividing all the terms by V, we obtain :

$$p' = \frac{S/V}{C/V + V/V}$$

$$p' = \frac{s'}{c' + 1} \qquad\qquad [8]$$

This last formula shows that the general rate of profit (or macro-economic rate of profit) depends both on the general (macro-economic) rate of surplus value and the general (macro-economic) composition of capital. *The higher the rate of surplus value, the higher the general rate of profit ; the higher the composition of capital, the lower the general rate of profit*. The two relationships are logical :

- A high rate of surplus value means that the surplus revenue created by labour-power is relatively high in comparison with the capital spent to acquire the labour-power ; for a given composition of capital, the general rate of profit will therefore be that much higher.

- A high composition of capital means that the capitalists spend proportionately more on means of production (which create no surplus revenue) and proportionately less on labour-power (which alone creates surplus revenue) : for a given rate of surplus value, the general rate of profit will therefore be that much lower.

As far as the *evolution* of the general rate of profit is concerned, no predictions can be made. We saw earlier that the evolution of the rate of surplus value and of the composition of capital cannot be predicted ; consequently, *the evolution of the general rate of profit cannot be predicted* either[12].

2.3.2. On the micro-economic level

In a particular enterprise or branch, profit obtained normally differs from surplus revenue created (P ≠ S), and there is no simple formula that can express the influences bearing on the rate of profit. The only existing formula is the initial one :

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[12] The issue of a « law of the falling tendency of the rate of profit » is discussed in appendix 9.

$$p' = \frac{P}{K} = \frac{P}{C+V}$$

If formula [8] were applicable on micro-economic levels, more mechanized enterprises (with a higher c') would have lower rates of profit than less mechanized competitors. In actual fact, the relation is quite the opposite : more mechanized enterprises enjoy higher rates of profit. Precisely this observation gives rise to a current objection : if profit rests on the wage-earners' surplus labour, how can we explain the high profit of highly mechanized enterprises, which employ comparatively few wage-earners and thus provide comparatively little surplus labour ? This objection will be answered at the beginning of next chapter.

PEDAGOGICAL DEVICES CONCERNING CHAPTER IV

SUMMARY

1. The price of commodities comprises three components : the price of the means of production (purchased by constant capital C), the price of labour-power (purchased by variable capital V) and the surplus revenue (S) or profit (P) (P = S on a macro-economic level). In short, the total price of commodities = C + V + S = C + V + P.

From this formula, three basic ratios can be set out : the rate of surplus value (s' = S/V), the composition of capital (c' = C/V) and the rate of profit (p' = P/[C + V]).

The rate of surplus value is equal to the rate of surplus labour per wage-earner (s' = surplus labour/necessary labour). It expresses the degree of economic exploitation of the wage-earners (which has to be distinguished from the degree of physical exploitation).

2. In the analysis of the influences bearing on each ratio, the dynamic viewpoint (evolution of the ratio) must be distinguished from the static viewpoint (comparison of ratios).

- As far as the *rate of surplus value* (or the rate of surplus labour) is concerned, its *evolution* depends on changes in three variables : the length of labour-time, the real wage

and the unit value of the means of consumption. Since these three variables may act in opposite directions, the evolution of s' cannot be predicted. Advances in general productivity tend to raise s' through reducing the unit value of the means of consumption. If advances in general productivity are sufficient, it is possible to simultaneously have an increase in the rate of surplus value and an increase in real wages : in this way, enterprises increase both their profits and their markets.

Differences in s' on a micro-economic level depend on differences in two variables : the length of labour-time and the real wage (the unit value of the means of consumption is an external, macro-economic, datum). Labour-time and wages being equal, productivity differences between enterprises do not result in differences in s'.

- As far as the *composition of capital* is concerned, its *evolution* depends on changes in three variables : the degree of mechanization, the real wage and the ratio between the unit values of the means of production and means of consumption. Since these three variables may act in opposite directions, the evolution of c' cannot be predicted. Due to the presence of the other two variables, the evolution of c' does not adequately reflect the evolution of the degree of mechanization.

Differences in c' on a micro-economic level depend on differences in two variables : the degree of mechanization and the real wage (the unit values of the means of production and the means of consumption are external, macro-economic data). Wages being equal, differences in c' between enterprises adequately reflect differences in the degree of mechanization.

- As far as the *rate of profit* is concerned, its *evolution* on the *macro-economic* level depends on the evolution of both s' and c'. Since the latter cannot be predicted, the evolution of p' cannot be predicted either. But it can be stated that the macro-economic p' is all the higher as s' is higher and c' lower.

On a *micro-economic* level, on the contrary, we observe that p' is higher in more mechanized enterprises (where c' is higher). This seems to contradict the thesis according to which profit stems form the wage-earners' surplus labour. This apparent contradiction is examined at the beginning of chapter V.

CONCEPTS TO ASSIMILATE (see glossary)

Composition of capital	Rate of surplus labour
Rate of profit	Rate of surplus value

EXERCISES (answers at end of book)

A. Basic knowledge

4.1. Develop the formula of the rate of surplus value (s') in order to show the basic influences affecting that ratio. Using the formula thus developed :
a) explain why the evolution of s' cannot be predicted ;
b) explain the compatibility between these two at first sight contradictory statements :
   - advances in general productivity *do affect* (increase) s' ;
   - productivity differences between two enterprises *do not affect* their respective s' ;
c) explain the compatibility between an increase in real wages and an increase in the rate of surplus value.

4.2. What is the difference between the wage-earners' *economic exploitation* and their *physical exploitation* ? Show that both types of exploitation may move in opposite directions.

4.3. Develop the formula of the composition of capital (c') in order to show the basic influences affecting that ratio. Using the formula thus developed :
a) explain why the evolution of c' cannot be predicted ;
b) explain the compatibility between these two at first sight contradictory statements :
- the evolution of c' *does not adequately reflect* the evolution of the degree of mechanization ;
- wages being equal, differences in c' between two enterprises *do adequately reflect* differences in their degree of mechanization.

4.4. Develop the formula of the *macro-economic* rate of profit (p') and show :
a) that p' depends on the other two macro-economic ratios (s' , c') ;
b) that the evolution of p' cannot be predicted.

B. More advanced knowledge

4.5. « The considerable rise in the wage-earners' standard of living since 1945 clearly invalidates the postulate of their being exploited. » What do you think of this statement ?

4.6. What is the difference between the *organic* composition of capital and the *technical* composition of capital ?

C. Applied knowledge

4.7. In what way would the following measures of economic policy affect the *general rate of surplus value* ?
a) raising money wages parallel to the rise in the consumer price index ;
b) raising money wages less than the rise in the consumer price index ;
c) raising real wages parallel to the rise in general productivity ;
d) raising money wages parallel to the rise in general productivity ;
e) reducing the length of labour-time parallel to the rise in general productivity.

4.8. Extending your answer to question 3.16 (chapter III), estimate the *rate of surplus labour* you are subjected to as a wage-earner. To do this, you simply have to carry out the following two operations :
- divide the (annual or daily) quantity of surplus labour by the (annual or daily) quantity of necessary labour ;
- express the result of the division in the form of a percentage.
(Note : for wage-earners in the *market* sector, the rate of surplus labour thus calculated is also the *rate of surplus value*.)

4.9. If you have access to the data of one or several capitalist enterprises, you might try carrying out the following operations :
a) estimate the *composition of capital* :
- divide constant capital by variable capital (*constant capital* spent per year = yearly depreciation of fixed capital + yearly expenditure in physical circulating capital ; *variable capital* spent per year = total wage-cost for all wage-earners) ;
- express the composition of capital thus calculated in the form of a percentage ;
b) record figures concerning the rate of profit (in %) ;
c) compare the composition of capital and rate of profit in several enterprises : do enterprises with a higher composition of capital enjoy a higher (or a lower) rate of profit ?

CHAPTER V

COMPETITION FOR THE SHARE-OUT
OF SURPLUS REVENUE

This chapter leaves behind the macro-economic framework of the foregoing analyses. It focuses on what takes place on the micro-economic level, i.e. the level of enterprises and branches of production. It first examines the principles which determine the distribution of the total surplus revenue between the various enterprises and branches (section 1). It then examines the contradictory relations which prevail between enterprises and branches for the distribution of this surplus revenue (section 2).

The whole chapter contemplates – as before – a system which comprises *only capitalist enterprises :* the various types of non-capitalist production will be brought into the analysis in chapter VI. Moreover, the whole chapter still adopts an essentially *static*, short-term, perspective : the long-run tendencies of the system will be considered in chapters VII to IX.

1. DISTRIBUTION OF TOTAL SURPLUS REVENUE

We proved that profit rests on the surplus labour provided by the wage-earners involved in commodity production, surplus labour which creates a surplus value and a surplus revenue. This proof left a classic objection unanswered : how do we explain the large profit of highly mechanized (even automated) enterprises, employing relatively few wage-earners ? In order to answer this objection, we have to make a clear distinction between the *creation* of surplus revenue and its *distribution*.

Surplus revenue is *created* by wage-earners in the commodity production sector, and by them only. Total surplus revenue can be compared to an immense cake, the size of which depends on three factors : the total number of wage-earners involved in commodity production, the length of their labour-time (which determines the revenue *created* by each of them) and the wage (which determines how this revenue is *divided* into the worker's remuneration and the surplus

revenue)[1]. If the length of labour-time and the wage are identical in all the enterprises and branches (if the rate of surplus value is uniform), each enterprise or branch contributes to the creation of the total surplus revenue in proportion to the number of wage-earners it employs.

However, the surplus revenue created by the wage-earners of a particular enterprise or branch is not necessarily appropriated by the capitalists of that enterprise or branch. The total surplus revenue is *distributed*, not according to the number of wage-earners taking part in production, but essentially according to two criteria : the degree of mechanization of the respective enterprises and branches and the market power of the respective branches. This explains why highly mechanized enterprises or branches can have a share of the cake, a profit, that has no relation to the number of wage-earners they employ, or to the surplus revenue created by the latter ; and the same holds for branches enjoying a greater market power.

In this section we will examine the two forms of surplus revenue redistribution most interesting for understanding capitalist society : on the one hand, the distribution of surplus revenue between *unequally mechanized enterprises* within the *same branch* of production ; on the other hand, the distribution of surplus revenue between *different branches* enjoying *unequal market power*[2].

1.1. Unequal degrees of mechanization and distribution of surplus revenue among enterprises

In order to clarify this first type of distribution of surplus revenue, we are going to consider a simplified and « average » branch of production : the enterprises that make up the branch produce only one category of commodity, which is identical in all the enterprises (homogeneous product) ; the branch as a whole is characterized by a rate of surplus value, a composition of capital and a rate of profit which are equal to what these ratios are on the macro-economic level ; the branch does not enjoy any particular market power and sells at a price equal to the simple price.

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[1]   The *total surplus revenue* is a subset within the broader set constituted by the *total revenue* created by the whole of present labour taking part in commodity production. Figure VI.4. (chapter VI, § 5.2.) locates total surplus revenue within the total revenue created.

[2]   We disregard here differences in mechanization between branches. Concerning the distribution of surplus revenue between *unequally mechanized branches* (with different C/V ratios), see appendix 10, § 10.2.

1.1.1. Differences in mechanization and their impact

Table V.1. and figure V.2. describe the situation of the three enterprises which are taken as constituting the branch in question. In what respects are these enterprises similar and in what are they different ?

The three enterprises employ different techniques : enterprise 1 is the most mechanized, enterprise 3 is the least mechanized, while enterprise 2 operates with an « average » technique within the branch.

Differences in the degree of mechanization do not result in different rates of surplus value in the three enterprises : indeed, the rate of surplus value in each enterprise depends on the length of labour-time (which determines the revenue created) and on the wage paid (which determines the necessary labour). In the example, we assume that the working day is in each case 8h (hence each wage-earner creates a revenue of \$8 and the total revenue created, $V + S$, is in each case equal to the number of workers, L, multiplied by \$8)[3] ; we assume moreover that the wage is in each case \$4 (hence the necessary labour is in each case equal to 4h and the total variable capital, V, amounts in each enterprise to $L \times \$4$). The three enterprises thus have the same rate of surplus value, equal to 100 % (see chapter IV, 2.2.3.).

On the other hand, differences in the degree of mechanization give rise to a series of other differences between the three enterprises :

- differences in the composition of capital (C/V) : this ratio is highest in 1, lowest in 3 (see chapter IV, 2.1.3.) ;

- differences in the quantities produced (Q) : the more highly mechanized the enterprises, the greater their productive capacity[4] ;

- differences in the unit costs of production (c + v) : the unit cost is \$8.90 in enterprise 1, \$10 in enterprise 2, \$12 in enterprise 3 ;

- differences in the individual unit values (c + v + s) : to produce one unit, 9.8h of labour (past and present) are required in enterprise 1, 12h in enterprise 2, 16h in enterprise 3.

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[3]   The money equivalent of value (E) is supposed to be equal to \$1 per hour (see table V.1., footnote 1a).

[4]   In this chapter's arguments we assume that productive capacities are always fully employed : a doubling of capacity is reflected in a doubling of production (we therefore disregard influences of underemployment of productive capacity on the unit costs of production and on the unit values). We assume, moreover, that each enterprise is able to sell its production : the quantity produced by the whole branch (1000 in the example) coincides exactly with demand.

Table V.1. : Distribution of surplus revenue between unequally mechanized
enterprises within the same « average » branch of production

	(units)	Enterprise 1	Enterprise 2	Enterprise 3	Whole branch
L	(number)	100	150	250	500
C	($ or h)	3600	2400	2000	8000
V	($ or h)	400	600	1000	2000
S	($ or h)	400	600	1000	2000
V + S	($ or h)	800	1200	2000	4000
C + V (=K)	($ or h)	4000	3000	3000	10000
C + V + S	($ or h)	4400	3600	4000	12000
s' = S/V	(%)	100 %	100 %	100 %	100 %
c' = C/V	(%)	900 %	400 %	200 %	400 %
Q	(units)	450	300	250	1000
c (= C/Q)	($ or h)	8	8	8	8
v (= V/Q)	($ or h)	0.9	2	4	2
s (= S/Q)	($ or h)	0.9	2	4	2
v + s	($ or h)	1.8	4	8	4
c + v	($ or h)	8.9	10	12	10
c + v + s	($ or h)	9.8	12	16	12
price	($)	12	12	12	12
p (= price −[c + v])	($)	3.1	2	0	2
P (= p × Q)	($)	1400	600	0	2000
p' = P/K	(%)	35 %	20 %	0 %	20 %
P − S	($)	+1000	0	−1000	0

Observations concerning table V.1. and figures V.2. and V.3. :
  1) Initial assumptions
    a) E = $1 per hour. Hence the basic symbols (C, V, S for total magnitudes ; c, v, s, for magnitudes per unit) represent both values (in hours of labour) and monetary magnitudes (in dollars : costs, revenues, prices).
    b) In each enterprise, the working day = 8h and the daily wage = $4. Hence :
    - the value of the means of consumption (the value of labour-power) = $4/E = 4h = necessary labour ;
    - surplus labour = 8h − 4h = 4h ;
    - the rate of surplus labour = 4h/4h = 100 % (= rate of surplus value).
    c) The purchases of means of production and labour-power have to be renewed « in one go » at the beginning of each period (1 day in the example) : hence the sum C + V (= K) represents both the total *cost of production* and the *money-capital* invested (on the basis of which the rate of profit is calculated : see chap. IV, footnote 1).

Figure V.2. : Distribution of surplus revenue between unequally mechanized enterprises within the same « average » branch of production

h or $ per unit

16

12

9.8

8

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++++++++++++

P

S

V

S = P

V

(P = 0)

V

—————————
——— S ———
—————————

{ unit social value
simple price
= market price

C

C

C

quantity produced

	Enterprise 1	Enterprise 2	Enterprise 3	Whole branch
$s' = S/V$	= 100 %	= 100 %	= 100 %	= 100 %
$c' = C/V$	= 900 %	= 400 %	= 200 %	= 400 %
Q	= 450	= 300	= 250	= 1000
$c + v$	= 8.9	= 10	= 12	= 10
$c + v + s$	= 9.8	= 12	= 16	= 12
$p' = P/K$	= 35 %	= 20 %	= 0 %	= 20 %

Note : the + (–) signs represent the surplus revenue gained (lost) through transfer ; the profit obtained (P) = surplus revenue created (S) ± surplus revenue gained or lost through transfer.

2) *Current meaning of the symbols used :*

L	= number of wage-earners	Q	= quantity produced
C	= total constant capital	c	= constant capital per unit
V	= total variable capital	v	= variable capital per unit
S {	= total surplus labour	s {	= surplus labour per unit
	= total surplus revenue		= surplus revenue per unit
V + S {	= total present labour	v + s {	= present labour per unit
	= total revenue created		= revenue created per unit
C + V	= total cost of production	c + v	= cost of production per unit
C+V+S	= total value	c + v + s	= value per unit
P	= total profit	p	= profit per unit
K	= total capital invested	$p' = P/K$	= rate of profit
$s' = S/V$	= rate of surplus value	$c' = C/V$	= composition of capital

Though they have different unit costs of production and different unit values, the three enterprises face the *same selling price*. In the average branch considered, the market price is equal to the simple price, corresponding to the unit *social value* of the commodity (to the labour time required *on average* to produce it)[5]. In the example, the market price is therefore $12, and this sale price applies to all the commodities. Thus, enterprise 3 cannot hope to sell its commodities at $16 : potential customers would rather buy from competitors 1 and 2 producing and selling at a lower price. Conversely, it is not in the interest of enterprise 1 to sell its commodities at $9.80 : it would make more – and without losing any customers – by selling them at $12[6].

1.1.2. The distribution of surplus revenue

With the sale price at $12, enterprise 1 obtains a profit per unit (p) of $3.10 (while the surplus revenue per unit, s, is only $0.90). This gives it a total profit of $1400 (while the surplus revenue created by its 100 wage-earners is only $400) and a rate of profit of 35 % (higher than the average rate of profit of the branch, which is 20 %). The additional profit of $1000 enjoyed by enterprise 1 is exactly balanced by the loss of an equal amount of surplus revenue on the part of enterprise 3 : with the market price at $12, the latter can barely cover its production cost (c + v) ; it thus makes no profit, while its 250 wage-earners have created a surplus revenue of $1000 (corresponding to 1000h of surplus labour). As to the average enterprise, it makes a profit exactly equal to the surplus revenue created by its own wage-earners and obtains a rate of profit equal to the average rate of profit of the branch.

We thus see that *the total profit* of the branch *is equal to the total surplus revenue* created by the wage-earners in that branch ($2000 in the example). But *this total surplus revenue is distributed according to the degree of mechanization of the enterprises*, so that the more mechanized enterprises enjoy a higher rate of profit than the others. The distribution of the total surplus revenue among the enterprises is brought about automatically by the market : the existence of a uniform price, applicable to the commodities produced by all enterprises,

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[5]   The unit social value is calculated by dividing the total value of a branch's production by the total quantity produced in that branch. In the example, the unit social value calculated in this way (12 000 ÷ 1000 = 12) corresponds exactly to the unit individual value in the « average » enterprise (3600 ÷ 300 = 12).

[6]   From a *dynamic* point of view, however, it would be in enterprise 1's interest to sell slightly below $12 in order to capture some of the other enterprises' customers (see chap. VII, 1.2.1.).

penalizes the less efficient ones (where high unit values reflect a relative waste of human labour) and benefit the more advanced ones (where low unit values reflect a relatively economical use of human labour)[7].

We can consider the extreme case of an *entirely automated enterprise*, not employing a single wage-earner (L = 0, hence V = 0). Under this assumption, no surplus revenue can be created (S = 0). The enterprise will, however, make a profit : as the unit individual value of its commodities (reduced to « c ») is lower than the average, it will benefit indirectly (thanks to the uniform sale price) from the surplus revenue created in the least efficient enterprises.

1.2. Unequal market power and distribution of surplus revenue among branches

1.2.1. The hierarchy of market power[8]

In the preceding paragraph we considered the *individual* rates of profit of various enterprises within the *same branch*. We explained why these specific rates of profit necessarily differ according to the degree of mechanization of the enterprises. Let us now consider *different branches* of production and the *average* rate of profit of each of them. Are there reasons why these average rates

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7   a) The distribution of the surplus revenue among the enterprises is thus determined by the *differences in the unit individual values* (and by the existence of a uniform market price corresponding to the unit social value). These differences in unit values *most often* result – as in the example considered – from differences in the degree of *mechanization* (in the C/V ratio). But they may also result from *other causes :* thus, production techniques being identical, differences in natural conditions (varying fertility of soils) or in labour intensity will also give rise to differences in unit values and thus similarly determine the distribution of the surplus revenue among the enterprises.

b) In practice, differences in the degree of mechanization are normally *combined* with differences in *skill* and *intensity* of labour. More advanced technology does in fact require higher qualifications on the part of the workers (engineers, technicians etc.) responsible for planning, directing and controlling the production process ; it also makes it possible to increase the intensity of labour by the mass of workers, subordinated to the machine and its rhythm (see chap. VII, § 1.1. and 1.2.2.). But these simultaneous differences in technology, in the skill and intensity of labour do not give rise to differences in the *creation* of value and surplus revenue : they only affect the hierarchy of the unit individual values and, in this way, the *distribution* of the surplus revenue created. (For more details on this question, see appendix 7.)

8   The analysis outlined here considers only two of the main factors which contribute to determining market power : the existence of barriers to entry which reduce the intensity of competition, and the existence of pressure groups capable of influencing the public authorities regulating prices. We disregard other relevant factors, such as the existence of imbalances between supply and demand as well as the heterogeneity of the products within the branch (see chap. II, 3.2.2.b).

of profit should differ between branches ? The answer is negative if we consider the theoretical hypothesis of a system based on free competition ; but it is positive if we contemplate an actual economy.

A system of free competition is defined by two essential features, namely freedom of prices and freedom of access. On the one hand, market prices fluctuate freely in response to changes in the relation of supply and demand in each branch. On the other hand, capital can move freely from one branch to another.

In such a system, the average rates of profit of the various branches necessarily tend to be equal. Let us assume, for instance, the initial average rate of profit to be 10 % in branch I (where supply exceeds demand, hence low prices and profits) and 30 % in branch III (where demand exceeds supply, hence high prices and profits). As a consequence, part of the capital would move from I to III, which would result in more production and a diminishing price in III, in less production and increasing price in I. The movement would stop when the average rates of profit become equal in the various branches.

Reality is far from corresponding to theoretical free competition.

On the one hand, the access to numerous branches of production is limited by more or less effective *barriers to the entry* of producers. The entry of new producers may be limited either by hard facts (the size of money-capital required) or by legal restrictions (regulations restricting entry to various professions or branches). In branches which are best protected against competition from new producers, the enterprises already established can enforce *monopoly prices :* these are market prices fixed by the capitalists themselves at levels which ensure them higher-than-average rates of profit. Prices fixed that way and the resulting higher profits are stable to the extent that restrictions to the entry of competitors prove effective.

On the other hand, certain branches of production have their *prices administered* by public authorities (fixing maximum or minimum prices, price controls, price approvals). Public authorities may administer prices for various reasons : to protect consumers, to fight inflation, to defend producers, etc. The branches of production subject to price regulations face unequal balances of forces vis-à-vis the public authorities : the branches capable of exerting economic and political pressure on the authorities can obtain favourable sale prices and higher-than-average rates of profit, and conversely for the other branches.

The various branches thus enjoy unequal *market power*. Market power can be defined as the ability of a branch to fix or obtain market prices that ensure an average rate of profit higher than the general rate of profit (calculated on the macro-economic level, on the level of all the branches of production). The « strong » branches obtain average rates of profit higher than the general rate of profit : their market power is *positive ;* by contrast, the « weak » branches obtain average rates of profit lower than the general rate of profit : their market power is actually *negative ;* the « average » branches obtain average rates of profit equal to the general rate : their market power may be termed *neutral*. The hierarchy of average rates of profit that can be observed in reality thus reflects the hierarchy of market power of the different branches, the hierarchy of their economic and political influence.

1.2.2. The distribution of surplus revenue

Figure V.3. assumes that the branch considered earlier (§ 1.1.) now enjoys positive market power which enables it to sell its commodities at a market price of $14 (the simple price being equal to $12). This higher price gives rise to an additional profit of $2 per unit, and thus to an additional profit of $2000 for the whole branch (which produces 1000 units). The branch now obtains a profit larger than the surplus revenue created (P = $4000 > S = $2000) and an average rate of profit of 40 % (= $4000 / $10,000), higher than the general rate of profit of 20 %.

The branch's favourable position is necessarily balanced by the fact that other branches obtain a profit lower than the surplus revenue created and a rate of profit lower than the macro-economic rate of profit. For the positive market power of the former branch does not alter in any way the magnitude of total surplus revenue, of the total « cake » to be shared among capitalists. The size of the latter still depends on the number of wage-earners taking part in commodity production, on the length of their labour-time and on the wage per worker. The *total profit* of all branches is therefore *equal to the total surplus revenue* created by all the wage-earners. But *this total surplus revenue is distributed among the various branches according to their respective market power*, so that the « stronger » branches obtain an average rate of profit higher than the general rate of profit to the detriment of the « weaker » ones[9].

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9   The « oil crisis » of the 1970's and of the early 1980's clearly illustrates these principles. At the time, the OPEC producers made use of their market power to raise the oil price considerably. They enjoyed substantial increases in their rate of profit, but this took place to the detriment of all

Figure V.3. : The effects of positive market power
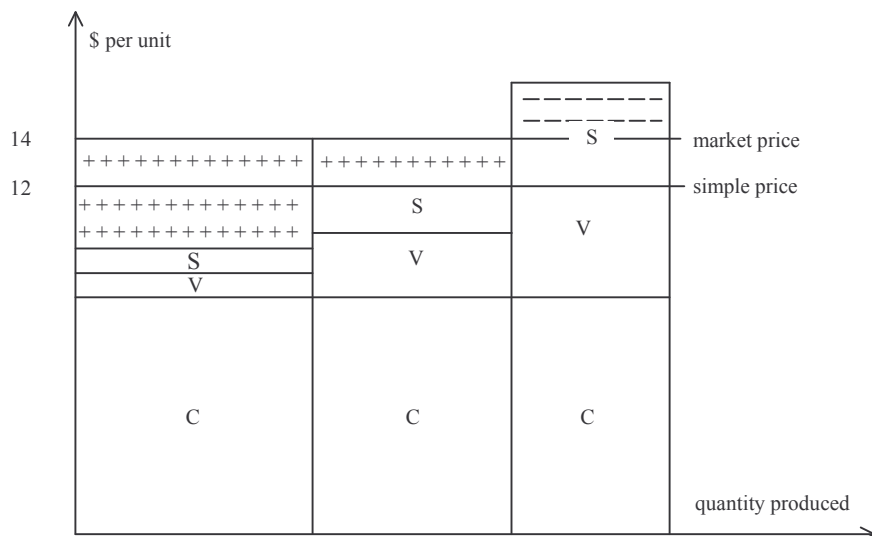
Enterprise 1	Enterprise 2	Enterprise 3	Whole branch
s' = S/V = 100 %	s' = S/V = 100 %	s' = S/V = 100 %	s' = S/V = 100 %
c' = C/V = 900 %	c' = C/V = 400 %	c' = C/V = 200 %	c' = C/V = 400 %
Q = 450	Q = 300	Q = 250	Q = 1000
c + v = 8.9	c + v = 10	c + v = 12	c + v = 10
c + v + s = 9.8	c + v + s = 12	c + v + s = 16	c + v + s = 12
p' = P/K = 57 %	p' = P/K = 40 %	p' = P/K = 17 %	p' = P/K = 40 %

Note : for the meaning of the symbols and signs (+ or –), see table V.1. and figure V.2.

The differences in market power enjoyed by different branches of production are therefore reflected in differences in the *average* rates of profit for each branch. On these differences between industries are superimposed differences between individual enterprises : within each branch, the *particular* rates of profit vary, as before, according to the degree of efficiency of each enterprise.

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the branches using oil : the production costs of the latter increased and their rates of profit went down. The increase in the oil price, in itself, did not alter the mass of surplus revenue on a world scale ; but it did redistribute this mass of surplus revenue among branches and among countries.

1.3. Conclusions

1.3.1. The creation of profit : illusion and reality

The distribution of the total surplus revenue implies transfers of surplus revenue between enterprises and between branches : the surplus revenue created by the wage-earners of a particular enterprise or branch is not necessarily appropriated by that enterprise or branch. These transfers of surplus revenue, however, involve *no actual payment* on the part of capitalists who lose surplus revenue and no actual payment in favour of those who gain additional surplus revenue : they therefore take place without their knowing it. This is one reason why capitalists are unable to see that the exclusive source of total profit lies in the wage-earners' surplus labour and why they explain the magnitude of particular profits by the respective degrees of market power or by the respective degrees of mechanization and efficiency.

Actually, the higher rate of profit of a *branch enjoying a greater market power* should not mislead us. This greater market power does not *create* profit : it makes possible a redistribution of a part of the total surplus revenue (created by all workers) to the benefit of that branch. In the same way, within any branch, the higher rate of profit of an *enterprise which is more technologically advanced* should not mislead us either. A machine embodying the most advanced technology can never produce any value or surplus value : its value is simply transferred, without any addition, to the commodities produced. The higher profit of the most efficient and most competitive enterprises always corresponds to the surplus revenue created by wage-earners, but not necessarily (or not entirely) by the wage-earners of the enterprises in question. In reality, *the utilization of more advanced technology makes it possible to seize, at the expense of competitors, a greater part of the aggregate surplus revenue created by all wage-earners* and created solely by them.

1.3.2. Differentiation of rates of surplus value between enterprises and branches

Insofar as they imply differences in the rates of profit, transfers of surplus revenue indirectly affect the degree of exploitation of the wage-earners in the various branches and enterprises.

The marginal enterprises, i.e. the least efficient ones, lose most of the surplus revenue created by their wage-earners and retain hardly any profit (such is the case of enterprise 3 in figure V.2., which makes no profit). In order to restore a minimal margin of profit and secure their survival, these marginal

enterprises seek to reduce variable capital : either by diminishing the number of workers and lengthening their labour-time, or by lowering the money wage – and hence the real wage – of all their workers. In both cases, the rate of surplus value is increased[10]. The situation of the most efficient enterprises (such as enterprise 1 in figure V.2.) is quite different. Since they benefit from transfers of surplus revenue which secure them high rates of profit, these enterprises can make concessions over the level of wages and over labour-time, without seriously impairing their profitability ; it is even in their interest to make these concessions, so as to be in a better position to recruit and retain their staff[11].

Similarly, branches with weak market power put pressure on wages and labour-time in order to raise their rate of profit. Whereas branches with strong market power and high rates of profit can make concessions over wages and labour-time.

We can therefore expect that *the rate of surplus value in a particular branch or enterprise should be all the higher if the branch enjoys a relatively low market power* (as compared to other branches) *and if the enterprise is relatively less efficient* (as compared to rival enterprises in the same branch).

2. RELATIONS BETWEEN PROFITABLE AND NON-PROFITABLE ENTERPRISES

2.1. *Contradictions between enterprises competing within the same branch*

Within each branch of production, profitable and non-profitable (marginal) enterprises are on contradictory terms with each other. On the one hand, it is in the interest of the more efficient enterprises to *eliminate* their less well-placed competitors : in this way, they can enlarge the scale of their production and increase the amount of surplus revenue created internally. On the other hand, the more efficient enterprises profit indirectly from the existence and *survival* of marginal enterprises : for most of the surplus revenue created in the marginal enterprises is appropriated by the more efficient ones (above, § 1.1.) ; and the surplus revenue creation in the marginal enterprises is enhanced by the fact that

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[10]   On relations between length of labour-time, real wage and rate of surplus value, see chap. IV, § 2.1.

[11]   Enterprise 1 could even afford to double the wage paid to all its workers ($8 instead of $4). In such a situation, the workers would not provide any surplus labour nor create any surplus revenue ; the entire profit of the enterprise would result from transfers of surplus revenue.

the loss of surplus revenue they face leads them to increase the exploitation of their wage-earners (above, 1.3.2.).

In the long term, the real tendency is for the most efficient enterprises progressively to *eliminate* most of the least efficient competitors and concentrate an increasing share of total production and employment within each branch : this general tendency of capitalist development will be considered in chapter VII (§ 2.2.). In the short term, however, it may be in the interest of large and profitable enterprises to ensure the profitability and *survival* of marginal enterprises : possibly through specific measures which benefit the latter alone (provision of subsidies for example), preferably through general measures which benefit the whole branch (a price increase for example).

2.1.1. Subsidizing non-profitable enterprises

Let us consider the marginal enterprise 3 in figure V.2. Not making any profit, this enterprise is doomed to disappear. The elimination of enterprise 3, however, would also mean the end of surplus revenue transfers to the advantage of enterprise 1, the most efficient. The provision of subsidies ensures the survival of enterprise 3, and therefore the continuation of the surplus revenue transfers in question.

A policy aimed at subsidizing marginal enterprises, however, has an adverse side, for it implies raising taxes (see chapter VI, § 3.1.) : these taxes affect all the profitable enterprises, including the direct competitors of the marginal enterprises themselves[12].

Subsidizing marginal enterprises thus shows contradictory aspects for the competing enterprises : on the positive side, the continuation of surplus revenue transfers ; on the negative side, the increased burden of taxation affecting profit.

2.1.2. Raising commodity prices

Let us consider figure V.3. again, in which the branch enjoys positive market power : this enables it to sell its commodities at a market price of $14 (instead of $12), to make an overall profit of $4000 (while the surplus revenue created is only $2000) and to achieve an average rate of profit of 40 % (while the

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[12] Taxes on profits affect the profitable enterprises directly ; taxes paid by the consumers (income taxes and indirect taxes) reduce the consumers' purchasing power and thus affect the profitable enterprises indirectly (through reducing their markets).

macro-economic rate of profit is only 20 %). What is the effect of the price rise on the respective situation of the various enterprises in the branch ?

On the one hand, the marginal enterprise 3 achieves a profit of $500 ($2 × 250) and a rate of profit of 17 % : its survival is therefore assured, at least as long as the branch can continue to sell at $14[13].

On the other hand, the distribution of the additional profit the branch benefits from is made in proportion to the quantities produced by each enterprise, and therefore essentially to the advantage of enterprise 1 : the latter benefits by an extra profit of $900 ($2 × 450), while enterprise 3 gains only $500 ($2 × 250). In other words, the price rise (justified by the necessity of « defending the small enterprise ») results mainly in enhancing the profit and the accumulation potential of the *large* enterprises : the latter can further widen the gap which separates them from the marginal enterprises both as regards the scale and cost of production[14]. A measure which benefits a whole branch of production therefore reinforces, in a cumulative way, the twofold advantage which the efficient large enterprise enjoys as regards transfers of surplus revenue : the advantage of size (of the higher volume of production) and of efficiency (of the lower unit individual value)[15].

However, the market power enjoyed by a branch has its limits, due to the fact that other branches compete in the share-out of the total surplus revenue. The extra profit obtained by the branch considered (in the last example P = $4000 > S = $2000) involves a loss of surplus revenue and a reduction in the average rate of profit in the other branches. The latter will fight back with the aim of cancelling the favourable measure enjoyed by the branch in question (that is, of bringing down its price) or of obtaining compensatory measures (price increases for their own products or other preferential measures).

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[13] Enterprise 3 continues to produce more surplus revenue than it realizes as profit (S = $1000 > P = $500). But the raising of the price reduces this transfer of surplus revenue and ensures a rate of profit (P/K = 17 %) which can be considered as « normal » (the macro-economic rate of profit is 20% in the examples in figures V.2. and V.3.).

[14] Figure V.3. describes perfectly the situation of a *cartelized industry*. The cartel agreement divides the market between the enterprises taking part (the quota system) and fixes a sale price enabling the least efficient to make a « normal » profit and indirectly assuring the most efficient enterprises of an even higher rate of profit.

[15] Raising prices is a typical example of a general measure : other examples would be tax rate reduction, obtaining cheaper credit, guaranteed sale of products, etc. As long as these measures are general (applying to all producers), they mainly favour the big producers.

2.2. Contradictions between enterprises operating in different branches

Two types of situation should be distinguished here : 1. the relations between *entire branches* of production, some of which are profitable and others not ; 2. the relations between *particular enterprises* belonging to different branches, more specifically the relations of sub-contracting between large profitable enterprises and small marginal ones.

2.2.1. Subsidizing non-profitable branches

Some branches of production may lack profit due to the competition of other commodities : such is the case of coal-mining, which faces competition from other sources of energy (oil, nuclear energy).

The non-profitable branches cannot ensure their survival through raising their price : the competition of alternative products reduces their market power to nothing. They can only survive through a general policy of subsidies.

Subsidizing non-profitable branches has contradictory effects on the other branches, and for the same reasons as above. On the one hand, the survival of non-profitable branches, which sell their commodities at reduced prices, ensures the continuation of surplus revenue transfers to the benefit of other branches. On the other hand, the payment of subsidies involves raising taxes which affect – directly or indirectly – the profitable branches. If political considerations are overlooked, it is the balance of economic advantages and disadvantages which determines the continuation or withdrawal of policies aimed at subsidizing non-profitable branches.

2.2.2. Unequal relations due to subcontracting

Relations between large and small enterprises often take the form of *subcontracting :* rather than carry out all the operations normally involved in their branch of activity, large enterprises delegate certain specialized activities to small enterprises, generally laying down strict norms of production[16].

The activities delegated may concern the production of specific intermediary products (A, B, C, etc.) necessary to the making of the final commodity (X) that the large enterprise produces (for instance, a big car company may delegate the production of engines or spare parts to one or several

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[16] The systematic use of subcontracting has been an outstanding feature of the growth of large Japanese enterprises.

small enterprises). They may also involve certain « peripheral » activities which are not directly related to the production of the final commodity (cleaning or accounting services, for instance, are increasingly handed over to specialist subcontractors). In both cases, the activities delegated now produce specific commodities which are *sold* by the specialized subcontracting enterprise to the parent enterprise.

Subcontracting brings together a large enterprise and a small enterprise which produce different commodities and therefore belong to different branches of production. The norms dictated by the large enterprise may involve such conditions as which inputs to use, delivery terms, quality controls, etc. They involve above all the price of the products which are delegated. For subcontracting is advantageous to the large enterprise only insofar as the latter can buy commodities at a price $(c + v + p)$ lower than the cost $(c + v)$ it would incur in producing the products itself. Now the price of the subcontracted commodity can be kept very low through the unequal relation prevailing between the two enterprises : the large enterprise is in a position to impose this low price ; the small enterprise is obliged to accept it, all the more since subcontracting is generally a matter of its elimination or survival.

But in order to survive, the small enterprise must enjoy a minimal rate of profit. Because of the low price imposed by the large enterprise, it will be under pressure to reduce its variable capital per unit (v) by imposing a higher rate of exploitation on its workers : lower wages and longer labour-time are indeed the norm in small-scale subcontracting enterprises.

Subcontracting has thus a twofold effect :

- it increases the general rate of surplus value (through a higher rate of exploitation of the workers in the small enterprise)[17] ;

- it gives rise to a transfer of surplus revenue from the small enterprise to the large enterprise (through the low price imposed by the latter on the former).

2.3. Conclusions

2.3.1. The problematic survival of non-profitable enterprises

The enterprises that make no profit (such as marginal enterprise 3 in figure V.2.) are normally doomed to go under. In order to ensure their survival in

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[17]   Higher rates of surplus value in small-scale subcontracting enterprises raise the general rate of surplus value in a direct way ; they also raise it indirectly, for the lower wages and/or longer labour-time prevailing in them put pressure on wages and labour-time in the whole economy.

the long term, they should essentially imitate the techniques of production employed by the more advanced enterprises, they should *closely follow the pace of technical progress* adopted by the latter. The marginal enterprises, however, have little chance of possessing the money-capital necessary to make these basic changes : they make no profit, and the banks lend only to healthy enterprises... (The changes will possibly be made after *absorption* by prosperous enterprises.)

The marginal enterprises can recover a margin of profit by *increasing the exploitation of their wage-earners* (reducing the wages and/or lengthening the labour-time). They may in some cases benefit from *public subsidies* or from an *increase in the price* of the commodities (a price rise decided by the leading enterprises of the branch or by public authorities). They may in other cases become *subcontractors* producing for large enterprises, under conditions dictated by the latter. They may eventually be transformed into *non-capitalist enterprises*, which do not aim at profit : either into independent enterprises (see chapter VI, section 1) or into public enterprises (chapter VI, section 2). All these measures ensure – at least in the short run – the survival of the marginal enterprises concerned, thus maintaining production and employment in them. But at the same time they ensure the continuation of surplus revenue transfers to the benefit of larger and more efficient enterprises, which thus reinforce their position : this is the reason why the latter may choose to « defend the small enterprise ».

All the measures just mentioned, however, will normally be no more than short-term solutions. In the long term, the question is always to know whether the marginal enterprise – be it capitalist or not – is able to keep pace with the technical advances prevailing in the competing enterprises, whether it is able to reduce the disparity between its individual unit value and the unceasingly diminishing social unit value. If the disparity gets too large (in figure V.2., for instance, if the individual value remains at 16h while the social value falls to 8h), wage restrictions will not suffice, the required subsidies will be too great, maintaining sufficiently high prices will be impossible. Subcontracting may provide more chance of survival, as long as the small enterprise is able to conform to the norms imposed by the large enterprise. In the long term, therefore, the problem is always of adapting oneself or being eliminated[18].

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18 The marginal *enterprise* may also adapt itself through changing its production rather than its technique, through differentiating its product in a way that corresponds to market opportunities (e.g. : organic food). In the case of non-profitable *branches*, the long-term solution is also through adopting new techniques or adapting to demand. But new techniques may be unavailable or inappropriate (methods designed for surface mining are not applicable to underground mining) and adaptations to demand may be impossible (coalfields cannot be transformed into oilfields).

2.3.2. Competition and community of interests within the capitalist class

Capitalists compete with each other for the share-out of the surplus revenue created by wage-earners. The more efficient their technique and the higher their market power, the larger their share in the total surplus revenue.

However, this competitive struggle takes place essentially within a community of interests which unites them against the wage-earners. For it is in the interest of all capitalists that the rate of surplus value be as high as possible, so as to maximize the total mass of surplus revenue that can be distributed among them. Methods by which they can increase the rate of surplus value will be analysed in chapter VIII (section 1).

PEDAGOGICAL DEVICES CONCERNING CHAPTER V

SUMMARY

1. The total surplus revenue is *created* by the wage-earners in the sector of market production. If the length of labour-time and the wage are equal (if the rate of surplus value is thus the same), each enterprise and each branch contribute to the creation of the total surplus revenue in proportion to the number of wage-earners they employ. On the other hand, this total surplus revenue is *distributed* according to essentially two criteria : the degree of mechanization of the enterprises and branches and the market power of the branches.

Within any branch of production, unequally mechanized enterprises have different unit individual values for their respective commodities. If the branch enjoys an average market power, its selling price is equal to the simple price, which corresponds to the unit social value. The existence of this uniform price, applicable to the commodities produced by all enterprises, benefits the more advanced enterprises and penalizes the less efficient ones : the former obtain a profit which is higher than the surplus revenue created within them (positive transfer of surplus revenue), and conversely for the latter (negative transfer of surplus revenue). The total profit of the various enterprises, however, is equal to the total surplus revenue, created by all the wage-earners in the branch considered.

If the various branches enjoy unequal market power, the market price of each commodity differs from the simple price and the various branches obtain unequal rates of profit (contrary to a hypothetical situation of free competition, in which the profit rates of the different branches tend to be equalized). The « strong » branches enjoy market prices which secure average rates of profit higher than the macro-economic rate of profit, whereas « weak » branches have to face lower rates of profit : the former obtain a profit higher than the surplus revenue created within them (positive transfer of surplus revenue), the latter obtain a profit lower than the surplus revenue created (negative transfer of surplus revenue). The total profit of all branches is nevertheless equal to the total surplus revenue, created by all the wage-earners in the market sector.

These transfers of surplus revenue do not involve any actual payment. Being unaware of such transfers, capitalists explain the existence of higher profits by a higher degree of mechanization or market power. The latter, however, do not *create* any profit : they simply affect the *distribution* of the total surplus revenue. On the other hand, the transfers of surplus revenue logically affect the rate of surplus value in the various enterprises and branches : those losing surplus revenue are incited to raise the rate of surplus value of their own wage-earners, while those gaining surplus revenue can reduce the rate of surplus value.

2. In the long term, the most efficient enterprises tend to eliminate the least efficient competitors (see chapter VII). In the short term, however, they may benefit from the survival of the latter, which secure them transfers of surplus revenue.

The survival of less efficient enterprises can be ensured through specific measures (provision of subsidies for example) or through general measures (a price increase, for example). Subsidizing marginal enterprises has contradictory aspects for the profitable competing enterprises : it allows for the continuation of transfers of surplus revenue from the marginal enterprises ; but it involves raising taxes, which directly or indirectly affect the profitable enterprises. Raising the price of the commodity results in increasing the profit of all the enterprises in the branch, and mainly the profit of the most efficient ones ; but it involves a transfer of surplus revenue from other branches, which will try and react against this loss.

Just like subsidies to non-profitable enterprises, subsidizing non-profitable *branches* has contradictory aspects : it allows for the continuation of transfers of surplus revenue from non-profitable branches, but it involves raising taxes which directly or indirectly affect the profitable branches.

Thanks to subcontracting, large enterprises profit by transfers of surplus revenue from small enterprises obliged to sell the « subcontracted » commodities at low prices ; in

order to remain profitable, the small enterprises in question are obliged to increase the rate of surplus value of their own wage-earners.

The enterprises that make no profit are normally doomed to go under. In order to survive in the long term, they should follow the pace of technical progress adopted by the more efficient competitors. Reducing wages, obtaining public subsidies, raising prices in the branch (or a transformation into non-capitalist enterprises : see chapter VI) will be no more than short-term solutions. Subcontracting itself implies that the small enterprise be able to conform to the norms imposed by the large enterprise. In the long term, the problem is always of adapting oneself or being eliminated.

The various enterprises and branches compete with each other for the share-out of the total surplus revenue, but they all stand together vis-à-vis the wage-earners : the higher the rate of surplus value imposed on the workers, the greater the total mass of surplus revenue that can be distributed.

CONCEPTS TO ASSIMILATE (see glossary)

Administered price	Market power
Free competition price	Monopoly price

EXERCISES (answers at end of book)

A. Basic knowledge

5.1. Using table V.1. and/or figure V.2., explain :
       a) why profit is higher in the more mechanized enterprise ;
       b) why this fact does not contradict the principle according to which profit is created only by the wage-earners' surplus labour.

5.2. Explain :
       a) why the average rates of profit of different branches are equal in a system of free competition, but unequal in actual fact ;
       b) why the higher profit of « stronger » branches does not contradict the principle according to which profit is created only by the wage-earners' surplus labour.

5.3. To what extent do the various enterprises and branches contribute to the *creation* of the total surplus revenue ? According to what criteria do they take part in the *distribution* of the total surplus revenue ?

5.4. Why do transfers of surplus revenue tend to differentiate the rate of surplus value of the various enterprises and branches ?

5.5. Explain why the granting of subsidies to non-profitable enterprises or branches has contradictory aspects (both advantages and disadvantages) for the profitable enterprises or branches.

5.6. Explain the advantages of subcontracting :
a) for the large enterprises making use of it ;
b) for all enterprises in general.

5.7. « All the capitalists compete with each other, but all stand together vis-à-vis the wage-earners ». Explain.

B. More advanced knowledge

5.8. « The higher profitability of more mechanized (or even automated) enterprises clearly invalidates the postulate of profit being created by the wage-earners' surplus labour ». What do you think of this statement ?

5.9. By what mechanisms are brought about :
a) the creation of total surplus revenue ?
b) distribution of total surplus revenue ?

5.10. In figure V.2., the marginal enterprise (n° 3) makes no profit and is doomed to disappear. Explain to what extent its survival can be ensured by the following measures (distinguish between short-term and long-term solutions) :
a) the payment of wages lower than in the profitable competing enterprises ;
b) the introduction of technical progress by enterprise 3 ;
c) the absorption by enterprise 1 and the subsequent introduction of technical progress by enterprise 1 into the former production unit 3 ;
d) the provision of subsidies to the marginal enterprise ;
e) its transformation into a subcontracting enterprise ;
f) the settlement of a « monopoly agreement » with the competing enterprises in the same branch ;
g) the differentiation of the product of the marginal enterprise ;
h) the transformation of the marginal enterprise into a workers' co-operative (+ possible pressure on incomes) ;
i) the nationalization of the marginal enterprise (+ possible provision of subsidies)
(Note : solutions h and i will be considered in the next chapter.)

5.11. Who benefits by measures aimed « to defend the small enterprise » ?

C. Applied knowledge

5.12. Consider one or the other present-day dispute concerning the defence or abandonment of marginal enterprises. Interpret the different viewpoints put forward.

5.13. According to theory, the rate of surplus value should be higher (lower wages and/or longer labour-time) :
a) in small-scale enterprises and little profitable branches (compared with large enterprises and highly profitable branches) ;
b) in subcontracting enterprises (compared to enterprises which delegate activities).
Are these theoretical principles confirmed by concrete cases you are aware of ?

CHAPTER VI

CAPITALISM AND NON-CAPITALIST PRODUCTION

This chapter begins by bringing *non-capitalist commodity production* into the analysis, namely the production carried out by *enterprises relying on self-employment* (section 1) and by *public enterprises* (section 2). After in each case recalling the specific features of those enterprises, we examine the contradictory relations which prevail between them and the capitalist sector of production.

The chapter then focuses on *non-commodity production*, namely the production carried out in the *institutional sector* (section 3) and in the *non-professional sphere* (section 4). After in each case describing the nature of production, we also examine the contradictory aspects of their relationship with the capitalist sector of production.

Finally, section 5 considers the *whole of society*, with its variety of commodity and non-commodity production, of waged and non-waged production. We examine which activities are « productive » and which are « unproductive ».

1. CAPITALISM AND ENTERPRISES RELYING ON SELF-EMPLOYMENT

Relations between capitalist enterprises and enterprises relying on self-employment (rectangle B of table I.3.) can be considered as a special case of the relations between profitable and marginal capitalist enterprises, a special case which does, however, exhibit a number of particularities due to the specific features of the firms relying on self-employment (hereafter called « independent » enterprises).

1.1. Specific features of independent enterprises

Here the workers are the owners of the means of production. They do not sell their labour-power to anyone else and do not buy anyone else's labour-

power, but work on their own account : whether as *individual commodity producers* (in the case of single producers : artisans, shopkeepers, members of the liberal professions, etc.) or as *associated commodity producers* (in the case of workers' collectives : cooperative farms, cooperative stores, partnership between lawyers, etc.).

These producers do not purchase labour-power, they do not lay out any « variable capital ». As to the sums laid out for the purchase of means of production, they constitute expenditure to be recovered, and not « constant capital » in search of profit. The purpose of production is not to make profit intended for accumulation, but to obtain revenue intended for consumption.

Not aiming at profit, an independent enterprise is able to survive longer than a capitalist enterprise. Let us consider figure V.2. again. The price of \$12 dooms the marginal capitalist enterprise to extinction, for it leaves it no profit (all the surplus revenue is transferred). Let us now suppose that this enterprise is replaced by a cooperative which delivers the same volume of production (Q = 250) with the same number of workers (L = 250), the same labour-time (8h), the same productivity (unit individual value = 16h). At the price of \$12, the associated producers lose part of the revenue created by their labour : just as in the case of the capitalist enterprise, the revenue lost is represented by the rectangle S (= \$1000). The price of \$12, however, assures them of a total net revenue which is equal to rectangle V (= \$1000) and of a net revenue per head (\$1000÷250 = \$4) which is equal to the wage per worker in the capitalist enterprises. The *independent* marginal enterprise will continue to produce at this price, while the *capitalist* enterprise, under the same conditions, is bound to fail for lack of profit.

To the extent that independent producers give up a part of the revenue they create (as in the case just described), they actually find themselves in an *analogous* situation to the wage-earners : like the latter, they create more revenue than they get, they create more value than they consume[1]. It is to emphasize this analogy that we will speak in such a case of the independent producers' « surplus revenue », « surplus value », « surplus labour » (in inverted commas) and also of

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[1]   However, the mechanisms compelling wage-earners and self-employed producers to give up part of the revenue created are different : wage-earners must give up the surplus revenue because of their *direct subordination* to the capitalists, within the enterprises ; whenever the self-employed have to give up part of the revenue created, they do so through the *market mechanisms* : either because of lower productivity compared to that of the competing capitalist enterprises (as in the case considered here and in 1.2.1. below) or because of a weaker market power (as in the case considered in 1.2.2.).

a « rate of surplus value » or « rate of surplus labour » (still in inverted commas)[2].

1.2. Contradictory relations between capitalist enterprises and independent enterprises

What happens when independent enterprises face capitalist enterprises ?

As in the case of relations between profitable and non-profitable capitalist enterprises (chapter V, section 2), two situations can be distinguished. Either the capitalist and independent producers compete within the *same branch :* this is the case, for instance, of large agricultural estates producing a given commodity (wheat, for example) alongside peasant families. Or the capitalist and independent producers belong to *different branches* and are linked by subcontracting : this is the case, for instance, of peasant families producing agricultural raw materials (milk, vegetables, etc.) on behalf of agro-business enterprises to which they sell their commodities.

In both situations, the principles are similar to those put forward concerning the relations between capitalist enterprises.

1.2.1. Competitive relations within the same branch

It is in the interest of large capitalist enterprises to *eliminate* less well-placed independent producers : in this way, they enlarge their scale of operation and the amount of surplus revenue their own workers create. However, large capitalist enterprises benefit indirectly from the existence and *survival* of marginal independent producers : as we have just seen, they benefit from a transfer of revenue as in the case where the marginal enterprise is also a capitalist one[3].

In the long term, capitalist enterprises tend to progressively *eliminate* most of the independent producers. *In the short term*, however, they may be interested in « *protecting* the independent producers » : either through specific measures (subsidies to the marginal producers) or – preferably – through general measures

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[2] When enterprise 3 in figure V.2. is an independent enterprise, the symbols C, V and S should therefore be put in inverted commas, for these concepts are only applicable by analogy.

[3] Relations between large capitalist enterprises and small enterprises (capitalist or non-capitalist) are considered here from a strictly economic point of view, in terms of profit for the large enterprises. It is obvious that these relations are just as much determined by political considerations : a too brutal elimination of the small enterprises (whether capitalist or not) would deprive the whole of the capitalist class of a good deal of political support.

which actually benefit the whole branch and especially the best-placed enterprises (as indicated in chapter V, end of 2.1.2., these preferential measures are subject to retaliation on the part of the other branches)[4].

1.2.2. Subcontracting relations

The large (capitalist) enterprise is in a position to impose a very low price on the independent producers from whom it buys « subcontracted » commodities. This low price means that these independent producers have to content themselves with a very low income : their hourly income is much lower than the hourly wage the capitalist enterprise would have to pay if it did not have recourse to subcontractors ; it is normally even lower than the hourly wage which would be paid in a *capitalist* small subcontracting enterprise.

Subcontracting to independent producers has thus a twofold effect :

- it gives rise to a transfer of revenue from the independent producers to the capitalist enterprise (through the low price fixed by the latter) ;

- it increases the average rate of surplus value (considering, as explained above, that independent producers who give up part of their revenue are subject to the equivalent of a rate of surplus value).

1.3. Conclusions

1.3.1. The problematical survival of independent enterprises

Since it does not aim at profit, an independent enterprise is able to survive longer than a capitalist enterprise placed in similar conditions. The ability to survive is further increased since the will to continue working on their own account often induces the workers to be satisfied with an income well below the wage level in the competing enterprises. The transformation of a capitalist marginal enterprise into a workers' collective therefore appears as a means of

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4   The problem of European agricultural prices provides a good illustration of this analysis. Agricultural prices were fixed at levels intended to assure the marginal small farmers a « decent » income : it is well known that these prices have mainly served to increase the profits of the biggest capitalist farms. But the growing burden of financing the Common Agricultural Policy (a question particularly of stockpiling and ensuring the disposal of excess production) and the high prices of food products (with their incidence on the level of wages payable to all workers) were bound to provoke a reaction on the part of non-agricultural enterprises : this reaction has been reflected in various plans and measures intended to « re-establish true prices » in the agricultural sector.

maintaining employment, while ensuring the continuation of revenue transfers in favour of the better-placed enterprises.

In the long term, however, the survival of the independent enterprise remains highly problematical. For the question is always whether the marginal enterprise (capitalist or not) will be able to keep up with the rate of technological progress prevailing with its better-placed competitors or whether, as a subcontractor, it will be able to conform to the norms dictated by the large enterprise. In both cases, the problem is one of adapting or being eliminated. The necessity of adapting to the technological methods of competitors (as well as to their methods of management, financing, advertising, etc.) explains why workers' collectives fitted into a capitalist society are inevitably bound to disappear or to be transformed into disguised capitalist enterprises : we may recall here the history of workers' co-operatives.

1.3.2. Contradictory aspects of the sector of simple commodity production

a) The two sources of capitalist profit

The typical source of profit is obviously *the surplus revenue created by the wage-earners* employed in the production of commodities. It is a profit which arises from the exploitation of wage-earners in production itself.

To this primary source of profit there is added another, that is, *the part of the revenue lost by the independent producers* who face capitalist enterprises using more advanced techniques or enjoying greater market power. This second source of profit is not typical of capitalism : profit arises here, not from relations of exploitation within production, but from relations of competition and power on the market.

If we take account of the presence of independent producers, the total profit (P) is therefore equal to the aggregate surplus revenue created (S), increased by the revenue created – but lost – by independent producers (« S »). We thus have :

$$P = S + « S »$$

We know that the surplus revenue created (S) depends on the total number of wage-earners in the sector of market production, on the average length of their labour-time and on the average wage (the length of present labour determines the revenue *created* by each of them, while the wage level determines how this

revenue is *distributed* into the worker's remuneration and the surplus revenue)[5]. In a similar way, the « surplus revenue » (« S ») depends on the total number of independent producers, on the average length of their labour-time and on the average income they actually obtain (the longer their present labour, the greater the revenue they create ; the smaller the income obtained, the greater the « surplus revenue » transferred).

The same principles are applicable on a world scale : the typical and essential source of profit lies in the surplus revenue created by the wage-earners involved in commodity production worldwide ; to this primary source is added the part of the revenue lost by the multitude of independent producers facing capitalist enterprises on the various markets all over the world. Owing to the huge number of independent producers in the less developed countries, the share of « S » on the world level is more important than when only advanced countries are considered.

b) Contradictory aspects of simple commodity production

Independent producers contribute to capitalist profit through their « rate of surplus labour », which is often higher than in the case of wage-earners : in many cases – specifically on a world scale – they work longer and earn less than the latter. From this point of view, capitalists would take advantage of an *expanding* (and highly exploited) sector of simple commodity production.

On the other hand, the capitalist system needs to grow endlessly : the circuit $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$ tends to expand towards all branches of production, all geographical territories, all forms of production. From this point of view, the system would benefit from *eliminating* the independent producers.

This contradiction contributes to explaining the permanent and universal coexistence of capitalist production with a sector of simple commodity production, the frontiers between both varying both through time and in space.

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5   See chap. V, introduction to section 1. We must observe that the term S comprises the surplus revenue created in *capitalist* enterprises, but also in *public* enterprises. As we shall see immediately, the two types of enterprise are on an equal footing as far as the *creation* of surplus revenue is concerned.

2. CAPITALISM AND PUBLIC ENTERPRISES

2.1. Specific features of public enterprises

Public enterprises (item A2 in table I.3.) are on the same footing as capitalist enterprises as regards the creation of *surplus revenue* and as non-capitalist enterprises as regards the need for *profitability*.

Just like the wage-earners of capitalist enterprises, the wage-earners of public enterprises sell their labour-power (they do not own means of production) and take part in commodity production ; just like them, they create value and revenue in proportion to the length of their labour-time, and they create surplus revenue to the extent that the wage received is less than the revenue created.

But public enterprises, in the same way as self-employed producers, can produce without making a profit. Referring to figure V.2., let us assume that enterprise 3 is a public enterprise : while the marginal capitalist enterprise is doomed to elimination with a price of \$12, the public enterprise, just like the independent enterprise, can survive perfectly well : its returns enable it to meet its production costs $(C + V)$[6].

As they are not bound by the need for profit, public enterprises can direct their production with a view to meeting social needs rather than monetary demand only. Their specific purpose is precisely to produce goods and services considered as indispensable and to make them available to all people (for instance : cheap public transport spread throughout the country).

2.2. Contradictory relations between the capitalist sector and the public sector of commodity production

2.2.1. Public enterprises and capitalist enterprises within the same branch

Jointly with private enterprises, public enterprises take part in the mechanisms of surplus revenue transfers : a public enterprise which is more efficient than its competitors takes surplus revenue created in other enterprises ; a less efficient public enterprise (a marginal public enterprise) loses surplus revenue to the benefit of its better-placed competitors.

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[6] Since public enterprises are not bound by the need for profit, the expenditure on labour-power and means of production do not constitute « capital » in the strict sense : in this sense the symbols « C » and « V » (in inverted commas) would be justified. On the other hand, the symbol S (without inverted commas) is justified by the fact that wage-earners in public enterprises truly create surplus revenue.

In the case of a marginal public enterprise, one must consider whether it *covers its costs* or keeps going with the help of *subsidies*. If the public enterprise *covers its costs* (without making a loss or a profit), the surplus revenue produced by its wage-earners is in fact appropriated by the better-placed rival enterprises (this is the classic situation described in figure V.2.). If the public enterprise is *in deficit*, and keeps going with the help of subsidies, the situation is less clear, for it shows contradictory aspects. On the one hand, the subsidies involve levies on all revenues and, therefore, a drain on the surplus revenue : this is the way things appear. On the other hand, keeping this unprofitable public enterprise in operation ensures, as we have just seen, a transfer of surplus revenue to the benefit of its better-placed competitors : this aspect of the matter is not obvious but is no less essential.

2.2.2. Public branches and capitalist branches

The foregoing concerns public *enterprises* within any branch of production. What about placing under public control (nationalization) a whole *branch of production* (iron and steel, electricity or all forms of energy, rail transport or all forms of transport, etc.) ? The principles are fundamentally the same.

Jointly with private branches, nationalized branches of production take part in the mechanisms of surplus revenue transfers. If a nationalized branch happens to enjoy a higher-than-average rate of profit, it takes surplus revenue created in other branches. More often nationalized branches have lower-than-average rates of profit, or make no profit (they sell at cost price) or make losses (they sell at a price lower than the cost price) : in all these cases they lose surplus revenue to the benefit of other (private) branches. The actual mechanism of this transfer of surplus revenue to the benefit of the private sector is well known : the public sector sells its commodities (steel, electricity, transport services, etc.) at a lower price than if the same commodities were produced by capitalists ; the production costs of the private sector are thus reduced, and the average rate of profit is increased. However, if the nationalized branch sells *at a loss* and calls on subsidies, the situation again shows contradictory aspects : the taxes involved by subsidies partially reduce the profits which the private sector gains from the favourable public sector prices.

2.3. Conclusions

2.3.1. The problematic survival of non profitable public enterprises

Since they do not aim at profit, public enterprises are able to survive longer than capitalist enterprises placed in similar conditions. The nationalization of non-profitable enterprises or branches therefore appears as a means of maintaining production and employment, while ensuring the continuation of surplus revenue transfers in favour of the capitalist sector.

Nationalization, however, is only a short-term solution. In the long run, marginal public enterprises are obliged to keep up with the technological advances adopted by competing enterprises, while public branches are obliged to adapt themselves to changes in demand. If they do not, the subsidies required to maintain them will become higher and higher and will eventually be abandoned.

2.3.2. Contradictory aspects of the market public sector

Even if it does not require any subsidies, the market public sector shows contradictory aspects. The positive aspect lies in the surplus revenue transfers from public enterprises or branches operating at low or zero rates of profit : these transfers increase the profitability of the capitalist sector. The negative aspect lies in the fact that production carried out by public enterprises takes place outside the circuit of capital $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$: this, in itself, is a limit to the expanded reproduction of the capitalist sector. Disregarding all political or ideological consideration, this sole contradiction explains why the frontier between the capitalist sector and the public sector can fluctuate, sometimes towards privatization and sometimes towards nationalization.

Insofar as public enterprises or branches are profitable (or can become so provided that some changes are made in production technique, or work organization, or wages...), it is interesting to privatize these enterprises or branches. In this way capitalists enlarge their control over the creation of surplus revenue, they increase their rates of profit and potential for accumulation. They do so, however, taking account of profit opportunities rather than of people's needs[7].

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[7] Current events provide numerous examples of public enterprises which are in the process of privatization and operate less and less in the interest of the general public : the development of high speed trains (TGV) entails reduced service on the ordinary railway network ; the price of international telephone calls decreases more than that of national calls ; the number of post offices goes down; etc.

On the other hand, when certain enterprises or branches cease to be profitable, it is preferable that these enterprises or branches be placed under public control. State ownership makes it possible for production and employment to continue, while giving the private sector the benefit of various transfers of surplus revenue which raise its average rate of profit. Moreover, insofar as nationalization is achieved by *selling out* to private capital (rather than by expropriation without compensation), the capitalists recover money-capital which they can re-invest in more profitable enterprises or branches[8].

The development of an « auxiliary » public sector, however, comes upon material and ideological limits. From a material point of view, the public sector may not constitute a burden for the private sector : as has already been mentioned, if the subsidies needed to ensure the survival of public enterprises are too high compared with the benefits that can be derived from them, such enterprises are doomed to elimination. From an ideological point of view, it is dangerous to overtly advocate nationalizations, however beneficial the latter may be : there is the fear that if capitalists themselves come out in favour of some limitation in the private ownership of the means of production, others may challenge *all* private ownership of the means of production[9].

3. CAPITALISM AND THE INSTITUTIONAL SECTOR

Through *public enterprises* (studied in the previous section), the state takes part in *commodity production*. But the state also intervenes in the economy in various other ways : it produces non-commodity collective goods and services, it purchases commodities (through public sector contracts), it redistributes aggregate revenue (through taxes and transfers of incomes). These additional forms of state intervention in the economy belong to the institutional sector (rectangle C in table I.3.), and more precisely to *public institutions* (item C1).

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[8]   As long as an enterprise or a branch is profitable, capitalists automatically recover the money-capital they have laid out, increased by a profit (according to the cycle $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$). When the enterprise or branch ceases to be profitable, the capitalists hand it over to the public sector, once again recovering some money-capital.

[9]   Similar advantages and disadvantages arise in the case of state participation in the capital of private enterprises (transformed into « *mixed enterprises* »). This state participation can be considered as partial nationalization. What was said above about public enterprises applies here to the part of the capital which comes under public control.

Alongside public institutions, *private institutions* also intervene (item C2). These have the same basic features as the former and analogous economic functions : they too produce non-commodity collective goods and services (education for instance), purchase commodities, take part in the redistribution of aggregate revenue (private institutions paying national insurance benefits)[10].

Given their economic similarities, we will study both public and private institutions as a whole[11]. After describing the activities carried out by the institutional sector (§ 3.1.), we will show their contradictory aspects (§ 3.2.) and explain how they make the division between wages and surplus revenue, as well as the structure of wage-earners' consumption, more complex (§ 3.3.)[12].

3.1. Activities of the institutional sector

The institutional sector carries out two types of activities : on the one hand, it produces *collective non-marketed goods and services*, on the other, it carries out *transfers of income*.

3.1.1. Collective non-marketed products

Collective non-marketed products are goods and services provided free of charge to all people and financed through levies on all incomes. Let us give as examples the roads and motorway network (if there are no tolls), public parks, maintaining public order (justice, police, etc.), national education, national health care.

The production of collective non-marketed goods and services is radically distinct from commodity production carried out in enterprises. The differences appear in various ways.

- In contrast to commodities, collective non-marketed products are *not subject to market validation* : they are *a priori* considered as useful, by virtue of a public authority's decision. Whereas labour provided in enterprises constitutes

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[10] Obviously these similarities should not hide the fact that *public* institutions monopolize coercion in the political field (legislative and executive power, justice, maintenance of public order) and in the economic field (taxes and other levies, economic policy).

[11] By contrast, capitalist, independent and public enterprises were studied separately because of their distinct economic features.

[12] For brevity's sake, we will use the fairly general terms of *institutions* and *institutional sector* to refer to all the institutions of public interest, irrespective of whether they belong to public authorities or private entities (rectangle C in table I.3.).

indirectly social labour (provided the products are sold), labour provided in institutions constitutes *directly social labour*[13]. If commodities are defined as the products of indirectly social labour carried out in enterprises (see chapter II, 2.1.1.b), collective non-marketed goods and services can be defined as the *products of indirectly social labour carried out in institutions*.

- Whereas commodities are only accessible to purchasers (against payment of the selling price), collective non-marketed products are *in principle available free of charge to everyone*. This principle of universal and free access, however, has some exceptions. On the one hand, access may be limited on statutory grounds (thus social services are intended only for the needy) or simply by hard facts (thus motorways are not accessible to those who cannot afford a car). On the other hand, various services involve a payment on the part of the users (education fees, registry office fees, etc.) : the higher these payments, the more the services in question tend to become commodities (see chap. I, 2.3.1.)[14].

- Whereas enterprises in principle live from the sale of the commodities produced (the proceeds from the sales enable them in particular to purchase the necessary means of production and labour-power), institutions live from *public financing*. The production of collective non-marketed goods and services involves a considerable *monetary cost* : it is necessary to pay for the *labour-power* of the wage-earners employed (officials, teachers, police, etc.) as well as for the *means of production* purchased (government offices, school buildings, office equipment, energy, arms, roads, etc.)[15]. Since institutions do not sell commodities, they must derive their monetary resources from public financing, which implies levies by the state (taxation). And since the products supplied by institutions are in principle available to all people, they are financed by levies on all incomes.

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[13] On the distinction between directly and indirectly social labour, see chap. I, 2.1.2.

[14] Certain collective goods or services may be available at no cost to people though being produced as commodities. Thus the road network is usually produced by private enterprises and purchased as commodity by the state ; but insofar as it is delivered free of charge to users, it is a non-commodity product for the latter.

[15] These purchases of means of production are the essential part of *public sector contracts*, the other part consisting in purchases of means of consumption (for instance : food for servicemen or for state banquets). Let us make it clear that the term « public sector contracts » used hereafter refers to the purchases of commodities by *institutions*, both *public and private*. We exclude the means of production purchased by *public enterprises* (which are in principle financed by the sale of commodities). But we extend the concept of public sector contracts (and of public expenditure in general) to the purchases made by *private institutions* : footnote 18 discusses to what extent this broadening of the concepts is justified.

3.1.2. Revenue transfers

Besides producing collective non-marketed production, the institutional sector carries out various revenue transfers : interest payment, granting subsidies, paying social allowances. Levies are required here too : not only to obtain the monetary resources which are then transferred, but also to pay for the means of production and labour-power of the institutions involved in all levies and transfers (Treasury, National Insurance institutions, etc.).

a) Payment of interest on public debt

Collective non-marketed products are financed by the state, which levies taxes to this end. Rather than collecting taxes, the state can also finance the institutions through credit, i.e. through borrowing part of the necessary funds. In this case the levying needed to finance the institutions will take place later, when the state repays the loans ; but other levies are required in the meanwhile to pay interest to the creditors, to the holders of government securities.

b) Granting of subsidies to enterprises

The state grants subsidies to enterprises (capitalist, independent or public) in order to write-off losses or increase profits, in order to attract or keep them within the country, etc. These subsidies are also financed through taxation, or possibly through credit[16].

c) Payment of social allowances to workers

The state has taken over various private initiatives (friendly societies, charitable institutions) and organized *systems of social protection* intended for all workers : national insurance on the one hand, social assistance on the other.
 - *National insurance* systems are based on the twofold principle of individual insurance and solidarity between workers : contributions are systematically levied on all the workers' incomes in order to guarantee each of them the payment of social allowances in the event of need (unemployment, sickness, retirement, etc.). Social allowances divide into « substitution incomes »

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[16]   a) Subsidies to enterprises may take the form of actual payments by public authorities to enterprises or that of reduction of charges due by enterprises to the state (reduction of taxes or national insurance contributions for instance).

b) The state also grants subsidies to *voluntary organizations* in order to keep them alive. These subsidies are small compared to those granted to enterprises.

and « complementary incomes » : the former are paid when the wage-earner must stop working, temporarily or definitively (unemployment, industrial disablement, retirement), the latter are added to the wage-earners' primary income under other circumstances (family allowances, refunding the cost of health care or prescribed medicines).

All these social allowances constitute for the workers an *indirect wage*, also called *deferred wage* (as it is only paid in the event of unemployment, sickness, etc.) or *solidarized* wage (because it spreads risks and creates a solidarity among wage-earners)[17]. The allowances are paid by national insurance institutions. These are in principle financed by contributions deducted from wages ; to the latter are added – in proportions which vary according to countries and periods – public subsidies financed by levies on all incomes (taxes, general social contributions).

- *Social assistance* systems are based on the principle of state charity : financial aids are provided to the poorest (after previously checking their resources) ; the paying institutions receive public subsidies which are financed by general taxation.

3.2. *Contradictory aspects of public expenditure*[18]

Activities of the institutional sector show a two-fold contradiction : the first is analogous to that mentioned with regard to wages (chap. III, 2.2.3.), the second is analogous to that mentioned with regard to public enterprises (chap. VI, 2.3.2.).

3.2.1. First contradiction

The institutional sector provides enterprises with a series of economic *advantages* : public sector contracts, wages paid by the institutions, as well as social allowances paid to the workers, enlarge the *markets* for enterprises

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[17] The solidarity appears in particular in the fact that the contributions paid by each one depend on the wage earned rather than on the risk run (solidarity, however, is obviously weaker when the highest income ranges are not subject to social contributions).

[18] The term « public expenditure » used hereafter refers to expenditure of both public *and private* institutions. If all private institutions were entirely financed by public subsidies, the term would be fully justified. Actually, insofar as various national insurance institutions constitute private institutions and are financed by wage-earners' and employers' contributions, the term « public and national insurance expenditure » would be more appropriate.

producing means of production or means of consumption[19] ; the interest on public debt, as well as public subsidies, increase the *rate of profit* of financial and non-financial enterprises ; the large-scale production of collective goods and services (education, roads, etc.) as well as the organization of national insurance, supply all enterprises with « external economies » and *reduce the cost* of labour-power[20]. Taking all these advantages into account, it is advantageous that institutions' activities be *extended*. However, these activities give rise to various kinds of expenditure which involve levies on profits and wages : deductions from profits reduce the money-capital available for accumulation, while deductions from wages restrict the size of the market (and thus the opportunities for profitable investment). Taking account of these levies, it is preferable that institutions' activities be *limited*.

This contradiction is analogous to the contradiction mentioned earlier with regard to wages : these constitute both a *cost of production* (which should be reduced) and a *market* (which should be enlarged). As will be seen in chap. VIII (§ 2.1.), the two contradictions can be overcome by means of sufficient productivity increases in the sector of commodity production.

3.2.2. Second contradiction

The institutional sector provides enterprises with the *various advantages* just mentioned. But the activities carried out in the institutional sector fall *outside the circuit of capital* $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$: they do not produce surplus revenue. This contradiction is analogous to that mentioned concerning public enterprises : the latter can give rise to various transfers of surplus revenue which benefit the private sector, but production carried out by public enterprises is a limit to the circuit of activities of capital.

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[19] Public sector contracts enlarge the outlets for enterprises producing means of production (school and office buildings, roads, equipment, energy, etc.) ; wages paid by the institutions enlarge the markets for enterprises producing means of consumption, and indirectly for enterprises producing means of production used by the former ; the same holds true for social allowances (for instance : the fact that national insurance assumes a more or less considerable part of the price of health care and medicines directly enlarges the markets for private hospitals, doctors, chemists, and indirectly those for medical and surgical equipment, medicines, etc.).

[20] Thanks to national education, for instance, each particular enterprise avoids having to personally take charge of its workers' basic training (ability to read, write, calculate, etc.). Similarly, the payment of « substitution » or « complementary » incomes by the national insurance system avoids the general wage increase which would otherwise be necessary to face the risks covered : the incomes in question are only paid to unemployed, or to sick workers, or to those with children, etc.

This second contradiction explains why the frontier between the institutional sector and the capitalist sector (just like the frontier between the market public sector and the capitalist sector) is not fixed once and for all. Insofar as certain activities of the institutional sector can be made profitable (possibly by means of changes in production technique, work organization, wage levels, etc.), taking over these activities is advantageous : such privatization may be sought in a wide range of activities, such as education, health care, the management of prisons, the management of national insurance (development of private insurance for health care, pensions), etc. On the other hand, it is not interesting to take over activities for which there is no prospect of profit.

3.3. Components of wages and wage-earners' consumption

3.3.1. The breakdown of wages and surplus revenue

a) General principles

The activities carried out by the institutional sector are financed by deductions from all incomes, and in particular from wages and profits. The simple division between wage and surplus revenue, which was drawn in chapter III on the assumption of a purely capitalist system, must therefore be adapted to take account of these deductions.

- In the case of a purely capitalist system, the *wage* paid enables the worker to purchase his means of consumption, all of which are commodities. Taking account of the institutional sector, the wage has an additional function : it must also enable the worker to take part in the financing of the institutions' activities. The wage-cost for the enterprise therefore breaks down into two components (see figure VI.1.).

The first component is handed over to the worker on a strictly *individual* basis : it is the *net wage* (or direct wage, or « take-home » pay), which allows for the direct purchase of personal means of consumption.

The second component of the wage is *socialized* through two types of levies. The *contributions to national insurance* may be considered as the solidarized part of the wage : they make each wage-earner take part in the financing of the *indirect wage*, which is paid to workers in particular circumstances (unemployment, sickness, retirement, etc.). Just like the net wage, the indirect wage allows for the purchase of personal means of consumption, but

on the basis of solidarity between workers[21]. *Income taxes*, the second type of deduction, may be considered as the *collectivized* part of the wage : they make each wage-earner take part in the financing of *collective non-marketed products* provided by the institutional sector.

- The *surplus revenue* created by wage-earners also breaks down into two components. The *net profit* is the part of the surplus revenue which the capitalists use for their own purposes : they use it, partly to purchase their individual means of consumption, but mainly to accumulate, i.e. to purchase additional means of production and/or labour-power. The *taxes* on profit constitute the part of the surplus revenue which is siphoned off by the state : in this way enterprises take part in financing the institutional sector.

Figure VI.2. shows the distribution of the new value and the revenue created by the wage-earners in the market sector (or sector of commodity production), taking account of the deductions needed to finance the institutional sector.

b) Additional observations

Examination of figures VI.1. and VI.2. leads us to add a few comments of a practical or theoretical nature.

1. To the different concepts of wage considered above (wage-cost, net wage, etc.) should be added the concept of the *gross wage*. The latter is equal to the wage-cost less the employer's contributions to national insurance. In reality, it is the gross wage which is negotiated between employers and workers ; and it is on that basis that the wage-earners' and employers' contributions to national insurance are calculated.

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21 a) The *employers'* contributions to national insurance are not deducted from profit : just like the *wage-earners'* contributions, they are a part of the wage-cost, of the price to be paid for the wage-earners' labour-power.

b) The contributions to national insurance are levied on the wages of *active* workers, while most of the indirect wage is paid to *inactive* workers (because of unemployment, industrial disability, retirement). The active workers will in their turn benefit from an indirect wage financed by others' contributions : this will be the case when they themselves cease to be active. Moreover, they normally benefit from an indirect wage while still active : this is the case if they receive family allowances or do not have to pay the full price for health care or medicines.

Figure VI.1. : Components of wages and wage-earners' consumption

price of labour-power = wage-cost			

net wage = direct wage	deductions = « socialized » wage		

$\longleftarrow$ ————————— « gross wage » ————————— $\longrightarrow$

net wage = direct wage	income tax	w-earner's contribution	employer's contribution

« privatized » wage	« collectivized » wage	« solidarized » wage

	↓	↓
↓	finances collective products	finances indirect wage
	↓	↓

purchase of DMC (direct real wage)	use of CMC (collective real wage)	purchase of IMC (indirect real wage)

direct real wage (DMC)	« socialized » real wage (SMC = CMC + IMC)

wage-earner's consumption = total real wage (= sum total of MC)

Note : MC   = means of consumption
        CMC   = collective MC
        DMC   = personal MC purchased from direct wage
        IMC   = personal MC purchased from indirect wage
        SMC   = socialized MC

For a given gross wage, what is the effect of a reduction in the national insurance contributions ? If the *wage-earner's* contribution is reduced, the wage-cost remains constant for the employer ; the net wage increases for the workers, but to the detriment of the indirect wage (the aggregate market, therefore, tends to remain constant). If the *employer's* contribution is reduced, the wage-cost diminishes ; the net wage is not affected, but the indirect wage diminishes (the aggregate market thus contracts).

2. Figures VI.1. and VI.2. only consider *direct taxes*, i.e. taxes on incomes (on wages and profits in this case). They ignore *indirect taxes*, i.e. taxes on consumption, which are paid when income is spent (VAT for instance). When wage-earners and capitalists buy commodities (at a price including VAT), part of the money spent becomes the income of the producers of the commodities, the other part (the VAT) merely passes through their hands and is passed on to the state. The amount of indirect taxes is thus deducted from net wages and net profits respectively. In practice the burden of indirect taxes is mainly borne by wage-earners.

Figure VI.2. : Components of new value and revenue created
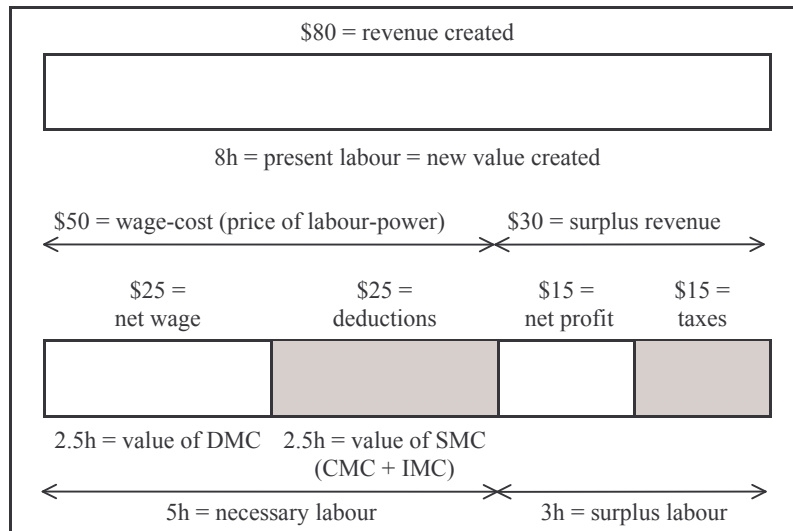
Note :   For the meaning of abbreviations, see figure VI.1.

3. In both figures, we assume that the indirect wage is entirely financed by national insurance contributions and that the latter do not finance anything else : in actual fact, a variable proportion of the indirect wage is financed through taxation (direct and indirect taxes) ; and these taxes and contributions are also used to finance the means of production and labour-power employed in the national insurance institutions. In both figures, we also assume that the taxes paid by wage-earners entirely benefit them in the form of collective non-marketed products (if wage-earners, for instance, contribute 3/4 of total taxes, they take part in 3/4 of the consumption of collective non-marketed goods and services) : actually, part of the taxes levied on wage-earners are used for other purposes, including the payment of interest on public debt and granting subsidies to enterprises.

4. In the case of a purely capitalist system, *necessary labour* is the part of present labour which is equal to the value of labour-power, i.e. to the value of the means of consumption purchased. The existence of a socialized wage (financing collective products and the indirect wage) makes things more complex. Necessary labour is now equal to the sum of two components : on the one hand, the value of the means of consumption purchased with the direct wage (= net wage/E = 2.5h in the example of figure VI.2.), on the other hand, the « value » of the socialized means of consumption (= deductions/E = 2.5h in the example). This second component includes the value of the means of consumption purchased with the indirect wage, as well as a fraction of the labour (past and present) embodied in the collective non-marketed products[22].

As to *variable capital*, it is logically equal to the wage-cost rather than to the net wage : for the employer, it is indeed the wage-cost which constitutes the price to be paid for the purchase of labour-power, irrespective of its division into direct wage, income tax and national insurance contributions.

5. The breakdown of wages and surplus revenue does not affect the definition of the rate of surplus value (= surplus revenue/variable capital = surplus labour/necessary labour) nor that of the composition of capital (= constant capital/variable capital). However, the presence of the institutional sector and of non-market collective products invalidates the equality between surplus revenue (S) and profit (P), even on the macro-economic level. Since part of the surplus revenue is appropriated by the state, we have :

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[22] The concept of « value of labour-power » can be criticized on the grounds that labour-power is not a commodity proper (see appendix 5). If non-marketed collective goods and services are taken into account, the concept can also be criticized on the grounds that it refers partly to non-commodity products. The concept of necessary labour avoids both of these problems.

$$\boxed{P < S}$$

Representing by g* the proportion of the surplus revenue appropriated by the state, we now have : $P = (1 - g^*)\, S$. As a result, the formulae for the rate of profit analysed in chapter IV (2.3.1.) now become :

$$p' = \frac{P}{C+V} = \frac{(1 - g^*)\, S}{C + V}$$

$$p' = \frac{(1 - g^*)\, s'}{c' + 1}$$

As before, the general rate of profit (p') is all the higher as the rate of surplus value (s') is higher and as the composition of capital (c') is lower. But it is all the lower, we must now add, as the proportion of the surplus revenue taken by the state (g*) is larger.

3.3.2. The structure of wage-earners' consumption

As shown in figure VI.1., the wage-earners' consumption comprises two distinct components, corresponding to the two components of the price of labour-power. The first component consists of the personal means of consumption which are purchased on a strictly individual basis, thanks to the money direct wage : these means of consumption (DMC) constitute the *direct real wage*. The other component, the *socialized real wage,* comprises two categories of socialized means of consumption (SMC) : on the one hand, collective means of consumption, which are available free of charge (CMC) ; on the other hand, personal means of consumption which are purchased on a solidarity basis, thanks to the indirect wage (IMC). The whole set of means of consumption which are accessible to wage-earners (MC) can therefore be represented in the following way[23] :

total MC = direct MC + socialized MC
total MC = direct MC + collective MC + indirect MC

An identical standard of living can in principle be attained through having recourse to any of these three categories of means of consumption (or to a variable combination of them). For example, an identical level of health can be

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[23]   To complete the picture, we must add the means of consumption produced in the non-professional area (households and voluntary organizations) : see below, 4.3.2.

reached through resorting to health care provided by the national health service (collective MC), to paying for unrefunded health care (direct MC), to paying for refunded health care (indirect MC)[24].

The aggregate distribution between the three categories of means of consumption depends on the amount, nature and use of all levies (on wages *and* on surplus revenue).

- If the amounts levied are small (if, among other things, the net wage almost coincides with wage-cost), the state promotes the first category of goods and services (direct MC), it enhances market production and strictly individual consumption. More precisely, the state encourages the production of goods and services which show the following two features : they are produced and launched on the market according to the criterion of *profit* ; and they are accessible to people on *unequal* terms, depending on each individual's purchasing power (which may be reduced to zero or prove to be insufficient due to various circumstances : unemployment, health problems, child-rearing).

- If social contributions are considerable, the state promotes the third category of products (indirect MC), it enhances market production while developing solidarized consumption. More precisely, the state encourages the production of goods and services which show the following two features : they are still produced and sold according to the criterion of *profit ;* but they are now accessible to people on *more equal* terms, due to the payment of social allowances when necessary (substitution incomes are paid in cases of work interruption, complementary incomes in cases of health problems, child-rearing). A high level of national insurance contributions therefore allows for a substantial redistribution of incomes and consumption ; it protects an important fraction of the population from falling into destitution in a period of economic crisis and is therefore an important factor of economic, social and political stability[25].

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[24] If health care is only partly refunded, it is purchased partly with the direct wage and partly with the indirect one (it belongs both to direct MC and to indirect MC).

[25] In theory and in practice, social allowances can be financed through taxes rather than social contributions. The advantage of social contributions is that they are necessarily assigned to social allowances, whereas taxes may be used for multiple purposes. In the same way as wage indexation *guarantees* the wage-earners' standard of living (individual wages rise parallel to prices and the cost of living), financing national insurance through social contributions *guarantees* the wage-earners' standard of social protection (aggregate social allowances rise parallel to aggregate wages and contributions).

- If the taxes collected are considerable (considering both taxes on all types of incomes and indirect taxes on consumption), the state is able to promote the second category of products (collective MC), to enhance non-market production and collective consumption. More precisely, the state is able to develop the production of goods and services which show two entirely different features : rather than being subject to the logic of profit, non-commodity production aims in principle at satisfying *social needs* (the latter being assessed by public authorities) ; and rather than being accessible according to each individual's purchasing power (direct and indirect), the non-marketed collective goods and services are in principle accessible to all on *equal* terms[26].

As can be seen, the amount, nature and use of the levies have far-reaching economic and social implications. They depend on eminently political choices, and thus on the balance of forces prevailing in society.

4. CAPITALISM AND THE NON-PROFESSIONAL SPHERE

Production in the non-professional sphere is carried out by *households* and *voluntary organizations* (§ 4.1.). Like the production of the institutional sector, they exhibit contradictory aspects (§ 4.2.). They contribute to a variable degree to the individuals' consumption, but do not affect the division between wages and surplus revenue (§ 4.3.).

4.1. Production by households and voluntary organizations

Individuals necessarily consume domestic goods and services, which are produced within the *household* (item D2 in figure I.3.). They may also consume goods or services produced by various *voluntary organizations :* trade unions, political parties, local committees, friendly societies, sporting clubs, etc. (item D1 in the same figure). All these goods and services are the *product of autonomous labour carried out in the non-professional sphere* (see chap. I, § 2.2.). They rest on labour provided free of charge by the producers and are themselves provided free of charge to the users, without being sold on the market.

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[26] The development of this « collective real wage » obviously depends on two additional conditions :
- the effective channelling of the money levied into the production of collective goods and services (rather than into such uses as the granting of subsidies to private enterprises or the payment of interest to holders of government securities) ;
- the wage-earners' effective access to the collective goods and services produced (effective access to all levels of education, for instance).

In order to ensure the survival or development of their activities, voluntary organizations may have recourse to public subsidies. The more important these subsidies, the closer the voluntary organization resembles a private institution of public interest (item C2 in figure I.3.) : labour becomes heteronomous and directly social labour. For the sake of simplicity, the brief analysis which follows will assume that both households and voluntary organizations do without public subsidies.

Like any production, production in the non-professional sphere uses means of production (embodying past labour) and labour-power (supplying present labour). The means of production may be either commodities (purchased) or non-commodity products (free of charge). Thus a meal at home may be prepared with *purchased* electric household appliances and *purchased* vegetables or tinned foods, or with garden produce and homemade tools. Similarly, a voluntary organization may purchase its office equipment, or receive it free of charge from members or external donors.

4.2. Contradictory aspects of domestic production

Like institutional sector production, non-professional sphere production involves contradictory aspects. Only domestic production will be considered here. It gives rise to two contradictions analogous to those explained above concerning the institutional sector, as well as to a third, specific, contradiction.

4.2.1. First contradiction

Domestic labour-power is not remunerated and therefore involves *no cost* to the enterprises : no wage to pay, no tax deduction. On the other hand, the absence of remuneration also means the *absence of a market* for the enterprises. The market is still more limited if the means of production used by domestic labour are themselves produced within the household.

It is therefore in the enterprises' interest to enhance the use of *commodity*-means of production by domestic labour (for example, the use of electric household appliances, which are purchased). This implies that the wages earned outside the household must be high enough to allow for the purchase of domestic means of production. Thus we again find the contradiction inherent in wages, which are both a production cost (which should be reduced) and a form of purchasing power (which should be increased).

4.2.2. Second contradiction

Domestic production is *advantageous* to enterprises : it involves no cost to them and gives rise to the purchase of domestic means of production. On the other hand, this type of production falls *outside the circuit of capital* : it does not create surplus revenue.

This contradiction may affect the frontier between domestic production and capitalist production. It may be in the enterprises' interest to take over, in part or in full, certain lines of production which can be made profitable (such as the large-scale production of meals in a chain of restaurants).

4.2.3. Third contradiction

Domestic production supplies the enterprises with the *advantages* mentioned above. On the other hand, it absorbs a large amount of labour-power, which is therefore *not available* on the « labour market ».

This contradiction is all the more acute if the system lacks waged labour-force. In that case, it is important to shorten the labour-time devoted to domestic production. This can be achieved in two complementary ways : on the one hand, by *reducing the amount* of domestic production and substituting external products, whether capitalist or not (child care entrusted to day-nurseries, use of tinned foods instead of cultivating an allotment, etc.) ; on the other hand, by *increasing efficiency* in housekeeping (through the use of various electric household appliances). The purchase of external products and of domestic means of production is financed through the wages earned in outside work.

4.3. Components of wages and wage-earners'consumption

4.3.1. The breakdown of wages and surplus revenue

The existence of an institutional sector – producing non-marketed collective goods and services and carrying out transfers of incomes – has made the division between wages and surplus revenue more complex (see 3.3.1. and figure VI.2.). The existence of goods and services produced by households and voluntary organizations does not make the matter much more complex : it simply enlarges the function of the net wage and net profit to some extent.

As before, the net wage must allow the wage-earner to directly purchase means of consumption. In addition, it must allow him to purchase various domestic means of production (electric appliances for example) and to take part in the financing of voluntary organizations he is affiliated to (payment of membership fees, grants). Since domestic

means of production are usually considered as means of consumption, we can continue to say that net wages allow the direct purchase of means of consumption (in the broader sense).

Similarly, net profit allows the capitalist to accumulate and purchase means of consumption in the broader sense (which includes the purchase of domestic means of production and the financing of organizations).

4.3.2. The structure of wage-earners' consumption

Commodity means of consumption and non-market collective goods and services can be grouped into one common category : both are products of the professional sphere. The distribution of the wage-earner's total consumption between products of the professional sphere and the non-professional sphere mainly depends on two factors.

It first depends on the *number of products available* in the form of commodities or non-market collective goods and services. The more important the purchasing power and the provision of public services, the less important the proportion of non-professional products required to attain a given standard of living. Conversely, a reduced purchasing power and a meagre provision of public services make it necessary, if one wants to reach the same standard of living, to have recourse to more domestic products and/or to goods and services provided by voluntary organizations.

The distribution also depends on the *labour-time available* for non-professional production. If professional activities take up most of the available labour-time, the proportion of non-professional products tends to be low. Conversely, reduced professional activities make it possible or necessary to increase the share of goods and services produced within the non-professional sphere.

5. LABOUR AND INCOMES IN THE WHOLE SOCIETY

This section now considers labour and incomes in society taken in its *totality*. The latter combines commodity (or market) production, carried out in enterprises, and non-commodity (or non-market) production, carried out in institutions, households and voluntary organizations ; it also combines waged labour, « self-employed » labour and capitalist labour, as well as an important amount of labour provided free of charge, which is typical of the non-professional sphere. What does the total revenue depend on ? What about the distribution of the total revenue created ? And what is meant by « productive » labour ? These are the main themes of section 5, which begins with an overview of the principal relations between labour and income.

5.1. An overview of activities and results produced

Table VI.3. provides a synthetic view of the various types of activities and classifies the results they produce according to different points of view.

The columns in the table show the four types of activities that can be singled out by combining, as before in chapter I (figure I.3.), the criteria of commodity (or non-commodity) production and waged (or non-waged) labour. Column A (waged commodity production) embraces all wage-earners in capitalist and public enterprises. Column B (non-waged commodity production) refers to self-employed producers, whether in individual or collective enterprises ; it includes capitalists as well, who also take part in commodity production (see chapter I, 2.1.2.b). Column C (waged non-commodity production) concerns all the officials employed by public or private institutions, as well as professional workers employed by voluntary organizations. And column D (non-waged non-commodity production) comprises all labour provided free of charge in households and voluntary organizations.

Table VI.3. : A classification of activities and results produced

Activities → Results ↓		Commodity production		Non-commodity production	
		waged labour	non-waged labour	waged labour	non-waged labour
		A	B	C	D
Production of use-value	1	Yes	Yes	Yes	Yes
Provision of labour labour surplus labour	2 3	Yes Yes	Yes No	Yes Yes	Yes No
Creation of value and revenue value and revenue surplus value and surplus revenue	4 5	Yes Yes	Yes No	No No	No No
Obtaining an income	6	Yes	Yes	Yes	No

The lines in the table then specify the nature of the results produced by the various types of activities. These results are considered from four points of view : in terms of use-value (line 1), in terms of labour (lines 2 and 3), in terms of value and revenue created (lines 4 and 5), in terms of income obtained (line 6).

As regards *use-value*, all production activities (as opposed to consumption activities) create use-values. The distinctions between commodity and non-commodity production, between waged and non-waged labour, are immaterial here.

As regards *labour*, the issue is whether all labour gives rise to *surplus labour*. In principle, all the wage-earners provide surplus labour : whether employed in enterprises (private or public) or in institutions (public or private), they normally work for a period longer than the time required to produce their means of consumption. By contrast, the self-employed and the capitalists in principle do not provide any surplus labour : they do not work for the benefit of an employer, who would utilize their labour-power for a period of time greater than the « necessary labour »[27].

The next issue concerns what type of labour creates *value* and *revenue* and what type of labour creates, more precisely, *surplus value* and *surplus revenue*. Only labour employed in the *production of commodities* creates value and revenue : this is true both of waged labour and of non-waged labour. But *waged* labour employed in commodity production has the special characteristic of creating surplus value and surplus revenue : the value created by the wage-earner can be broken down into corresponding value (equal to the value of labour-power) and surplus value (due to the wage-earner's surplus labour) ; the revenue created can be divided into a wage for the wage-earner and surplus revenue for the capitalist. As for activities of non-commodity production, they create neither value nor revenue (although they involve an expenditure of labour) ; if they are carried out by wage-earners, they can therefore create neither surplus value nor surplus revenue (although they do involve surplus labour).

As regards *obtaining an income*, only non-waged labour in households and voluntary organizations is provided free of charge. All other activities constitute professional labour, carried out in order to obtain an income. This is the case for all activities of commodity production carried out by wage-earners, self-

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[27]   These principles allow some exceptions, which were mentioned earlier : wage-earners enjoying high remuneration may actually provide no surplus labour (chap. III, footnote 9) ; whereas many self-employed producers facing more efficient or more powerful capitalist enterprises on the market actually provide the equivalent of « surplus labour » (chap. VI, § 1.1.).

employed and capitalists. It is also the case for all the activities of the institutional sector (waged non-commodity production) : wage-earners employed in the latter earn an income, though they do not create value or revenue. (It is worth recalling that rentiers also earn an income, though they do not provide any labour).

5.2. The basis of incomes

The foregoing synthesis shows that a clear distinction must be made between the creation and the acquisition of incomes, between the producers of total revenue and those who benefit from it.

5.2.1. The creation of aggregate revenue

The total revenue is created only by labour involved in *commodity* production, to the exclusion of all labour involved in non-commodity production. The total revenue is the monetary expression of the mass of new value created by all labour in commodity production :

$$\text{total revenue created} = \text{sum total of new values} \times E$$

As *wage-earners in enterprises* carry out most of the activities of commodity production, they also create most of the new value and total revenue. (The revenue created by them breaks down into wages and surplus revenue). The remaining part of total revenue is created by non-waged commodity producers, i.e. by the *self-employed* and *capitalists*.

5.2.2. The distribution of aggregate revenue

Aggregate revenue is created by commodity producers alone, but the latter are not the only recipients of this revenue. Part of the aggregate revenue created falls to *wage-earners employed in non-commodity production* and to *rentiers :* the former produce non-marketed goods and services on a professional basis, against the payment of wages ; the latter earn their living through transferring the ownership or use of their assets, against the payment of rents. Total revenue thus breaks down into different specific incomes, earned by different categories of recipients :

$$\text{total revenue distributed} = \text{sum total of incomes earned}$$

Figure VI.4. : Creation and distribution of total revenue

	market wage-earners' available income	non-market wage-earners' available income	capitalists' available profit	indep. prod. avail. income	rentiers' avail. income	state avail. income
II.C						
II.B	market wage-earners' net wage	capitalists' net profit	indep. net income	state revenue transformed into non-market wage-earners' net wage	state revenue intended for transfers	
II.A	market wage-earners' wage-cost	surplus revenue			revenue created by capit.	revenue created by indep. producers
I. Creation of total revenue by present labour	revenue created by market wage-earners					

II. Distribution of total revenue

Note   II.A = distribution of the revenue (created by the market wage-earners) into wages and surplus revenue
II.B = deductions by the state and payments to non-market wage-earners
II.C = transfers by the state : subsidies, social allowances, interest on public debt
(non-) market wage-earners = wage-earners employed in the sector of (non-) commodity production

The share of total revenue that each category of recipients obtains depends on its comparative numerical size and on its power compared to that of the other categories. Wage-earners as a whole (both in commodity and non-commodity production) receive the highest share, due to their numerical superiority. The capitalists' share in the distribution of total revenue is considerably greater than their share in the creation of total revenue : this is due to their dominant power in society, and in particular to the capacity they have to appropriate the surplus revenue created by all the wage-earners in the sector of commodity production.

5.2.3. Synthesis

Figure VI.4. emphasizes the distinction between revenue creation and revenue distribution, as well as the successive theoretical stages in the distribution of the revenue created. What appears on the surface is the breakdown of total revenue into various specific incomes earned by different categories of recipients. The hidden base of the iceberg is the creation of this same total revenue solely by the commodity producers, most of whom are wage-earners.

The figure reads from bottom to top. The creation of total revenue is the hidden base of the iceberg : it corresponds to present labour provided in the sector of commodity production, and this present labour is supplied above all by wage-earners.

The first stage in the distribution of total revenue (II A) takes place within the sector of commodity production : the surplus revenue created by wage-earners is appropriated by capitalists (see chapter III, § 1.1.). Upon this basic transfer are grafted other transfers within the market sector, which are overlooked by the figure : we refer to surplus revenue transfers between capitalist enterprises or branches (see chapter V) as well as surplus revenue transfers involving public enterprises (chapter VI, section 2) and revenue transfers from self-employed producers (chapter VI, section 1).

The second stage in the distribution of total revenue (II B) considers the deductions by the state (taxes and national insurance contributions) and the payment of wages in the non-market sector : in the example, the state siphons off about half of the revenue created ; about a third of the revenue appropriated is used to pay the « non-market » wage-earners.

The third stage (II C) considers the transfers of incomes carried out by the institutional sector : the latter passes social allowances to wage-earners and the self-employed (whose total available income is therefore higher than net wage or net revenue) ; it grants subsidies to enterprises (whose available profit is therefore higher than net profit) ; it pays interest on public debt to rentiers (who

also benefit from rents paid by the private sector)[28]. All the incomes which appear at the top of the figure (the visible part of the iceberg) are intended for the purchase of commodities or for saving ; the state « available income », in particular, is the amount of monetary resources which remains available for public sector contracts after the state has paid out wages to the civil servants, subsidies to enterprises, social allowances to workers and interest to rentiers[29].

5.3. Productive labour and unproductive labour

The analysis developed in the preceding chapters enables us to examine the key-issue of productive or unproductive labour. This question is completely independent of the more or less useful or necessary character of the products of labour, and it is also clearly distinct from the definition of social classes.

5.3.1. Two concepts of productive labour

a) Labour productive of value and revenue

In a broader sense, productive labour is *labour which creates value and revenue*. In this sense, *all labour (whether waged or not) devoted to the*

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[28] In the example we assume that rents are earned by pure rentiers, who are distinct from wage-earners, capitalists and self-employed producers. Actually rents are also earned by wage-earners, capitalists and self-employed producers to the extent that the latter own assets which yield an income (land, securities). As they do not derive from any labour, rents always involve deductions from the total revenue created. They involve deductions from *surplus revenue* if they are paid by capitalist or public enterprises (dividends of shares, interest on loans).

[29] The principles concerning the creation and distribution of aggregate revenue apply to any *national* capitalist economy and to the *world* capitalist economy. However, the equality between total revenue *created* and total revenue *distributed* is only valid if we assume a *closed* national economy or consider the world economy *as a whole*. Indeed, just as more powerful enterprises or branches seize part of the surplus revenue created in less powerful enterprises or branches, more powerful (dominant) countries seize part of the revenue created in less powerful (dominated) countries. These international transfers of revenue take place through two types of mechanisms : on the one hand, price ratios (« terms of trade ») implying « unequal exchanges » to the detriment of the dominated countries (the latter, for instance, sell for $100 commodities which embody 1000 hours of labour and purchase for the same amount other commodities which require only 500 hours of labour in other countries) ; on the other hand, financial flows from the dominated countries to the dominant ones (repatriation of profits by foreign capital, servicing of external debt, capital flight). Given these international transfers of revenue, the dominated countries obtain less revenue than they create, and conversely for the dominant countries : the equality between revenue created and revenue obtained is only valid at the level of the world economy taken as a whole.

production of commodities is productive ; all labour (whether waged or not) assigned to non-commodity production is unproductive (see table VI.3., line 4) [30].

The importance of this first distinction between productive and unproductive labour appears in the following way. Since the incomes of some economic agents (the unproductive ones) are taken from the revenues created by other economic agents (the productive ones in the broader sense), it is important to specify which are productive activities (productive of value and revenue) and which are not. In fact, it is only possible to develop the financing of unproductive activities if productive activities are themselves sufficiently developed, if the revenues created by the latter are sufficient to provide what is required to pay the unproductive workers.

b) Labour productive of surplus value and surplus revenue

In a narrower sense, productive labour is *labour which creates surplus value and surplus revenue*. In this sense, only *waged labour devoted to the production of commodities* is productive. All labour (whether waged or not) assigned to non-commodity production is unproductive ; non-waged labour devoted to the production of commodities is also unproductive (see table VI.3., line 5).

The point of this second distinction between productive and unproductive labour is to single out those activities which produce what the system aims at producing, namely surplus value and surplus revenue. The importance of the distinction can be illustrated in the following way. We know that services play a decisive role in contemporary capitalism : the « tertiary » sector (the production of services) is taking an increasing part in the whole of economic activity, at the expense of the « primary » sector (the production of agricultural or mineral raw materials) and of the « secondary » sector (the production of industrial goods). Are the wage-earners employed in this tertiary sector productive of surplus value and surplus revenue ? If they are, it they create surplus revenue, the system finds there a new source of nourishment for its perpetuation and growth. If they are not, if profit and wages in the tertiary sector are a burden on the existing total surplus revenue, the system comes up against new limits to its total scope for

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[30] Both in the broader sense (production of value and revenue) and in the narrower sense (production of surplus value and surplus revenue), productive labour is always labour devoted to *commodity* production. For a discussion on the concept of commodity, and hence on the concept of productive labour, see appendix 6.

profit and accumulation : taken to extremes, the whole surplus revenue created would be financing unproductive activities and nothing would remain available for accumulation.

The answer to this question leads us to make a distinction between the tertiary sector of commodity production and the tertiary sector of non-commodity production. The development of the *tertiary sector of commodity production* (tourism, insurance, restaurants, garages, etc.) contributes to the renewal of profit : the wage-earners working in these enterprises constitute an extra source of surplus value for the whole system. Only the development of the *tertiary sector of non-commodity production* (the institutional sector) involves a growing levy on surplus revenue : such a development is only possible if the aggregate surplus revenue increases, which normally implies an increase in the number of wage-earners employed in commodity production and/or an increase in their rate of surplus value.

A complementary observation must be made here. We have just seen that the second distinction between productive and unproductive labour aims at determining the scope and limitations of the system, insofar as profit and accumulation are concerned. Does this mean that the first distinction is without importance in an assessment of the potential for profit and accumulation ? Not at all, and for two reasons.

First, insofar as a (non-waged) activity is productive of value and revenue, it is « self-financing » : it involves *no levy on surplus revenue*. Let us consider, for example, the activity of doctors in the private sector : is their work productive of value and revenue or not ? If it is, the doctors' incomes derive from the value created by their labour. If not, these incomes derive from a levy on the wages and the surplus revenue created in society as a whole : they thus reduce the profit available and the scope for accumulation.

Next, insofar as a (non-waged) activity is productive of value and revenue, it can indirectly *increase profit* and thus help finance accumulation. Indeed, non-capitalist producers find themselves caught up in the market mechanisms and in the transfers of revenue involved : if they are less efficient or less strong than their capitalist competitors or customers, their labour (provided it is productive in the broader sense, that is, devoted to commodity production) creates value and revenue, but a part of that revenue will be lost to them and will feed an increase in profits and the potential for accumulation (see above, section 1).

5.3.2. Productive and unproductive wage-earners : two social classes ?

The distinction between productive and unproductive labour does not involve the slightest moral judgement of the activities considered : a wage-earner

working in an arms factory provides productive labour (if the arms are sold), the teaching staff of state schools provide unproductive labour (since the lessons are not sold).

Nor is the distinction in any way aimed at dividing wage-earners into two social classes, whose interests could be considered as contradictory (some creating surplus revenue, the others living off the surplus revenue created). In this respect, we should clearly realize that *unproductive wage-earners perform surplus labour in the same way as productive wage-earners* and that the system gains by increasing the surplus labour of all of them.

- Unproductive wage-earners perform surplus labour : as in the case of productive wage-earners, the duration of their working day normally exceeds the working time necessary for the production of their means of consumption. If a steel worker and a civil servant work 8 hours and get the same wage, representing 3 hours of labour (necessary labour), both of them provide 5 hours of surplus labour (the difference is that the steel worker's 5 hours of surplus labour will create surplus revenue, while the civil servant's 3 hours of necessary labour will be paid for by a levy on surplus revenue).

- The system gains by increasing the surplus labour of all of them : increasing the surplus labour of productive wage-earners means increasing the creation of surplus revenue ; increasing the surplus labour of unproductive wage-earners means reducing the levy on the surplus revenue and so increasing the profit available[31].

Though distinct from the point of view of the creation of surplus revenue, productive and unproductive wage-earners do not, however, constitute two opposed classes. All of them share the following features : they *are obliged to sell their labour-power*, they carry out *activities which are indispensable* and they perform *surplus labour* which is profitable to the system[32].

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[31] A wage-earner's surplus labour increases as his labour-time is lengthened and as his wage level decreases. The longer the working time of each unproductive worker, the smaller the number of unproductive workers which need be employed and the smaller the total amount of wages needed to pay them ; this total amount of wages is further reduced as the wage level of each unproductive worker decreases. Now, the smaller the total amount of wages needed to pay unproductive workers, the smaller the levies on the revenue created in the sector of commodity production and thus the smaller the levy on surplus revenue.

[32] Once we grant that the distinction between productive and unproductive labour is not bound up with the question of social classes, we will recognize a capitalist's labour as productive (of value and revenue) since he actually takes part in commodity production (see chap. II, footnote 31, and chap. III, footnote 8). On the issue of social classes, see appendix 12.

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PEDAGOGICAL DEVICES CONCERNING CHAPTER VI

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SUMMARY

1. Unlike capitalist enterprises, independent enterprises do not use wage-earners' labour-power (they rely on self-employment) and do not seek a profit intended for accumulation. Not aiming at profit, *independent* marginal enterprises are able to survive longer than *capitalist* marginal enterprises. The transformation of a non-profitable capitalist enterprise into an independent enterprise (into a workers' collective) is, therefore, a way of ensuring its survival in the short term.

The independent enterprises' ability to survive is further increased insofar as the self-employed producers are content with incomes below the wage level in the economy. In the long run, however, the survival of independent enterprises remains always problematical : either they adapt themselves or are eliminated due to insufficient incomes.

Independent producers facing more efficient or powerful enterprises give up a part of the revenue they create. The revenue thus lost constitutes a further source of profit for capitalists, which is added to the surplus revenue created by the wage-earners in the market sector. The sector of simple commodity production therefore shows contradictory aspects : its production activities give rise to transfers of revenue which increase profit, but they take place outside the circuit of capital. For this reason, its frontier with the capitalist sector can always fluctuate.

2. Wage-earners in public enterprises create surplus revenue, just like wage-earners in capitalist enterprises. Unlike the latter, however, public enterprises are not bound by the need for profit. Since they do not aim at profit, public enterprises can direct their production with a view to meeting social needs more adequately. For the same reason, *public* marginal enterprises can survive longer than *capitalist* ones. The nationalization of a non-profitable enterprise is therefore a way of ensuring its survival in the short term.

The public enterprises' ability to survive is further increased insofar as they can count on government subsidies to make good losses. Subsidizing a public sector in deficit, however, shows contradictory aspects : it ensures the continuation of transfers of surplus revenue from the public sector, but it involves levies on the private sector. In the long term, therefore, the survival of public enterprises showing losses remains problematical : either they adapt themselves or they disappear when the subsidies required appear to be excessive.

Even if it does not require any subsidies, the market public sector shows contradictory aspects : its production activities give rise to transfers of surplus revenue,

but they take place outside the circuit of capital. For this reason, the frontier between the market public sector and the capitalist sector can always fluctuate.

3. The institutional sector carries out two types of activities : it produces collective non-marketed goods and services (which are in principle available free of charge to all people) and carries out transfers of incomes : payment of interest to the holders of government securities, provision of subsidies to enterprises, payment of social allowances (national insurance and social assistance). All these activities are ultimately financed through two types of levies : taxes (for all activities) and social contributions (for national insurance allowances). Like wages, public expenditure (the activities of the institutional sector) shows contradictory aspects : it provides enterprises with various advantages (which basically consist in extended markets and profits) but it involves levies (which result in reducing markets and profits). This contradiction, like the one concerning wages, can be overcome by productivity increases (see chapter VIII).

Like the other non-capitalist sectors (simple commodity production and market public sector), the institutional sector shows another contradiction : it provides enterprises with various advantages, but its activities take place outside the circuit of capital. This contradiction explains why the frontier between the institutional and the capitalist sector can also fluctuate.

The levies required to finance the institutional sector affect both wages and profits : the net wage (after taxes and social contributions) is less than the wage-cost (the price paid by the enterprise for the purchase of labour-power), while net profit (after taxes) is less than the surplus revenue created by the wage-earners.

Wage-cost can be broken down into three components, to which correspond three types of means of consumption. The first part (« privatized wage ») is the net or direct wage, which allows for the purchase of personal means of consumption on a strictly individual basis ; these means of consumption are produced according to the criterion of profit and are accessible to people on unequal terms. The second part (« collectivized wage ») consists of income taxes, through which wage-earners take part in the financing of collective means of consumption provided by institutions ; these means of consumption are in principle produced according to the criterion of social needs and accessible to all on equal terms. The third part (« solidarized wage ») consists of contributions to national insurance, through which wage-earners take part in the financing of national insurance allowances (i.e. the indirect wage) ; the personal means of consumption purchased in this way are produced according to the criterion of profit, but they are accessible on a solidarity basis and on more equal terms than those purchased with the direct wage.

4. The non-professional sphere comprises households and voluntary organizations. In principle, their products rely on labour provided free of charge and are supplied free of charge to the users. They contribute to a variable extent to the individuals' total means of consumption.

Domestic production shows several contradictory aspects for enterprises. The main advantage is that it involves no costs (no wage to pay, no tax deduction), while the disadvantage is threefold : absence of a market (hence a stimulus to promote the purchase of domestic means of production), absence of surplus revenue (hence a stimulus to take over certain activities which can be made profitable), unavailability of labour-power (hence a stimulus to shorten the labour-time devoted to domestic production).

5. Society as a whole combines market and non-market production, waged and non-waged labour, professional and non-professional labour. All activities (whether professional or not) create use-values ; all professional activities (whether market or non-market production) obtain an income ; but only market production creates the total revenue, only market waged production creates the total surplus revenue.

The total revenue is the monetary expression of the new value created by all labour in commodity production ; it is *created* mostly by the wage-earners in enterprises, secondarily by the self-employed and capitalists. The total revenue thus created is *distributed* in various ways, especially in the following ones : the revenue created by the wage-earners breaks down into wages and surplus revenue ; the surplus revenue is distributed among enterprises and branches according - above all - to their degree of mechanization and market power ; levies are made on all incomes to finance the institutional sector ; the latter pays its own wage-earners, passes social allowances to all workers, grants subsidies to enterprises, pays interest to holders of government securities. We can observe the various incomes eventually *obtained* by the different categories of recipients, whereas the *creation* of the aggregate revenue remains an invisible reality.

In a broader sense, productive labour is labour which creates value and revenue, i.e. all labour involved in market production. In a narrower sense, it is labour which creates surplus value and surplus revenue, i.e. all waged labour involved in market production. The distinctions between productive and unproductive labour matter if one wants to analyse the potential for growth of the capitalist system. They do not imply any moral judgement and are not relevant to an analysis of social classes.

CONCEPTS TO ASSIMILATE (see glossary)

Money wage	Productive labour
- collectivized wage	Public expenditure
- direct wage (or net wage or	Public sector contracts
privatized wage)	Real wage
- gross wage	- collective real wage
- indirect wage	- direct real wage
- socialized wage	- indirect real wage
- solidarized wage	- socialized real wage
- wage-cost	- total real wage

EXERCISES (answers at end of book)

A. Basic knowledge

6.1. Show the resemblances and differences between *capitalist*, *independent* and *public* enterprises.

6.2. The two sources of profit are the wage-earners' surplus revenue and the independent producers' « surplus revenue ». Explain :
a) under what conditions independent producers produce « surplus revenue » ;
b) the similarities and differences between this « surplus revenue » and the surplus revenue produced by wage-earners.

6.3. The ability to survive of a *non-capitalist* marginal enterprise is higher than that of a capitalist one in the short term, but it remains problematical in the long term. Explain both statements, considering successively :
a) the case of a marginal *independent* enterprise ;
b) that of a marginal *public* enterprise.

6.4. The activities of the institutional sector :
a) what are they ?
b) how are they financed ?

6.5. What are the contradictory aspects :
a) of the sector of simple commodity production ?
b) of the market public sector ?
c) of the institutional sector ?

6.6.   The components of wages and wage-earners' consumption :
       a) explain figure VI.1 ;
       b) why do the respective shares of the three components (net wage and direct real
       wage ; income tax and collective real wage ; social contributions and indirect real
       wage) matter a great deal ?

6.7.   Explain figure VI.4. on the *creation* and *distribution* of total revenue.

6.8.   Productive and unproductive labour :
       a) explain the two concepts of productive labour ;
       b) explain why the system profits by increasing the surplus labour of both
       productive and unproductive wage-earners.

B. More advanced knowledge

6.9.   Explain the two reasons why, even on a macro-economic level, profit differs from
       the surplus revenue created by the wage-earners.

6.10. Does the private sector profit by measures of state intervention in the economy ?
       Distinguish various types of intervention (public enterprises, public institutions,
       public sector contracts, public subsidies) and show the contradictory aspects of each
       type.

6.11. Explain the contradictory aspects that domestic production shows for enterprises.

C. Applied knowledge

6.12. Show with examples that the same labour can be productive or unproductive.

6.13. Surplus labour and surplus revenue :
       a) do *civil servants* provide surplus labour ? surplus revenue ?
       b) do wage-earners in *public enterprises* provide surplus labour ? surplus revenue ?
       c) do *all* wage-earners in *capitalist enterprises* provide surplus labour and surplus
       revenue ?
       d) do *all self-employed producers* provide « surplus labour » and « surplus
       revenue » ?
       e) do *capitalists* create surplus revenue ?

6.14. Is a desindustrializing region doomed to economic collapse ?

6.15. Is it in the capitalists' interest to defend the income of marginal peasants ?
       Distinguish between agricultural and industrial capitalists.

6.16. How are wage-earners and enterprises affected by the following measures of economic policy ?

a) reducing the employers' contributions to national insurance (the other elements of wages remaining unchanged) ;

b) leaving gross wage and wage-cost unchanged, but reducing the workers' social contributions and income taxes.

CHAPTER VII

BASIC TENDENCIES AND
CONTRADICTIONS OF GROWTH

The object of this chapter is not to sketch out a history of capitalism and divide it up into different phases. It is rather to show some logical consequences arising from three general principles explained in previous chapters, namely : 1. Profit rests on the *surplus labour* provided by the wage-earners employed in commodity production (chapter III, section 1) ; 2. *Profit and accumulation* are the aims of production (chapter III, section 2) ; 3. In order to maximize their individual rates of profit, the enterprises are in constant *competition* with each other (chapter V) and with non-capitalist producers (chapter VI).

The logical consequences arising from these three principles appear in the form of *basic tendencies* : the development of mechanization ; the growing interdependence between the workers employed in the different enterprises, branches and countries ; the growing concentration of capital in the hands of large enterprises and groups ; the expansion of commodity production and waged labour ; the growing contradiction between the search for profit and the satisfaction of social needs. The basic tendencies thus set out only hold good as *general* and *long-term* tendencies. They may appear with *variable intensity* according to countries and periods of time.

Two other issues, which also arise from the same general principles, will be dealt with in specific chapters. Chapter VIII will consider the conflicts around the *rate of surplus value*, which is at the heart of the system. Chapter IX will examine the problem of *crises*, which have affected growth at all times.

1. THE DEVELOPMENT OF MECHANIZATION

One of the most pronounced tendencies lies in the growing mechanization of all production processes. After *describing* the capitalist transformation of production techniques, we will examine the *role* played by mechanization, not only in relations *between enterprises*, but above all in relations *between*

capitalists and wage-earners (§ 1.2.). We will then underline the *contradictory* character of mechanization : while being motivated by the search for profit, it tends to eliminate the very source of profit (§ 1.3.)[1].

1.1. The transformation of production techniques

Capitalism did not change production techniques overnight (and it does not necessarily change them overnight when it enters sectors of pre-capitalist production). Schematically, starting from a typical small-scale production by craftsmen, we can distinguish the following three stages in the transformation of production techniques (see table VII.1.)[2].

1. The first stage is that of *simple co-operation*. Co-operation, for the individual worker is replaced by workers employed collectively : the independent craftsmen, working at home, are brought together in one place (the manufacturing workshop) and under one command (the capitalist's). Simple co-operation, for the members of this collective workforce are simply placed side by side : each one continues to carry out the same craft as before (but now as a wage-earner).

This first stage is not accompanied by any significant change in the means of production : the same simple tools continue to be used. Nor is there any significant change in the production process : there is still no technical division of labour, each worker carries out as before the complete series of operations required to arrive at the finished product. As before, each worker thus controls a variety of different means of labour and makes use of a variety of different skills : each one remains a proper qualified worker.

2. The second stage is that of *complex co-operation :* within the group of workers, we observe an extensive *differentiation of tasks,* a technical division of labour. Each worker no longer carries out, as before, the complete series of

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1   We will use the terms « mechanization » and « technical progress » interchangeably : technical progress is basically expressed by the development of mechanization, by the use of machines (past labour) in place of actual or potential producers (present labour).

2   For a vivid analysis of the transformation of production techniques, see *Capital*, London, Penguin, Volume I, Part 4, chap. XII to XV. The analysis considers industrial production, but it can be extended – with the necessary adaptations – to the services sector : here also we can observe the technical division of labour and its corollaries (fragmented, repetitive, de-skilled labour), the dissociation between routine labour and supervisory labour, the replacement of wage-earners by modern technology, etc.

operations required to arrive at the finished product : the different operations are now split up and each handed over to a specialized group of individuals. Each worker becomes a *« fragmented » worker*, employed in a specialized category of operations : he only develops a particular category of skills and only masters a particular range of tools.

This second stage, while modifying the labour process, does not basically modify the means of labour : the difference from the first stage is that each worker, in order to fulfil the specialized function in which he is employed, only uses a specialized category of tools (and a specialized category of skills).

Table VII.1. : Transformation of production techniques.

	Type of enterprise			
	Craftsman's workshop	*Capitalist enterprise (collective workers employed by a capitalist)*		
	(independent individual worker)	*Manufacture with simple co-operation*	*Manufacture with complex co-operation*	*Large-scale industry*
Technical division of labour	No	No	Yes	Yes
Means of labour used	Simple tools	Simple tools	Simple tools	Machinery
Type of labour and technical relations	Skilled labour controlling all tools	Skilled labour controlling all tools	« Fragmented labour » controlling one tool	« Fragmented labour » subordinated to the machine

3. The third stage is that of large-scale industry. The tools are replaced by a system of machines (in combination and functioning at the same time). From here on, the worker becomes an appendage of the machine, subject to the machine. « In the manufacture [first and second stages], the worker uses the tool ; in the factory [third stage], he serves the machine. In the first case, it is he who sets the means of labour in motion ; in the second, he has only to conform to its motion. In the

manufacture, the workers are members of a living mechanism ; in the factory, they are only the living complements of a lifeless mechanism which exists independently of them »[3].

    This situation deprives the worker of all command over the functioning of the means of production and over the product of his labour. While in the manufacture, the quantity and quality of production depend basically on the efficiency of each worker (on his skill, on his *savoir-faire*), in the factory, they depend basically on the efficiency of the machines (on the scientific progress embodied in them). Compared with the efficiency of the machines, the particular skill of the workers counts for little : subordinated to machines, they are also increasingly de-skilled and interchangeable.

1.2. The twofold role of mechanization

1.2.1. Mechanization and competition

    At the most obvious level, the various stages described above, as well as the subsequent development of mechanization, result from competition. As we saw in chapter V, the utilization of more advanced technology makes it possible to seize a sizeable share of the aggregate surplus revenue at the expense of competitors.

    In actual fact, the innovating enterprises can at one and the same time produce *more* and at *less cost* (the individual unit value of their commodities is lower than the social unit value). They thus increase their rate of profit and potential for accumulation, at the expense of less well-placed competitors.

    These competitors are obliged in their turn to adopt the techniques introduced by the innovating enterprises : if they do not, they will sooner or later be eliminated (see chapter V, 2.3.1., and chapter VI, 1.3.1. and 2.3.1.).

1.2.2. Mechanization and domination

    An essential weapon in capitalist competition, mechanization plays just as basic a role in the collective struggle between capitalists and workers. The technical transformations and development of mechanization are not neutral : they enable the capitalists to strengthen their domination over the wage-earners, both at the level of each enterprise and at the level of the whole economy.

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3   *Capital*, Volume I, Part 4, chap. XV, p. 548.

a) Domination within enterprises

1. Within each enterprise, mechanization *transforms a « formal » domination into a « real » domination*.

Before the introduction of mechanization, we can speak of the capitalists' « *formal* domination ». By this we understand the domination they exercise from the simple fact that they – and not the workers – have control of the *ownership* of the means of production : this enables them to purchase the wage-earners' labour-power and to extract the surplus revenue from it, even though the wage-earners still have control of the functioning of the means of production.

With the development of mechanization, the domination becomes *real*. By this we mean the domination exercised by the capitalists controlling not only the *ownership* but also the *functioning* of the means of production. Now the workers are doubly subordinated : obliged to work for the benefit of the capitalists, they also become instruments of the machine controlled by the latter.

2. The evolution towards real domination is accompanied, within the collective workforce, by a *division between routine workers and executives.* For the growth of enterprises and the development of mechanization mean that capitalists are no longer able to personally control the functioning of the means of production. This control is ensured, in their name, by a minority of workers specialized in the tasks of technical and social supervision : researchers working on the perfection of the new techniques, engineers ensuring the control and fine-tuning of the production process, technicians and foremen responsible for overseeing the workers' discipline and their submission to the rhythm of the machines, directors and managers at the top of the firm. The strengthening of capitalist domination is thus accompanied by a division among the workers : a majority of wage-earners find themselves reduced to tasks of mere execution, to fragmented, repetitive, unskilled jobs ; on the other hand, a minority of wage-earners (the executives or supervisory staff) monopolize the tasks of technical and social supervision[4].

3. Even at the stage of large-scale industry, capitalist domination is not perfect. Routine workers may be unable to follow the pace imposed upon them by

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[4]   The distinction between routine tasks and the work of supervision is more relevant than the distinction between manual and intellectual labour : the most « manual » labour implies the use of intellectual faculties ; and « intellectual » workers may very well be confined to tasks which are merely routine.

the machinery ; they may resent the alienation, the stress or the monotony of their tasks and react by going on strike or practising sabotage or absenteeism. Faced with these circumstances and the resulting slump in productivity, the enterprises tend to adopt two types of strategy.

On the one hand, they make experiments in *job development* and/or *job enrichment :* job development consists in allowing the workers to carry out a relatively complex cycle of operations rather than a fragmented and repetitive task ; job enrichment consists in giving the workers responsibility for tasks of production control, inspection, etc., hitherto reserved to the supervising staff. These experiments and other « quality circles », « management sharing », etc., are mainly meant to attenuate the frustrations of the workers concerned and to increase their level of productivity.

On the other hand, the enterprises try to eliminate workers – and the same goes for part of the supervisory staff – by implementing an increasing *automation* of the production process, namely by the use of robots.

b) Domination on the labour market

The transformation of production techniques and the development of mechanization not only change the very nature of the wage-earners' work and the relations within the enterprise. This qualitative effect is coupled with a quantitative result : technical progress *increases the productivity of present labour, which in turn tends to lessen the demand for labour-power*[5].

The demand for labour-power is the result of two contradictory effects : on the one hand, the increase of total *production* involves an *increase* of employment (employment effect) ; on the other hand, technical progress implies *productivity* growth and as such a *lessening* of employment (redundancy effect). In times of feeble expansion, the redundancy effect outweighs the employment effect, which

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[5]   a) Productivity increases at each of the three stages. The very simple gathering of the workers into the manufacture allows the implementation of an increasing work intensity. At the stage of complex co-operation the technical division of labour contributes to increasing the efficiency of the production process. But it has been the development of mechanization (both the increase in *number* of mechanical means and their improving *efficiency*) that has allowed the most significant productivity gains.

b) It must be observed that there is not *necessarily* a link between technical progress and unemployment. Theoretically speaking, full employment can be maintained by an appropriate reduction of the working time of each wage-earner. But practically speaking, a combination of full employment and labour-time reduction runs against the logic of the system, for this curtails profits and restricts the hold over wage-earners : see further, 4.1.2., and appendix 4, 4.2.3.

results in increasing unemployment. In times of rapid expansion, the employment effect may outweigh the redundancy effect, which causes labour scarcity. This, however, cannot be but a transitory effect : the rise of wages will speed up technical innovation aimed at the replacement of labour by machines ; besides, public authorities will put in action policies whose aim is to broaden the supply of waged labour (see further, 3.2.2.).

Technical progress thus creates a permanent (though variable) pool of unemployed workers. The very existence of this unemployment reserve enhances the capitalists' domination over the wage-earners : it makes the balance of forces more advantageous to capitalists, which enables them to impose more « profitable » working conditions (lower wages, higher work intensity).

1.3. The contradictory nature of mechanization

Technical progress is implemented in order to enhance or to defend the profit rate of the enterprise. At the same time it has the effect of *evicting, from the production process, the very source of profit :* wage-earners, who create surplus revenue, are replaced by machines, which do not create any surplus revenue.

Capitalism faces this contradiction in two complementary ways. On the one hand, the *scale of production is continually extended* : while maintaining a more or less significant level of unemployment, the growth of production provides additional (surplus revenue creating) employment. On the other hand, enterprises seek to *enhance the rate of surplus value* which is imposed upon active wage-earners : by increasing productivity, technical progress contributes as such to the increase of the rate of surplus value (see chapter IV, § 2.1., and chapter VIII, § 1.2.).

If capitalism can develop technical progress while facing its inherent contradiction, it cannot, on the other hand, push technical progress to its limits, i.e. complete automation of all production processes. The latter would entirely free human beings from the obligation to work, but it would also completely stem the flow of surplus revenue. Admittedly, some enterprises (or even some branches or countries) may be able to push automation to its limits and take advantage of surplus revenue transfers from enterprises (or branches or countries) which are not automated) ; but a general (and worldwide) automation of the production processes is not compatible with capitalism[6].

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[6] On the profit of an automated *enterprise*, see chap.V, 1.1.2; on the profit of an automated *branch* and the incompatibility between capitalism and *universal* automation, appendix 10, 10.2.2.a (last paragraph and footnote 25).

2. THE GROWING CONTRADICTION BETWEEN THE SOCIALIZATION OF
   PRODUCTION AND THE CONCENTRATION OF CAPITAL

Capitalism is based on a fundamental class opposition between a mass of wage-earning workers and a minority of capitalist proprietors. The former carry out collectively the production of the goods and services consumed in society, the latter direct and manage this social production according to the logic of profit and accumulation.

This opposition has been aggravated with the further development of the system. On the one hand, the work of the wage-earning producers constitutes a growing and increasingly interdependent network : this is the phenomenon of the *socialization of production* (§ 2.1.). On the other hand, capitalist property is becoming an increasingly private matter insofar as a limited minority controls a growing part of total capital : this is the phenomenon of the *concentration of capital* (§ 2.2.).

2.1. The socialization of production

Production becomes more and more a collective and universal undertaking. On the one hand, production *activities* become an increasingly integrated network : workers are growing more and more interdependent within the framework of each enterprise ; interdependence is also developing between enterprises and branches and as a result between the workers of all those enterprises and branches. On the other hand, production *sites* constitute an increasingly integrated network : there is a growing interdependence between countries and thus between workers all over the world. The socialization of production can thus be defined as the *growing integration or interdependence between workers* within each enterprise and between workers of different enterprises, branches and countries.

2.1.1. Increasing interdependence between production activities

a) Within enterprises : the technical division of labour

Within the craftsman's workshop and the manufacture with simple co-operation, every worker accomplishes all the necessary operations to bring the product to completion (see above, § 1.1.). In both cases the products of labour can

easily be personalized : it remains possible to ascribe each item to a particular producer[7].

With the transition to complex co-operation and to large-scale industry, this product personalization is no longer possible. From that stage the enterprise implements a *technical division of labour*, i.e. a distribution of labour between different categories of specialized and interdependent workers. None of the workers is able to claim the finished product as his own : *the products are the result of integrated labour*, they must be imputed to all the workers collectively.

The technical division of labour is *not a neutral, purely technical phenomenon*. On the one hand, it is implemented in order to increase profits. On the other hand, as described before (1.2.2.a), it reinforces the domination over the « fragmented » workers and introduces an hierarchy between executives and « routine » workers[8].

b) Between branches of production : the division of social labour

Interdependence between production activities extends beyond the framework of each enterprise. It also manifests itself in the fact that the different enterprises and branches are interdependent as to their supplies and their outlets : each of them is integrated within a division of labour covering the whole society. This enlarged division of labour is known as the *division of social production* or *division of social labour*. It can be defined as the distribution of the overall production or the total labour between different specialized and interdependent branches of production which purchase and sell each other their respective commodities[9].

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[7]   Strictly speaking, this imputation of a particular item to a particular producer is only correct if the producer manufactures his own means of production : see further, 2.1.1.b.

[8]   Thus the *technical* division of labour goes hand in hand with a *social* division of labour, i.e. a distribution of the work between socially distinct classes or groups : « executant workers », supervisory staff and capitalists. As to the definition of social classes, see appendix 12. The concept of *social division of labour* should not be confused with the concept of *division of social labour* which is discussed next (2.1.1.b).

[9]   An abstract analysis of the interdependence between branches of production can be found in *Capital*, Book II, within the « reproduction schemes ». These are the ancestors of modern input-output tables. The « reproduction schemes » are explained in appendix 11.

The interdependence between branches increases both downstream (destination of the products) and upstream (origin of the means of production and means of consumption).

- *Downstream,* each branch directly or indirectly supplies a growing number of other branches. Thus the chemical industry, when it appeared as a specific branch of industry, only supplied a small number of industries ; but the areas for the application of its products were progressively enlarged to the point where nowadays it is practically universal. The same increase in outlets can be observed, to different degrees, in almost every branch producing means of production. As to the branches producing means of consumption, they create goods and services for all the workers in all branches of activity.

- *Upstream*, each branch directly or indirectly gets its supplies from an increasing number of other branches. Thus agriculture (which in the beginning produced its own means of production : tools, fertilizers, etc.) resorts progressively to means of production purchased in more and more diversified industries : agricultural machinery, chemicals, electrical energy, oil, etc. Whether they produce means of production or means of consumption, all the branches enlarge their supplies of means of labour and raw materials in the same way. And one can add that the workers of every branch of production get their means of consumption from a growing variety of branches.

Let us consider solely the supply of means of production. Starting with any industrial branch, let us look further back at the chain of supplies : industry X purchases its means of production from industries A, B, C, which in their turn purchase their own means of production from industries L, M, N, and so on... : it then appears that every branch of production resorts, to a variable extent, to work provided in all the sectors of the economy. In that sense no enterprise or branch may call the marketed product *its own :* products are the result of collective labour, not only within each individual enterprise, but also on the level of the society as a whole ; the production of any commodity depends on a variety of producers distributed all over the economy. As growth proceeds, *the production of any commodity becomes a more and more collective activity :* it draws upon an increasing variety of producers in different branches[10].

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10   Two notes to avoid possible ambiguities :
 - The producers referred to include *direct* producers (those who carry out the processing operations within the enterprise or branch considered) as well as *indirect* ones (who participate in the production of the means of production). An automated production process does not rely on any direct producers but requires a number of indirect producers.

The division of social labour is *not a neutral, purely technical phenomenon.* Just like the technical division of labour, it is implemented in order to increase profits : it is developed insofar it enables enterprises to enlarge their markets and/or reduce costs.

2.1.2. Increasing interdependence between countries : the international division of labour

Interdependence between production activities extends beyond the limits of each national territory : the various enterprises and branches depend to a greater or lesser degree, for their supplies and their sales, on suppliers and clients beyond the boundaries of their national territory. Parallel to the division of social labour (between branches), there is an *international division of labour* (between countries). This can be defined as the sharing out of world production between various relatively specialized and interdependent countries, each country exporting to the others those products in which it is relatively specialized[11].

The interdependence between countries increases as growth proceeds. This growing interdependence is expressed by the increasing flow of exports and imports between countries, both of means of production (raw materials, energy, tools and equipment) and means of consumption. This increase in international trade has been stimulated by technical progress and the lowering of costs in the transport industries. Thanks to these advances, geographically distant areas may be considered economically close : enterprises can now sell in the far corners of the continent or worldwide, foreign oil can compete with local coal, domestic fruit has to compete with exotic varieties.

As before, let us start with any industrial branch and follow the chain of supplies of means of production. If we also take into account the sites where the successive means of production are produced, we realize that any commodity

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- The fact that the production of a commodity depends on a growing variety of producers does not mean that the unit value of this commodity increases : indeed the technical transformation of the production process induces greater productivity and thus a decline in the unit value of commodities.

[11] In the technical division of labour, as well as in the division of social production, specialization is *absolute :* every worker remains confined to a well defined task, each branch produces a well defined commodity. In the international division of labour, in contrast, specialization is never more than *relative :* even if it exports just one kind of goods, any country produces by necessity a range of means of consumption and means of production (houses and building materials, health care, local transportation, etc.).

wherever produced is the result of more or less universal labour : every production depends, to a variable extent, on work provided all over the world. As growth proceeds, *the production of any commodity becomes a more and more universal activity :* it is the result of producers distributed among more and more diverse regions.

Like the technical division of labour within the enterprise and the division of social production between industrial branches, the international division of labour is *not altogether neutral*. It is organized above all by the large enterprises and public authorities of the dominant countries, who mould to their own benefit the productive structure of the dominated countries. This conditioning of the productive structure of dominated countries by dominating countries constitutes *economic imperialism*[12].

The international division of labour between dominant and dominated countries has been partly transformed since the sixties. In the *traditional* international division of labour, the dominated countries exported raw materials (mineral and agricultural) to the dominant countries and imported industrial products (consumer goods and equipment). In the *new* international division of labour, some of the dominated countries themselves export various industrial

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[12] The theory of imperialism lies beyond the scope of this book. Nevertheless some remarks may be of interest to illuminate the phenomenon.

a) Economic imperialism is exerted through specifically economic (« peaceful ») means and/or through (more or less violent) political means. The *economic means* par excellence is the free circulation of commodities and capital : free trade in goods and services allows technically advanced countries to ruin the competing production of less advanced countries ; free circulation of capital allows large enterprises of dominant countries to establish themselves directly in the economy of dominated countries. The *political methods* of economic imperialism are extremely diverse : a « colonial treaty » which forbids the local production of those goods which could compete with imports from the home country ; the imposition of free trade in international economic relations (see the role of the World Trade Organization at the present time) ; the establishment of customs tariffs or other protectionist barriers which are in violation of free trade but protect industries within the dominant countries ; the granting of « tied loans » which are only to be used to purchase means of production from the lender ; the granting of « conditional credit » subservient to the implementation of « structural adjustment » (the current role of the International Monetary Fund) ; etc.

b) All the quoted methods are those of *economic* imperialism. The latter is complemented by *political-military* and *cultural* imperialism.

c) The simple division into dominant and dominated countries actually takes the form of an *hierarchical* structure of dominant and dominated countries. This hierarchical structure is changeable : the leadership of Britain has been followed by that of the United States ; once a dominated country, Japan has become a world superpower.

products in exchange for other industrial products : in general they export industrial products with a high input of unskilled labour (steel, tinned food, clothes, spare parts and components for cars and engines, etc.) while the dominant countries keep for themselves the production of more sophisticated goods and services with a high input of skilled labour (machinery, high technology)[13].

2.2. The concentration of capital

While the production of any commodity is more and more a collective and universal activity, the *control over overall production* becomes increasingly a private matter : it *is exercised by a minority of large owners* who control an ever growing part of the total capital under its different forms (money-capital, productive capital, commodity-capital). This is the phenomenon of the concentration of capital[14].

Capital concentration is a necessary product of competition. Every enterprise tends to enlarge, to the detriment of the others, *its own* capital, profits and potential for accumulation. In this competitive struggle, the strongest *eliminate*, *absorb* or *subdue* the feeblest. In these ways total capital becomes more and more concentrated and an oligarchy reinforces its overall control over the worldwide economy.

We will study the concentration of capital in the same manner as the socialization of production in the preceding paragraph : the international aspects will be disregarded in the first stage of the analysis.

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[13] The international division of labour is obviously not limited to the distribution of world production between dominant and dominated countries. It concerns also – and even more – the distribution of production within the group of dominant countries : most international trade takes place between the latter.

[14] Two terminological notes :

a) In *Capital*, the term « concentration » means the simple increase in the size of an enterprise, while the term « centralization » designates the merger of various individual capitals under a unified control. We are using the term « concentration » in its usual meaning, which is the fusion of various capitals under unified control.

b) The terms *«concentration of capital»* and *«concentration of capitalist ownership»* are synonymous, provided the ownership which is referred to is the *real ownership* (i.e. the effective powers of decision-making) rather than the *legal ownership* of the enterprises (real ownership tends to concentrate, while legal ownership can be dispersed among a multitude of shareholders).

2.2.1. Concentration at the level of branches of production

a) Concentration in industry[15]

An essential weapon in industrial competition consists in producing commodities more cheaply than one's competitors, especially by means of technical innovation : the innovating enterprise, which produces at lower cost, is in a position to sell at a lower price and so to increase its scale of production and profit. The results of this price competition are well known : whatever their survival capacity in the short run, the enterprises which are unable to adapt their techniques will, in the long run, go bankrupt and disappear (see chapter V, 2.3.1., and chapter VI, 1.3.1. and 2.3.1.). In the long run, we thus see a process of *concentration by elimination* at work : within each branch, marginal enterprises disappear and a limited number of increasingly larger enterprises monopolize a growing proportion of capital and production (money-capital, means of production and labour-power, produced commodities).

The extension of these large enterprises soon created a financing problem : with the growing importance of mechanization, where to find the funds necessary for launching and developing a big enterprise ? Personal means and profits from previous production cycles were now insufficient. Two methods were used in order to bypass this financial obstacle : the setting up of *joint-stock companies* and *bank loans*. These two formulae allowed the gathering of a multitude of capitals, bigger and smaller ones, and so ensured that the funds required for increasingly larger enterprises were actually available.

Joint-stock companies and bank loans cause a dissociation between the *legal ownership* and the *real ownership* over the enterprise. The formula of *joint-stock companies* disperses the legal ownership, which goes to the whole of the stockholders : each of them participates in this legal ownership in proportion to the number of shares he holds. This dispersion of legal ownership does not remove the exclusivity of real ownership from the capitalist ; it is not even necessary that he hold the majority of the shares of his enterprise : having a controlling minority, which varies from case to case, is sufficient to maintain de

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[15]   The term « industry » is used here for brevity's sake : it actually comprises all the branches of production (industrial, agricultural and of services) with the exclusion of the banking sector alone (which is considered separately below).

facto decision-making power[16]. The introduction of *loans* causes another dissociation between legal and real ownership : the money-lender remains the legal owner of the funds loaned, but it is the borrower who has the power to dispose of them.

The external financing and the profits made stimulate the growth of large enterprises in various complementary directions, each of which reinforces the concentration of capital.

1. *Within their original branch* of operations, large enterprises can use the available money-capital to introduce *new technology*, which will improve their competitiveness (decrease in the unit cost of production) and enlarge their market shares (increasing sales). This tends to accelerate, within each branch, the process of *concentration by elimination* of the marginal enterprises.

In many branches, capital concentration favours the formation of agreements between the surviving big enterprises. Rather than carry on a price competition which could be dangerous for each of them, they may prefer to agree on a common price level profitable to all of them : these prices are fixed at a level higher than would result from free competition and thus increase the average rate of profit of the branch. These agreements between enterprises are called *monopoly agreements* and the prices thus fixed are *monopoly prices*[17].

The monopoly agreements suppress price competition temporarily, but never suppress competition as such. Every enterprise always seeks to maximize its own profit rate and capture its competitors' clients. But the (temporary) relinquishment of price competition leads (in a definitive way) to competition by way of marketing strategies : every enterprise develops *advertising* for its own products, launches new *brands* or new presentations for what remains basically the same product, tries to *differentiate* its products from those produced by competitors and make known the specific qualities (real or supposed) of its own products, etc.

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[16] The control of a company can sometimes be ensured by the possession of a very small minority share of the stock capital (20 % or less). This is so because most of the smaller shareholders do not take part in general meetings, do not participate by proxy, or give bigger shareholders power of attorney to vote on their behalf.

[17] These agreements can be explicit or implicit. An example of an implicit agreement is that of « price leadership **»,** by virtue of which the prices fixed by a dominant enterprise are spontaneously adopted by its immediate competitors. The typical case of an explicit agreement is the *cartel* agreement, which fixes market quotas as well as a sale price that enables the least efficient participant to realize a « normal » profit.

2. Large enterprises can equally use their available money-capital in order to diversify their production, to invest in the production of other commodities : instead of confining themselves to their original branch, they also enter – directly or via the setting up of subsidiaries – *other branches of production*.

The conclusion of monopoly agreements in the original branch stimulates this orientation of money-capital towards new branches. Indeed, in order to keep the benefit of a price and a profit rate higher than would result from free competition, the enterprises have to closely control any increase of production in this branch : it will therefore be better to invest part of their profits in other branches of production.

By thus diversifying their production, large enterprises become *conglomerates*, i.e. corporations which regroup production units belonging to different branches. The development of conglomerates reinforces the concentration of capital at the level of the branches : a restricted number of corporations concentrate an increasing fraction of the total money-capital and productive capital and of total production. To this *concentration by diversification* will be added a reinforcement of concentration by elimination : within the new branches they enter, the large enterprises also adopt more advanced technology and thus speed up the elimination of marginal enterprises.

3. Large enterprises can also grow without initiating technical improvement or new product lines. They can simply devote their money-capital to *buying and absorbing* less powerful enterprises, which will disappear as distinct legal entities. They can also *merge* with equally powerful corporations and establish with them a new legal entity.

These take-overs and mergers lead to the formation of *trusts*. These are of two types : *horizontal* trusts result from the combination of enterprises competing in the same branch (two enterprises in the car industry, for instance), while *vertical* trusts result from the combination of enterprises which are respectively clients and suppliers of one another (for instance, an enterprise producing cars and another producing tyres). Horizontal trusts reinforce capital concentration within the branch considered, vertical trusts reinforce this concentration on the level of the branches considered as a whole. In both cases we will call the phenomenon *concentration by merger-absorption*.

4. Instead of buying and absorbing less powerful enterprises, large enterprises can leave them as independent legal entities but *take control* of them. Taking control of an enterprise means being able to determine its actual

management, it means enjoying *real ownership* of it. In order to gain actual control of an enterprise it is not necessary to acquire the totality of its stock, nor the majority *:* it will suffice, once again, to have a « controlling minority », which varies from case to case.

Large enterprises which thus acquire the control of other enterprises become *holding companies.* Holding companies can be defined as corporations which hold stock in various other legally distinct corporations and which subject the latter to a unified strategy.

The phenomenon of a controlling minority allows certain corporations to direct an extremely large pyramid of enterprises. Suppose that holding company A acquires a controlling minority in ten corporations, which in their turn control a number of others, and so on : this succession of cascading controls puts holding company A in command of an actual industrial pyramid. In the case of holding companies, we will thus speak of *concentration by pyramidal control.*

Table VII.2. : Various forms of capital concentration

Form of concentration	*Method used*	*(Specific concept used here)*
1. by elimination	technical progress and price competition	—
2. by diversification	investment in other branches	(conglomerates)
3. by merger-absorption	merger with – or absorption of – other corporations	(trusts)
4. by pyramidal control	controlling participation in capital of other corporations	(holding companies)
5. by subcontracting	*de facto* domination over subcontractors	—

Note :   These phenomena take place in all sectors (for the financial sector, see 2.2.1.b) as well as on a worldwide scale (see 2.2.2.).

5. Finally, large enterprises can control smaller, legally distinct, enterprises by resorting to *subcontracting* (see chapter V, 2.2.2.). In this case, the large enterprise controls the smaller subcontractors without participating in their stock capital : control relies entirely on a de facto domination, on the fact that the

former can impose its own production standards (technical and quality norms, delivery dates, prices) on the latter. Insofar as the large enterprise imposes its standards, it has de facto the *real ownership* of the smaller subcontracting enterprises. The large enterprise and the various subcontracting enterprises are legally distinct, but the former monopolizes the real ownership of all of them : we will therefore speak of *concentration by subcontracting*[18].

b) Interpenetration of banking capital and industrial capital

Since its very origins, the banking sector has shown the same concentration process as the one which touches all the branches of production : elimination of those banks with bad loans, absorption or merger processes, control of small banks by larger ones[19]. Large banks thus grow to the detriment of smaller ones and concentrate an increasing part of the sector activities : some large banks possess most of the deposits and grant most of the credits.

The links between the banking sector and other branches have been increasing and their interests are more and more interwoven.

From the beginning, banks had a preponderant control of industry. They exercised this control indirectly at first, as they *loaned* money-capital to the enterprises confronted with the development of mechanization. Subsequently, some banks took direct control by transforming themselves into *merchant banks* : these, in the same way as holding companies, take a significant stock in a variety of legally independent enterprises and subject them to a unified strategy. By way of its loans and stock participation, the banking sector played a decisive role in industrial development and in the very process of industrial concentration[20].

A reverse movement has developed more recently : industrial holdings invest part of their profits in banking activities and seek to take control of financial companies. Thus the line between industrial capital and financial capital tends to disappear : both are closely interwoven, without one being preponderant over the other.

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[18] If the large enterprise merely *passes on* part of its own production, the degree of capital concentration remains unchanged. It only grows when the large enterprise uses subcontracting as a way of enlarging the activities which it controls.

[19] Banks are also developing by diversification into the industrial sector (see below).

[20] By penetrating the industrial sector, bank capital became what is known as *finance capital* (to use the term created by Hilferding).

c) The domination of groups

The preceding pages showed the different ways in which the large enterprises grow and the concentration of capital proceeds : introduction of technical progress and elimination of marginal enterprises, diversification (the conglomerate phenomenon), mergers and take-overs (the trust phenomenon), taking control (the holding company phenomenon), subcontracting. These processes concern, to different degrees, all the sectors of activity : industry, agriculture, services, trade, banking. The whole of economic life is finally dominated by a small number of *groups* (conglomerates, trusts, holding companies) expanding their control, be it directly or indirectly, within all the sectors.

2.2.2. Concentration on a worldwide scale

a) The process of international concentration

On a worldwide scale, a supplementary way has opened up for still more growth for the large enterprises and the concentration of capital. Large enterprises can use their money-capital to *diversify their geographical location :* instead of keeping to the initial country, they set up agencies and subsidiaries in foreign countries. They become *multinationals*, i.e. corporations that regroup production units located in different countries. The development of multinationals within a given branch reinforces the worldwide concentration of capital in that sector : the multinationals control an increasing fraction of global capital, employment and production of the branch. In this case, we will speak of *concentration by export of capital*[21].

On the other hand, the various processes of growth and concentration discussed before equally take place on a worldwide scale : elimination of enterprises through *international competition*, formation of *multinational conglomerates* (corporations diversifying both their production lines and their geographical locations), formation of *multinational trusts* (through mergers or

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[21]   a) If the large enterprise only *relocates* part of its production (transferring it from one country to another), the degree of capital concentration remains unchanged. It only grows when the large enterprise establishes subsidiaries in foreign countries in order to *enlarge* the volume of its total production.

b) Whether merely a relocation or an enlargement of production, the export of capital diffuses or reinforces the capitalist system in foreign countries : it is an essential vehicle for its spread all over the world.

absorption of enterprises located in different countries), development of *multinational holding companies* (through taking control of enterprises located in different countries), development of *international subcontracting*.

All these processes are stimulated by technical progress in the field of transport and communications : the sharp reduction of transport costs brings about competition between enterprises located in different continents ; the development of telecommunication systems allows an instant link between management sites and production units scattered throughout the world.

b) Reinforcement of an economic oligarchy

Increasing concentration within every production sector (the banking sector included), development of holding companies and merchant banks extending their control to various production sectors in many countries, interpenetration of industrial and financial capital on a national and international scale, all these simultaneous processes contribute to the formation and reinforcement of an *oligarchy* dominating the whole of the world economy : a small number of capitalists concentrate the real ownership, the power, over an increasing share of money-capital, productive capital and commodity-capital on a worldwide scale.

The worldwide economic oligarchy is not altogether a unified class : it is composed of various competing groups, each of them seeking to increase its own power to the detriment of the others.

The dominant groups on a worldwide scale have domestic « ties » : there are North American, German, Japanese groups, etc. But their activities and sources of profit are spread all over the world : they can therefore come into conflict of interests with their own country as well as with each particular country they operate in. While benefiting from the existence of national states (to receive grants, orders, customs protection, etc.), they liberate themselves from national borders and evade a large part of the control mechanisms of the different states.

Just as the concentration of capital within a branch favours agreements between the large enterprises of the branch, the worldwide concentration of capital gives rise to agreements between groups operating on that scale (research, supply, distribution agreements between North American, European, Japanese groups ; joint-ventures, etc.). But such agreements cannot suppress competition between enterprises or groups.

Given their power, the dominant groups worldwide take a preponderant part in organizing the international division of labour (see above, 2.1.2.b) and in shaping the economic destiny of the planet[22].

3. THE EXPANSION OF PRODUCTION, WAGED LABOUR-POWER AND MARKETS

As we explained in chapter III, the purpose of capitalist production is profit sought for its own sake. The profits obtained are mainly *accumulated* rather than consumed : they are reinvested in additional means of production and labour-power, in order to obtain subsequently even larger profits. So the successive circuits of capital, represented by the formula $M \to C_0 (MP, LP) \to P \to C_1^+ \to M^+$, are repeated on an ever increasing scale. This *expanded reproduction*, this growth, affects the different forms in which capital appears in each circuit : *money-capital* (M at the beginning, M^+ at the end), *productive capital* and *commodity-capital*.

3.1. The generalization of the « realm of the commodity »

The increase of commodity-capital is all the more rapid as the *mechanization* of the production processes increases : the characteristic of mechanized labour is that it can produce more (and at a lower unit value) than simple manual labour, that it can expand the production of commodities at a greater rate than the labour (past and present) required to produce them.

The increase of commodity-capital results as much from the constant *diversification* of capitalist production. Capitalist production continually launches new material goods on the market, it invades the sector of services and spreads to all aspects of social or individual life[23] : capitalist growth coincides with the generalization of the « realm of the commodity ».

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[22] The dominant groups play a preponderant part but not an exclusive one : the decisions of all the producers – and states – play a role in these matters, even if their influence is much less than that of the dominant groups.

[23] Communication, culture, art, sport, leisure, eroticism, spirituality, etc. : everything can be transformed – and is being transformed – into profitable commodity production.

3.2. The creation and expansion of waged labour-power

Growth involves an expansion of productive capital under its two forms, namely means of production *and labour-power*. In theory, enterprises control the production of means of production and can increase it according to the requirements of growth (similarly they can, in theory, ensure the desired increase in the production of means of consumption). But waged labour-power, unlike means of production or consumption, cannot be turned out at will in the factory. Hence the problem : how to ensure an adequate supply of waged labour-power ?

3.2.1. Two irreversible processes

a) The breaking up of non-commodity communities

In Western Europe the formation of the proletariat was the outcome of a long historical process which led to the separation of producers from their means of production or of subsistence[24]. This process sometimes took relatively *peaceful* forms : impoverished or ruined by inflation, the feudal lords dismissed many of their servants. Most often the process took *violent* forms : by usurping the village common, the landlords deprived many peasants of an indispensable part of their resources ; by expelling peasants from their plots of land, they deprived them of their basic means of production and subsistence.

In less developed countries, the break-up of non-commodity communities has been an essential means of expanding the supply of waged labour[25]. The most radical means of achieving this is *by force*. Part of the lands of the community are seized or a number of its members are conscripted for various kinds of forced labour (road and railway construction, work in mines or plantations). Without sufficient land or working hands, the community is no longer able to ensure the subsistence of its members by itself. In order to subsist, they are compelled to sell commodities or to sell their labour-power. The other way of breaking up non-

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[24] This process of proletarianization of producers is one of the aspects of what is called *primitive accumulation*, that is, the formation of the constituent elements of capitalist production. The other aspect is the assembly of money-capital in the hands of a class aiming at increasing it through the purchase of labour-power : most of this initial money-capital stemmed from usury, from trade and from the plunder of gold and silver in Latin America.

[25] One basic feature of a typical non-commodity community (whether an African clan, a Polynesian tribe or an Indian settlement) is essentially its self-sufficiency. The means of production and of consumption necessary to the community are produced within it : its own agricultural and craft activities ensure the production of tools, food, clothing, housing, etc. consumed by its members. In such a system, neither the products of labour nor labour-power itself are commodities.

commodity communities is *to introduce a minimum of commodity relations* which are intended to «snowball». It is possible for example to compel a community to pay a monetary tax or to persuade it to consume or use certain non-traditional products (for example transistor radios or feeding bottles) : in each case, members of the community are forced to earn money, and therefore to sell commodities or labour-power.

b) The elimination of marginal enterprises

The expansion of the supply of waged labour also results from the very development of capitalism. Competition eventually eliminates marginal enterprises, whether capitalist or independent (see above, 1.1.1.). Lacking other resources to ensure their subsistence, the entrepreneurs who are eliminated must work as wage-earners in the enterprises which survive or grow.

The elimination of artisans facing the competition of capitalist enterprises (located in the same country or abroad) has been an important factor in the creation or growth of a wage-earning class in many less developed countries.

3.2.2. Various reversible policies

Various policies can be implemented in order to enhance, if necessary, the supply of waged labour : increase of female labour, lengthening of working life, increase of birthrate and immigrant labour. These policies, however, can be reversed if there is excess supply of labour (as has been the case since the structural crisis of the seventies : see chapter IX, section 3).

a) The increase of female labour

The supply of waged labour can be increased by encouraging women's labour outside the home. Insofar as it is women who actually carry out most domestic production, the increase in their labour outside the home obviously involves a reduction of the working time they devote to it. This reduction of work in the home is achieved in two complementary ways : by *reducing the extent* of domestic production, and by *increasing efficiency* in housekeeping (see chapter VI, 4.2.3.).

b) The lengthening of working life

The supply of waged labour (both male and female labour) can be further increased by affecting people's working life : by advancing the beginning of

professional life (children and youth labour) and /or by deferring the retirement age.

c) The increase in population

The working population and waged labour can also be expanded through policies intended to increase population : on the one hand, through increasing the birth rate of nationals ; on the other hand, through developing migrant labour (both official and clandestine) as a complement to scarce national labour-power.

3.3. The expansion of markets

The growth of productive capital and increasing mechanization have the effect of multiplying the productive capacity of enterprises on a vast scale : the latter deliver a continuously growing supply of means of consumption and means of production. For enterprises to recover the money-capital invested and make profit, this continuously growing supply has to be matched by a demand which increases in a parallel way.

This increase in demand, this expansion of capitalist markets, has been ensured in various complementary ways : some of them raise the demand for means of consumption, others raise that for means of production[26]. All of them have been applied in each country[27].

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[26] Before examining the various factors which have contributed to expanding capitalist markets, let us note that chapter IX will come back to two of them, namely the increase of the wage-earners' purchasing power and the increase in public sector contracts : these are two essential features of growth after World War II (chap. IX, section 2) ; but both show contradictory aspects and have been challenged since the structural crisis of the seventies (chap. IX, section 3).

[27] We disregard here the possible expansion of *external* markets, that is the growth of exports (of means of consumption or means of production). Exports to other *capitalist* countries do not add to the overall markets of the system : if the enterprises of a country A prove successful in exporting to customers of a country B, they obviously enlarge their own markets, but they do so to the detriment of the competing enterprises of country B, which have their markets reduced. Only exports to *non-capitalist* countries (semi-feudal colonies, socialist countries) add to the overall markets of the system : the role of such exports – which was certainly considerable in earlier stages – has become rather marginal at the aggregate level since most international trade takes place between capitalist countries.

3.3.1. The increasing demand for means of consumption by wage-earners

a) The expansion of waged labour-power

We noted above (§ 3.2.) that the expansion of waged labour-power is one of the long-term problems which has to be solved to ensure the growth of total production. The answers given to this problem at the same time contribute to solving the problem of expanding markets for means of consumption : the demand for the latter increases each time there is an increase in the working population actually employed. Thus the increase of female paid labour leads women to *purchase* a whole range of goods and services ; similarly, immigrant workers become *purchasers* of commodities. The expansion of waged labour therefore provides enterprises with a twofold advantage : it simultaneously expands the sources of surplus revenue and the markets for the commodities produced.

b) The increase of the wage-earners' purchasing power

The expansion of waged labour is not sufficient to provide the markets required by the growth of production. For the continuous growth of mechanization is accompanied by an accelerated expansion of the *output per worker* and of total production[28] ; this increased supply can only be sold if there is a parallel increase in *consumption per worker*. In other words : the growing flow of means of consumption produced in the enterprises can only be sold if the wage-earners' individual purchasing power (their real wage, both direct and indirect) grows in parallel ; with mass production there must be corresponding mass consumption.

The majority of commodities, taken individually, do not enter into mass consumption overnight. For every new commodity (cars, electric household appliances, television sets, foreign travel), the classic scenario is rather as follows. In the first stage, the product is manufactured in a relatively limited quantity and on a «trial» basis ; its value and price are relatively high and its consumption is reserved for a minority with high incomes. The second stage is where the product, technologically perfected, is then mass-produced ; its value and price have fallen and its consumption spreads to larger and larger sections of the population.

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[28] The output *per worker* necessarily increases as a result of technical progress. On the other hand, *total* production need not necessarily increase, or not necessarily in the same proportion. For large increases in production per head can – at least in principle – result in important reductions in the length of labour-time (maintaining both production and employment constant). But this runs counter to the logic of the system : see below, 4.1.2., as well as appendix 4, 4.2.3.

This spread of the new product, made possible by the fall in value and price and by the rise in purchasing power, is fostered in various ways.

Mass consumption is fostered first by *advertising*, which, as we all know, becomes more and more omnipresent and intrusive. Advertising actually plays a threefold role in capitalism. It is first a means of competition between the enterprises operating within each branch of production : each firm intensifies the advertising of its own products, thereby seeking to win over the customers of rival enterprises producing similar products. In the second place, advertising can constitute a way of raising obstacles to the entry of new competitors into the branch and thus a means of defending the market power of the enterprises already established : the more money the latter invest in advertising, the higher the «cost of entry» for outsiders and the harder it will be for them to seize a sufficient share of the market[29]. In the third place – from a macro-economic viewpoint – advertising is at the same time an essential means of stimulating the mass consumption which is necessary for the growth of the whole system.

Mass consumption is also stimulated by the « *demonstration effect* » (« keeping up with the Joneses »). We mean by this that the consumption of the higher income groups of the population appears spontaneously (and is so presented by advertising) as a « consumption model » for the masses. Because of this « demonstration effect », the maintenance of a *pyramid of unequal incomes* plays an entirely functional role : the privileges of consumption enjoyed by the minorities at the top of the pyramid have the effect of fuelling the desire and demand of increasingly wider layers, lower and lower down the pyramid[30].

Mass consumption is finally stimulated by the development of *consumer credit*. The latter enables people to make their purchases earlier, which makes it possible for enterprises to more promptly recover money-capital laid out.

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[29] Advertising is of particular importance in the branches in which price competition is prohibited (prices being *fixed* by a public authority or by an agreement between producers) as well as in the branches in which the *technical* investments required are low (which makes the entry of outsiders easier).

[30] This downward spread of a consumption model is a continually repeated process : yesterday's privilege (the private car for example) is today enjoyed by (nearly) everyone, but higher income groups always have access to new privileges (the second house or the second car, the yacht or safari) which a growing number of consumers are anxious to copy. Let us also make it clear that if differences in incomes have the *effect* of stimulating consumer demand, *this does not explain them :* differences in incomes arise essentially from differences in the balance of power among the different social groups.

Like all the tendencies described in this chapter, the increase of the wage-earners' purchasing power and mass consumption only constitute *general* and *long-term* phenomena. Purchasing power may very well stagnate or diminish in certain circumstances or during certain periods : such has been the case since the early eighties, when restrictive wage policies were introduced to try to overcome the crisis (chapter IX, § 3.1.). And purchasing power may very well increase on average, while stagnating or diminishing for certain categories of wage-earners : this is particularly so for workers doomed to long-term unemployment. On the other hand, the increase in real wages and mass consumption have only benefited the population in *advanced countries* (as well as the privileged minorities in third-world countries) : on a world scale, growth has been accompanied by an impoverishment of the masses (below, 4.1.2.) ; and the misery of the masses today limits the expansion of markets.

c) The rapid displacement of consumer goods

Enterprises swell demand artificially by deliberately limiting the life-cycle (physical or social) of their commodities.

They limit the *physical life-cycle* of their commodities by downgrading the quality and strength of the materials turned out : many durable consumer goods (cars, electric household appliances, shoes, etc.) are designed and made to wear out fairly quickly, which compels users to repeat their purchases at fairly frequent intervals. Enterprises can also limit the availability of spare parts : the lack of spare parts most often rules out the possibility of repairing the commodities, thus compelling customers to renew their purchases.

Enterprises limit the *social life-cycle* of their commodities by imposing continual changes of fashion. This holds true not only for clothes, but also for many durable consumer goods (see for example the unceasing changes of models imposed by car manufacturers).

The rapid displacement of consumer goods artificially swells markets and production. At the same time, however, it increases the ecological problems brought about by growth (see below, § 4.2.) : upstream, waste of raw materials and energy ; downstream, multiplication of refuse and pollution.

3.3.2. *The increasing demand for means of production by enterprises and the state*

We have just seen that the demand for *means of consumption* is expanded by the increase in the number of wage-earners, by the growth of their individual

purchasing power and by the rapid displacement of consumer goods. These circumstances contribute to expanding markets for enterprises which produce *means of production :* in order to expand their supply, the enterprises producing means of consumption must of necessity increase their purchases of machines and materials.

Apart from being indirectly stimulated in that way, the demand for means of production is directly stimulated by two other phenomena : the obsolescence of equipment and public sector contracts.

a) The increasing obsolescence of equipment

The obsolescence of equipment can be defined as the technological ageing of machines, in contrast to their physical wearing out. It refers to the situation where equipment, which has been installed and is still capable of functioning, is overtaken by new equipment, technologically more advanced, which can be produced and/or used at lower cost. (In figure V.2., the equipment used by enterprises 2 and 3 is obsolete : the technique used by enterprise 1 enables it to produce at lower cost).

Obsolescence is due to the competition prevailing both between the producers of equipment and between the users of equipment : in branches which produce equipment, each enterprise seeks to extend its market by launching new and improved machines ; and in all the branches – producing either means of production or means of consumption – enterprises compete with each other through the introduction of new and improved equipment. Both the supply of machines and the demand for them are therefore constantly renewed, and equipment necessarily becomes obsolete. And the stronger the competition, the more rapid the obsolescence of equipment : a machine which is capable of functioning for decades may become obsolete a few months after being installed...

The scrapping of obsolete equipment and its replacement by up-to-date equipment imply increased markets to the benefit of the industrial sectors which produce the new means of production. On the other hand, just like the displacement of consumer goods, the obsolescence of equipment contributes to worsening the ecological problems of capitalist growth.

Obsolescence explains the sustained interest of enterprises in operating their means of production round the clock (the system of continuous production or of three 8-hour shifts). In fact, these enterprises see a number of advantages in this system : in utilizing their productive capacity more fully, they reduce the costs of production per unit ; in having three shifts working a day, they treble the daily flow of surplus value ; and in wearing out the machines three times faster, they

can replace them all the more quickly by better machines which will improve their competitive position on the market.

b) The growth of public sector contracts

Public sector contracts were defined earlier (chapter VI, footnote 15) as the purchases of commodities by the institutional sector. Most of these purchases bear on means of production and are made by the state (or other public authorities) : the latter orders roads, armaments, buildings, office equipment, etc.

Public sector contracts facilitate the profitable investment of capital for the enterprises which produce the required means of production. These enterprises enjoy both a secure *market* and a guaranteed *rate of profit :* in fact, government and enterprises come to agreements on prices which guarantee the latter a rate of profit equal to or higher than the average.

But the profits thus obtained have now to be accumulated (that is, reinvested in order to obtain further profits) : hence the pressure for government contracts not only to be kept up but to be renewed on an ever expanding scale.

This explains the continual increase in the number of public sector contracts, which are designed to provide enterprises with an increasingly essential market. This also explains the shift in liberal ideology regarding measures of state intervention, which are presented as «regulators of economic activity»[31].

Public sector contracts, however, just like wages, show contradictory aspects : they enlarge markets, but they are financed through deductions from wages and profits. This second aspect has often proved decisive since the eighties : the structural crisis has dictated policies which restrict public expenditure in general ; at the same time, liberal ideology has again recommended that the state withdraw from the economy.

4. THE CONTRADICTION BETWEEN THE SEARCH FOR PRIVATE PROFIT AND THE SATISFACTION OF SOCIAL NEEDS

Capitalist growth shows a contradictory balance. On the one hand, competition and the search for profit have induced technical progress and productivity gains as never before in human history ; and these advances have

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[31] Public sector contracts contribute to solving problems of growth, not only in the long term (profitable investment of a growing quantity of capital), but also in the short term (anti-cyclical policy against crises of overproduction : see chap. IX, 2.2.1.b).

allowed unequalled material well-being in the more advanced countries. On the other hand, the search for private profit is in conflict with the satisfaction of social needs and is linked to a multitude of negative phenomena affecting human beings as well as nature. Without developing a systematic analysis, some significant facts can be mentioned.

4.1. The human costs of growth

Man constitutes at the same time the fundamental *productive force* and the ultimate *end* of production : all production rests ultimately on human labour and aims ultimately – at least in principle – at satisfying human needs (chapter I, § 1.3.). Growth, however, assaults man considered both as a productive force and as the ultimate end of that production[32].

4.1.1. Attacks on man's productive power

Unemployment is the steadfast companion of growth and expresses itself with more strength during times of crisis (see chapter IX). Unemployment signifies that part of the available labour-power is overabundant for the reproduction of capital and profit. In theory, this overabundant labour-power could be used for the development of socially useful production. But the logic of profit overpowers that of social needs, and thus unused labour-power is left to drift and deteriorate.

Work in enterprises also attacks the productive powers of man. This is shown clearly in the number of *industrial injuries* and *occupational diseases* (stress, among others). The requirements of profit supersede those of security and health, and thus workers are spoiled or wrecked, temporarily or permanently.

Moreover, in industry as well as in the services sector, the transformation of production techniques creates a *dissociation between routine workers and executives* (chapter VII, 1.2.2.a). This affects the productive powers of human labour in a negative way. On the one hand, the majority of wage-earners are confined to repetitive and fragmented tasks : their capacities to take initiative and to innovate are crushed. On the other hand, the supervisory staff, who monopolize

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[32] For the purpose of the statement, we will distinguish between the attacks on man as a productive force and as the purpose of production. Of course there are a number of connections between both aspects : for instance, industrial injuries and unemployment concern the worker's productive power directly, but they also affect the possibilities of his total realization as a human being ; conversely, illiteracy and malnourishment are direct attacks on human dignity but also affect the worker's productive power.

initiative and innovation, do not have the practical knowledge of the production processes they supervise. In both cases, possible productivity gains are annihilated.

4.1.2. Attacks on human development

On a planetary scale, growth has been synonymous with the *« development of underdevelopment »* for most of the world's population. The extension of capitalism caused the destruction of traditional ways of life and the impoverishment of the populations concerned. Currently, even while scientific and technical progress make it possible in theory to meet basic needs all over the world, half of humanity lives in quite inhumane conditions : malnourishment, illiteracy, deplorable sanitary conditions, etc.

In advanced countries, the growth of productivity enhances *the increase in consumption rather than the development of leisure time*. In theory, the growth of productivity could give rise to a moderate increase in production and a substantial decrease in working time, the latter ensuring full employment and the development of free time for all individuals[33]. But that evolution goes against the prevailing logic : slowing down production means thwarting the expanded

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[33] The following equation allows us to « visualize » the argument in this paragraph :

$$\text{productivity} = \frac{\text{quantity produced}}{\text{quantity of labour}} = \frac{\text{production}}{\text{employment} \times \text{labour - time}}$$

According to *capitalist logic*, the growth of productivity results in both an increase of the numerator and a decrease of the denominator. The increase in production is an objective in itself (« growth for the sake of growth »), both for each enterprise and for the system as a whole (see chap. III, 2.2.2., and chap. VII, § 3.1.) ; this leads to the growth of mass consumption, which is perpetually and artificially renewed (see chap. VII, 3.3.1.b and c). As to the decrease of the denominator, it is obtained through reducing employment rather than labour-time : this enables each particular enterprise to reduce its production costs ; on the macro-economic level, such evolution results in dividing the working class (integrated workers versus unemployed), stabilizing the rate of surplus value (through a stable labour-time) and reinforcing the workers' alienation (for lack of free time and due to their subjection to the requirements of mass consumption).

According to an *alternative logic*, the growth of productivity can give rise to completely different evolutions. The first change refers to the denominator : it consists in reducing the normal labour-time, so as to increase employment and restore full employment (see chap. IX, 3.2.1.b). The second change refers to the numerator : it consists in checking production (in countries with a sufficient level of development), which makes it possible to enhance the reduction in labour-time for all workers. These alternative « translations » of productivity gains would bring about opposite results : greater cohesion of the working class, lesser exploitation, lesser workers' alienation.

reproduction of capital and profits ; reducing working time means lessening the rate of surplus value and the rate of profit ; ensuring full employment and developing free time means diminishing the hold over the wage-earner and increasing the latter's sphere of freedom. Instead the system drags the wage-earner along an alienating spiral of imposed and perpetually renewed needs : in this way, it standardizes the individual, it thwarts the development of diversified personalities, it removes people from an active and creative participation in economic, social and political life. Moreover, the system excludes a significant fraction of the population in advanced countries (the « Fourth World ») and reduces it to inhumane living conditions, analogous to those of the masses in underdeveloped countries.

Other significant attacks on the development of mankind are the production of means of destruction and the multiplication of wars. All over the world, the search for profit stimulates the manufacture and sale and purchase of means of production and means of consumption which are in fact *means of destruction*, real or potential, for the individual as well as for all humanity : armaments, drugs, nuclear power. And if *wars* line the history of mankind, capitalism enhances their causes and effects : indeed, armed conflicts are the normal outlet for the armament industries ; and the « progress » of the latter – quantitatively and qualitatively speaking – adds to the devastating effects of the former.

4.2. The ecological costs of growth

Nature supplies production with the essential raw materials : as such she is, together with human labour-power, one of the two fundamental productive forces (chapter I, § 1.3.). On the other hand, nature supplies humanity with an « environment », with daily « surroundings » : as such she can be taken as an essential means of consumption for individuals. Here again, growth assaults this productive power as well as the environment.

4.2.1. Attacks on nature's productive power

These attacks are both of a quantitative and a qualitative order. From the quantitative viewpoint, numerous natural resources are exhausted, some are disappearing : increasing scarcity of non-renewable mineral and energy resources, quickening deforestation and desertification of whole areas, disappearance of various animal and vegetal species (reduction of biodiversity). Qualitative degradation is also well known : thus, intensive monoculture depletes soil fertility, while chemical emissions pollute the air, the soil, the rivers and the seas.

Most of these attacks are directly or indirectly linked to the following characteristics : 1. Enterprises aim at profit and *overlook the social costs* of their decisions : thus big corporations benefit from overexploiting tropical forests and do not care about damage to biodiversity and climatic conditions ; chemical fertilizers, pesticides and insecticides are produced and used with a view to maximizing profit and without taking account of ecological effects in the long run. 2. The model of *maximum consumption* imposed in advanced countries (and shared by a minority in underdeveloped countries) puts considerable pressure on raw materials and the energy resources of the planet. 3. *Poverty* in less developed countries, as a consequence of capitalist development on a planetary scale, induces other attacks on nature's productive powers : whenever no other fuel is available, deforestation remains the only source of fuel for heating and cooking ; without the land that has been monopolized by big owners, peasants are driven to forest clearing in order to cultivate weakened and swiftly degrading soils[34].

4.2.2. Attacks on the environment

The devastation of towns by real estate promoters, the invasion of landscape by roads and cars, air and water pollution, acid rain attacking forests and historic buildings, the heaping up of toxic waste (nuclear garbage included), the destruction by chlorine of the ozone layer which protects man against the negative effects of the sun's rays, the « greenhouse effect » leading to the rise of the earth's average temperature and to major climatological disruption, etc. : whether immediately perceived or not, they are assaults or threats upon the quality of life, health, and even upon the very survival of humanity.

The fundamental reasons for these negative developments are to be found in the same characteristics of growth : the search for private profit and ignorance of the social costs, extravagant consumption habits by a minority of the planet's inhabitants and poverty for the largest part of them[35].

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[34] The *demographic thrust*, like poverty, puts pressure upon nature's resources. But the demographic thrust is itself a consequence – and not a cause – of general poverty.

[35] One example among others. The greenhouse effect is due to CO_2 emissions resulting from fossil fuel combustion (oil, coal, gas) : the industrialized countries and their modes of production and consumption are responsible for the largest part of those emissions. The part for which the less developed countries are responsible remains essentially due to massive deforestation and wood combustion : these are explained partly by the search for profit by big enterprises and partly by the poverty conditions in which most people live.

PEDAGOGICAL DEVICES CONCERNING CHAPTER VII

SUMMARY

1. Capitalism transformed the production process through the technical division of labour and the introduction of machines. These developments, as well as the subsequent progress of mechanization, are due to two factors. On the one hand, they result from competition between enterprises : innovating enterprises produce more and at less cost ; competitors must imitate them in order to survive. On the other hand, they make it possible to strengthen the domination over the wage-earners, both within each enterprise and on the labour market. Within each enterprise, mechanization allows capitalists to exercise a « real » domination, in that they control the very functioning of the means of production (personally or through executives). On the labour market, mechanization maintains a permanent (though variable) pool of unemployed workers.

Mechanization shows contradictory aspects : it is implemented in order to enhance or defend the profit rate, but it has the effect of suppressing surplus revenue creating employment. This contradiction is faced in two ways : through increasing total production (which involves additional employment) and/or through raising the rate of surplus value (which involves more surplus revenue being created by each active wage-earner).

2. Capitalist growth is characterized by a growing contradiction between the socialization of production (increasing interdependence between all producers) and the concentration of capital (increasing control by a minority of capitalists).

Interdependence between workers develops within the framework of each enterprise, as well as between branches and countries : in each enterprise, the *technical division of labour* specializes the producers within a collective workforce ; on the level of the whole economy, the *division of social production* specializes the various branches and makes them mutually dependent as to their supplies and outlets ; on a worldwide scale, the *international division of labour* relatively specializes the various countries and makes them mutually dependent as to their imports and exports. As growth proceeds, the various branches and countries become increasingly interdependent : the production of any commodity becomes a more and more collective and universal activity, for it is the result of a variety of different producers who are distributed in an increasing number of branches and countries.

The technical division of labour, the division of social production and the international division of labour are not neutral phenomena. They are organized with a twofold aim in view : on the one hand, in order to increase profit ; on the other hand, to

strengthen capitalist domination through hierarchizing the producers (executives/routine workers) and countries (dominant/dominated).

Whereas the production of any commodity is an increasingly collective and universal activity, control over total production becomes an increasingly private matter : a small minority concentrates the real ownership over a growing part of total capital (money, means of production and labour-power, commodities).

This concentration of capital is due to competition between enterprises, each one seeking to extend its profit and accumulation. It takes multiple forms : elimination of marginal enterprises, sectorial diversification of production (the conglomerate phenomenon), mergers or take-overs (the trust phenomenon), controlling participation in the stock capital of legally distinct corporations (the holding company phenomenon), de facto domination over subcontracting enterprises. These processes take place in all sectors of activity, both in the industrial sector (in the broadest sense) and in the banking sector, which are closely interwoven. The same processes also take place on a worldwide scale : elimination through international competition, geographical diversification of production (the multinational enterprises phenomenon), geographical and sectorial diversification (multinational conglomerates), formation of multinational trusts and holding companies, development of international subcontracting.

All these simultaneous processes are stimulated by technical progress in the field of transport and communications. They contribute to the reinforcement of an oligarchy dominating the whole of the world economy and evading a large part of the control mechanisms of the different states.

3. Expanded reproduction of capital pushes enterprises into invading all sectors of activity, into generalizing the « realm of the commodity ». It involves both an adequate supply of waged labour-power (to produce an increasing output) and an extension of markets (to sell this growing production).

In Europe and in many dominated countries, the breaking up of precapitalist communities – through violent or peaceful means – gave rise to the formation of a proletariat. Such breaking up of precapitalist communities is an irreversible process, just like the elimination of marginal enterprises. Various policies can be implemented in order to extend the supply of labour-power : increase of female labour, lengthening of working life, increase of birthrate and immigrant labour. These policies can be reversed if there is excess supply of labour.

The expansion of waged labour (female labour and immigrant labour among others) contributes by itself to directly expanding the demand for means of consumption. But the development of mechanization and the resulting mass production require the development of mass consumption. In the long term, the latter has been made possible by increasing the

wage-earners' individual purchasing power, combined with various types of demand stimulation (advertising, demonstration effect, consumer credit). Enterprises can further increase the demand for means of consumption by deliberately limiting the physical life-cycle of commodities (planned wearing out) or their social life-cycle (changes of fashion).

The expansion of the demand for means of consumption contributes by itself to indirectly expanding the demand for means of consumption. The latter is directly stimulated by the obsolescence of equipment (which is all the more rapid as competition is stronger) and by the growth of public sector contracts (which nevertheless show, just like wages, contradictory aspects for enterprises).

4. Since it is spurred by the search for profit rather than the satisfaction of social needs, growth assaults the productive power of man (unemployment, industrial injuries and occupational diseases, dissociation between routine workers and executives) as well as development of the human personality (increase in consumption rather than in leisure time, inhumane living conditions in the « third » and « fourth » world, manufacture and sale of means of destruction). For basically the same reason, growth assaults the productive power of nature (both quantitatively and qualitatively) as well as the environment.

CONCEPTS TO ASSIMILATE (see glossary)

Concentration of capital	Obsolescence
Division of social labour	Real domination
(or division of social production)	Social division of labour
Formal domination	Socialization of production
International division of labour	Technical division of labour

EXERCISES (answers at end of book)

A. Basic knowledge

7.1.   The transformation of production techniques :
        a) explain table VII.1. ;
        b) explain why these technical changes strengthen domination over the wage-earners both within the enterprises and on the labour market.

7.2.   The contradictory nature of mechanization :
        a) what is the contradiction ?
        b) how can it be solved ?

7.3. The socialization of production :
a) what does it mean ?
b) how does it proceed ? (what forms does it take ?)
c) is it neutral ?

7.4. The concentration of capital :
a) what does it mean ?
b) how does it proceed ? (what forms does it take ?)
c) what are its causes and consequences ?

7.5. Show the importance of the distinction between legal ownership and real ownership for analysing the concentration of capital.

7.6. By what means has the supply of waged labour-power been created or extended in order to meet the requirements of growth ?

7.7. By what means has the demand for means of consumption been extended in order to meet the requirements of growth ?

7.8. Explain the threefold role of advertising in present-day economy.

7.9. By what means has the demand for means of production been extended in order to meet the requirements of growth ?

7.10. « Growth relies on two basic productive forces (human labour-power and nature) but affects each of them negatively. » Explain these two statements.

7.11. Using the equation : productivity = production/(employment × labour-time), explain how productivity gains are expressed under capitalist logic and how they could be expressed under an alternative logic.

B. More advanced knowledge

7.12. The dissociation between routine work and work of supervision :
a) what is meant by this dissociation ? (does it coincide with the distinction between manual labour and intellectual labour ?)
b) what are its effects on labour productivity (positive and negative effects) ?

7.13. Subcontracting and the creation of subsidiaries abroad may – or may not – increase the degree of concentration of capital : explain.

7.14. The displacement of consumer goods and the obsolescence of equipment :
a) what is meant by these terms ?
b) what are the causes and consequences of these phenomena ?

7.15. The system of continuous production : what kind of advantages do enterprises derive from utilizing equipment 7 days a week and 24 hours a day ?

C. Applied knowledge

7.16. The dissociation between routine work and work of supervision : what are the tendencies in your enterprise or sector ? (more or less dissociation ? how ? why ?)

7.17. The socialization of production : starting with one concrete commodity or another (for instance, the commodity produced in your enterprise or any current consumer good), describe – or at least imagine – the sectorial and geographical chain of supplies of means of production (means of labour and objects of labour) ; realize that the commodity considered is in actual fact the product of an eminently collective and universal labour.

7.18. The concentration of capital : in daily newspapers or journals, point out present-day examples of capital concentration under its variousguises :
- elimination of marginal competitors ;
- sectorial diversification ;
- merger or take-over ;
- taking control of other enterprises ;
- subcontracting ;
- setting up of subsidiaries abroad.

7.19. The generalization of the « realm of the commodity » :
a) illustrate this tendency with present-day examples ;
b) in the examples chosen, see whether commodity production develops under a capitalist or non-capitalist form ;
c) in the examples chosen, how can you explain the extension of market production ?

7.20. The displacement of consumer goods and the obsolescence of equipment : illustrate these phenomena with present-day examples.

7.21. The system of continuous production : what are the tendencies in your enterprise or sector of production ?

7.22. The human and ecological costs of growth :
a) to what problem(s) are you particularly sensitive ?
b) what are the immediate and more remote causes of the problem(s) considered ?

CHAPTER VIII

CONFLICT AND COMPROMISE
OVER THE RATE OF SURPLUS VALUE

Let us recall the formula of the rate of surplus value developed in chapter IV, § 2.1. (LP = labour-power, MC = means of consumption) :

$$s' = \frac{\text{present labour}}{\text{necessary labour}} - 1 = \frac{\text{present labour}}{\text{value of LP}} - 1$$

$$s' = \frac{\text{present labour}}{\text{real wage} \times \text{value per MC}} - 1$$

Conflicts over the rate of surplus value concern the *length of the working time* (present labour) and the magnitude of the *real wage*. These are two very sensitive variables, for they immediately affect the wage-earners' working and living conditions[1].

Conflicts do not directly concern the unit value of the means of consumption, which depends mainly on the pace of mechanization and *technical progress*. This does not mean that technical progress is neutral : it contributes not only to increasing the rate of surplus value, but also to strengthening domination over the wage-earners (see chapter VII, 1.2.2.).

In this chapter, we first examine the two main ways in which the rate of surplus value can be increased (section 1). Next we shall emphasize that an increase in the rate of surplus value can very well be accompanied by a rise in the workers' real wage, as well as by an increase in taxation and public expenditure (section 2). We shall finally consider the effect of the internationalization of capital on the rate of surplus value on a world level (section 3).

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[1]   In other words, the length of the working time and the real wage affect both the degree of *economic* exploitation of the wage-earners (the rate of surplus value) and their degree of *physical* exploitation. On the distinction between the two types of exploitation, see chap. IV, end of § 1.1.

1. METHODS OF INCREASING THE RATE OF SURPLUS VALUE

The rate of surplus value can be increased either through increasing present labour (§ 1.1.) or through reducing necessary labour (§ 1.2.)[2]. The first method is usually called « production of absolute surplus value » ; the second one, « production of relative surplus value »[3].

1.1. Lengthening labour-time

The prolongation of labour-time – the money wage being kept constant or increasing proportionately less than labour-time – is the most direct means of increasing the rate of surplus value. Lengthening labour-time has the effect of increasing the value and revenue created by the wage-earner ; keeping the wage constant (or increasing it proportionately less than labour-time) results in increasing the amount of surplus revenue and the rate of surplus value.

The situation is illustrated in figure VIII.1. (where E = $10 per hour). The data at t_0 are as follows : the daily labour-time is 8h ; the revenue created ($80) gives rise to a wage of $50 and a surplus revenue of $30, so that present labour breaks down into 5h of necessary labour (equal to the value of the means of consumption purchased) and 3h of surplus labour ; the rate of surplus value or surplus labour is thus equal to 60 %. At t_1, we assume that the wage is still $50, while the working day increases to 10h : in these circumstances, surplus revenue now amounts to $50, surplus labour to 5h, and the rate of surplus value is equal to 100 %.

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2   In a more general sense, the lengthening of labour-time and the reduction of necessary labour constitute two ways of increasing the rate of *surplus labour*. The latter applies to both productive and unproductive wage-earners. The analyses which follow refer to the rate of surplus value, i.e. the rate of surplus labour of *productive* wage-earners ; if we disregard the references to the creation of (surplus) value and (surplus) revenue, they apply equally to the increase of the rate of surplus labour of *unproductive* wage-earners.

[3]   These expressions are not without ambiguity, for they suggest that there may be two *kinds* of surplus value (absolute and relative). In fact, the first expression should be understood in the sense of an « *absolute method of increasing* the production of surplus value per worker » and the second one in the sense of a « *relative method of increasing* the production of surplus value per worker ».

Figure VIII.1. : The « production of absolute surplus value »

	wage = $50	surplus revenue = $30	
t_0			s' = 60 %
	necessary labour = 5h	surplus labour = 3h	
	wage = $50	surplus revenue = $50	
t_1			s' = 100 %
	necessary labour = 5h	surplus labour = 5h	
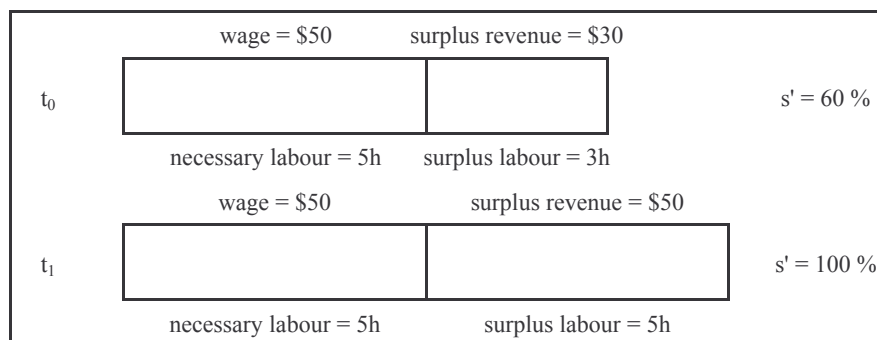
This first method of increasing the rate of surplus value was used extensively in the early stages of capitalism : labour-time was systematically increased, up to 12 or 14, even to 16 hours a day ! But this method came up against physical barriers (a minimum of time required to ensure the workers' rest and recovery) and social barriers (the resistance of the working-class and its struggle for the statutory limitation of the working day).

With the further spread and transformation of capitalism, the significance of this first method became relatively less important. We should note, however, that it still applies in many countries throughout the world. It also enables us to understand the resistance of employers, today as in the past, to the reduction of labour-time : reducing labour-time (while paying the same wage) means reducing surplus labour, consequently lowering the rate of surplus value and the rate of profit. This resistance on the part of employers therefore indirectly confirms that profit is based on the wage-earners' surplus labour [4].

1.2. Reducing necessary labour

The second method of increasing the rate of surplus value operates through the reduction of necessary labour. Since necessary labour is equal to the value of the means of consumption which the wage-earner purchases, the second method

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[4] Most Marxist authors consider that an increase in the *intensity* of labour has the same effect as an increase in labour-*time*. They consider that in both cases there is an increase in the quantity of value produced and, therefore, a « production of absolute surplus value ». For a statement and a criticism of this traditional viewpoint, see appendix 7.

therefore involves a reduction of the value of these means of consumption (a reduction in the « value of labour-power »).

Let us assume that the daily labour-time is 8h. If the value of labour-power at t_0 is 5h, the surplus labour is 3h, and the rate of surplus value = 60 %. If the value of the means of consumption falls to 4h at t_1, the surplus labour is 4h and the rate of surplus value = 100 %. This situation is illustrated in figure VIII.2. (In hypothesis A, we assume that the money equivalent of value remains equal to $10 per hour ; in hypothesis B – a period of inflation – we assume that E increases to $20 per hour).

Figure VIII.2. : The « production of relative surplus value »

Under what conditions will the value of the worker's means of consumption (the « value of his labour-power ») diminish ? The latter depends both on the *number* of means of consumption the wage-earner can purchase (his purchasing power or real wage) and on their *unit value*. Both magnitudes are influenced by technical progress.

First, technical progress has the effect of reducing the *unit value* of the means of consumption. This is so because it raises productivity in all branches, both in those producing the means of consumption (cars...) and in those

producing the means of production (metal...) used by the former (which has the result of reducing the past value of the means of consumption).

Second, technical progress has contradictory effects on the wage-earners' *purchasing power*. On the one hand, it involves a *rise* in wage-earners' consumption, since it results in increased production and requires a parallel increase in markets (chapter VII, 3.3.1.). On the other hand, technical progress *limits* the rise of the workers' level of consumption, since it modifies the overall balance of power in different but complementary ways (chapter VII, § 1.1. and 1.2.2.) :

- the continual transformations of labour processes are constantly putting a proportion of the active workforce out of employment ;

- the development of mechanization requires far fewer special skills and makes workers all the more interchangeable ;

- this facilitates the introduction of new categories of workers (in particular women and immigrants), who exert a twofold pressure on the average level of wages and consumption : on the one hand, because they swell the total volume of labour supply, and on the other, because they are in a particularly unfavourable bargaining position vis-à-vis the capitalists.

Since the value of labour-power depends both on the number of means of consumption and on their unit value, since this unit value decreases as growth proceeds, the condition for necessary labour to fall (and for the rate of surplus value to rise) can be stated as follows : it is necessary (and sufficient) that the *number* of means of consumption should increase less than the fall in their *average value ;* in other words, it is necessary (and sufficient) that *the workers' purchasing power should increase less rapidly than productivity* in the (direct and indirect) production of their means of consumption.

2. COMPATIBILITY BETWEEN ACCUMULATION, WAGE-EARNERS' CONSUMPTION AND PUBLIC EXPENDITURE

This section focuses on the increase in the rate of surplus value by way of a decrease in necessary labour. We shall see that the resulting increase in profit is compatible with an increase in the wage-earners' purchasing power (which is obviously advantageous to workers, but also to enterprises) ; and that these simultaneous increases are also compatible with a growth of public expenditure (which is also advantageous to both wage-earners and enterprises). These compatibilities can be demonstrated theoretically (§ 2.1.) and empirically (§ 2.2.).

2.1. A theoretical approach

2.1.1. Compatibility between an increase in the rate of surplus value and an increase in the wage-earners' purchasing power

a) Analysis

The condition stated at the end of § 1.2. shows that *there can be simultaneously a rise in real wages and an increase in the rate of surplus value*. This compatibility is illustrated in table VIII.3. and figure VIII.4. Table VIII.3. considers the transition from t_0 to t_1 under two hypotheses : either E remains constant (hypothesis A) or it increases (hypothesis B) ; for simplicity's sake, figure VIII.4. only considers the case of E remaining constant. The table and the figure contemplate a purely capitalist system, without an institutional sector : there is therefore no taxation or public expenditure (the latter will be included in the argument in point 2.1.2.).

In the table as well as in the figure, we assume that, from t_0 to t_1, the division of the revenue created into wage and surplus revenue (and hence the division of the wage-earner's present labour into necessary labour and surplus labour) is modified to the benefit of the enterprise : the rate of surplus value goes up from 60 % to 100 %[5]. We further assume that technical progress and the resulting increase in productivity have the effect of reducing the unit value of the means of consumption by half and of bringing down their unit price[6]. In both hypotheses, the comparative evolution of the money wage and the unit price of the means of consumption brings about a rise in the wage-earner's purchasing power : the number of means of consumption purchased goes up from 10 to 16 (+ 60 %).

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[5]   In the hypothesis where E remains constant, the money wage is reduced (from $50 to $40) ; in the hypothesis where E increases, the money wage increases (from $50 to $80), but by less than the revenue created (which rises from $80 to $160). In both hypotheses, the surplus revenue and the profit (which are equal on a macro-economic level) rise (from $30 to $40 or $80). The hypothesis of an increasing E is obviously more realistic nowadays. An increase of E is also more favourable to employers, as the latter can raise the rate of surplus value without having to cut money wages (the rise in both the real wage *and* the money wage is an important part of the compromise between capitalists and wage-earners).

[6]   In the hypothesis where E remains constant, the unit price of the means of consumption is also reduced by half (from $5 to $2.50) ; in the hypothesis where E increases, it remains constant ($5) despite the increase in E.

We thus can see that an increase in the rate of surplus value does not prevent a rise in the wage-earners' purchasing power and, conversely, that a rise in the real wage does not prevent an increase in the rate of surplus value (and therefore in profit). Both can be raised simultaneously if – for a given working day – the unit value of the means of consumption declines more than real wages increase or, in other words, if productivity gains in the production of the wage-earners' means of consumption are higher than the rise in the wage-earners' purchasing power (see the formula of the rate of surplus value at the beginning of this chapter).

Table VIII.3. : Compatibility between an increase in the rate of surplus value and a rise in the wage-earners' purchasing power

		t_0	t_1	
			(hyp. A)	*(hyp. B)*
1.	Money equivalent of value (E)	\$10/h	\$10/h	\$20/h
2.	Labour-time	8h	8h	8h
3.	Revenue created (= 2 × 1)	\$80	\$80	\$160
4.	Money wage (= price of LP = total price of MC purchased)	\$50 ⎱ \$80	\$40 ⎱ \$80	\$80 ⎱ \$160
5.	Surplus revenue = profit (= 3 – 4)	\$30 ⎰	\$40 ⎰	\$80 ⎰
6.	Necessary labour (= value of LP = total value of MC) (= 4 ÷ 1)	5h ⎱ 8h	4h ⎱ 8h	4h ⎱ 8h
7.	Surplus labour (= 5 ÷ 1)	3h ⎰	4h ⎰	4h ⎰
8.	Rate of surplus value (= 5 ÷ 4 or 7 ÷ 6)	60 %	100 %	100 %
9.	Unit value of MC	1/2h	1/4h	1/4h
10.	Unit price of MC (= 9 × 1)	\$5	\$2.50	\$5
11.	Worker's purchasing power (= 4 ÷ 10)	10 MC	16 MC	16 MC

Note : MC = means of consumption ; LP = labour-power

Figure VIII.4. : Compatibility between an increase in the rate of surplus value
and a rise in the wage-earners' purchasing power
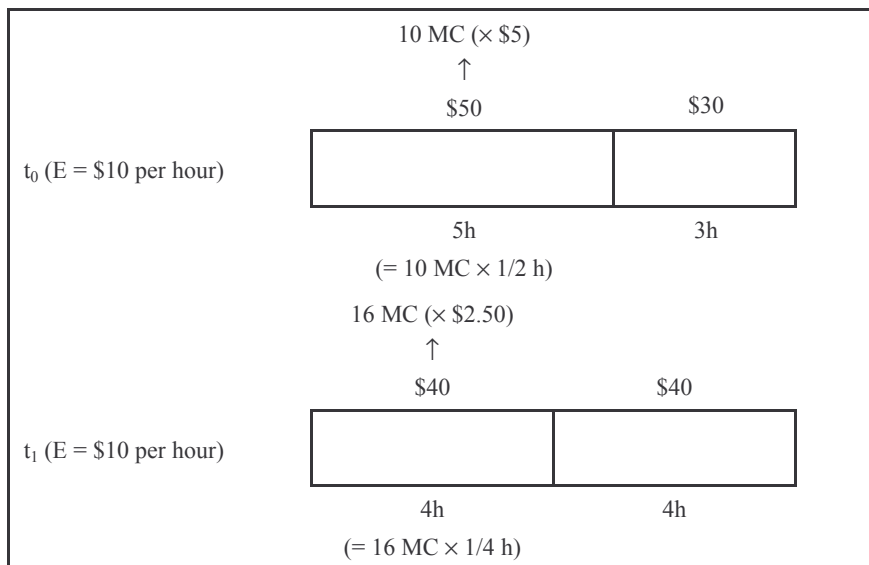
Note : MC = means of consumption ; each arrow means « is used to purchase »

b) Conclusions

This type of evolution – which combines productivity gains, an increase in the rate of surplus value and a rise in the wage-earners' purchasing power – is clearly interesting for the workers : the rise in their purchasing power directly contributes to improving their living conditions. But it is equally interesting for the capitalists, both from a socio-political viewpoint and from an economic viewpoint.

In the socio-political field, the evolution considered is more likely to guarantee social peace. Whereas an increase in the rate of surplus value through a lengthening of labour-time comes up against the direct resistance of the working class, an increase in the rate of surplus value combined with a rise in purchasing power does not come up against such resistance at all : the increase in the wage-

earners' degree of exploitation is indeed concealed by the rise in their standard of living[7].

In the economic field, the evolution considered resolves the contradiction concerning wages. As already mentioned (chapter III, 2.2.3.), wages are both an essential cost of production (which enterprises should reduce in order to increase their profit) and an equally essential market (which they should increase). Adequate productivity gains make it possible to increase both the amount of profit and the size of the market : profit increases thanks to the increase in the rate of surplus value (each wage-earner produces more surplus revenue), while the market expands thanks to the rise in the workers' purchasing power (each wage-earner purchases more commodities)[8].

2.1.2. Compatibility between an increase in profit, a rise in the wage-earners' purchasing power and growth of public expenditure

a) Analysis

Productivity gains, we have just seen, make it possible to raise both the wage-earners' purchasing power (and thus their potential consumption) and the rate of surplus value (and thus profit and the potential for accumulation). Moreover, as we are going to see, they make it possible to simultaneously increase public levies on wages and surplus revenue (and thus the potential for public expenditure).

Just like wages, public expenditure presents contradictory aspects for enterprises (see chapter VI, 3.2.1.). On the one hand, it provides them with a series of economic *advantages* (higher profitability and enlarged markets) : from this viewpoint, *more* public expenditure would be desirable. The latter, however, must be financed through *levies* on surplus revenue and wages, which implies

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[7] The rise in the standard of living actually contributes to reducing the workers' *physical* exploitation ; and it is precisely according to the degree of *physical* exploitation that wage-earners react in the socio-political field (see chap. IV, footnote 4).

[8] a) The compatibility between an increase in the rate of surplus value and a rise in the wage-earners' purchasing power discredits a current preconception, according to which an increase in the rate of surplus value should *necessarily* imply a reduction in the workers' level of consumption.

b) On the other hand, this compatibility does not imply that the wage-earners' purchasing power will *necessarily* rise, or that it will rise in proportion to productivity : everything depends on the evolution of the balance of forces (see below, 2.1.2.b).

both a decrease in the net profit available for accumulation and a decrease in the wage-earners' purchasing power (and thus restricted markets for enterprises) : from this viewpoint, *less* public expenditure would be preferable.

Productivity gains make it possible, here too, to solve the contradiction : growing public expenditure involves growing deduction from surplus revenue and wages ; owing to productivity gains, however, these deductions are compatible both with a rise in the net profit available for accumulation and with a rise in the wage-earners' purchasing power (and thus in markets).

Such a compatibility is illustrated in table VIII.5. and in figure VIII.6. Table VIII.5. considers the transition from t_0 (without levies) to t_1 *without* and *with* levies ; figure VIII.6. considers the transition from t_0 (without levies) to t_1 *with* levies[9]. For simplicity's sake, we assume that E is always equal to $10/h.

As before, we assume that a rise in productivity of 100 % reduces the unit value of the means of consumption by half and that the rate of surplus value goes up from 60 % to 100 %.

If there are no public levies, the surplus revenue available for accumulation goes up from $30 to $40 (+ 33 %), while the wage-earner's purchasing power goes up from 10 to 16 means of consumption (+ 60 %).

Let us assume that the state levies $20 to finance public expenditure, of which $7.50 are deducted from surplus revenue and $12.50 from the wage. In this case, the net profit and the direct real wage rise comparatively less, but both of them do rise : net profit goes up from $3 to $3.25 (+ 8 %), while the direct real wage goes up from 10 to 11 means of consumption (+ 10 %). The wage-earners' living standard rises more than their direct real wage, for the levies finance the provision of an indirect wage as well as the production of non-marketed collective goods and services : in the example, purchasing power – both direct and indirect – goes up from 10 to 13 means of consumption (+ 30 %), while the total real wage goes up from 10 to 16 (+ 60 %).

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[9]   a) The levies comprise both taxes and national insurance contributions. Taxes allow for the financing of collective goods and services, national insurance contributions allow for the financing of an indirect wage.

   b) If there are no levies (hypothesis of an exclusively capitalist system), the wage-earners' living standard coincides with their purchasing power, which is equal to their (direct) real wage. When levies and public expenditure are taken into account, the wage-earners' purchasing power includes both direct and indirect real wages ; their living standard moreover includes a collective real wage, i.e. the non-marketed collective products which are accessible to them free of charge (see chap, VI, 3.3.1. and figure VI.1.).

Table VIII.5. : Compatibility between an increase in profit, a rise in the
wage-earners' purchasing power and growth of public expenditure

	t_0	t_1	
	(no state deductions)	*(without state deductions)*	*(with state deductions)*
1. Money equivalent of value (E)	$10/h	$10/h	$10/h
2. Labour-time	8h	8h	8h
3. Revenue created (= 2 × 1)	$80	$80	$80
4 Wage-cost	$50 ⎱ $80	$40 ⎱ $80	$40 ⎱ $80
5. Surplus revenue	$30 ⎰	$40 ⎰	$40 ⎰
6. Necessary labour (= 4 ÷ 1)	5h ⎱ 8h	4h ⎱ 8h	4h ⎱ 8h
7. Surplus labour (= 5 ÷ 1)	3h ⎰	4h ⎰	4h ⎰
8. Rate of surplus value (= 5 ÷ 4 or 7 ÷ 6)	60 %	100 %	100 %
9. Levies by the state	$0 ⎱	$0 ⎱	$20 ⎱
10. Net profit	$30 ⎬ $80	$40 ⎬ $80	$32.50 ⎬ $80
11. Net wage	$50 ⎰	$40 ⎰	$27.50 ⎰
12. Unit value of MC	1/2h	1/4h	1/4h
13. Unit price of MC (= 12 × 1)	$5	$2.50	$2.50
14. Direct real wage (= 11 ÷ 13)	10 DMC	16 DMC	11 DMC
15. Indirect real wage	0 IMC	0 IMC	2 IMC*
16. Wage-earner's purchasing power (= 14 + 15)	10 MC	16 MC	13 MC
17. Collective real wage	0 CMC	0 CMC	3 CMC*
18. Total real wage (16 + 17)	10 MC	16 MC	16 MC

Notes : MC   = means of consumption
          CMC = collective MC
          DMC = personal MC purchased through direct wage
          IMC = personal MC purchased through indirect wage
*   We assume that the socialized real wage (indirect real wage + collective real wage) exactly
    makes up for the reduction in the direct real wage due to levies

Figure VIII.6. : Compatibility between an increase in profit, a rise
in the wage-earners' purchasing power and growth of public expenditure

10 DMC (× $5)
↑
$50 $30

t_0 (with no levies)

5h   3h
(= 10 DMC × 1/2h)

11 DMC (× $2.50)
↑ 2 IMC (× $2.50)
↗ 3 CMC ←

$27.50 $12.50 $32.50 $7.50

t_1 (with levies)

4h   4h
(= 16MC × 1/4h)
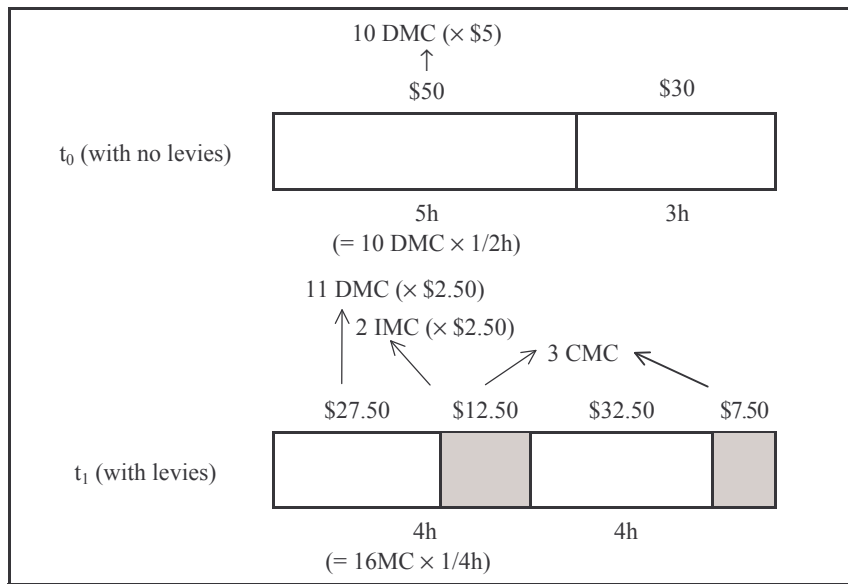
Notes : MC   = means of consumption
         CMC   = collective MC
         DMC   = personal MC purchased through direct wage
         IMC   = personal MC purchased through indirect wage

b) Conclusions

Three conclusions can be drawn from this theoretical approach. In the first place, an increase in the rate of surplus value is compatible with a rise in the wage-earners' living standard under all its forms (rise in the direct, indirect and collective real wage). As mentioned earlier, the improvement in the wage-earners' living conditions conceals their economic exploitation and contributes to maintaining social peace.

In the second place, the growth of general productivity makes it possible to overcome the contradictions inherent in both wages and public expenditure. Productivity gains make it possible to simultaneously foster three developments which may seem contradictory at first sight : an increase in the rate of surplus value and in the amount of *profit* (and thus in the potential for *accumulation*), a

rise in the *wage-earners' purchasing power* (with its beneficial effects on markets) and growth in *public expenditure* (with its beneficial effects on the enterprises' markets and profitability, as well as on the standard of living of the population). The larger the productivity gains, the greater the scope for increasing both wage-earners' and public expenditure without jeopardizing profits. On the other hand, smaller productivity gains necessarily limit the growth of these different elements and entail distributive conflicts between wage-earners' purchasing power, public expenditure and enterprises' profits.

In the third place, compatibility should not be confused with necessity. The compatibility between the growth of the three variables considered (rate of surplus value and enterprises' profits, wage-earners' purchasing power and living standard, levies by the state and public expenditure) does not mean that all these variables should *necessarily* increase simultaneously[10]. As a matter of fact, productivity gains only *allow* for the simultaneous growth of the variables in question. Their *actual* evolution depends as much on the *balance of forces* prevailing in society : the latter play an essential part in determining the rate of increase (or decrease) of wages and public expenditure.

This essential role played by the balance of forces will be given full attention later in the book[11]. In the meantime, the empirical data of the next paragraph (§ 2.2.) confirm the essential role played by productivity gains.

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[10]   The rate of surplus value, for instance, may very well diminish : such is the case when the wage-earners' purchasing power grows more than productivity. Or again, an increase in the rate of surplus value may be accompanied by a reduction in public expenditure and/or in the wage-earners' purchasing power.

[11]   - We will see at the end of this chapter that the internationalization of productive capital brings about both an increase in the rate of surplus value on a worldwide scale and a decline in the masses' living standard in dominated countries : this is mainly due to the very unfavourable balance of forces facing workers in those countries (see chap. VIII, section 3).
   - On the other hand, at the end of the next chapter we will examine the stages in the growth of the dominant economies since 1950, and in particular the transition from « Keynesian » policies (rise in real wages and public expenditure) to « neo-liberal » policies (reduction of real wages and public expenditure) : the stages in question will be accounted for by the combined changes in general productivity and in the balance of forces between social classes (see chap. IX, point 2.2.2. and section 3).

2.2. An empirical approach

2.2.1. The case of the USA, 1948-1992

Figure VIII.7. and table VIII.8. depict the movement of the rate of surplus value in the USA from 1948 to 1992, as well as the movement of the variables affecting it : on the one hand, the annual labour-time, on the other hand, the annual real wage and the unit value of the means of consumption (the last two variables determine the value of labour-power per year and hence the wage-earner's necessary labour per year). All the variables are expressed in the form of indices (1948 = 100)[12].

If we consider the whole of the period 1948-1992, the following changes can be observed.

Labour-time has decreased (by about 15 %) and the real wage has increased (by about 80 %) : these are the most visible and best-known aspects of what is called « the improvement of workers' conditions ».

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[12] A few methodological observations :

- The data concerning *present labour* and the *real wage* refer to those wage-earners productive of surplus value and surplus revenue, i.e. to all the wage-earners in the sector of commodity production (see chap. VI, § 5.1.).

- The number of hours of present labour is provided directly by the statistical data on the annual labour-time per wage-earner.

- The evolution of the real wage is calculated by dividing the evolution of the annual money wage by the series of the consumer price index (see chap. III, footnote 10.a). The concept of money wage considered here is that of wage-*cost*, which comprises both the net wage and all the deductions. By dividing the evolution of this wage-cost by the series of the consumer price index, we approximate the evolution of the *total* real wage, which comprises both the means of consumption purchased with the net wage and the socialized means of consumption financed by the levies (see chap. VI, 3.3.2.).

- The evolution of the *unit value of the means of consumption* is calculated by dividing the series of the consumer price index by the evolution of the money equivalent of value (E). The series thus obtained reflects the evolution of total labour productivity (of present + past labour) in the whole economy (see appendix 4, 4.3.2.).

- The product (real wage x unit value of the means of consumption) gives the value of labour-power and thus the quantity of necessary labour. Since the real wage refers to the *total* real wage, comprising both individual commodity means of consumption and collective non-commodity means of consumption, the figures for necessary labour calculated in this way reflect the combined evolution of the value of the former and of the « labour-content » of the latter (see chap. VI, 3.3.1.b, fourth observation).

(For details on sources and methods, see Gouverneur J., « Productive labour, price/value ratio and rate of surplus value », *Cambridge Journal of Economics*, 1990, vol 14, p. 19-20.)

Figure VIII.7 : USA, 1948-1992 : Evolution of the rate of surplus value
and the variables affecting it (yearly indices, 1948 = 100)
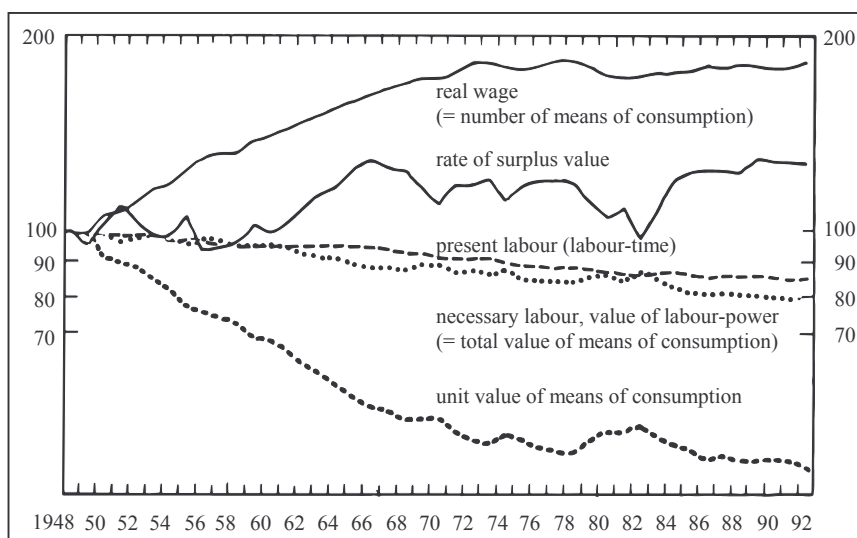
Table VIII.8. : USA, 1948-1992 : Evolution of the rate of surplus value
and the variables affecting it

	Indices (1948 = 100)			Average annual rate of growth		
	1948	1968	1992	1948-68	1968-92	1948-92
1. present labour (= labour-time)	100	93	85	– 0,4 %	– 0,4 %	– 0,4 %
2. real wage (= number of MC)	100	169	180	+ 2.7 %	+ 0.3 %	+ 1.3 %
3. unit value of MC	100	52	44	– 3.2 %	– 0.7 %	– 1.8 %
4. necessary labour (= value of LP = value of MC)	100	87	79	– 0.7 %	– 0.4 %	– 0.5 %
5. rate of surplus value	100	123	127	+ 1.1 %	+ 0.1 %	+ 0.5 %

Notes :   - All the calculations were made from non-rounded data.
              - LP = labour-power ; MC = means of consumption.

Something less visible and less widely known is that, in the same period, the growth of productivity has had the effect of considerably reducing the unit value of the means of consumption (the latter is reduced by about 56 %, which implies an increase in productivity of about 120 %).

Since the growth of productivity is greater than the increase of the real wage, the value of labour-power has decreased (by 21 %) and necessary labour has decreased accordingly. This reduction in necessary labour is slightly greater than the reduction in labour-time : the final result is that the rate of surplus value at the end of the period is higher than at the beginning (+ 27 %).

These observations confirm the theoretical analysis developed above : a rise in the rate of surplus value is perfectly compatible with a rise in the real wage. As the real wage considered here comprises both individual commodities purchased (through the direct and the indirect wage) and collective non-commodity means of consumption provided by the state, the empirical observations confirm, more generally, that the rise in the rate of surplus value is compatible with a simultaneous rise both in the wage-earners' purchasing power and in public expenditure. All these compatibilities are made possible by the growth of productivity.

As far as productivity gains are concerned, 1968 shows a clear inflexion point : from 1948 to 1968, the unit value of the means of consumption declines in a constant and rapid way (at an average annual rate of 3.2 %) ; from 1968 to 1992, it only declines in a discontinuous and slow way (at an average annual rate of 0.7 %). This slowing down of productivity growth does not affect the evolution of labour-time, which goes on diminishing at a slow but fairly continuous pace[13]. On the other hand, it clearly affects the evolution of the real wage and of the rate of surplus value : from 1948 to 1968, the rapid growth of productivity allows for a considerable and simultaneous growth of both the real wage and the rate of surplus value ; between 1968 and 1992, on the contrary, weak productivity gains result in a very small increase in the real wage and a quasi-stability of the rate of surplus value.

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[13] The reduction in labour-time is somewhat misleading since the 1970's : it is partly due to an increase in the proportion of part-time wage-earners.

2.2.2. The case of Western European countries

The compatibility between a rise in the real wage and the stability of the rate of surplus value is also confirmed in the case of Western European countries : it is well known that *real wages* have substantially increased in the long term, especially during the period 1945-1975 ; and the statistical data available suggest that *rates of surplus value* have fluctuated around a fairly stable axis since 1960[14].

The available data also show that *labour-time* has decreased in a slow and continuous way (as in the USA), while *productivity* and *real wages* have increased at a progressively slower pace (although this slowing down of the two variables has appeared later and is less marked than in the USA)[15].

3. EFFECTS OF THE INTERNATIONALIZATION OF PRODUCTIVE CAPITAL

3.1. Forms of internationalization of productive capital

Two main forms of internationalization must be considered here. On the one hand, raw materials and/or labour-power can be drained from some countries and used by enterprises located in other countries. On the other hand, enterprises can set up abroad in order to use raw materials and labour-power which are available there. These two types of movements can take place between dominant countries as well as between dominant and dominated countries. We shall consider here the movements between dominant and dominated countries.

- The *transfer of cheap raw materials* from dominated countries has been a permanent concern of capitalism : the recent wars against Iraq (1991, 2003) are clear proof of this, just like the repeated refusals to reach agreements aimed at raising or simply stabilizing the price of raw materials. As to the *transfer of immigrant labour-power*, it has fluctuated, depending on the needs of

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[14]For Germany, France, Belgium and the Netherlands (1966-84), see Gouverneur J., *Valeur, capital et accumulation*, Brussels, De Boeck, and Paris, Editions Universitaires, 1989, figure on p. 275. For Germany (1960-86) and the whole of 7 European countries (1970-86), see Gouverneur J., « Productive labour … », *CJE*, 1990, figure on p. 13. It should be noted that the methods used to calculate the rate of surplus value are different in the different publications, so that the results cannot be compared with one another ; however, the tendency of the rate of surplus value appears to be fairly stable in each of the above studies.

[15] See the same sources. Concerning the evolution of productivity, see also appendix 4, table A.2.

industrialized countries : the massive inflow in the fifties and sixties was followed by a strict control of immigration, including a reflux of immigrant labour in more recent years.

- The *setting up of enterprises in dominated countries* has been especially significant in three sectors successively : first in the production of *raw materials for export* (since the nineteenth century), then in the production of *industrial goods for the domestic market* (especially after 1940), and more recently in the production of *industrial goods for export* to dominant countries. Numerous industrial products consumed in the dominant countries – and not only raw materials as in earlier periods – are produced today in growing proportions in dominated countries under the aegis of multinational companies : this is true for products as diverse as steel, tinned goods, textiles, clothing, car and engine parts, etc. As explained earlier (chapter VII, 2.1.2.), this worldwide restructuring of industrial production constitutes the beginning of a *new* international division of labour.

3.2. Effects of the internationalization of productive capital

3.2.1. Increase in the general rate of surplus value

Both forms of internationalization of productive capital tend to raise the rate of surplus value on a worldwide scale.

- The *transfer of cheap raw materials* and the *use of immigrant labour* raise the rate of surplus value *in the dominant countries*. Indirectly in the first case : cheap imported raw materials contribute to reducing the price of the means of consumption, which makes it possible to limit the wage level. Directly in the second case : immigrant workers face a much worse balance of power (especially in the case of clandestine immigrants) and are therefore more exploited than indigenous workers (lower wages, longer working time)[16].

- The *setting up of enterprises in dominated countries* also raises the rate of surplus value on a worldwide scale, both directly and indirectly.

Directly, because the rate of surplus value *in the dominated countries* is higher than in the dominant countries. This is so for two basic reasons. First, the role of domestic labour in the production of the wage-earners' means of subsistence remains very significant for most of them (especially in rural areas or on the outskirts of cities, where the wage-earners and their families cultivate a

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[16]   Moreover, the immigrants' lower wages push down the whole wage structure.

patch of ground, build their makeshift dwellings, produce their own clothes, etc.) : this reduces the wages to be paid. Secondly, the overall balance of power between capitalists and wage-earners is clearly in favour of the former : this too makes it possible to ensure a high rate of surplus value by exerting pressure on the workers' level of consumption and labour-time.

The rate of surplus value on a worldwide scale is also increased by an indirect rise of the rate of surplus value *in the dominant countries*. There are two reasons for this indirect rise. First, the transfer of industries towards dominated countries (within the framework of the new international division of labour) contributes to increasing structural unemployment in the dominant countries : this affects the balance of power in favour of the employers. Secondly, the transfer of industries broadens the range of consumer goods which are imported at a low price into the dominant countries : this also makes it possible to limit wages in the latter.

3.2.2. *Deterioration in the living standard of the masses*

While the advanced countries have simultaneously enjoyed a stable rate of surplus value and a substantial increase in the average living standard of their population, the picture is quite different if one considers the whole world. The most striking long-term phenomenon is, on the contrary, the considerable decline in the standard of living in the dominated countries (which has contributed to supporting the rise in the standard of living in the advanced countries). Hence the question arises : can capitalism only grow at the price of an impoverishment of the majority of the world's population ? Is it incapable of ensuring at a global level what has been observed in the advanced countries, namely a compatibility between stable rates of surplus value and rising real wages ?

This question can be answered by successively putting forward the following statements :

- First, while the deterioration of the masses' standard of living is an obvious fact, it is not for all that a logical necessity. Generalized poverty affects the capitalist system both positively and negatively : on the one hand, it creates advantages in the form of a reduction in the price of labour-power on a worldwide scale ; on the other hand, it creates obstacles in the form of an atrophy of world markets. The logical way of overcoming this contradiction is the same on a worldwide scale as on the level of the advanced countries : it consists in increasing real wages proportionately to productivity gains.

- Obviously, this « logical solution » is by no means automatic. For competition compels each enterprise to consider wages as production costs rather

than markets ; since they benefit from a particularly favourable balance of forces in the dominated countries, capitalists can easily reduce wages and the standard of living in those countries. A rise in real wages and in the living standard of the masses cannot be obtained without a considerable change in the balance of power which has been prevailing there for decades.

- The rise in the living standard of the population in the less developed countries cannot consist in simply imitating the consumption patterns which prevail in the advanced countries. Indeed, without technological revolutions capable of drastically saving raw materials and limiting pollution, the generalization of the prevailing pattern of production and consumption will lead to a twofold deadlock : absolute scarcity of raw materials on the one hand and multiplication of types and cases of pollution on the other.

- The world economy is not only faced with environmental problems, but also with a major problem of structural unemployment, which seems to be closely linked with recent technical progress (automation, generalization of computers). Solving both types of problems would require the adoption of new and innovative measures, running contrary to the spontaneous logic of the capitalist system. We shall return to this question at the end of the next chapter (chapter IX, § 3.2.).

PEDAGOGICAL DEVICES CONCERNING CHAPTER VIII

SUMMARY

1. In order to raise the rate of surplus value, capitalists seek to lengthen the labour-time (« production of absolute surplus value ») and/or to reduce necessary labour (« production of relative surplus value »). The first method comes up against physical limits (a minimum of indispensable rest) and social limits (the workers' resistance). The second method implies a reduction in the value of the means of consumption purchased by the wage-earners : for this to take place, it is necessary – and sufficient – that the number of means of consumption purchased (the wage-earners' purchasing power) should increase less than the fall in their average value (owing to productivity gains).

2. The increase in the rate of surplus value through the second method is compatible with a rise in the wage-earners' standard of living (rise in the direct and indirect purchasing power, rise in the collective means of consumption). Such improvement in living standards conceals the economic exploitation and contributes to maintaining social peace.

The growth in general productivity makes it possible to simultaneously overcome the contradiction inherent in wages (both production costs which reduce profits, and purchasing power which extends markets) and the one inherent in public expenditure (which affects profits and markets both positively and negatively). They make it possible to simultaneously foster three developments which may seem contradictory : an increase in the rate of surplus value and in the amount of profit (and thus in the potential for accumulation), a rise in wage-earners' purchasing power (with its beneficial effects on the enterprises' markets) and a growth in public expenditure (with its beneficial effects on the enterprises' markets and profitability, as well as on the living standard of the population).

All these compatibilities are illustrated with numerical examples and confirmed by empirical analyses. However, such compatibilities do not happen automatically in reality : they depend both on the growth of general productivity and on the balance of forces prevailing in society (see chapter IX).

3. The internationalization of productive capital raises the rate of surplus value on a worldwide scale both directly (use of immigrant labour-power, investment in dominated countries) and indirectly (import of cheap raw materials or consumption goods, transfer of industries). In contrast with the evolution observed in advanced countries, the increase in the rate of surplus value on a worldwide scale has been accompanied by a decline in the masses' standard of living. This is mainly due to the balance of forces prevailing in the dominated countries.

CONCEPTS TO ASSIMILATE (see glossary)

Production of « absolute surplus value »   Production of « relative surplus value »

EXERCISES (answers at end of book)

A. Basic knowledge

8.1. Using the formula of the rate of surplus value (taken from chapter IV, 2.1.1.) :
    a) show the difference between the production of « absolute surplus value » and that of « relative surplus value » ;
    b) show that the production of « relative surplus value » can be accompanied by an increase or a reduction in the wage-earners' physical exploitation.

8.2. Table VIII.3. and figure VIII.4. (which contemplate an exclusively capitalist system) illustrate that the growth in general productivity makes it possible to reconcile the contradictory aspects of wages.
a) Recall what these contradictory aspects are.
b) Explain the table and/or the figure.
c) Show how the contradictory aspects of wages are reconciled.

8.3. Table VIII.5. and figure VIII.6. (which contemplate a capitalist system with an institutional sector) illustrate that the growth in general productivity makes it possible to reconcile the contradictory aspects of both wages and public expenditure.
a) Recall the parallel between the contradictory aspects of wages and of public expenditure.
b) Explain the table and/or the figure.
c) Show how the contradictory aspects of both wages and public expenditure are reconciled.

8.4. In what ways does the internationalization of productive capital raise the general rate of surplus value on a worldwide scale ?

B. More advanced knowledge

8.5. Comment figure VIII.7. and show how the increase in the rate of surplus value is compatible with an improvement in the workers' living conditions.

8.6. Do wages show contradictory aspects both for export-oriented enterprises and for those oriented towards the domestic market ? (Consider the case of enterprises producing means of consumption).

C. Applied knowledge

8.7. Is the production of « absolute surplus value » still a present-day phenomenon ? What about your enterprise ? your sector of production ? your country ?

8.8. Is the production of « relative surplus value » nowadays accompanied by a rise in real wages ? What about your enterprise ? your sector of production ? your country ?

8.9. What kind of advantages or disadvantages do you personally draw from the internationalization of capital :
a) as a producer ?
b) as a consumer ?

CHAPTER IX

GROWTH AND CRISES

Growth cannot be a balanced process, since it is based on the initiative of thousands of entrepreneurs taking independent and thus not necessarily compatible decisions. This chapter deals with the problem of the imbalances inherent in growth, and more specifically with the problem of crises. With this aim in view, we will make a twofold distinction.

First, we will distinguish two main stages in growth : *« classical »* up to the Second World War, *« contemporary »* afterwards[1]. As we shall see, the context differs markedly from stage to stage with respect to the wage-earners' situation and state intervention in the economy. As a result, production and markets (or aggregate supply and demand) tend to grow in a *non-parallel* way before the Second World War, but in a *parallel* way afterwards[2].

Secondly, we will distinguish two types of crises : *« cyclical »* and *« structural »*. A *cyclical crisis* is a situation of *temporary overproduction* (supply exceeds demand) within a trade cycle : it is followed by a recession (decline of production) which makes it possible for an equilibrium between aggregate supply and demand to be restored. A *structural crisis* is a situation in which *fundamental problems* impede the normal functioning of growth (whether classical or contemporary). A cyclical crisis may in some cases reveal the presence of a structural crisis.

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[1]   a) The distinction between these two stages is borrowed from the « French regulation school » (Aglietta, Boyer, Destanne de Bernis, Lipietz, etc.). However, I have not adopted the terminology used by these authors (competitive and monopolistic regulation, extensive and intensive accumulation).

b) The analyses of this chapter only apply to the advanced countries, not to the less developed ones.

[2]   We will not study the genesis or development of each stage, nor the transition from the first to the second stage. Obviously the context did not completely change between 1940 and 1945 : various features which are characteristic of contemporary growth originate in the first stage (such is the case of collective wage agreements) ; however these features only become more widespread and dominant during the second stage.

1. GROWTH BEFORE THE SECOND WORLD WAR

1.1. The socio-economic context

One essential feature of the whole period covering the nineteenth century and continuing up to the Second World War is the permanent tendency towards an imbalance between the growth of aggregate supply and demand : while technical progress and growth of the wage-earning labour force make a continuous increase in production possible, *there is nothing to ensure a parallel growth of markets* for this production.

a) On the one hand, there is no guarantee that wage-earners will increase their *consumption of capitalist commodities*[3] nor that they will do so on a regular basis. This is so for several reasons.

- Wage-earners mainly consume traditional goods or services, purchased from small-scale *independent* producers or produced in the domain of *domestic* activities.

- The majority of *labour contracts* are *individual* contracts, linking *one* employer to *one* wage-earner. Each employer simply considers the wage as a cost to be minimized, neglecting its complementary « market » aspect ; and this cost minimization is all the easier to ensure as the employer negotiates with individuals rather than with a trade union. In these conditions, the consumption capacity of wage-earners always tends to increase less rapidly than the productive capacity of enterprises (in other words, purchasing power per worker tends to increase less rapidly than production per worker).

- *Jobs and incomes are precarious and liable to great variations*. Labour contracts only cover limited periods : wage-earners therefore can easily be deprived of their jobs. Wage-earners who lose their jobs (due to rising unemployment but also because of illness, accident, or age) also lose their wages and this loss of wages is not compensated by an indirect wage (or social allowances : unemployment benefit, pension, etc).

b) On the other hand, *state* intervention in support of aggregate demand is relatively limited :

- The state provides steady jobs in the institutional sector, but officials engaged there constitute a very small proportion of the working population.

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3   Capitalist commodities = commodities produced in capitalist enterprises.

- Similarly, public sector contracts for the private sector and other measures of state intervention in the economy are still very limited[4].

1.2. The cyclical character of production

In the above-described context of accumulation, growth takes place through an alternation of phases of expansion (increase in production) and recession (decline in production). A phase of expansion tends to proceed cumulatively but reaches a limit which necessitates a reversal (this is the cyclical crisis). In the same way, the recession which follows proceeds cumulatively but it also reaches a limit which permits recovery and new expansion.

Let us briefly describe the successive phases of this « trade cycle » before making some comments on crises and recessions.

1.2.1. The « trade cycle »[5]

a) Expansion

The expansion of production proceeds cumulatively : an increase in production brings about an increase in employment and wages, and therefore an increase in demand ; increased demand in its turn stimulates a rise in prices, in profits, in investment, in production ; and so on.

b) Crisis

Expansion takes place in a competitive and disorganized way. Competition compels each *individual* enterprise to increase its capacity and level of production without the total increase in production being planned and adapted to the size of the market. Now, as we have seen, markets tend to develop in a relatively limited way. The result is that, sooner or later, *supply exceeds demand :* this is the *crisis of overproduction*. The excess of supply results in the accumulation of unsold stocks and in the increase of unused productive capacity.

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[4]   Some measures of state intervention have the effect of *limiting* aggregate demand. Such is the case when the state prohibits workers' associations : this reduces the workers' bargaining power and therefore their wages and purchasing power.

[5]   The description which follows concentrates on the aspect of *production*. The cyclical fluctuation of prices is merely mentioned in passing here.

c) Recession

The excess supply brings about a fall in market prices and a *reduction in rates of profit*[6]. This situation particularly affects the marginal enterprises in each branch : already working with the highest unit costs and the most slender profit margins, they are faced with *bankruptcy*. As for the surviving enterprises, they cut back on their production and try to lower their costs by carrying out measures of *rationalization*.

Following the bankruptcies, cut-backs in production and measures of rationalization, *unemployment* spreads. As the workers who are discharged lose their wages and the lost wages are not replaced by unemployment benefits, *aggregate purchasing power contracts*.

The process described is that of *recession*. This tends to have a *cumulative* character. In fact, the contraction of the masses' purchasing power amounts to a reduction in demand : as a result, prices and profits fall and bankruptcy becomes widespread.

d) Upturn and recovery

After a certain time, the recession process stops and gives way to *recovery*. For the elimination of the marginal enterprises increases the potential customers for the surviving ones, while falls in market prices stimulate a recovery of demand. The surviving enterprises dispose of their stocks, market prices rise, as does the rate of profit.

The recovery then becomes a new cumulative expansion : investment picks up, production increases and, with it, employment, wages and demand.

1.2.2. Absurdity and functional character of crises and recessions

The process of crisis and recession seems *absurd*. The recession brings about a reduction of popular purchasing power and consumption. But this reduction in consumption is not due to a shortage of production nor to any scarcity (as in the case of precapitalist crises, where the reduction in consumption was due to a shortfall in the harvest, for instance). *The reduction of consumption*

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[6]   A branch benefiting from strong market power can maintain its prices and rates of profit for a fairly long time. This only aggravates the difficulties of the other branches, difficulties which eventually affect the former branch. The course of the crisis described here disregards the differences in market power held by different branches ; we are considering the crisis only on a global, macro-economic, level.

is due to an excess of production in relation to popular consumption capacity : it is this excess of production which brings about bankruptcies and rationalizations, loss of jobs and wages and a reduction in purchasing power and consumption. The process seems absurd from yet another point of view : the closed-down enterprises and unemployed workers constitute a huge amount of *unused resources* in relation to the masses' consumption needs.

The process is nevertheless *functional*. Crisis and recession are not « routine hazards », regrettable but fortuitous events. On the contrary, they constitute the very mechanism through which the rate of profit is periodically restored and a certain equilibrium re-established in a society based on the producers' free initiative and competition. Certainly new structural conditions can considerably mitigate the trade cycle and the cumulative process of recession : this will appear to be the case when we examine post-war growth (§ 2.2.). But these new conditions do not completely suppress the cyclical fluctuations and crises : experience in recent years (since the seventies) is sufficient proof of this (§ 2.3.).

1.3. The crisis and recession of the 1930's

The crisis of 1929-30 constitutes a *cyclical* crisis, typical of the classical growth prevailing before 1940. It marks the limit of a phase of cumulative expansion and the starting point of an equally cumulative recession.

However, the trade cycle culminating in 1929 differs from the majority of previous cycles in the duration and intensity of the phases of expansion and recession. The expansion began around 1920 and continued for nearly ten years (instead of the usual three or four) ; it was characterized by much greater advances in productivity than ever before. The recession resulted in a catastrophic fall in production and employment, which took a very long time to put right : in most countries, the production and employment levels reached in 1929 were not to be achieved again until the forties.

The extent and depth of this recession enables us to designate the crisis of 1929-30 not only as a cyclical crisis but also as a *structural* crisis. While previous cyclical crises constituted « normal » incidents, the crisis of 1929-30 in contrast showed that classical growth encountered a fundamental problem, the solution of which was politically unacceptable. The problem lay in the increasing imbalance between the rapid growth of productive capacity (supply) and the relatively limited growth of consumer capacity (demand). The solution, in the context of classical accumulation, was recession (the downturn of production), and this was bound to be all the more severe as the previous imbalance was more serious. But a severe

recession, on the scale of the 1930's, would involve such economic wastage and such a high social cost that it was no longer politically acceptable. Another type of growth was called for.

2. GROWTH FROM 1945 TO 1974

2.1. *The new socio-economic context*

One essential feature of the new type of growth progressively adopted after the Second World War is that *aggregate demand tends to grow in parallel to the growth of production*[7]. This parallel growth can be explained by the new context prevailing with regard to the wage-earners' situation and state intervention.

a) Wage-earners' *consumer demand* now looks quite different.
- Wage-earners massively purchase *capitalist commodities*. Their pattern of consumption shows a considerable reduction in the proportion of domestically-produced products (partly as a result of the growth in female labour) as well as in the proportion of commodities produced by craftsmen (the independent producers being progressively eliminated by capitalist enterprises).
- Wages and labour conditions are mostly regulated by *collective agreements* reached at a branch or national level. Implicitly or explicitly, these collective agreements tend to link the evolution of wages to productivity. Given these conditions, the consumer capacity of wage-earners tends to develop more or less at the same pace as the productive capacity of industry (or again, purchasing power per worker tends to grow in parallel to the physical production per worker).
- *Employment and incomes tend to stabilize*. Greater job stability is ensured, on a national level, by the growth of the state sector both in commodity and in non-commodity production (increase in the number of officials). Furthermore, the indirect wage develops in different forms (unemployment benefits, pensions, health insurance, etc.) and constitutes a growing proportion of household income. Job stability and the expansion of the indirect wage help to stabilize aggregate purchasing power and therefore the wage-earners' consumer demand.
- Besides this, *consumer credit* develops, which stimulates and regularizes domestic demand (especially for durable goods).

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[7]   The parallel growth of aggregate supply and demand does not alter the basic fact that a capitalist economy is a *market* economy, and hence subject to the uncertainties any such economy necessarily implies : each enterprise has to find purchasers for its commodities, and each of them may very well fail in this venture.

b) As for the *state*, it exercises an increasingly strong influence on aggregate demand :

- It provides a growing number of stable jobs in the non-commodity production sector ; it regulates the growth of indirect wage in the whole economy.

- It influences the level of economic activity by means of public sector contracts as well as by other forms of intervention (subsidies to industry, etc.).

2.2. New features of growth

New conditions affecting wage-earners' consumer demand as well as the role of public sector demand gave rise to an entirely new phase of growth after 1945. This new period of growth is characterized by a considerable mitigation of cyclical fluctuations and crises and a sustained increase in production over a period of some 30 years.

2.2.1. Mitigating cyclical fluctuations and crises

The cumulative processes of recession, typical of the classical stage (downturns in production spread over 2-3 years), disappeared after 1945 : they were replaced by mere *slowdowns* in the growth of production, sometimes by very *short* downturns followed by rapid recovery. What is this change due to ?

Since crises are crises of overproduction (excess of supply in relation to demand), with contemporary growth it is possible to reduce their extent by various measures of *demand support*. These measures help to stop the cumulative process of the recession, a process where falls in production bring about falls in purchasing power, which, in their turn, limit the scope for production. The appropriate measures to support demand in a period of recession can be grouped into two main categories : those which have the direct effect of relatively stabilizing the masses' purchasing power, and those which have the direct effect of relatively stabilizing the level of economic activity.

a) The relative stabilization of the masses' purchasing power.

The growth of *stable jobs* (in the institutional sector) and *replacement income* (particularly unemployment benefits) has the effect of permanently maintaining a relatively high level of demand for consumer goods. Officials with secure jobs and income maintain their level of consumption ; the wage-earners who are laid off have to reduce their level of consumption but this reduction will be less severe, the higher the unemployment benefits available.

Besides this, *consumer credit* enables households to maintain a certain stability in their purchases. If credit conditions are made easier in periods of recession, this helps to ensure the stability of private consumer demand.

b) Anti-cyclical measures of state intervention

Public sector contracts constitute a typical measure for mitigating cyclical fluctuations. Thus a programme for motorway construction in a period of recession has the effect of immediately increasing the demand for consumer goods (through the income paid out to workers) and the demand for production goods (with the need for new machinery).

Other measures of government intervention, such as *subsidies* to marginal enterprises, can help to mitigate cycles. These measures have the effect of putting off the elimination of marginal enterprises : they therefore mitigate the cumulative process of bankruptcies and lay-offs typical of periods of recession.

Table IX.1. summarizes the new elements prevailing in the socio-economic context after the Second World War and points out which of them contribute to the mitigation of cyclical fluctuations and crises. It also mentions the elements which contribute to a rapid growth in the long term (see below, 2.2.2.).

2.2.2. The sustained growth of production

The mitigation of cycles does not in itself mean sustained growth of production and consumption in the long term : we could envisage slight cyclical fluctuations around a slowly rising long-term trend. In reality, advanced countries have experienced, over a long 30-year period (1945-74), a growth in production and consumption which is without precedent in history. What can we attribute this remarkable growth to ?

Two facts appear to be fundamental : on the one hand, the *rapid rise in general productivity* during the fifties and the sixties brought about a considerable increase in production ; on the other hand, a *balance of forces relatively favourable to workers* made it possible to ensure a parallel growth of markets, both through a steady rise in the wage-earners' purchasing power and a continuous increase in public expenditure.

Table IX.1. : The socio-economic context after the
Second World War and its influence on growth

Socio-economic context	Mitigation of cyclical crises	Sustained growth of production
a) *Wage-earners' consumption expenditure*		
1. Demand for standardized capitalist commodities	....	X ⎫ growth of wage-earners'
2. Collective agreements linking wages to productivity	.....................…............	X ⎬ = consumption expenditure
3. Stability of employment and income	X ⎫	
4. Consumer credit	X ⎬ = stabilization of the masses' purchasing power	
b) *Public expenditure*		
1. Institutional sector	X.....................................	X ⎫ growth of
2. Public sector contracts	X..................................	X ⎬ = public expenditure
3. Subsidies	X ⎬ = anti-cyclical measures of state intervention	

Before considering the influence of these two basic factors (increase in general productivity, balance of forces relatively favourable to workers), we must remember that both wages and public expenditure have contradictory aspects for enterprises. This is evident as far as wages are concerned : the latter constitute a *production cost*, which it is in the enterprises' interest to *minimize* (thus increasing their profit) ; wages also constitute an essential *market*, which it is in their interest to *maximize* (thus reducing available profit). Similarly, public expenditure has both advantages and disadvantages for enterprises. On the one hand, it provides them with a series of economic *advantages :* public sector

contracts, wages paid to officials, as well as social allowances (unemployment benefits, pensions, family allowances) enlarge or regulate the markets ; public subsidies improve profitability ; public expenditure in health and education ensure an adequate – and cheaper – reproduction of labour-power ; and so on. Taking all these advantages into account, an *extension* of public expenditure would be desirable. On the other hand, public expenditure entails *levies* on wages and profits : levies on profits reduce the capital available for accumulation, levies on wages reduce the size of the market. Taking these disadvantages into account, a *limitation* of public expenditure would be preferable.

This twofold contradiction can be overcome through an *increase in general productivity*. As we saw earlier (chapter VIII, section 2), productivity gains make it possible to simultaneously foster three apparently antagonistic developments : a rise in the wage-earners' purchasing power (with its beneficial effects on the enterprises' markets), growth of public expenditure (with its beneficial effects on the enterprises' markets and profitability, as well as on the consumers' standard of living) and an increase in profits (and thus in the potential for accumulation). The higher the productivity gains, the greater the scope for increasing both wage-earners' expenditure and public expenditure without jeopardizing profit and accumulation. On the other hand, smaller productivity gains necessarily limit the growth of these different elements and entail distributive conflicts between wage-earners' purchasing power, public expenditure and accumulation.

During the period 1945-1970, productivity gains were very great. This made it possible to adopt « Keynesian » policies : the latter stimulate consumer and public expenditure, thus encouraging a rapid growth in production and employment. Productivity gains, however, have no automatic effect on growth : they allow for – but do not necessarily entail – an increase in the wage-earners' purchasing power and in public expenditure (especially that favourable to workers : health, education, social allowances). For these potential developments to become realities, another condition must be fulfilled, namely a *balance of forces* relatively favourable to workers. This second condition was met during the period 1945-1975 : wage-earners benefited in particular from the high levels of employment as well as from the fear of « communist contamination »[8].

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8   The USSR exercised a very strong power of attraction after the Second World War. On a political level, it had contributed decisively to defeating the Nazi regime. On a socio-economic level, its planning system had made it possible to reach high rates of growth, to avoid the great depression of the 1930's, to secure employment and better living conditions for the workers (hence the pressure in Western countries for raising wages and setting up a system of national insurance).

The combination of important productivity gains and a balance of forces relatively favourable to workers thus made it possible, during the quarter of a century following the Second World War, to ensure a type of growth which satisfied the material interests of both wage-earners and capitalists. The former enjoyed rising standards of living, the latter enjoyed increasing profits and markets : they were thus stimulated to reinvest their profits, to enhance production and employment[9].

During that period, however, productivity gains were far from being equal in all sectors : they were extremely strong in the agricultural and industrial sectors, but very weak in the services sector as a whole (the tertiary sector).

The strongest productivity gains were observed in the industries producing durable consumer goods (cars, electrical appliances, televisions, etc.). These industries were even considered as « motors » of economic growth. It is within them that productivity gains had the most obvious effects, both in the fall in unit production costs and a rise in the quantities consumed. These two trends supported each other : the fall in cost and price (due to productivity gains) made the goods more accessible to the mass of consumers ; conversely, the growth of consumer demand stimulated mass production and therefore productivity gains (mass production of standardized goods at a reduced unit cost)[10].

On the other hand, during the same period productivity gains remained very limited in the tertiary sector taken as a whole. This sector comprises both commodity services (leisure, catering, trade, etc.) and non-commodity services

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9   Our argument concerning the respective influence of the two key-variables (growth of general productivity and the prevailing balance of forces) is summarized in frame IX.2. and in table IX.3., which also cover the subsequent years. (In chapter VIII, the growth of general productivity was expressed by a decline in the unit value of the means of consumption ; in frame IX.2, it is expressed, in an evocative way, by an extension of the « cake » produced, by an increase in the number of « pieces of the cake »).

[10] The stimulating effect that productivity and consumption have on each other also indirectly affects the branches producing the means of production. The *increase in consumer demand* brings about an increase in the demand for industrial equipment, which stimulates increases in productivity in the branches engaged in its production. Moreover, the *continual pursuit of productivity increases* in all branches (linked to competition) stimulates a demand for an increasingly improved plant, and therefore a more rapid diffusion of technical progress in the production of the machines themselves. As a result, the supply and demand of the machines are constantly renewed, which speeds up their obsolescence : less and less time is required for a machine to become technologically out-of-date without being physically worn-out. This phenomenon increases the market for the branches producing means of production and so contributes to the growth of production (see chap. VII, 3.3.2.a).

(health, education, etc.). Insufficient productivity gains resulted in maintaining both the price of commodity services and the social cost of non-commodity services at comparatively high levels. However, the demand and supply of all these services continued to expand, due to the rise in purchasing power (for commodity services) and to a broader coverage of social needs by public authorities. As a result of this twofold movement (high prices and costs, but growing supply and demand), the share of services in aggregate production and consumption steadily increased, reaching as much as 2/3 of national income.

The low productivity of the tertiary sector will be all-important for understanding the origin of the structural crisis which has been affecting the capitalist system since the 1970's. Before tackling this problem, a few words must be said about the cyclical crisis of 1974-75.

2.3. The cyclical crisis of 1974-75

In all advanced countries, the year 1974-5 was characterized by a marked downturn in production, lasting for several months.

In certain respects, this recession is a *cyclical* recession, but a recession which is typical of the new stage of capitalist growth. As we have said, in this new stage, sustained demand from the wage-earners and from the state has the effect of considerably mitigating the cumulative processes of recession (which give way to mere slowdowns of growth or to downturns of short duration). The recession of 1974-5 was indeed very different from the long and severe recessions of the previous period (and in particular from the recession of the thirties) : the cumulative process of declining production was halted after only a few months, giving way to a recovery from the end of 1975[11].

However, the year 1974-5 also signified a radical change in the long-term tendencies of the economy. While production and consumption grew at an unprecedented rate from 1945 to 1974, subsequently they have only grown at a very moderate rate, with a succession of downturns and slow uncertain recoveries and with a rising level of unemployment. This interruption of sustained growth and the rise in unemployment reveal a *structural* crisis of the system. Let us now examine this structural crisis : what is its cause ? how can it be overcome ?

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[11] Compared to the very slight recessions of the 1950's and 1960's, the recession of 1974-5 resulted in a real and very sharp fall in production : the *extent* of the recession was greater, but, given the rapid halt of the cumulative process, the recession was typical of the new stage of growth.

3. THE STRUCTURAL CRISIS SINCE 1975

3.1. *Stages of the crisis*

Growth after the Second World War has been explained by the conjunction of two beneficial factors : on the one hand, increases in general productivity ; on the other, a balance of forces relatively favourable to workers. Similarly, the interruption of growth since 1975 can be explained by the disappearance of *either* of these factors or *both* of them. In this respect, it is possible to distinguish the last three decades of the twentieth century in a basic way : during the seventies, the balance of forces remains rather favourable to workers, but general productivity hardly increases ; during the eighties, the gains in general productivity are still very weak, and the balance of forces is reversed ; during the nineties, general productivity again quickly rises, but the balance of forces is still less favourable to workers. How can we explain the structural crisis from these elements[12] ?

3.1.1. *The 1970's : the failure of Keynesian policies*

We pointed out earlier that increases in general productivity make it possible to foster three apparently antagonistic developments simultaneously : a rise in the wage-earners' purchasing power, growth of public expenditure and an increase in profits. However, increases in productivity have slowed down since the end of the sixties : this slowing down of productivity necessarily limits the growth of the three variables considered and entails distributive conflicts between them. Before examining how these conflicts were settled, we must consider the reasons why general productivity slowed down.

This first argument is commonly put forward : productivity slowed down because of *the workers' resistance to technical progress* and its consequences (loss of jobs, higher intensity of labour, accidents...). This resistance may result in increasing absenteeism, acts of sabotage, lack of discipline, etc., all of which reduce output per worker. The relevance of this explanatory factor differs according to the different branches of production : amongst other things, it depends very much on the workers' degree of organization and combativeness, as on the capitalists' ability to develop mechanization still further.

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[12] Obviously the principles put forward – as well as the division into three decades – should be adapted to each country's evolution. However, they constitute a useful starting point for carrying out such analyses. The line of argument is summarized in frame IX.2 and table IX.3.

Frame IX.2. : Conditions for overcoming the contradictions inherent in wages and public expenditure

1. *Wages and public expenditure have contradictory effects on enterprises (which need both profits and markets)* :
    a) Wages :   (–) production cost, which should be *reduced* in order to increase profits ;
                (+) purchasing power, which should be *increased* in order to expand markets (and thus investment opportunities).
    b) Public expenditure :   (+) various advantages (basically : increase in profits and markets) → public expenditure should be *increased* ;
                (–) levies on profits and wages (hence decline in profitability and markets) → public expenditure should be *reduced*.
2. *Those contradictions can be overcome (= both profits and markets can rise) if two conditions are simultaneously fulfilled* :
    (1) *general productivity is increasing* (= increase in the number of « portions of the cake ») ;
    (2) *the balance of forces is relatively favourable to the wage-earners*, so that Keynesian policies are implemented (= increases in real wages and public expenditure).

- *Case n° 1 (50's and 60's) : conditions (1) and (2) satisfied :*

W	W	G	P
W	W	G	P

→

W	W	W	G	G	P
W	W	W	G	P	P

The new situation is favourable to workers (increase in wages and public expenditure : education, national insurance, etc.). It is also favourable to enterprises (increase in profits *and* in markets).

- *Case n° 2 (70's) : condition (1) not satisfied, condition (2) satisfied :*

W	W	G	P
W	W	G	P

→

W	W	W	G
W	W	G	G

The new situation is favourable to workers (increase in wages and public expenditure). But it is harmful to enterprises (decline in profits, which disappear in this example).

- *Case n° 3 (80's) : conditions (1) and (2) not satisfied :*

W	W	G	P
W	W	G	P

→

W	W	P	P
W	G	P	P

The new situation is harmful to workers (decline in wages and public expenditure). To enterprises it is both favourable (profits rise) and harmful (markets contract).

- *Case n° 4 (from the 90's on) : condition (1) satisfied, condition (2) not satisfied :*

W	W	G	P
W	W	G	P

→

W	W	G	P	P
W	W	G	P	P

W	W	G	P
W	W	G	P

→

W	W	P	P	P
W	G	P	P	P

The new situation is harmful to workers (stagnation or reduction of wages and public expenditure). To enterprises it is both favourable (profits rise) and harmful (markets stagnate or contract).

Note : W = wages ; P = profits ; G = government levies and expenditure

Table IX.3. : The stages of growth and crisis since 1950

	(1) Growth of general productivity and its consequences	*(2) Balance of forces between classes and resulting economic policies*	*Effects of (1) and (2)*
50's and 60's	*Sufficient growth of general productivity* • Reason : great productivity gains in the production of goods (especially durable consumer goods) • Consequence : theoretical *compatibility* between rise in profits, real wages and pu-blic expenditure	*Relatively favourable to wage-earners* • Reasons : full employment + fear of « communist conta-mination » • Consequence : implemen-tation of *Keynesian policies* (rise in real wages and public expenditure)	Increasing profits + expanding markets ↓ Rise of productive investment ↓ Growing employment
70's	*Insufficient growth of general productivity* • Reason : growing impor-tance and low productivity of services • Consequence : *conflicts ine-vitable* between rise in profits, real wages and pu-blic expenditure	*Relatively favourable to wage-earners* • Reasons : same as before • Consequence : continuation of *Keynesian policies*	Falling profits ↓ Fall of productive investment ↓ Growing unemployment
80's	*Insufficient growth of gene-ral productivity* • Reason : same as before • Consequence : same as before	*Unfavourable to wage-earners* • Reasons : unemployment + internationalization of the economy + weakness of international trade unionism • Consequence : implemen-tation of *neo-liberal policies* (cuts in wages and public expenditure)	Increasing profits + contracting markets ↓ Transfers of ownership (take-overs, privatization, speculation on currencies and securities) and lack of productive investment ↓ Continuing unemployment
from the 90's on	*Sufficient growth of general productivity* • Reason : progress of auto-mation and computerization, including in the services sector • Consequence : theoretical *compatibility* between rise in profits, real wages and public expenditure	*Still more unfavourable to wage-earners* • Reasons : same as before (even stronger) + fall of planned economies • Consequence : continuation of *neo-liberal policies*	Same as before

A more basic explanation lies in *the growing importance and low productivity of the tertiary sector*. We saw earlier that services have taken an increasingly important role in aggregate production and consumption since 1945 ; today they represent up to 2/3 of total production and consumption in the most advanced countries. Until recently, however, technical advances and increases in productivity have been very limited in the services sector, compared to those in branches of industrial production. The low productivity of the services sector, combined with its increasing importance in total production, would thus explain the slowing down of average, *aggregate*, productivity.

As a result of the slowing down of general productivity since the late sixties, the system faces the following dilemma :
- either it maintains the rhythm of wage-earners' consumption and public expenditure (Keynesian policies) : in which case, profits become insufficient, enterprises stop investing, and growth is reduced to zero ;
- or it reduces wage-earners' consumption and public expenditure (neo-liberal policies) : in which case, enterprises recuperate enough profit for investment, but the opportunities for profitable investment are limited due to the slowing down of the demand from wage-earners and the state.

During the 1970's, the balance of forces, which is relatively favourable to the workers, results in the continuation of Keynesian policies : consumer demand and public expenditure continue to rise rapidly. As a result, profits fall and the potential for investment shrinks. Growth slows down and unemployment rises[13].

3.1.2. The 1980's : a change to neo-liberal policies

The progress of general productivity remains weak throughout this decade. Certain services are able to develop their productivity (especially financial services such as banking and insurance), but the tertiary sector as a whole slows down general productivity. Conflicts between wage-earners' consumption, public expenditure and profit therefore remains inevitable.

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[13] The structural crisis cannot be explained by the « shock of the oil crisis » in the 1970's : the decline in profit started in the late 1960's, whereas the first sharp rise in oil prices did not take place before 1973 ; moreover, the relative price of oil has fallen in the 1990's lower than it was in the 1960's, but the structural crisis has been going on… As was already mentioned, the « shock of the oil crisis » mainly resulted in a huge *redistribution* of total surplus revenue among branches and among countries (see chap. V, footnote 9).

However, these conflicts are now resolved in a completely different way from the previous decade : the former Keynesian policies give way to neo-liberal policies, which put pressure on wages and public expenditure with the explicit aim of restoring profit. What are the reasons for this reversal ?

The previous fall in profit was unbearable for the system, and therefore for the state itself : whatever the coalitions in power (even if it consists of left-wing coalitions), the state's primary function is always to ensure the reproduction of the prevailing system (see conclusion, section 2). Sooner or later, therefore, the state had to adopt social and economic policies aimed at restoring the enterprises' profit, no matter their harmfulness to wage-earners. And it did so fairly easily, as the balance of forces changed to the detriment of the wage-earners : the latter had been facing growing unemployment since 1975 ; moreover, as will be seen now, they were to suffer the cumulative effects of the growing internationalization of the economy.

Restrictive policies concerning employment and wages are in response to both internal and external motives. Within each country, they aim to modify the distribution of (monetary) « value added » : by reducing the wage bill, they directly increase companies' profits and therefore their investment possibilities. On an external level, restrictive policies aim to improve local firms' competitive position : through decreasing the wage-cost per unit of output, they reduce the cost of national products compared to that of foreign products and so tend to ensure the survival – or even the growth – of local enterprises.

Two solutions exist for reducing the wage bill and the wage-cost per unit[14]. Either by putting pressure on the wage-cost per worker, i.e. by reducing the direct wage (and therefore the wage-earners' purchasing power) and/or contributions to national insurance (and therefore the indirect wage and again the wage-earners' purchasing power). Or by increasing labour productivity through rationalization or technical improvements, both of which induce a decrease in employment.

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[14]   The following equations allow us to « visualize » the two solutions :
Wage bill = number of workers $\times$ wage-cost per worker
Wage-cost per unit

$$= \frac{\text{wage bill}}{\text{quantity produced}} = \frac{\text{wage - cost per worker} \times \text{number of workers}}{\text{quantity produced}}$$

$$= \frac{\text{wage - cost per worker}}{\text{quantity produced / number of workers}} = \frac{\text{wage - cost per worker}}{\text{productivity per worker}}$$

In an increasingly international economy, with more and more commodity exchanges and capital flows between countries, the pressure on wages and employment worsens and tends to become a vicious circle. Why is this so ?

One of the causes is the *competition between dominant countries*. Insofar as they are efficient, restrictive policies adopted by one country call for similar – and even more restrictive – policies in other countries. If French companies, for example, are more « efficient » at « controlling » wages and employment, they develop their market share to the detriment of foreign competitors ; the latter are forced to react by adopting the same – or stronger – wage and employment reduction measures.

With the development of the « new international division of labour », the dominant countries' companies are also confronted with *competition from firms established in dominated countries*, where the wage-cost is significantly lower[15]. This increases pressure in favour of restrictive policies in the dominant countries.

International capital mobility increases pressure on revenue. To improve competitiveness and profit, large companies implant subsidiaries abroad, where the wage-cost per worker is less. They can either do this whilst holding on to existing production units (which means an extension of activity and geographical diversification), or through the closure of existing production units (activity is relocated rather than extended). In both cases, pressure on wages and employment in the original country will be exacerbated.

The *absence of an effective international trade union organization* is another major handicap. Competition between dominant countries, competition with dominated countries and international capital mobility combine and weaken trade union organizations in each country. Lacking an effective international organization to defend and promote workers' rights throughout the world, capitalists find themselves in an advantageous situation which allows them to use competitiveness and capital mobility as a form of blackmail.

Finally, the *ideology of competitiveness*, which is forcefully spread by the mass-media, *invades workers and trade union organizations*. This leads them to

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[15] The advantage enjoyed by dominated countries concerning wages – both direct and indirect – may be balanced out by their backwardness in labour productivity, as well as by the cost of transporting commodities to the dominant countries. Over all, dominant countries compete chiefly *between themselves :* they are only marginally affected by competition from the dominated countries. In the same way capital movements and industrial relocation are above all *between dominant countries*.

accept concessions over wages within each country or within specific enterprises[16].

All things considered, what are the results of the neo-liberal policies implemented during the 1980's ? They are contradictory. On the one hand, they *increase the enterprises' total profit*, and thus their financial potential for investment : this was the outcome aimed at. But there is another outcome, not aimed at but inevitable : as they put pressure on the wage-earners' purchasing power and on public expenditure, these same neo-liberal policies *contract the enterprises' total market*, and thus their opportunities for profitable investment. Total profit is then massively invested, not in production activities, but in *transfers of ownership* : take-overs of private firms or corporations, purchase of public enterprises (the privatization phenomenon), speculation on currencies and securities (the « financial bubble » phenomenon)[17]. Such operations redistribute the ownership over means of production and money : for many enterprises or groups, they are a privileged way to grow and extend their sphere of influence, to increase their economic power. Such operations, however, do not raise production and employment : growth remains weak and unemployment goes on rising.

3.1.3. From the 1990's on : the absurdity of neo-liberal policies

The various negative factors which have just been mentioned continue to operate fully throughout the present stage. The balance of forces is still disadvantageous to the wage-earners, even more so than during the 1980's :

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[16] The ideology of competitiveness hides the following three facts : 1. a particular enterprise or country can only improve its position to the detriment of other workers from other enterprises or countries (if we save our jobs, others lose theirs) ; 2. maintaining an advantageous position demands new concessions from wage-earners in the longer run ; 3. all wage concessions reduce the overall number of market outlets and bring about bankruptcy of the whole system. The competitiveness ideology thus disguises the (short-term) deadly and (long-term) suicidal nature of wage concessions. It is therefore essential for national and international trade unions to push forward and spread the workers' fight to defend both their jobs *and* their wages.

[17] The development of the « financial bubble » is usually considered as a *cause* of the low rate of growth of the economy : driven by the prospect of speculative profit, investors would deliberately choose not to invest in production activities, which are less profitable. We think, however, that the development of the « financial bubble » is rather a *consequence* of the low rate of growth of the economy, which is itself due to the neo-liberal policies : limited by too narrow markets (owing to the pressure on wages and public expenditure), investors seek to increase their capital through other means, namely through various types of transfer of ownership.

unemployment has continuously gone up and internationalization of the economy has been reinforced (thereby increasing the blackmail over competitiveness and capital mobility) ; moreover, the recent toppling of planned economy regimes leaves enterprises and groups an even freer rein.

What about general productivity ? It has clearly progressed since the end of the 1980's, under the influence of rationalization and new techniques (especially the widespread use of computers). This rationalization and these new techniques are affecting the tertiary sector more and more, including non-market public services. To a large extent, therefore, the tertiary sector is now taking part in the increase in general productivity.

Progress in general productivity theoretically allows renewed compatibility between an increase in wage-earners' purchasing power, an increase in public expenditure and an increase in profit. Therefore the perpetuation of neo-liberal policies is absurd on a worldwide level : they ensure *higher profits* (and therefore a higher potential for investment) *to the detriment of markets* (and therefore of profitable investment opportunities). But *what is absurd taking the system as a whole, can make perfect sense to dominant companies and groups :* they survive and develop, whilst their less favourably ranking rivals go downhill and disappear. Putting into practice this « competitiveness dogma » and exacerbating competition on an international scale thus produce a threefold result : stimulating productivity progress, limiting global demand and reinforcing the process of capital concentration.

3.2. Which way out of the present crisis ?

If the preceding analysis is correct, the following conclusion seems inevitable : *a boost in growth implies a boost in demand* and the latter implies *a change in the balance of forces between employers and wage-earners*. From 1945 to around 1970, trade union organizations in the more advanced countries were able to obtain, from employers and the state, implementation of policies which systematically raised the workers' purchasing power (both direct and indirect). Since then, the fall in growth, the increase in unemployment, the strengthening of international competition and the breakdown of planned economy regimes have allowed employers to gain the upper hand and undermine the advantages previously conceded to workers. The ability to overcome the structural crisis implies, just as after the Second World War, a change in the balance of forces to the wage-earners' advantage : it is necessary that political and economic leaders stop considering wages as simply an expense to be

minimized and again start considering them as also an essential source of market demand.

Simply reviving growth, however, will not be sufficient to resolve the present structural crisis. On the one hand, this would not be enough to solve *unemployment :* technical progress (robotization, computerization) has reached such an extent that even rapid growth cannot alone ensure full employment. On the other hand, a boost in production and consumption would worsen *ecological* problems : increasing the scarcity of raw materials upstream, increasing the amount of waste and pollution downstream. Finally, growth would leave the problem of *underdevelopment* unresolved on a worldwide scale : the development of the « North » has fed on the « South »'s poverty (reduced cost of labour-power and of exported produce from the Third World), but this poverty, an affront to our humanity, at the same time constitutes a formidable obstacle to the planet's economic, social and political stability (atrophying the world market, encouraging migration, increasing the risks of local or international war).

Unemployment, environmental and development problems cannot therefore be resolved simply by boosting the kind of growth similar to that which prevailed after the Second World War. They can only be resolved through leaving behind the prevailing logic at the root of these problems. Leaving behind the prevailing logic means either promoting reforms within the system or aiming at the transformation of the system itself.

3.2.1. Reforming the system

a) Creating socially useful employment

One of the remedies for the main problems outlined earlier consists in *greatly developing employment in types of production which answer* well known, but insufficiently fulfilled, *social needs* (caring for aged people, child care, council housing, mobility in the town and country, environmental improvement, etc.). This type of policy kills two birds with one stone : it directly attacks the unemployment problem and develops socially useful production, set to one side for lack of profitability.

How should this policy be financed ? The first step should be to redirect the public subsidies handed over to enterprises, especially employment subsidies. Employment subsidies have more often than not proven to be inefficient or useless : inefficient, inasmuch as they end up replacing some of the workers by less costly ones, rather than creating new jobs ; useless, insofar as most of the new jobs created would have been created anyway, even without subsidies.

Besides, jobs created or maintained in the market sector are always precarious, as the survival of enterprises depends on national and international competition. This is why it would be well-advised to redirect the subsidies presently handed over to companies, and use them to systematically create new jobs meeting unfulfilled social needs while avoiding the risks of competition.

Other sources of financing must be sought for the same ends. The progress in general productivity and persisting neo-liberal policies have increased firms' profits, as well as the richest people's income and wealth : an increase in tax on these profits, income and wealth nowadays appeals to simple equity[18]. On the wage-earners' side, progress in productivity could be expressed by an increase in the indirect wage (and therefore in social contributions) rather than by a rise in the direct wage. On the users' side, an individualized payment, variable according to the revenue available, could be claimed for the use of some of the new services.

Creating jobs in this way obviously presupposes clear political decisions from the public authorities. The latter will only make them if social movements put enough pressure on them.

b) Reducing working time

Another measure advocated against unemployment consists in *reducing individual working time* and proceeding with compensatory hiring.

The same question must be asked : how are these new jobs to be financed ? A reduction in wages together with a reduction in working time must be excluded : this would be a catastrophe for most workers, especially for those less well-paid ; moreover, it would not solve the problem of the weakness of demand which is obstructing the system. Reducing working time must be carried out, therefore, without loss of wages (except for the highest salaries, so as to level out the hierarchy of wages). It must be financed by available profit and productivity gains : instead of being transformed into an increase in wages, profit and productivity gains should give rise to a reduction in working time, together with compensatory hiring.

Although this solution contributes to resolving the problem of insufficient demand, it goes against the enterprises' interests on two accounts : first of all, it increases production costs and jeopardizes competitiveness (if each firm is considered separately) ; secondly, it lessens the social gap between employed and

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[18] In most countries, wealth is completely or almost completely free from tax. Moreover, it is regarding companies' profits and the highest incomes that the greatest fiscal fraud takes place.

unemployed people, which reduces the hold on the workers as a whole. This is why the solution must be decided upon by public authorities (preferably on an international level to avoid distortions in the competition between trading countries). However, once again, public authorities will only make this kind of decision if they are forced to do so by the pressure of social movements[19].

c) Sustainable development

Creating socially useful employment and reducing working time attacks the problem of structural unemployment which affects developed economies' growth. However, this leaves other problems intact, which are linked to growth and are present on a worldwide scale : *ecological* problems on the one hand, and problems of *underdevelopment* on the other.

Proposals for *sustainable development* claim to remedy these two types of problem. They aim to promote a kind of development which is based on populations' essential needs (especially those of the Third World) and is respectful of the long-term equilibria of eco-systems.

Technical and scientific knowledge gathered together over the last few decades, together with populations' ancestral knowledge, are easily sufficient to ensure sustainable development for all the inhabitants of this planet straightaway. If the achievement of this objective recedes further and further, if proposals for sustainable development usually remain inapplicable (or act as mere illusions), it is due to the fact that a true political willingness to « transform the world » does not exist. Many social movements certainly militate in that direction, but national and international public authorities surrender to the pressure of dominant economic groups.

3.2.2. Transforming the system

Transforming the system means building up an alternative economy, which would function according to principles radically different from capitalist economy (see table IX.4.).

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[19] Reducing working time has its limits, however, even with compensatory hiring. It does not ensure the necessary development in areas of production concerning unfulfilled social needs. Besides, if it only involves the capitalist sector of production, it introduces a new duality between the workers of this sector (who benefit from increased leisure time) and the other workers (who do not). This is why it is advisable to simultaneously create jobs in socially useful production and reduce labour-time in this sector along with that of the capitalist sector.

Capitalist economy is fundamentally *antidemocratic*. Real ownership (i.e. the effective power of decision-making) is concentrated in the hands of a tiny minority of owners. The latter are those who take the basic decisions concerning production : what to produce (priority to individual cars or to collective means of transport ?), how to produce (preference for machines or for employment ?), where to produce, etc. While all these decisions affect – directly or indirectly – the living conditions of all citizens-producers-consumers, the latter do not have a say : on the contrary, they are conditioned (through advertising, through the mass-media) to ratify the choices made by a minority[20]. The other two basic characteristics of this economic system are well known. The owners – enterprises or groups – make their decisions (concerning the type of products, the production techniques to be used, plant location, etc.) with one objective in mind : *profit* and accumulation. And they *compete* amongst themselves to maximize their particular profit.

Table IX.4. : Comparison between a capitalist economy
and a democratic economy

	Capitalist economy	*Democratic economy*
Power of decision-making	Monopolized by a minority	Shared by the greatest number
Criteria for decisions	Profit and accumulation	Satisfaction of social needs (democratically assessed)
Relations between enterprises	Competition	Co-operation

The alternative lies in the construction of a democratic economy, aiming at the satisfaction of social needs and based on co-operation amongst producers. In such an alternative economy, real ownership is no longer monopolized by a minority : on the contrary, *decision-making power must be shared*, to the largest possible extent, by everyone concerned (via democratic planning, worker participation, consumers' control mechanisms, etc.). The objective which must be given priority in production is no longer that of profit and accumulation, but that

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[20] This antidemocratic feature becomes more and more pronounced as growth proceeds : as we saw in chap. VII (§ 2.2.), the concentration of capital contributes to the formation and reinforcement of an *oligarchy* dominating the whole of the world economy.

of *satisfying* democratically assessed *social needs :* the social needs considered to be of importance being obviously health, education and housing, but also the development of skills, respect for the environment, employment, dividing up work and leisure time and ensuring the quality of life in general. These objectives are aimed for through radically differing methods : when profit disappears as a criterion, competition can give way to real *co-operation* between producers (co-operation organized through planning, via contracts between enterprises, etc.)[21].

The continuance or worsening of numerous economic and social problems (unemployment, inequalities, misery, violence, environmental damage, etc.) show that the construction of a democratic economy is on the agenda as a way out of the present-day structural crisis. Still more than the reforms considered earlier, such a transformation requires considerable pressure from social movements towards that end : for powerful forces are constantly operating, as we will see in the conclusion, to ensure the perpetuation of the existing system.

PEDAGOGICAL DEVICES CONCERNING CHAPTER IX

SUMMARY

1. Before the Second World War, aggregate demand tends to grow less rapidly than aggregate supply. This is mainly due to the fact that direct wages are limited by individual labour contracts, while indirect wages (unemployment benefits and other social allowances) are practically non-existent ; moreover, state intervention in support of aggregate demand is relatively limited. In such a context, growth takes place through a succession of « trade cycles » : each of them comprises a phase of cumulative expansion, a crisis of overproduction (supply eventually exceeds demand), a phase of equally cumulative recession and a recovery (when equilibrium between supply and demand has

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[21]   The three criteria put forward (democratization of decision-making power, priority given to the satisfaction of social needs, priority of co-operation over competition) also make it possible to critically assess – positively or negatively – any action carried out or contemplated (by public authorities, institutions, voluntary organizations, social movements, etc.) within the frame of the capitalist system itself.

been re-established). The crisis of 1929-30 is a classic cyclical crisis, but it also reveals the presence of a structural crisis of the system : a severe recession, on the scale of the 1930's, is no longer politically acceptable, another type of growth is called for.

2. The type of growth implemented after the Second World War tends to develop aggregate demand in parallel to aggregate supply : collective agreements link the rise in real wages to the rise in productivity, while the indirect wage develops in different forms (unemployment benefits, pensions, etc.) ; moreover, the state supports aggregate demand in various ways (public sector contracts, subsidies to enterprises, financing of the institutional sector). In this new context, growth is both more regular (cyclical fluctuations practically disappear) and sustained (production and consumption rise markedly from 1945 to 1974).

The mitigation of cyclical fluctuations is due to various measures which have the effect of stopping the cumulative process of the recession : development of replacement income (particularly unemployment benefits) and of consumer credit, as well as anti-cyclical measures of state intervention (public works).

The sustained growth over a period of 30 years is due to the conjunction of a rapid rise in general productivity and a balance of forces relatively favourable to wage-earners. The rise in general productivity allows for a simultaneous increase in profits, real wages and public expenditure. The relatively favourable balance of forces results in the actual implementation of Keynesian policies (increase in real wages and public expenditure).

The crisis of 1974-75 is a cyclical crisis typical of contemporary growth, but it also reveals the presence of an incipient structural crisis (interruption of sustained growth and rise in unemployment).

3. It is possible to schematically distinguish three stages in the evolution of the present structural crisis. During the 1970's, Keynesian policies are continued while general productivity increases too little (due to the growing importance and low productivity of the services sector) : profits and investment decline sharply and unemployment develops. During the 1980's, the change in the balance of forces results in the adoption of neo-liberal policies : the latter raise profits but contract markets ; profits are therefore invested in transfer activities (take-overs, privatization, speculation) rather than in production, and unemployment goes on rising. Neo-liberal policies are continued in the 1990's, with the same effects ; new progress in general productivity (also in the services sector) would allow for a return to Keynesian policies, but the prevailing balance of forces rules out this possibility.

Today's structural crisis (with its unemployment, environmental and development problems on a worldwide scale) cannot be resolved simply by boosting a kind of growth

similar to that experienced during the 1945-1975 period. What is required is leaving the prevailing logic behind, either by reforming the system (creating socially useful employment, reducing individual working time and proceeding with compensatory hiring, promoting sustainable development) or by transforming the system itself (building up a democratic economy). In all cases, it is essential that social movements exert enough pressure to counterbalance the power of the dominant groups.

CONCEPTS TO ASSIMILATE (see glossary)

Cyclical crisis	Keynesian policies
Structural crisis	Neo-liberal policies

EXERCISES (answers at end of book)

A. Basic knowledge

9.1. What are the distinctive features of the *wage-earners'* consumer demand at the two
      main stages of growth :
      a) before the Second World War ?
      b) after the Second World War ?

9.2. During the stage before the Second World War :
      a) why does growth show a *cyclical* character ?
      b) why is the phase of recession both *absurd* and *functional* ?

9.3. During the period of growth from 1945 to 1974, what are the factors which account
      for :
      a) the mitigation of cyclical fluctuations ?
      b) the sustained increase in production ?
      (In each case, consider both the *wage-earners'* consumer demand and the measures
      of *state* intervention.)

9.4. Using table IX.3., explain the successive stages in growth since 1950 by the
      combined influence of increases in *general productivity* and the prevailing *balance
      of forces* between social classes.

9.5. The neo-liberal policies implemented since 1980 :
      a) what are they due to ?
      b) why can they be considered as *functional* in the beginning, *absurd* afterwards ?
      c) if they are absurd, why are they continued ?

9.6.   The solution to the present crisis :
       a) why does the competitiveness race between enterprises and between countries aggravate the crisis instead of resolving it ?
       b) why would a mere revival of Keynesian policies be insufficient to resolve the structural crisis ?
       c) what kind of alternative policies could be put forward ?

B. More advanced knowledge

9.7.   What are the specific features of the cyclical crisis of 1974-75 :
       a) compared with the recessions of the period 1945-74 ?
       b) compared with the cyclical crisis of 1929-30 ?

9.8.   Liberal ideology considers competitiveness as a question of economic survival :
       a) to what extent is this viewpoint correct ?
       b) why is the competitiveness race nevertheless « deadly and suicidal » ?

C. Applied knowledge

9.9.   In the mass-media (newspapers, periodicals, radio, television) or elsewhere (books, articles, conversations), mind the comments concerning the present structural crisis :
       a) How do they explain the crisis ? What kind of solutions do they recommend (Keynesian, neo-liberal, others) ?
       b) Do they adopt a micro-economic or a macro-economic point of view ? (See the distinction in chap. I, footnote 2).

9.10. Should the reduction in individual working time involve a reduction in wages ? Consider the argument put forward in favour or against such wage reduction and explain your point of view (here also, mind the distinction between the micro-economic and macro-economic approach).

CONCLUSION

THE REPRODUCTION OF CAPITALISM

To conclude, a few words must be said on the reproduction of the system analysed throughout the book. This requires us to move out of the somewhat narrow economic framework to which all the previous analysis has been confined.

Various elements combine to make a joint contribution to the reproduction of capitalism : the permanent separation of wage-earners from the means of production, the repressive or preventive forms of intervention by the state, the integrative role of liberal ideology.

1. THE PERMANENT SEPARATION OF WAGE-EARNERS FROM THE MEANS OF PRODUCTION

The reproduction of capitalism is primarily ensured by the fact that *wage-earners are permanently separated from the means of production*. Therefore they can only subsist by continually renewing the sale of their labour-power.

However, could not wage-earners save up their wages, acquire some « capital » and become « small-scale capitalists » ? On this point, several illusions must be dispelled.

- For the vast majority of the working population, savings from wages only pay for the purchase of durable *consumer goods* (a house or a flat in the most favourable cases). To talk about « property capital » with reference to the houses or flats belonging to wage-earners obviously does not put them on the same footing as capitalists.

- On the other hand, while some *individual* wage-earners succeed in acquiring means of production and setting up on their own account, the *general* tendency is towards the progressive elimination of the simple commodity producer (chapter VI, 1.3.1.). And we know that the status of the simple commodity producer is entirely different from that of the capitalist (chapter I, 2.1.2.c, and chapter VI, § 1.1.).

- Finally, if a number of wage-earners acquire shares in enterprises, this does not turn them into « small-scale capitalists ». In fact, « employee-shareholding » does enable workers to share the *juridical* ownership of enterprises and recover on this basis (by way of dividends) a tiny portion of the surplus revenue they have created. But these « employee-shareholders » are still obliged to sell their labour-power and create surplus value ; moreover they have no share at all in the effective power of decision-making, i.e. in the *real* ownership of the enterprises : this ownership remains in the hands of the big shareholders who control a sizeable proportion of the shares and have a voice on the decision-making bodies.

The permanent separation of workers from the means of production therefore ensures the « spontaneous » reproduction of the working class and of capitalism : workers remain sellers of labour-power, capitalists remain the exclusive owners of the means of production and of the product of the wage-earners' labour. Nonetheless, this basic inequality must not be challenged by workers but must on the contrary be preserved and maintained. It is here that the role of the state and ideology must be observed.

2. REPRESSIVE AND PREVENTIVE FORMS OF INTERVENTION BY THE CAPITALIST STATE

The basic role of the state, in every society, is to ensure the reproduction of the prevailing social system. The pages which follow give some indication of the way the state plays this role within the framework of a capitalist society.

2.1. Repressive forms of intervention

The basic role of the state clearly appears during clashes affecting the employers' free disposal of the means of production and labour-power, especially if these clashes are widespread (general strikes, waves of factory occupation by workers, etc.). We then see the usual repressive measures of state intervention set in motion : the police, the army, the courts intervene to break up the strikes and occupations, restore the « normal » functioning of enterprises and deal severely with those who most actively oppose this « normal » functioning.

State repression is obviously not limited to cases where the system as a whole sees itself as being immediately threatened. It is also exercised in every local conflict where workers challenge the prevailing right of ownership. It is also exercised in response to every action (demonstrations, distribution of

leaflets, formation of groups, etc.) considered to be even a remote threat to the system.

2.2. Preventive forms of intervention

The repressive measures of state intervention (particularly in their most brutal form) do not constitute the most appropriate method of ensuring the perpetuation of the system in the long term. The saying « prevention is better than cure » applies in this case : better to forestall basic challenges than intervene to crush them, better to develop preventive measures of intervention rather than repressive ones.

The range of preventive measures of state intervention is extremely varied. We can identify general legal measures, measures in the economic and social domain, and on an ideological level.

2.2.1. In the legal domain

The legislature and the courts have developed a whole arsenal of legal rules and precedents which *sanction the basic principles underlying the system :* personal freedom (workers have to be able to sell their labour-power « freely »), private ownership of the means of production and labour contracts (capitalists have to remain in control of the enterprises and freely dispose of the wage-earners' labour-power), assignment of the products of labour to the owners of the means of production rather than to the producers themselves (the workers have a right to a wage but no say over the product of their labour). These general principles are translated into different juridical rules (laws, regulations, decrees, precedents), backed up by appropriate sanctions ; the whole constitutes a fairly ill-defined[1] but powerful means of control, intended to dissuade possible opponents of the system and « legalize » the repression which can be used against them.

2.2.2. In the economic and social domain

The state operates various policies intended *to ensure the « harmonious » functioning of the system*. Most of these policies have already been mentioned in earlier chapters : taking marginal enterprises or branches into *public ownership*

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[1] The notion of the preservation of « public order » is as essential as it is ill-defined : this lack of precision makes it possible to arbitrarily interpret the dangers threatening the capitalist system and deal with them in an equally arbitrary manner.

allows the transfer of capital to more profitable sectors and ensures favourable public sector prices (chapter VI, section 2) ; *public sector contracts* provide a guaranteed market for large enterprises (chapter VII, 3.3.2.b) and mitigate cyclical recessions (chapter IX, 2.2.1.b) ; the expansion of *national insurance* (pensions, unemployment benefits, etc.) helps to stabilize the masses' living standards and also mitigate recessions (chapter IX, 2.2.1.a).

The objection may be raised that the expansion of national insurance, as well as all social legislation favourable to the mass of workers, constitute measures of state intervention which are in the workers' interests and opposed to the interests of the bourgeoisie. Without denying the importance of the social progress which has characterized the post-war years, we must, however, emphasize the origin and significance of these measures of social progress. On the one hand, these measures have been implemented under the pressure of social movements. On the other hand, the measures of social progress conceded by the state (as well as the rises in wages or the reductions in working hours negotiated without its intervention) never challenge the system itself but are always confined within its limits : they are only introduced if the « economic situation » permits and are systematically cut down or cancelled if the « economic situation » (really or allegedly) deteriorates (chapter IX, 3.1.2. and 3.1.3.) ; they constitute a means of stabilizing economic activity in the short term and expanding it in the long term (chapter IX, 2.2.1. and 2.2.2.) ; finally, they are also an important instrument of social peace-keeping, for the improvement of the material conditions of life conceals the continuous and possibly increasing exploitation to which wage-earners are subjected (chapter VIII, section 2).

2.2.3. In the ideological domain

The state plays an essential role in promoting a liberal ideology, which we shall deal with in a moment. Let us just mention here the great variety of state measures of intervention : state institutions may for instance control the content of educational curricula and the recruitment of teachers ; they may control the means of mass communication (radio and television) ; they may hand out selective subsidies to newspapers in financial difficulty ; they may also invoke the maintenance of public order to forbid the distribution of certain leaflets or the organization of certain demonstrations. In short, while proclaiming and formally guaranteeing the freedom of speech and opinion, state institutions massively intervene to organize a certain « social consensus », necessary for the reproduction of the system.

3. THE INTEGRATIVE ROLE OF LIBERAL IDEOLOGY

If we exclude systematic recourse to violence to maintain public order, a society can only be held together if a certain « social consensus » exists, an « ambient ideology » favourable to the maintenance of the social system in force.

An *ideology* consists of a whole set of ideas, of mental perceptions, concerning man and society. The *dominant ideology* is the ideology held by the dominant class and propagated through the whole population ; its function is to ensure the indispensable « social consensus », whether by *concealing* the basic divisions and inequalities of society, or by *making* these divisions and inequalities *acceptable* by *pseudo-justifications* or *evasions*. The pages which follow give some indication of the way in which liberal ideology plays this role within the framework of capitalist society.

3.1. Concealing reality

Liberal ideology, under different complementary guises, conceals reality.

- It glosses over the division of society into antagonistic social classes : it presents society as a juxtaposition of free and equal individuals (*liberté, égalité, fraternité*, the slogan proclaims) ; the owners of the means of production and the owners of labour-power are supposed to meet freely and on equal terms.

- Supported by the prevailing economic theory, liberal ideology glosses over the pre-eminent role of labour and the reality of surplus labour. It puts the two main « factors of production » (« labour » and « capital ») on equal terms, overlooking the fact that « capital » (that is, the means of labour) is itself the product of human labour (chapter I, footnote 6). It lists and justifies the different types of income (labour earns a wage, capital earns a profit, land earns a rent, etc.) but refuses to see that the sole source of all incomes lies in the present labour of commodity producers (chapter II, § 4.2., chapter VI, § 5.2.). It emphasizes the form of the wage (hourly wage, monthly wage, etc.), thus concealing the surplus labour provided free of charge by the wage-earners (chapter III, 1.3.3.c). It supports the idea that « profit is the source of investment and investment the creator of employment », ignoring the fact that surplus revenue and profit are themselves created by waged labour (chapter III, footnote 21)[2]. It also asserts that

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[2] The wage-earners' demand for « full employment » therefore amounts to a demand for « maximum creation of surplus revenue and profit » ! It only becomes an anti-capitalist demand if it also reveals the source of profit and denounces the system's incapacity to ensure full employment.

« competitiveness means survival », concealing the fact that the competitive drive is both murderous and suicidal (chapter IX, footnote 16).

     - Liberal ideology glosses over the essentially capitalist nature of measures of state intervention. It presents the state as « the emanation of popular sovereignty » (under bourgeois democracy, cannot all citizens « freely » choose their elected representatives at regular intervals ?) and as the « guardian of the common weal », the « arbiter of private interests ». It presents the preventive measures of state intervention as being in the « general interest », the repressive measures as « necessary for public order ». It puts the emphasis on different *forms of government* (democratic republic, parliamentary monarchy, military dictatorship, etc.) and conceals the *class nature* common to all capitalist states.

3.2. *Making reality acceptable*

     As liberal ideology can never completely conceal all the inequalities and tensions inherent in society, it must *make them acceptable*, whether by trying to *justify* them or by using *derivatives*.

3.2.1. *Pseudo-justifications*

     A typical example of « justification » concerns inequalities of income, for example the differences in income between doctors and nurses, between university professors and nursery-school teachers, between engineers or executives and manual or non-manual workers. While these differences basically arise from the fact that various social groups benefit from an unequal balance of power in society, liberal ideology seeks to justify them by arguments such as « differences in academic qualifications » or « the lack of incomes during years spent in education » or « differences in responsibilities exercised ».

     These arguments obviously only provide unconvincing and superficial answers. The first does not explain why certain social groups and not other have access to higher education ; the second argument would be acceptable if the higher incomes did no more than make up for the loss during the initial years, but fails to account for the considerable income differentials observed over the whole professional life ; the third argument does not show how the responsibilities of some are greater than the responsibilities of others, and it can be reversed in many cases[3].

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[3]   Is the responsibility of engineers designing new locomotives greater than the responsibility of workers manufacturing them or of railwaymen driving them ? And if « everything is settled by the

3.2.2. Derivatives

The « opium of the people » role played by the majority of religions, where the prospect of a blissful after-life encourages the acceptance of the social *status quo* here below, is well known. Other kinds of opium today induce a comparable degree of social apathy, favourable to the reproduction of capitalism. Some of them are equally well known, such as the mediatization of sport events, of the private lives of princes or stars, etc. Other are more subtle and deserve to be mentioned here.

- According to liberal ideology, capitalism is the most efficient way of introducing *technical progress*, technical progress is the best guarantee of the masses' material progress and this material progress is itself assimilated to social progress (or even to the disappearance of social classes). As it conceals the basic functions of technical progress (strengthening domination and increasing the rate of surplus value : see chapter VII, 1.2.2., and chapter VIII, § 1.2.), such an argument is simply a justification of capitalism ; besides which, it encourages an evasion in the pursuit of maximum consumption.

- We find another factor responsible for social apathy in the practice and ideology of *participation* and *negotiated agreements*. The practice consists in offering workers some « crumbs » of participation and in associating their representatives with policies or reforms which still fit into the framework of capitalism. The ideology consists in presenting this participation and this process of negotiated agreements as a sharing of power between employers and workers, as the advent of a new society.

- In a more radical way, liberal ideology also declares that capitalism is « the end of history ». It claims that capitalism is a natural and « self-evident » system, it discredits every experiment in an alternative society.

These are some typical elements of liberal ideology. Insofar as they are accepted by people, they constitute powerful elements in the reproduction of the capitalist system. And this why the protest against this system *also* demands a questioning of liberal ideology in all its guises.

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age of six » as regards child development, is not the responsibility of kindergarten teachers infinitely greater than that of university professors ? This would justify an exactly inverse scale of income… (For more comments on the issue of wage differentials, see appendix 5).

PEDAGOGICAL DEVICES CONCERNING THE CONCLUSION

SUMMARY

1. The reproduction of capitalism is ensured by the fact that wage-earners – taken as a whole – remain obliged to sell their labour-power, while capitalists retain the real ownership of the means of production and products of labour. This basic inequality is not affected by the fact that some wage-earners succeed in setting up on their own account, or by the fact that many of them share the *legal* ownership of enterprises, or by the fact that all can purchase durable consumer goods.

2. The basic inequality between wage-earners and capitalists is preserved by the *state*. The latter uses *repression* in response to every action considered to be a threat to the system. Moreover, it permanently develops *preventive* measures of intervention intended to ensure the harmonious functioning of the system. These preventive measures are developed in the legal domain (legal rules and precedents), in the economic and social field (public expenditure, national insurance, etc.) and in the ideological sphere (control of the educational system, of the mass-media, etc.).

3. The basic inequality between social classes is also preserved by the dominant *liberal ideology*, the function of which is to ensure « social consensus » and avoid protests against the system. Liberal ideology *conceals* reality (this role is played, among others, by standard economic theory), tries to *justify* inequalities and *distracts* people's attention from tensions in society.

EXERCISES (answers at end of book)

A.   Basic knowledge

C.1. Have the « bourgeois » way of life and « employee-shareholding » not transformed wage-earners into « small-scale capitalists » ?

C.2. What is the basic role of the state ? By what means is it played ?

C.3. What is the role of liberal ideology ? By what means is it played ?

B.   More advanced knowledge

C.4. If the state defends enterprises rather than the workers, how can Keynesian policies and systems of national insurance be accounted for ?

C.5. Give your opinion on the following two statements :
a) the profitability of automated enterprises invalidates the thesis according to which profit is created by waged labour ;
b) the rise in the wage-earners' living standard in advanced countries invalidates the thesis according to which workers are exploited.

C. Applied knowledge

C.6. Give present-day examples concerning the repressive and preventive measures of state intervention.

C.7. Give present-day examples concerning the threefold role of liberal ideology (concealing – justifying – distracting attention).

THEORETICAL APPENDICES

1. Theoretical viewpoints adopted in the book

2. A brief comparison with national income accounting

3. The money equivalent of value (E)

4. Labour productivity

5. The basis of wages and wage differentials

6. The production of value and surplus value in *qualitative* terms : the question of productive labour

7. The production of value and surplus value in *quantitative* terms : the question of more productive, more intensive or more skilled labour

8. Additional comments on the basic economic ratios

9. A « law of the falling tendency of the rate of profit » ?

10. The distribution of surplus revenue between unequally mechanized branches : the law of the equalization of the profit rate

11. Reproduction schemes

12. On social classes

1. THEORETICAL VIEWPOINTS ADOPTED IN THE BOOK

The book basically keeps with the tradition of *Capital*, which it develops on several points (§ 1.1.). However, for reasons of rigour and conceptual coherence, it also adopts a certain number of non-conventional viewpoints (§ 1.2.).

1.1. Traditional viewpoints

a) The book systematically distinguishes – and puts into relation – the visible phenomenon of prices and the hidden reality of value. This *simultaneous attention to prices and value* makes it possible – contrary to current economic theory – to draw an essential distinction between *revenue created* and *revenue obtained* (see in particular the syntheses provided in chapter II, 4.2.2., and chapter VI, 5.2.3.).

b) The book derives the main tendencies of the system (chapters VII to IX) from three basic structural features : profit is created by the wage-earners' *surplus labour* (chapter III, section 1) ; *profit* and *accumulation* constitute the aims of the system (chapter III, section 2) ; enterprises are in *competition* with each other with a view to maximizing their particular profit (chapters V and VI).

c) The book underlines the basic influence of both *productivity* and *power relations* (balance of forces). Their combined influence appears in numerous fields :
- Growth after the Second World War – including the stages of the present structural crisis – is analysed in terms of advances in general productivity and changes in the balance of forces between social classes (see chapter IX, 2.2.2. and section 3).
- Simple prices depend on the value of commodities, and therefore on productivity in the branches which produce them or contribute to their production (chapter II, 3.2.1.) ; differences between prices of production and simple prices depend on the composition of capital in the different branches, and therefore on the unequal development of productive forces between them (appendix 10, footnote 26) ; differences between market prices and simple prices (or prices of production) depend on the respective market power of the different branches, and therefore on the power relations between them (chapter II, 3.2.2.b).
- Aggregate surplus revenue is distributed according to the productivity of the different enterprises within each branch (chapter V, § 1.1.), to the composition of capital of the different branches (appendix 10, § 10.2.) and to the market power of the different branches (chapter V, § 1.2.).
- The value of labour-power – and hence the rate of surplus value –- depends both on general productivity (which determines the unit value of the wage-earners' means of consumption) and on the balance of power between employers and wage-earners (which determines the workers' money wage, and hence their real wage) (see appendix 5, 5.2.1.).

d) The book also emphasizes the *contradictory aspects of reality*, which are mentioned or underlined on numerous occasions :
- contradictory aspects of wages (see in particular chapter III, 2.2.3., chapter VIII, 2.1.1., chapter IX, 2.2.2.) ;
- contradictory aspects of public expenditure (see in particular chapter VI, § 3.2., chapter VIII, 2.1.2., chapter IX, 2.2.2.) ;
- contradictory relations between profitable and non-profitable enterprises (chapter V, section 2) ;
- contradictory relations between capitalist and non-capitalist production (chapter VI, sections 1 to 4) ;
- contradictory aspects of mechanization (chapter VII, § 1.3.) ;
- contradictory effects of mechanization on the evolution of the general rate of profit (appendix 9) ;
- contradiction between the socialization of production and the concentration of capital (chapter VII, section 2) ;
- contradictory effects of capitalist growth (chapter VII, introduction to section 4).
- contradiction between the search for private profit and the satisfaction of social needs (chapter VII, section 4) ;
- contradictory effects of neo-liberal policies (chapter IX, 3.1.2.).

1.2. Non-conventional viewpoints

The non-conventional viewpoints adopted combine the advantages of precision and simplicity : on the one hand, they make the theoretical approach more rigorous and coherent ; on the other hand, while justified on purely theoretical grounds, some of the viewpoints adopted present the additional advantages – as by-products, we might say – of making the theory simpler and allowing a much easier quantification of various key-concepts.

1.2.1. On the concepts of value, commodity and productive labour

- In order to take account of both the production aspect and the market aspect, value is defined, not as « embodied labour », but as « indirectly social labour », i.e. labour which is recognized as socially useful through the sale of the product (see chapter II, § 2.1., especially 2.1.2.b).

- The sole criterion of « indirectly social labour » is used to define commodity and productive labour in a coherent way. As a result, the concept of commodity is not restricted to material goods : it also includes services, on condition that the latter be sold (see chapter II, § 1.2. and 2.1.2.a ; see also appendix 6). The traditional distinction between production activities and circulation activities is therefore abandoned : insofar as

they consist of indirectly social labour, both types of activities produce commodities and value. A new distinction, however, is made between circulation *activities* (which require time) and circulation *acts* (which are instantaneous) : the former, which belong to production in the broader sense, can create value and surplus value (they do so in the market sector) ; the latter, on the contrary, cannot create value or surplus value (see appendix 6).

        - Adopting the criterion of « indirectly social labour » leads us to question traditional conceptions of more skilled and more intensive labour. The latter do not create more value than average labour. But they are possible means of increasing labour productivity and are treated as such : if limited to a particular enterprise, they give rise to transfers of surplus revenue ; if generalized throughout the economy, they give rise to one form of « production of relative surplus value » (on these questions, see appendix 7).

1.2.2. On other problems

        - The money equivalent of value, which establishes the link between the visible phenomenon of prices and the hidden reality of value, can be quantified country by country and year by year (see appendix 3, § 3.1.). Once this is done, we can statistically approximate the evolution of various basic concepts such as the value of commodities (inverse of total productivity), necessary labour and the rate of surplus value (see chapter II, footnote 21 ; chapter III, § 1.4. ; chapter VIII, 2.2.1. ; appendix 3, § 3.3. ; appendix 4, 4.3.2.).

        - Strictly speaking, the wage-earners' labour-power is not a commodity and the expression « value of labour-power » is not suitable. This does not affect the analysis concerning the source of profit, but it does affect the analysis of wage differences (see appendix 5).

        - Simple commodity producers within a capitalist society normally provide « surplus labour » which is analogous to the wage-earners' surplus labour. This « surplus labour » provided by the self-employed constitutes an additional – though subsidiary – source of profit (see chapter VI, § 1.1. and 1.3.2.a).

        - There is no « law of the falling tendency of the rate of profit » : mechanization has contradictory effects both on the composition of capital and on the rate of surplus value, so that the evolution of the rate of profit cannot be determined a priori (see appendix 9).

        - The problem of social class is completely distinct from the problem of defining productive labour (see chapter VI, 5.3.2., and appendix 12).

2. A BRIEF COMPARISON WITH NATIONAL INCOME ACCOUNTING

Tables I.3. and VI.3. (classification of labour activities) and figure VI.4. (creation and distribution of aggregate revenue) may be usefully compared with the principles and methods of national income accounting. This comparison applies first to the *general principles* which underlie the two approaches ; it then concerns the specific problem of *measuring aggregate revenue.*

2.1. General principles

- Tables I.3. and VI.3. differ radically from national income accounting since they *only* consider the *social forms* of production and disregard the nature of the use-values produced. National income accounting, on the contrary, breaks down aggregate production into different branches – which are defined by the nature of the use-values produced – and disregards the variety of social forms of production. Certain national accounts, however, introduce one exception : they consider a branch of « non-market services », which in principle refers to the production carried out in private and public institutions (rectangle C in table I.3.). (In practice, however, « non-market services » also refer to various *market* activities usually carried out in small enterprises, such as hairdressing and cleaning : this shows the lack of rigour of the conceptual categories used.)

- Tables I.3. and VI.3. consider *all* the social forms of production, and hence the whole of production carried out in capitalist society. National income accounting, on the contrary, in principle considers only paid activities, carried out on a professional basis : it glosses over the vast contribution to aggregate production which is due to labour provided free of charge in households and voluntary organizations. (National accounting, however, imputes a fictitious income to *some* non-monetary activities, like the occupation of a home by its owner : the arbitrary character of these exceptions makes the whole construction all the more inconsistent).

- National income accounting in principle considers only paid activities, but it puts on the same footing and simply adds up *all* the incomes earned in the professional sphere, making no distinction between incomes in the market sector (rectangles A and B) and incomes in the non-market sector. This assimilation is unjustifiable, for it confuses *creation* and *distribution* of aggregate revenue : aggregate revenue is created only in the market sector, and the incomes obtained in the non-market sector are *levied* on the aggregate revenue created in commodity production (see chapter VI, § 5.2.).

2.2. Calculating the aggregate revenue created

One of the methods used in national accounts to estimate a country's aggregate revenue consists in summing up the «net value added» of all the branches (i.e. the income obtained in all the branches after deducting depreciation) : the sum total constitutes the country's « net domestic product » or « net domestic income ». Does this macroeconomic magnitude correspond to the aggregate revenue created in a country ? The answer is negative, and for two reasons.

- First, the « net domestic product » sums up all the « net values added » before taxes, which gives rise to a double counting of the incomes in the non-market sector. Since the incomes in the non-market sector are derived from levies made on the revenue created in the market sector, two methods can actually be used to estimate the aggregate revenue created : either the « net values added » of all branches are summed up (both in the market and in the non-market sector), but they are recorded after taxes ; or the « net values added » are recorded before taxes, and only the market sector is taken into account (which is what is done in the lower part of figure VI.4. : see line II.A).

In order to approximate the aggregate revenue created in a country, it is therefore necessary to subtract, from the « net domestic product », the « net value added » in the non-market sector (i.e. the total wage-cost in the non-market sector).

- Second, the aggregate revenue corrected in that way is a theoretically valid approximation of the aggregate revenue created insofar as international transfers of revenue may be disregarded. The corrected aggregate revenue is actually equal to the aggregate revenue distributed in a country, which normally differs from the revenue created in it : the aggregate revenue distributed within a dominant economy is higher than the revenue created in it, and conversely for a dominated economy. The equality between aggregate revenue distributed and aggregate revenue created is only valid if we consider the worldwide economy or assume a closed national economy (see chapter VI, footnote 29).

3. THE MONEY EQUIVALENT OF VALUE (E)

The money equivalent of value was defined in chapter II (3.2.1.b). This appendix explains the method adopted to calculate E, the influences bearing on E and its usefulness on the empirical level[1].

3.1. Calculation of E

We know that prices express the value of commodities (simple price = value × E) and that revenues express the new value created by the commodity producers' present labour (revenue created = new value created × E). Starting with the second equality, we can write :

$$E = \frac{\text{revenue created}}{\text{new value}}$$

The revenue *created* cannot be measured on a micro-economic level (worker, enterprise, branch) : on this level, only the revenue *obtained* can be observed, but the latter may be very different from the revenue created. On the macro-economic level, however, the sum total of the revenues obtained (the aggregate revenue distributed) coincides with the aggregate revenue created[2]. We can therefore estimate E in the following way :

$$E = \frac{\text{aggregate revenue created}}{\text{sum total of new values}}$$

We saw in appendix 2 how to derive the numerator from national accounts : from the « net domestic product » we subtract the total wage-cost in the non-market sector

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[1] This concept, which is essential to establish the connection between prices and values, has been generally neglected. Among the few texts that consider it, let us mention Aglietta M., *A Theory of Capitalist Regulation : The U.S. Experience*, London, NLB, 1979 (who uses the term « monetary expression of the hour of labour »), Gouverneur J., *Contempory Capitalism and Marxist Economics*, Oxford, Martin Robertson,1983 (who uses the term « monetary expression of values ») and « Productive labour … », *Cambridge Journal of Economics*, 1990, vol. 14, p. 1-27 (where the term « price/value ratio » is used). Some other texts – as rare as the former – consider the inverse relation between values and prices : see, for instance Mage Sh., *The law of the falling tendency of the rate of profit*, Columbia University, unpublished thesis, 1963 (who considers the « labour content of the dollar ») and Foley D., *Understanding Capital*, Cambridge Mass., Harvard University Press, 1980 (who uses the ambiguous term « value of money »).

[2] Strictly speaking, this equality between the sum total of the revenues obtained and the aggregate revenue created is only valid on the level of the worldwide economy or of a hypothetical closed national economy (see appendix 2, § 2.2.). As a result, the calculation of E on the level of each country can only approximate the true magnitude of E.

(rectangles C and D in table I.3.). As to the denominator, it is equal to the number of hours of present labour performed in the market sector (rectangles A and B in table I.3.). We obtain it through multiplying the *number* of workers in this sector (both waged and non-waged workers) by their average annual *labour-time*.

Let L_v and t_v represent the number of *wage-earners* in the *market* sector and their average labour-time per year ; L_n and t_n the number of non-waged workers (capitalists and self-employed) in the *market* sector and their average labour-time per year ; L_u and w_u the number of *wage-earners* in the *non-market* sector and their average cost per year ; R the net revenue created each year and Y the « net domestic product » or « net national income ». We can write :

$$E = \frac{R}{L_v t_v + L_n t_n} = \frac{Y - L_u w_u}{L_v t_v + L_n t_n}$$

3.2. Influences affecting the magnitude of E

- In a system using metallic money or convertible credit money (bank notes or current account money which are convertible into metallic money), the magnitude of E basically depends on the value of the metal and on the « legal definition of the currency ». The value of the metal is given by the labour-time socially necessary to produce a unit of weight of metal ($\times$ hours per gram of gold, for instance). The « legal definition of the currency » expresses the weight of metal officially contained in the monetary unit (for instance : 1 dollar = 10g of gold, or 10g of gold per dollar) or, conversely, the number of monetary units corresponding officially to a unit of weight of metal (in the example : 1g of gold = 0.10 dollar, or 0.10 dollar per g of gold). We can write :

$$E = \frac{\text{legal definition of the currency}}{\text{value of metal}} = \frac{\$/\text{g of gold}}{\text{h/g of gold}} = ...\$/\text{h}$$

Consequently, in a system using metallic money or convertible credit money, E tends to increase for two reasons : a *devaluation* of the currency (the dollar is defined by a smaller quantity of metal, which amounts to expressing the same weight of metal by a greater quantity of dollars) and/or a *fall in the unit value of the metal* (due to the discovery of deposits which are easier to extract and/or to the introduction of technical progress in their extraction).

- When credit money ceases to be convertible into metallic money, as is the case since the Second World War, the level of E no longer depends on the definition of the currency or on the value of the metal. Its evolution basically depends on the respective

evolutions of the quantity of money in circulation and of the sum total of values (the total value of the commodities which are exchanged) : if the money in circulation increases in parallel to the growth of the sum total of values, E remains constant ; on the contrary, if the monetary mass grows more than the sum total of values (if there is excess creation of money), E increases.

In a system of convertible credit money, the very requirements of convertibility compel the banking system to correct any excess creation of money. In a system of inconvertible credit money, on the contrary, an excess creation of money can very well develop continuously, entailing a permanent rise of E[3].

3.3. Usefulness of the concept

Knowing E, it is possible to establish the link between the value and the price of commodities, as well as between the new value and the revenue created by the producers.

3.3.1. The link between value and price of commodities

From a theoretical point of view, assuming that we know the value of a commodity, we can derive its simple price :

$$\text{simple price} = \text{value} \times E$$

On the empirical level, starting from the market price of a commodity – which is the only price we can observe in reality –, we can derive the « labour-equivalent of the market price », which approximates the value of the commodity :

$$\text{market price} \div E = \text{labour-equivalent of market price}$$
$$= \text{value} \pm \text{deviation}$$

The labour-equivalent of market price approximates value all the more satisfactorily as one considers the value of a *whole set* of commodities (rather than the value of a particular commodity) and/or the *evolution* of value over a certain period of time (rather than the measure of value at a given time). If we want to estimate the value of a *set* of commodities – such as the means of consumption purchased by a wage-earner – we may assume that the differences between market prices and simple prices tend to compensate each other, market price being higher than simple price for some commodities and lower for others (on this compensation of the deviations, see chapter II, 3.2.3.a). If we want to measure the *evolution* of value, the important point is not that the market price of any

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[3] Further details on the questions of money and prices can be found in Gouverneur J., *Contemporary Capitalism ...*, chapter X.

commodity always deviates from the simple price, but that both prices are affected by the same two basic influences (value and E) and consequently move in the same direction in the long run (see chapter II, 3.2.3.b).

Figure and table A.1 : Evolution of simple price and market price (indices)
(hypothetical example)

		t_1	t_2	t_3	t_4	t_5
(1)	Unit social value	100	80	65	56	50
(2)	Money equivalent of value (E)	100	150	200	250	300
(3)	Simple price = (1) × (2)	100	120	130	140	150
(4)	Market price = (3) ± deviation	100	114	130	145	156
(5)	Labour-equivalent of market price = (4) ÷ (2)	100	76	65	58	52
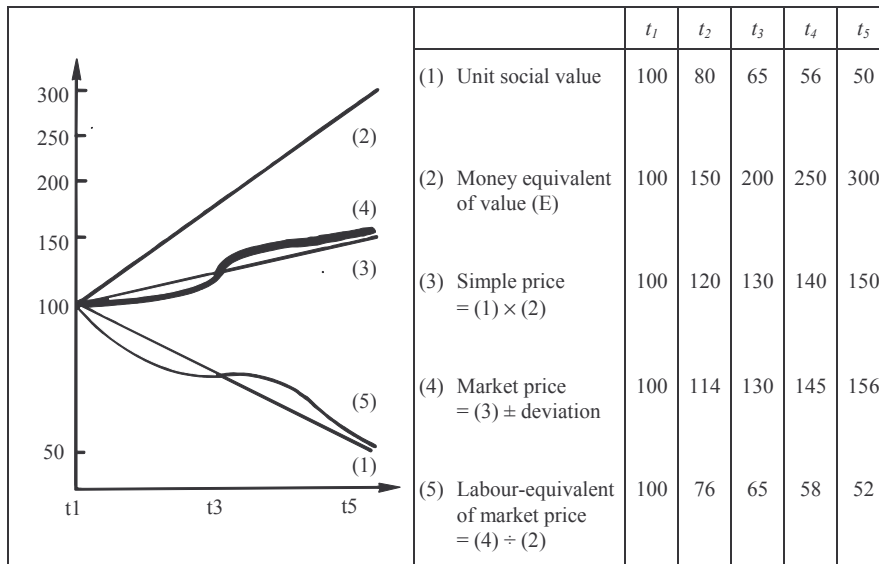
Notes :   (1) and (3) = invisible and non-calculable magnitudes
           (2) and (5) = invisible but calculable magnitudes
           (4) = only visible, observed, magnitude

Figure and table A.1 illustrate how market price and simple price move in the same direction and how, consequently, the labour-equivalent of market price moves parallel to value[4].

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[4]   If we overlook the deviation of market price from simple price and consider the price formula (price = value × E), some conclusions can be derived concerning the evolution of E : a) since the unit value of commodities decreases as productivity increases, a rise in the general level of prices necessarily involves a (stronger) rise of E ; b) mere *stability* in the general level of prices also implies a rise of E ; c) only a decrease in prices *stronger than the decrease in values* would imply a decline of E.

3.3.2. The link between new value and revenue created

The revenue created by a particular commodity producer (or by all the producers in an enterprise, a branch, etc.) is the monetary equivalent of the new value created by present labour :

revenue created = new value $\times$ E

Since all the hours of labour are on an equal footing as far as the creation of value and revenue is concerned (see chapter II, 2.2.2. and 4.1.2.), the money equivalent of value (E) makes it possible to calculate straightaway the revenue created (by a particular worker or by all workers in an enterprise or branch). If we compare the revenue *created* with the income *obtained* (with the sum total of wages and profits in the case of enterprises or branches), we can see immediately whether the distribution of the revenue created turns out to the advantage or disadvantage of the producer (or enterprise or branch) considered.

4. LABOUR PRODUCTIVITY

It is well known that productivity gains play a basic role in growth. This appendix aims to specify various concepts of productivity (§ 4.1.), clarify the relations between productivity and related concepts (production, employment, labour-time) (§ 4.2.) and show that the evolution of the *unit value* of commodities most adequately reflects the evolution of productivity (§ 4.3.). The appendix also examines the impact of productivity on the *total value* of commodities (§ 4.4.).

4.1. Different concepts of productivity and their mutual relations

4.1.1. On the micro-economic level

There are various ways of estimating labour productivity on the level of a particular branch or enterprise. *Total labour productivity* is the ratio of the quantity produced to the number of hours of *past and present labour* necessary to produce that quantity. The *productivity of present labour* is the ratio of the quantity produced to the number of hours of *present labour* devoted to producing that quantity (the number of hours of present labour is itself equal to the number of workers multiplied by their average labour-time). The *apparent productivity of labour* is the ratio of the quantity produced to the number of *workers :* it is the output per worker[5].

Let Q_i stand for the quantity produced in enterprise or branch i, A_i for the past value transferred, t_i for the amount of present labour or of new value created, L_i for the number of workers and t_i for their average labour-time (present labour per worker)[6]. We can write :

$$\text{total labour productivity} \quad = \frac{Q_i}{A_i + T_i} = \frac{Q_i}{A_i + L_i.t_i}$$

$$\text{productivity of present labour} \quad = \frac{Q_i}{T_i} = \frac{Q_i}{L_i.t_i}$$

$$\text{apparent productivity of labour} \quad = \frac{Q_i}{L_i}$$

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[5]   We use the term « apparent » productivity of labour for two reasons : on the one hand, output per worker is the most direct and visible way of expressing labour productivity ; on the other hand, it is also the most misleading way of assessing it (see below).

[6]   We shall systematically use *italic* symbols to refer to magnitudes expressed in *hours of labour*.

Each of these three concepts has its reciprocal. The reciprocal of total labour productivity, $(A_i + T_i)/Q_i$ or $A_i/Q_i + T_i/Q_i$, is the unit value of the commodity. The reciprocal of the productivity of present labour, T_i/Q_i, is present labour per unit. The reciprocal of the apparent productivity of labour, L_i/Q_i, is the number of workers per unit. Let us highlight the link between unit value and total labour productivity :

$$\text{unit value} = \frac{1}{\text{total productivity}}$$

Total labour productivity is clearly the most relevant concept for assessing changes in productivity. The other two concepts may be misleading, concealing the evolution of total productivity.

For instance, a rise in the *productivity of present labour* may conceal a decline in *total productivity*. Suppose that the value per table is at the start 18h = 10h (past value per unit) + 8h (new value or present labour per unit). Suppose that it becomes 20h = 14h + 6h : the productivity of present labour has increased (the table is produced in a day of 6h instead of 8h), but total labour productivity has actually deteriorated (20h are required to produce a table, instead of 18).

Similarly, a rise in the *apparent productivity* may conceal a decline in *total productivity*. It may also conceal a stagnation or a decline in the *productivity of present labour :* if a worker turns out 2 tables in a day of 12h instead of 1 table in a day of 6h, the apparent productivity has doubled, whereas present labour per table has remained identical[7].

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[7] Conversely, could a rise in total labour productivity be accompanied by a decline in the productivity of present labour and/or in the production per worker ?

In theory, a rise in total productivity is compatible with a decline in the *productivity of present labour*. In the example above (unit value of tables = 18h = 10h + 8h), a rise in total productivity will depress the unit value of the tables (from 18h to, say, 16h), but this result can be achieved in various ways : it may be that both *past and present* labour per unit decrease (for instance, 16h = 9h + 7h) ; it may be that only *present* labour per unit decreases, past labour per unit remaining constant or increasing (16h = 10h + 6h or 16h = 11h + 5h) ; and it may be that only *past* labour per unit decreases, present labour remaining constant or increasing (16h = 8h + 8h or 16h = 7h + 9h). The decrease of past labour alone, however, looks more like a theoretical case : in actual fact, gains in total productivity are normally coupled with increases in the productivity of present labour (decline in the new value per unit).

On the other hand, an increase in the productivity of present labour may very well be coupled with a decline in the *production per worker :* all depends on the evolution of labour-time. In the preceding example, suppose that the present labour per table diminishes from 8h to 6h. If the normal working day is reduced from 8h to 3h, the 6h of present labour now imply the employment of 2 workers instead of 1. In such a case, the rise in the productivity of present labour (decline in present labour per unit) is coupled with a decline in the apparent productivity (increase in the number of workers per unit).

4.1.2. On the macro-economic level

We saw in chapter I (§ 1.2.) that the total production of goods and services ultimately rests on human labour (the means of production used are themselves the product of human labour) and that it ultimately aims at producing means of consumption (means of production are normally produced in order to enhance the production of means of consumption).

This being so, macro-economic productivity (or general productivity) can be adequately expressed by the ratio of the total production of *means of consumption* (Q_{MC}) to the amount of present labour (T) provided in the *whole economy*, both in the branches producing means of consumption (T_{MC}) and in those producing means of production (T_{MP}). Since the labour provided in the branches producing means of production is (more or less directly) transferred as past value into the branches producing means of consumption (A_{MC}), macro-economic productivity is quite as adequately expressed by total labour productivity in the production of the means of consumption. We have thus :

$$\text{macro-economic productivity} \quad = \quad \frac{Q_{MC}}{T_{MP}+T_{MC}} = \frac{Q_{MC}}{T} = \frac{Q_{MC}}{L.t}$$

$$= \quad \frac{Q_{MC}}{A_{MC}+T_{MC}}$$

= total labour productivity in the production of the means of consumption

These ways of expressing macro-economic productivity are strictly valid only in the framework of a closed economy, which produces all its MP and MC. In an open economy, which exports and imports part of its MP and MC, macro-economic productivity is more adequately expressed by the following ratio, where Q stands for the whole of the MP and MC produced in the economy considered :

$$\text{macro-economic productivity} = \frac{Q_{MP}+Q_{MC}}{T_{MP}+T_{MC}} = \frac{Q}{T} = \frac{Q}{L.t}$$

In this situation, the evolution of macro-economic productivity is only approximately represented by the evolution of total labour productivity in the production of the means of consumption : this approximation is all the better as the economy is more self-sufficient and less dependent on foreign trade.

4.2. Relations between productivity, production, employment and labour-time

Let Q stand for the quantity produced per year, L for the number of wage-earners, t for the annual labour-time per wage-earner and π for the productivity of present labour. As shown in § 4.1., the ratio Q/T (or $Q/L.t$) can be used to express both macro-economic productivity and the productivity of present labour in a particular enterprise or branch. Irrespective of the level considered, we have therefore :

$$\pi = \frac{Q}{T} = \frac{Q}{L.t} \qquad\qquad [1]$$

We can also express production (Q) and employment (L) in relation to the other two variables :

$$Q = \pi \cdot L \cdot t \qquad\qquad [2]$$

$$L = Q \cdot \frac{1}{\pi} \cdot \frac{1}{t} \qquad\qquad [3]$$

4.2.1. Influences affecting total production

Equation [2] shows that the volume of output depends on labour productivity, the number of workers and the labour-time. We also know that capitalism aims at the expanded reproduction of the circuit of capital $M \to C_0 \to P \to C_1^+ \to M^+$: the growth of production (ΔQ) is therefore a permanent requirement, corresponding to the very logic of the system. In theory, this growth of production may result from a rise in productivity and/or in employment and/or in labour-time. What is the respective influence of these variables in reality ?

In the long run, the growth of production is basically accounted for by the rise in productivity due to technical advances ($\Delta\pi$), as well as by the expansion of waged labour (ΔL). The first factor has logically been more influential : for technical progress is an essential weapon in the competition between enterprises and in the collective struggle between employers and wage-earners (see chapter VII, § 1.2.), whereas employment, on the contrary, can be sacrificed (which strengthens the domination over workers and contributes – through the pressure on wages – to raising the rate of surplus value). As to the third factor (Δt), it certainly contributed to the growth of production at the early stages of capitalism, when technical progress was slow and the workers' movement weak ; since the middle of the nineteenth century, however, labour-time has tended to diminish.

4.2.2. Influences affecting employment and unemployment

Equation [3] focuses on the volume of *employment*. The latter moves under the contradictory influences of Q and π : it expands with the growth of production but declines with the growth of productivity. Employment also depends on the length of labour-time (*t*) : it tends to increase when labour-time is reduced.

Another equation can be introduced in order to focus on the volume of *unemployment* (Z) : the latter is the difference between the number of workers supplying their labour-power on the « labour market » (L*) and the number of jobs actually created (L). We have :

$$Z = L^* - L$$

$$= L^* - Q.\frac{1}{\pi}.\frac{1}{t} \qquad\qquad [4]$$

Changes in employment and unemployment can be analysed from equations [3] and [4]. Let us consider, for instance, the period after the Second World War : a sharp contrast appears between the stage of rapid growth in the fifties and sixties and the stage of slow growth since the seventies.

During the first stage, total production grows more than labour productivity ($\Delta Q > \Delta\pi$) and employment expands : the « employment effect » due to the growth of production is stronger than the « eviction effect » due to the development of mechanization ; the needs for labour are also increased by the progressive reduction in annual labour-time. In order to prevent a shortage of labour, female labour and immigrant labour are actively promoted, which increases L* more or less parallel to L : only some « frictional » unemployment continues to exist.

During the second stage, on the contrary, employment tends to stagnate or even decrease, as total production grows less than productivity ($\Delta Q < \Delta\pi$). In order to cope with growing unemployment, capitalists promote part-time jobs (which reduce *t* and increase L) and seek, above all, to diminish L* (through developing premature retirement, stopping immigration and promoting the return of immigrant workers to their country of origin).

4.2.3. Various possible expressions of productivity gains

Taking up equation [1], we see that a given increase in productivity may give rise to very different evolutions of the numerator and denominator. A doubling of productivity, for instance, may result in doubling output (Q), total labour-time (*T*) remaining constant ; alternatively, the same increase in productivity may result in reducing *T* by half, output Q

being kept constant ; the increase in productivity may also result in a moderate growth of Q combined with a moderate reduction of *T*.

Equation [1] also shows that a reduction in *T* is compatible with a growth of employment (L) : this involves a sufficient reduction in the annual labour-time per worker (*t*). The growth of productivity can therefore give rise – at least in theory – to a moderate growth of production and a substantial reduction in labour-time, thus ensuring full employment. As mentioned earlier (chapter VII, 4.1.2.), such evolutions run against capitalist logic : checking production means thwarting the expanded reproduction of capital and profit ; reducing labour-time means diminishing the rate of surplus value and the rate of profit ; ensuring full employment and expanding free time means reducing control over workers and expanding their sphere of freedom. Capitalist logic, therefore, drives towards mass production and mass consumption, ensured by and for the workers integrated into the system, but to the detriment of everyone's freedom : the « integrated » workers are unceasingly subjected to the requirements of production and consumption, while those left out are unable to exercise their rights to normal employment and consumption.

4.3. Measurement of productivity changes

4.3.1. The usual method

The usual method consists in calculating the evolution of the « value added at constant prices » per worker or per hour of labour. The « value added » in question is a monetary magnitude : it is the difference between the receipts from the sales and the cost of the means of production purchased (if depreciation is included in the cost, we get the « net value added » ; if it is not, we get the « gross value added »). This monetary « value added » is deflated by an appropriate price index to give the « value added at constant prices » : the evolution of the latter is supposed to represent the evolution of production in real terms (that is, in physical quantities). Dividing the « value added at constant prices » by the number of workers or by the number of hours of labour gives a measure of the apparent productivity of labour or of the productivity of present labour.

Such a method has two main shortcomings : 1. In order to estimate production in real terms, it is not « value added » which should be deflated, but rather the price of the product, including the cost of all intermediate consumptions (not only the depreciation of the means of labour, but also the cost of the objects of labour). 2. In any case, the usual method does not consider the efficiency in the use of the means of production : a rise in productivity calculated in that way may conceal a decline in total labour productivity, which is the most relevant concept.

4.3.2. An alternative method

An alternative method enables us to estimate the evolution of total labour productivity while avoiding the problem raised by the calculation of the numerator (volume of production in real terms). Our method consists in calculating the evolution of the labour-equivalent of the market price (= market price ÷ E). The latter moves parallel to the unit social value (appendix 3, 3.3.1.), and the unit social value is exactly the reciprocal of total labour productivity (above, 4.1.1.).

In each particular branch, therefore, the evolution of the labour-equivalent of market price (= market price ÷ E) enables us to approximate the evolution of the unit social value of the commodity considered ; in that way we can measure the growth of total labour productivity in the branch considered.

The same method can be used on an aggregate level. We know that the evolution of the consumer price index reflects the evolution of the average market price of all the means of consumption (both goods and services). If we divide the successive figures of the consumer price index by the successive figures of E (themselves in indices), we obtain a series which approximates the evolution of the average or unit value of all the means of consumption available in the economy. This series reflects the growth of total labour productivity in the production of the means of consumption. As explained above (4.1.2.), it indirectly reflects the growth of labour productivity in the whole economy.

Table A.2. calculates the evolution of the unit value of the means of consumption in four countries over the period from 1972 to 1992. This unit value has decreased by about 35 to 45 % in the European countries considered (though at a clearly slower rate since 1978 in France and Germany), while it has remained practically stable in the USA. This means that total labour productivity has increased in Europe (though at a progressively declining rate), while it has stagnated in the USA during the period considered[8].

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[8]   On the evolution of productivity in the USA over a longer period (1948-1992), see chap. VIII, figure VIII.7. and table VIII.8.

Table A.2. : Evolution of the money equivalent of value (E), consumer
prices and the unit value of the means of consumption in four countries
(1972-1992 ; 1972 = 100)

		1972	1978	1984	1988	1992
France						
E	(1)	100	231	504	680	805
unit price of MC	(2)	100	178	335	385	436
unit value of MC	(3)	100	77	66	57	54
Germany						
E	(1)	100	167	242	280	361
unit price of MC	(2)	100	135	175	181	206
unit value of MC	(3)	100	80	72	65	57
United Kingdom						
E	(1)	100	246	494	669	968
unit price of MC	(2)	100	230	410	491	637
unit value of MC	(3)	100	93	83	73	66
USA						
E	(1)	100	164	253	304	368
unit price of MC	(2)	100	156	248	283	335
unit value of MC	(3)	100	95	98	93	91

(1) Source : table II.2
(2) Source : official consumer price index
(3) = [(2) x 100] ÷(1)
Notes :   - all the indices were calculated from non-rounded data
            - MC = means of consumption

4.4. The influence of productivity on total value

We know that a rise in total productivity necessarily depresses the *unit* value of commodities. How does it affect *total* value, that is, the value of a set of commodities produced in an enterprise, branch or country ? The evolution of total value cannot be predicted : indeed, as we shall see immediately, the rise in productivity has no influence on the *new value* of the set of commodities considered, and has contradictory effects on the *past value* transferred.

The *new value* created in an enterprise or branch of production is equal to the number of hours of present labour performed in it : it varies therefore according to the *number of workers* and their *average labour-time*, but it is not affected by labour productivity in any way (labour productivity affects the quantity of *use-values* produced, not the quantity of *new value* created : see chapter II, footnote 16.a, and theoretical appendix 7). The *past value* transferred depends on the *number of means of production*

used and their *unit value* (and also on their anticipated use-life as far as means of labour are concerned). It is influenced by labour productivity in contradictory ways : a higher level of productivity in a given enterprise or branch generally involves a greater *number* of means of production being employed there ; on the other hand, higher productivity in the branches which produce these means of production results in a decrease in the *unit value* of the means of production employed by the enterprise or branch considered. It is therefore impossible to predict the evolution of the *past value* transferred in this enterprise or branch.

The same principles apply in the case of a country. The *new value* created in a country is equal to the number of hours of present labour devoted to commodity production (indirectly social labour) : it varies thus according to the *number of workers* in the market sector and their *average labour-time*. As far as the *past value* transferred is concerned, it is affected by the same contradictory influences of labour productivity ; it is therefore impossible to predict its evolution.

5. THE BASIS OF WAGES AND WAGE DIFFERENTIALS

5.1. *The traditional approach*

Since the wage-earner's labour-power is *sold* (hired out) on the « labour market », Marx and most Marxist authors consider it as being a *commodity*. Just like any commodity, labour-power has therefore a value ; and just as the price of commodities is basically determined by their value, the price of labour-power (the wage) is basically determined by the « value of labour-power ».

This traditional approach defines the value of labour-power as the value of the « socially necessary » means of consumption, that is, the value of the means of consumption which enable the wage-earner to cover the different needs considered as normal in a given country at a given time. This conception implies that the « socially necessary » means of consumption can be determined *a priori*. Knowing them, as well as their average value, it is possible to determine the value of labour-power ; from the latter, it is possible to derive the equilibrium wage, around which the actual wage fluctuates (see figure A.3.).

In the logic of this approach, differences in equilibrium wages are accounted for by objective differences in the value of labour-power defined *a priori*. This is the way, for instance, wage differentials between skilled workers (engineers, executives, etc.) and unskilled workers are explained : the « socially necessary » means of consumption are more considerable in the case of the former, so the value of their labour-power is greater, and their wage is logically higher[9].

5.2. *An alternative approach*

5.2.1. *Principles*

Contrary to the prevailing view, we consider that the wage-earner's labour-power is not a commodity, for it is not the product of indirectly social labour (which is the precise definition of commodities : see chapter II, 2.1.1.b). On the one hand, labour-power is not the result of an actual process of production, as described in table I.1. : we cannot speak of a process of labour in which means of production and labour-power are brought together

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9   According to the traditional approach, differences in the intensity of labour also entail objective differences in the value of labour-power : a more intensive labour involves a more rapid wear of the labour-power, which must be compensated by additional means of consumption (more substantial food to recover the energy spent, relaxation sessions to eliminate stress, etc.).

in order to create a new commodity, the wage-earner's labour-power[10]. On the other hand, and more fundamentally, the labour which contributes to the development and reproduction of labour-power does not constitute indirectly social labour, that is, labour whose social usefulness would depend on the sale of the labour-power : the labour provided within households (upbringing, health care, etc.) or in the institutional sector (education, for instance) *need not be validated* by the market ; and the labour carried out in the market sector to produce the necessary means of consumption *was already validated* when the latter were purchased[11].

Since labour-power is not a commodity, its price does not depend on a predetermined value and there is no equilibrium wage. The actual wage depends directly on the balance of forces on the labour market and will be found within two limits : the lower limit is given by the need to ensure the workers' physical reproduction, the upper limit is given by the need to ensure the enterprises' profitability. The actual wage in its turn determines the wage-earners' purchasing power, that is, the number of means of consumption that can be *actually purchased* : according to this view, there is no need to define a priori what the « socially necessary » means of consumption would be. Knowing the means of consumption actually purchased, as well as their unit value, we can derive the « value of labour-power », that is, the value of the means of consumption actually purchased by the wage-earner (see figure A.3.). All things considered, the wage does not depend on the value of labour-power : the latter actually depends on the former[12,13].

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10 Most of the « means of production » would actually be the means of consumption used by the wage-earner. However, is it possible to think of an average technique of production ? Is there any competition penalizing the « producers » who use too many « means of production » and benefiting those who economize on them ? What would the « present labour » devoted to producing the « new commodity » (labour-power) consist of ? Do eating, reading, breathing, sleeping constitute present labour ? And would it be necessary to economize on this « present labour » ?

11 If labour-power is not a commodity, is it justified to consider it as a natural resource ? It is difficult to adopt such a point of view, as the development and reproduction of labour-power involve multiple labour activities. It seems preferable to consider labour-power as an entirely specific non-commodity product.

12 Since labour-power is not a commodity, the concept of « value of labour-power » is irrelevant : strictly speaking, labour-power has no value. By continuing to use this concept, we simply conform to the current usage. Contrary to the current approach, however, we consider that the value of labour-power is equal to the value of the means of consumption *actually purchased* and that it therefore depends on the wage level.

13 As shown in figure A.3., the value of labour-power depends both on overall productivity and on the balance of forces : the former determines the unit value of the means of consumption, the latter determines the workers' money wage, and hence their real wage (the number of means of consumption purchased). On the macro-economic level, the real wage depends itself on these two influences : overall productivity determines the total quantity of goods and services produced in

Figure A.3. : Relations between wage and value of labour-power
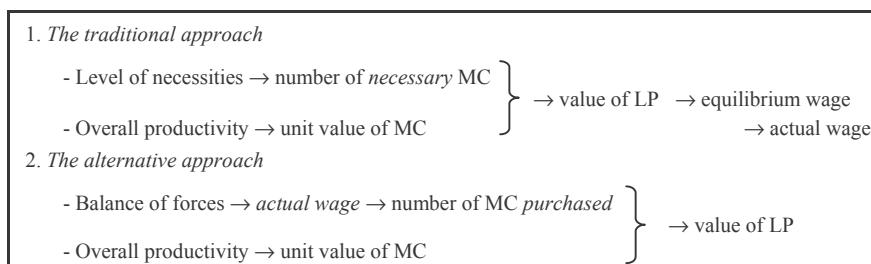
Note : MC = means of consumption ; LP = labour-power

In the logic of this alternative approach, wage differentials are accounted for by the respective balance of forces in which the different categories of workers are involved. This principle applies to wage differentials between men and women, between nationals and immigrant workers, between occupations (engineers and unskilled workers, for instance), between branches (energy and textile industries, for instance), between regions. All these wage differentials are due to the relative positions of strength or weakness of the workers concerned. These positions in turn are dependent on factors such as the political power of the groups concerned, the degree of unionization, the scarcity or excess supply of manpower, the profitability of the enterprise or branch, etc.[14]

5.2.2. Criticism of competing views

Wage differentials between skilled and unskilled workers (between engineers or executives and manual workers, for instance) are usually explained by « objective » factors, which overlook the actual balance of forces.

a) The first « objective » conception was mentioned above (5.1.1.) : it states that the value of labour-power is higher in the case of skilled workers, that the socially necessary means of consumption are more considerable as far as they are concerned.

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the economy ; given this total quantity, it is the balance of forces which determines the share accruing to the wage-earners.

[14] In a society in which the dominant positions are practically monopolized by educated white men, it is tempting to justify the privileged wages of those who are educated or white or male by supposedly objective factors which gloss over the actual balance of forces. Explaining wage differentials by objective differences in the value of labour-power entails the risk of disregarding or underestimating this balance of forces.

This argument is only valid for a limited number of means of consumption, namely for those « means of training » (that is, the goods and services necessary to acquire and maintain the required skills) which have to be *purchased* by the wage-earner. The argument is not valid for the means of training which the wage-earner obtains free or almost free of charge from public authorities or from his enterprise. And the argument is completely irrelevant as far as current means of consumption are concerned : if « necessities » are greater for executives and engineers than for manual workers, it is only because the former benefit from a more favourable balance of forces in society, which enables them to enforce this broader definition of their « necessities ».

As a matter of fact, the executives' and engineers' higher wages are due to their relative strength vis-à-vis employers (compared to the relative weakness of unskilled workers). This more favourable balance of forces, in turn, is due to their strategic position in the enterprise, to the fact that they often carry out typically entrepreneurial tasks (command, organization, innovation, etc.) which are delegated to them ; it is also due to their relative scarcity, which they may deliberately maintain in order to protect their privileges.

b) A second argument focuses, not on the value of labour-power, but on the value *created* by labour-power : the skilled labour performed by executives and engineers would create more value than the unskilled labour performed by manual workers, which would justify the former obtaining higher wages than the latter[15].

This argument does not hold : as far as the *creation* of value and revenue is concerned, all the producers are on an equal footing (see chapter II, 2.2.2. and 4.1.2., as well as appendix 7).

c) Among other arguments, differences in responsibilities exercised are put forward, as well as the lack of incomes during years spent in education.

But responsibilities cannot be compared with one another, and wage differentials do more than make up for the later entry into professional life (see Conclusion, 3.2.1.).

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[15] Some economists explain wage differentials by differences in the quantity of value created, and claim simultaneously that differences in the quantity of value created can be estimated from wage differentials !

6. THE PRODUCTION OF VALUE AND SURPLUS VALUE IN QUALITATIVE
    TERMS : THE QUESTION OF PRODUCTIVE LABOUR

We saw in chapter VI (5.3.1.) that productive labour can be understood in two senses : in a broader sense, productive labour is labour which creates value and revenue ; in a narrower sense, which is specific to capitalism, productive labour is labour which creates surplus value and surplus revenue. Both in the broader and in the narrower sense, productive labour is always labour devoted to commodity production. This raises the problem already broached in chapter II (§ 1.2. and 2.1.2.a) : do services constitute commodities in the same way as goods ? do all the activities in the market sector contribute to the production of commodities ?

6.1. The traditional approach

6.1.1. The exclusion of circulation and supervisory activities

In their analysis of productive labour, Marx and most Marxist authors make a distinction between production activities on the one hand, circulation and supervisory activities on the other. *Production* consists of all the operations which are technically necessary to result in a given product. These technical operations are meant in a broad sense : they include, not only the making of the product proper, but also transport, storage, maintenance, etc. *Circulation* comprises all the activities which secure transfers of rights of ownership or use over products or money, that is, activities which are made necessary by the commodity form of production : purchase of means of production and labour-power, sale of products, lending and borrowing of money. These activities are carried out either within specialized departments of production enterprises (« marketing », « finance », etc.) or within specialized enterprises (retailers, wholesalers and banks in particular). *Supervisory* activities are made necessary by the capitalist nature of production, with its class division : they are intended to enforce workers' discipline in the enterprise (labour of various executives and foremen).

According to the traditional Marxist view, only production activities (in the market sector) are productive : they alone create commodities, value and revenue (and thus surplus value and surplus revenue if wage-earners are concerned). On the other hand, circulation and supervisory activities are unproductive : they do not create commodities, value, or revenue. As a consequence, the incomes earned in these activities, just like the wages earned in the sector of non-commodity production, involve deductions from the aggregate revenue created : this is the case for wages and profits of commercial and financial enterprises, and also for wages paid to employees devoted to circulation and supervisory activities within production enterprises.

The deductions required to finance circulation and supervisory activities, like those required to finance non-market collective goods and services, affect the rate of profit and potential for accumulation of the productive sectors. Insofar as the proportion of workers devoted to those activities increases, insofar as the proportion of workers devoted to technical production activities decreases, the economy as a whole comes up against limits to its growth.

6.1.2. The exclusion of immaterial services

The analysis of commodities at the beginning of *Capital* only considers the case of material goods. Similarly, subsequent analysis of the production process focuses on the making of material goods. Whereas this limitation can be explained by the historical context (market services were hardly developed during the nineteenth century), many authors have considered that the concept of commodity should by nature be restricted to material goods, as well as to services directly related to material goods. According to them, for instance, the transport and repair of objects can be classed as commodity production, whereas the transport of persons, or health care, or education, etc., cannot.

According to this approach, immaterial production activities are thus unproductive : they do not create commodities, value, or revenue. The incomes earned in these activities also involve deductions from the aggregate revenue created in material market production. Insofar as the proportion of immaterial activities increases, the economy runs into additional limits to its growth.

6.2. An alternative approach

6.2.1. Principles

The traditional views summarized above define a commodity, and thus productive labour, taking account of the nature of the activities carried out. According to their advocates, the criterion of indirectly social labour (human labour validated by sale on the market) is not sufficient to define a commodity : an additional condition is that labour be devoted to technical activities of *production* (as opposed to circulation and supervisory activities), or even to technical activities of *material* production (as opposed to immaterial services).

The alternative view adopted in this book defines a commodity, and thus productive labour, using the sole criterion of indirectly social labour. If *any* enterprise – whatever goods or services it may produce – proves successful in selling its products, *all* labour carried out in it counts as indirectly social labour and therefore contributes to the creation

of commodities, value and revenue (and thus of surplus value and surplus revenue if it is waged labour).

Circulation and supervisory activities, therefore, equally constitute productive labour (provided the goods or services produced by the enterprise are actually sold). They equally contribute to the creation of the aggregate revenue. The development of such activities, in itself, involves no deductions from the aggregate revenue and no slowing down of the growth of the economy.

6.2.2. A reply to two objections

a) The alternative view we advocate considers that commodity services contribute to the creation of aggregate revenue (and of aggregate surplus revenue if they are produced in enterprises employing waged labour). Does this mean that activities like trade and finance can develop indefinitely, without prejudice to the system ?

The answer is negative, but not because such activities would be unproductive. If an excessive expansion of those activities is prejudicial to the economy, it is because *no* branch of activity can expand without taking account of the requirements of general interdependence, without taking account of the relations it maintains with other branches (from which it purchases or to which it sells means of production) and possibly with consumers (to whom it sells means of consumption).

b) The alternative view we support abolishes the traditional distinction between « production » and « circulation » activities : both are included in the concept of indirectly social labour (if products are sold). What remains then of the formula $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$ and of the Marxist thesis stating that revenue and surplus revenue are created in production (P) and not in circulation ($M \rightarrow C_0$ and $C_1^+ \rightarrow M^+$) ?

We must in fact introduce a distinction between circulation *acts* and circulation *activities*.

Circulation acts are juridical acts effecting transfers of rights of ownership or use over commodities and/or money. The transactions $M \rightarrow C_0$ transfer to the enterprise the right of ownership or use over means of production and labour-power (simultaneously, the sellers of the means of production and the wage-earners become the owners of the sum of money paid by the enterprise). The transactions $C_1^+ \rightarrow M^+$ transfer to the buyer or user the right of ownership or use over the finished product (simultaneously, the enterprise becomes the owner of the sum of money paid by the purchaser). All these transfers are *instantaneous acts :* they take place at a definite moment in time, which is determined by the contracting parties or by law (for example : at the moment of signing the contract, or of paying the price, etc.).

Though instantaneous acts, the transfers of rights imply a variable amount of labour, a certain number of varied activities : thus the purchase of labour-power (which is effected when signing the labour contract) implies varied activities such as organizing recruitment, establishing labour contracts, paying the employees engaged, etc. ; similarly, the sale of the finished product (which occurs for instance when the invoice is signed) is surrounded by multiple activities such as advertising, determining the sale conditions, invoicing, giving credit, recovering debts, etc. All these activities constitute *circulation services* or *circulation activities :* the latter may be defined as all activities carried out to implement transfers of rights, or again as all activities implied by circulation acts.

Once the distinction between circulation acts and circulation activities is established, the thesis concerning the source of revenue and surplus revenue remains perfectly valid. Circulation *acts* ($M \rightarrow C_0$ or $C_1^+ \rightarrow M^+$) do not create value or revenue, surplus value or surplus revenue : they do no more than transfer juridical rights over commodities embodying a certain value or over money symbolizing a certain value. Circulation *activities*, on the contrary, contribute to creating value and revenue, surplus value and surplus revenue : they are included in the process of production in the wider sense[16].

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[16]   In our opinion, the profits of the financial sector (banks, insurance companies) have a threefold origin : 1. the *surplus revenue* created by the employees of the sector (whom we actually consider as productive workers) ; 2. *transfers of surplus revenue* from other sectors, insofar as the financial sector enjoys a higher-than-average market power ; 3. *financial rents*, due to the mere ownership of financial assets (financial rents are comparable to ground rents, which derive from the mere ownership of land, independently of any labour : on the agricultural ground rent, see Gouverneur J., *Valeur, capital et accumulation*, Brussels, De Boeck, and Paris, Editions Universitaires, 1989, p. 138-143).

7.   THE PRODUCTION OF VALUE AND SURPLUS VALUE IN QUANTITATIVE
      TERMS : THE QUESTION OF MORE PRODUCTIVE, MORE INTENSIVE OR
      MORE SKILLED LABOUR

The preceding appendix considered the problem of productive labour from a *qualitative* point of view : the question was whether all labour in the market sector produced value and revenue (and thus surplus value and surplus revenue in the case of waged labour). This appendix examines the problem of productive labour from a *quantitative* point of view : do all the activities considered as productive create the same quantity of value and revenue (of surplus value and surplus revenue) ? The problem we have to consider here is that of differences in labour productivity, or in the intensity or skill of labour.

7.1. The traditional approach

7.1.1. The creation of value

According to the traditional Marxist approach, *more productive* labour is labour which, without requiring a greater expenditure of energy on the part of the workers, produces more commodities in a given lapse of time (in a working day of 8h, for instance). In accordance with this definition, labour is (or becomes) more productive for reasons independent of the workers' efforts : the main reason for advances in labour productivity lies in mechanization and technical progress, but other factors may also have the same effect (better organization, for instance). On the other hand, *more intensive* and *more skilled* labour do require a greater expenditure of energy on the part of the workers : in the case of more intensive labour, additional expenditure of energy takes place *at the very moment* when labour is carried out ; in the case of more skilled labour, it takes place *prior* to labour, when the worker (alone or, more often, with the help of others' labour) makes the efforts needed to acquire or maintain the skill required.

1. Commodities are exchanged in proportion to their unit social value, that is, in proportion to the quantity of labour required under *average* conditions of productivity, skill and intensity prevailing at a given time. The average conditions of productivity can only be assessed within each branch of production[17]. The average conditions of skill and

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[17]   We can compare labour productivity in two iron and steel works, but we cannot compare productivity in the iron and steel industry with productivity in the textile industry (see chap. II, footnote 17).

intensity, on the contrary, must be considered both within each branch and on the level of the whole economy.

The unit social value of commodities is determined, in the first place, by the average conditions of productivity, skill and intensity prevailing *within each branch*. Commodities cannot be exchanged in proportion to the labour-time resulting from the *productivity* in each particular enterprise : for in such a case, it would be in each enterprise's interest to use the least efficient techniques, requiring more labour-time. Consequently – according to the traditional view – one hour of more productive labour must count as a multiple of one hour of average productivity : it creates more social value ; conversely, one hour of less productive labour should count as a fraction of one hour of average productivity : it creates less social value. The same argument holds for labour *intensity :* assuming identical techniques, if commodities were exchanged in proportion to the labour-time provided by each individual producer, it would be in each one's interest to work lazily and slowly. As a matter of fact, one hour of more intensive labour involves a greater expenditure of energy and must count as a multiple of one hour of average intensity : it creates more social value. Similarly, more *skilled* labour also implies a greater expenditure of energy (during the process of training) : in order to induce producers to acquire the necessary skills, one hour of more skilled labour (called « complex labour ») must count as a multiple of one hour of average skill (called « simple labour »).

The unit social value of commodities is determined, in the second place, by the average conditions of skill and intensity prevailing *in the whole economy*. Suppose that the producers within each branch work with the same degree of productivity, skill and intensity. Suppose that 15h are required to produce one commodity B and 5h to produce one commodity C. Will the two commodities be exchanged in the ratio 1B = 3C ? This is only possible if the degree of skill and intensity is the same in the two branches. If labour is more demanding in branch B (if it is more intensive or requires higher skills in it), the exchange ratio 1B = 3C would divert producers from branch B to branch C. Consequently, more skilled or more intensive labour in a particular branch must count as a multiple of labour of average skill and intensity in the whole economy : it creates more social value than this average labour.

2. The foregoing referred to *differences* in productivity or skill or intensity between different enterprises or branches. What can be said concerning an *increase in the average degree* of productivity, skill and intensity in a branch and concerning an increase in the average degree of skill and intensity in the whole economy ? The answers given in *Capital* refer to an increase in productivity and in intensity :

- An increase in the average productivity of labour in a branch gives rise to an increase in the quantity produced, but not in the value created : for a given working time, labour will create more commodities, but no more value. The increase in productivity will actually reduce the present labour per unit and the unit value of commodities (past and present labour per unit).

- An increase in the average intensity of labour in the whole economy also gives rise to an increase in the quantities produced, but not in the value created (though there is a greater expenditure of energy). Just like a general increase in productivity, it will depress the unit value of commodities.

7.1.2. The effect on the rate of surplus value

1. If labour productivity or intensity *increase* in the whole economy (or at least in the branches producing, directly or indirectly, the wage-earners' means of consumption), the unit value of the latter diminishes. Assuming that labour-time and the real wage remain constant, necessary labour decreases and the rate of surplus value increases : this is one type of production of « relative surplus value »[18].

2. If labour productivity or intensity *differ* between different enterprises within a branch, the unit individual value of commodities produced in more efficient enterprises is lower than the unit social value. These enterprises, by selling their commodities at a price above the unit individual value, obtain an « extra surplus value », which is commonly regarded as a case of « relative surplus value » production : assuming that the working day and the wage are equal in all the enterprises, the more efficient enterprises enjoy a higher rate of surplus value, due to a lower « necessary labour » on the part of their wage-earners. This « extra surplus value », however, is doomed to disappear when the competing enterprises imitate the methods used in the innovating ones.

7.2. An alternative approach

7.2.1. Critical comments on the traditional approach

a) According to the traditional approach, the common denominator of commodities and the substance of value lie in the *expenditure of energy* (considered in an abstract way, that is, without taking account of the specific type of commodity produced or labour

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[18] According to the traditional Marxist view, however, a higher intensity or skill of labour increases the number of means of consumption necessary for the workers (see appendix 5, § 5.1. and footnote 9) : this should logically limit the production of « relative surplus value ».

carried out). Insofar as more skilled and more intensive labour involve a greater expenditure of energy, they create more value than less skilled and less intensive labour. Three observations can be made on this view.

- If the energy spent is to act as a common denominator, a unit of measure of it should be specified, at least on a theoretical level (the practical difficulty of actually calculating the expenditure of energy is not the point here). But what common unit of measurement could we use to compare, for instance, the energy spent by a more manual worker with that spent by a more intellectual worker ? These two types of energy are part of the material characteristics which define the concrete labour performed by each worker, they are not comparable with one another.

- If the energy spent is taken as the substance of value, it seems logical to consider an increase in the average intensity of labour in the same way as a lengthening of labour-time and to recognize that « absolute surplus value » is produced in both cases. This is the viewpoint adopted by most followers of the traditional approach ; in *Capital*, however, a general increase in the intensity of labour has no effect on the quantity of value created[19].

- If we consider a capitalist system rather than a system of simple commodity production, the expenditure of energy plays no part in regulating commodity exchange. In a system of *simple commodity production*, commodities are exchanged as *products of labour*. The equilibrium of exchanges logically implies that the energy spent in each branch be taken into account : if the social value took account of the labour-time alone and disregarded the skill and intensity specific to each branch, the producers would leave the branches requiring more intensive or more skilled labour. In a *capitalist* system, however, commodities are exchanged as *products of capital*. The equilibrium of exchanges implies that the different branches obtain the same average rate of profit (see appendix 10, § 10.2.) ; otherwise, capital would leave the branches with a lower-than-average rate of profit. But it does not imply that the labour-time should be weighed by the degree of skill and intensity specific to each branch : capital will not move out of branches where wage-earners must carry out more skilled or more intensive labour[20].

b) By regarding « extra surplus value » as a form of « relative surplus value », Marx implicitly adopts another definition of necessary labour, which does not coincide with his

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[19] See Volume I, Part 4, chap. XVII : in the case of a general increase in the intensity of labour, only international intensity differentials affect the quantity of value created.

[20] The problem will rather be of attracting wage-earners to branches (and occupations) requiring more skilled or more intensive labour : depending on the balance of forces between workers and capitalists, it is possible – but not certain – that higher wages will have to be paid. This problem, however, is about wages and value of labour-power : it is different from the problem of the social value of commodities produced in different branches.

initial definition. According to the initial definition, necessary labour is the labour-time during which the wage-earner creates a quantity of value equal to the value of his means of consumption. In the new definition, necessary labour becomes the labour-time during which the wage-earner creates a quantity of product that brings in a net revenue equal to the worker's wage.

In order to make this point clear, let us consider the example in table V.1 and figure V.2. The « extra surplus value » of enterprise 1 is represented by the rectangle with + signs : it amounts to $1,000 (= P - S).

According to the current definition, necessary labour is equal to 4h in the three enterprises : we assume that all the wage-earners earn $4 and that E = $1 per hour, so that the value of labour-power is 4h for all of them.

According to the new (implicit) definition, necessary labour is different in the three enterprises : given the same selling price ($12) and the cost of the means of production per unit (which happens to be $8 in the three enterprises), it is necessary to produce and sell 1 unit in order to obtain a net revenue of $4. Now a wage-earner produces 1 unit in 0.222 day in enterprise 1, in 1/2 day in enterprise 2 and in 1 day in enterprise 3 : since the working day is 8h everywhere, « necessary labour » amounts to 1.78h (= 8h x 0.222) in enterprise 1, to 4h (= 8h x 1/2) in enterprise 2 and to 8h in enterprise 3 ; the respective « rates of surplus labour » or « rates of surplus value » are 350 % (6.22h/1.78h), 100 % (4h/4h) and 0 % (0h/8h). « Necessary labour » (in the implicit definition) therefore depends on the productivity of present labour in the three enterprises. But it also depends on the selling price of the product : if enterprise 1 sold its product for $11 (instead of $12), each unit would bring in a net revenue of $3 only (instead of $4) ; the enterprise would have to sell 1.33 unit (instead of 1 unit) in order to obtain a net revenue equal to the wage ($4) : « necessary labour » would then amount to 2.37h (instead of 1.78h). As a matter of fact, these different « rates of surplus labour » or « rates of surplus value », which vary according to labour productivity and the selling price, are no more than profit/wage ratios (in enterprise 1, $1400/$400 = 350 % ; in enterprise 2, $600/$600 = 100 % ; in enterprise 3, $0/$1000 = 0 %).

If one wishes to avoid this coexistence of two contradictory definitions of necessary labour, one should rather regard « extra surplus value » as a form of « absolute surplus value » : necessary labour remains equal to 4h in the three enterprises, but 8h of more productive labour in enterprise 1 are considered as equivalent to a working day of 14h (they thus create a value of 14h), while 8h of less productive labour in enterprise 3 are considered as equivalent to a working day of 4h (they thus create a value of 4h). The « rates of surplus labour » or « rates of surplus value » are the same as above (in enterprise 1, 14h/4h = 350 % ; in enterprise 2, 4h/4h = 100 % ; in enterprise 3, 0h/4h = 0 %). But again, these different rates are no more than profit/wage ratios.

c) Irrespective of whether « extra surplus value » is regarded as « relative surplus value » or « absolute surplus value », another contradiction remains. The distinction between surplus revenue and profit, which plays an essential role on the level of branches of production, completely disappears on the level of enterprises : the surplus revenue created in each enterprise is supposed to be equal to the profit obtained. The consequence is that the « rate of surplus value » varies according to enterprises, depending on the profit obtained : even if all the working conditions were identical in the different enterprises (same wage, same working day, same skill and intensity of labour), wage-earners would be all the more (less) exploited as their enterprise would have more (less) profit ; in the extreme case of enterprises having no profit (like enterprise 3 in the example, like marginal enterprises only surviving thanks to subsidies), wage-earners would not be exploited at all ![21]

7.2.2. Alternative principles

a) In our opinion, the common denominator of commodities (abstract labour, value) must disregard *all* the concrete characteristics of labour, including the degree of mechanization of the production process and the degree of skill and intensity of labour (see chapter II, 2.2.2.). These concrete characteristics cannot be the object of comparisons between different commodities or different producers. The only thing that remains comparable in all the cases is the length of labour-time or, more precisely, the time during which the workers place their labour-power at the enterprise's disposal. If two workers are at the disposal of an enterprise during 8h and if the goods or services they contribute to producing find purchasers on the market, both workers have created 8h of value. The quantity of value created is thus independent of labour productivity, skill or intensity. It only depends on two *purely social conditions :* the time during which the worker is subjected to the enterprise and the fact that the goods or services produced in the

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[21]   a) In his analysis of « extra surplus value » (*Capital*, Volume I, Part 4, chap. XII), Marx does not take the situation of marginal enterprises into account : all the enterprises in the branch are on an equal footing, except for one more efficient enterprise (where the unit individual value is less than the unit social value). In his analysis of the whole hierarchy of unit individual values (*Capital*, Volume III, Part 2 , chap. X), the problem of « extra surplus value » and inter-firm differences in the « rate of surplus value » is no longer taken into account.

b) Authors are usually reluctant to use the concept of individual value and prefer the expression « individual labour-time » (as against the « socially necessary labour-time » which determines the social value). The concept of individual value is nevertheless perfectly justified : if an enterprise succeeds in selling its commodities, the labour devoted to producing them is indirectly social labour (and thus creates value), no matter the degree of productivity of the enterprise. The concept of individual value appears explicitly in the chapter of *Capital* just referred to (Volume III, Part 2, chap. X), where it is distinguished from « market value » or « social value ».

enterprise are validated by the market. Labour-time being equal, more productive or more intensive or more skilled labour creates as much value and revenue as less productive or less intensive or less skilled labour. Labour-time and the wage being equal, both types of labour create the same quantity of surplus value and surplus revenue[22].

b) An increase in the intensity of labour (or in its skill) is one of the ways of increasing labour productivity and so of reducing the value of commodities. It must therefore be treated in the same way as any other cause of productivity gains (development of mechanization in particular)[23] :

- If it takes place in the whole economy (or at least in branches which contribute to producing the wage-earners' means of consumption), it gives rise to production of « relative surplus value ».

- If it takes place only in a particular enterprise, the latter will benefit from « extra surplus value ». But this additional profit is not created by the wage-earners employed in the more efficient enterprise : it results from a redistribution of the surplus revenue created in the less efficient enterprises.

Just as well as the traditional approach, this alternative approach accounts for the enterprises' drive to increase labour intensity. Moreover, it has the advantage of avoiding the contradictions, mentioned above, inherent in the traditional approach. For the alternative approach uses one and only one concept of necessary labour ; it maintains the essential distinction between profit and surplus revenue not only for branches, but also for enterprises ; and it recognizes the existence of exploitation in all the enterprises, including in the enterprises which do not make profit.

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[22] These principles clearly apply to the production of services, where simply waiting for the client may be more or less time-consuming. Consider for instance hairdressing. Suppose that the production process is identical in all salons, that each of them employs one wage-earner for 8 hours a day, and that it takes the latter 1 hour of present labour to care for a client (for simplicity's sake, we will overlook past labour). Suppose that the salons receive 6 clients per day on average : the unit social value of the hairdressing service is equal to 1.33h (=8h/6). Suppose now that a better-placed salon attends 8 clients daily, while a marginal one only attends 4 clients : *the daily value created per worker amounts to 8h in all the enterprises*, but the *unit individual value* (per commodity) is below average in the better-placed salon (8h/8=1h) and above average in the marginal one (8h/4=2h). (Price being the same for all the competing enterprises, the usual transfer of surplus revenue necessarily takes place : the first salon obtains a profit higher than the surplus revenue created in it, to the detriment of the marginal one where profit is less than the surplus revenue created).

[23] In practice, differences in the degree of mechanization are normally *combined* with differences in *skill* and *intensity* of labour : see chap. V, footnote 7.b.

7.2.3. *Physical exploitation and economic exploitation*

In our view, wage-earners working more intensively do not provide more labour than wage-earners working less intensively ; in the market sector, the former do not create more value or revenue than the latter ; labour-time and the wage being equal, the rate of surplus labour or surplus value will be the same for all of them. Is it not « evident », however, that wage-earners subjected to more intensive labour are more exploited, that the rate of surplus labour or surplus value is higher in their case ?

In order to meet this objection, which is based on straightforward common sense, we must recall the distinction between physical exploitation and economic exploitation[24]. From a physical point of view, wage-earners are all the more exploited as they are forced to work longer, harder or more intensively and/or to consume less. From an economic point of view, wage-earners are all the more exploited as the rate of surplus labour or surplus value is higher.

The two types of exploitation may very well move in opposite directions. An increase in the rate of surplus value may be accompanied by a rise in the level of consumption (see chapter VIII, section 2) and/or by a decrease in the intensity of labour. Conversely, and contrary to straightforward common sense, a higher physical exploitation – in this case a higher intensity of labour – does not necessarily involve a higher economic exploitation.

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[24]   See chap. IV, § 1.1. (including footnote 4).

8. ADDITIONAL COMMENTS ON THE BASIC ECONOMIC RATIOS

8.1. *Influences affecting the three ratios*

The analysis of the basic ratios in chapter IV has brought out three types of concepts : some concepts are expressed in terms of *hours of labour* (labour-time, value of means of consumption, etc.), others in terms of *money* (wage, price of means of consumption, etc.), others in terms of *physical quantities* (real wage, number of workers, etc.). This section begins by symbolizing all the influences bearing on the three ratios (s', c', p') ; it does so while differentiating between the three types of concepts. In the second place, it gives the general principles which govern the measurement of the different concepts used. Finally, it re-writes the three ratios (using the symbols chosen) and highlights the influences bearing on the macro-economic rate of profit.

8.1.1. *Symbolizing the relevant magnitudes*

a) Magnitudes in physical terms

M = number of means of production (MP)

x = number of means of consumption (MC) per wage-earner = real wage per worker (= w/p_x)

L = number of wage-earners

b) Magnitudes in money terms

p_m = average price of MP

p_x = average price of MC

w = average wage per worker (= $x.p_x$)

c) Magnitudes in terms of hours of labour

p_m = unit value of MP (= p_m/E)

p_x = unit value of MC (= p_x/E)

w = value of labour-power per wage-earner (= value of MC purchased per wage-earner = necessary labour per wage-earner) (= $w/E = x.p_x$)

t = labour-time or present labour per wage-earner (= new value created per wage-earner)

8.1.2. Measuring the relevant magnitudes

The variables L, *t* and w raise no theoretical problem.

The magnitude of *w* is obtained by dividing w by E (chapter III, § 1.4.).

The variables p_x and p_m are available in the form of indices : the consumer price indices give the evolution of the average price of the MC, other price indices give the evolution of the average prices of the MP.

Dividing the price indices p_x and p_m by E (itself expressed in the form of indices), we obtain indices expressing the evolution of p_x and p_m respectively (see table A.2 for the evolution of p_x).

The different MC cannot be aggregated, any more than the different MP. It is therefore impossible to quantify x and M. The *evolution* of x and M, however, can be quantified by way of indices :

index of x = index of w ÷ index of p_x

index of M = index of constant capital ÷ index of p_m

8.1.3. Analysing the influences affecting each ratio

a) *The rate of surplus value*

$$s' = \frac{t-w}{w} = \frac{t}{w} - 1$$

$$\boxed{s' = \frac{t}{x \cdot p_x} - 1}$$

b) *The composition of capital*

$$c' = \frac{M}{L} \cdot \frac{p_m}{w} = \frac{M}{L} \cdot \frac{p_m}{p_x} \cdot \frac{1}{x}$$

$$\boxed{c' = \frac{M}{L} \cdot \frac{p_m}{p_x} \cdot \frac{1}{x}}$$

c) *The rate of profit*

On the *macro-economic* level (where P = S), the formula can be developed in the following way :

$$p'=\frac{s'}{c'+1}=\frac{\dfrac{t}{\text{x}.p_x}-1}{\dfrac{M}{L}.\dfrac{p_m}{p_x}.\dfrac{1}{\text{x}}+1}=\frac{\dfrac{t-\text{x}.p_x}{\text{x}.p_x}}{\dfrac{(M/L)\,p_m+\text{x}.p_x}{\text{x}.p_x}}$$

$$\boxed{p'=\frac{t-\text{x}.p_x}{(M/L)\,p_m+\text{x}.p_x}}$$

This last formula for p' will be used in appendix 9 to shed light on the « law of the falling tendency of the (general) rate of profit » and to assess the validity of this law.

On the *micro-economic* level (where P ≠ S), no simple formula is available to express the influences affecting p'. However, if the rate of surplus value is the same throughout the economy, the reasons why p' differs between enterprises or branches are well known. As far as *enterprises* are concerned, the individual rate of profit of each enterprise is higher (lower) as the unit individual value is lower (higher) compared with the unit social value (see chapter V, § 1.1.). As far as *branches* are concerned, the average rate of profit of each branch is higher (lower) as it enjoys stronger (weaker) market power (see chapter V, § 1.2.) ; in the case of equal market powers, the average rates of profit are equal (see appendix 10).

8.2. Alternative formulae for the rate of surplus value

8.2.1. A more precise statement of the basic formula

The above formulae refer to a purely capitalist economy and ignore the existence of a non-market production sector. In reality, wage-earners comprise two economic categories : those working in the sector of market production (L_v) and those working in the sector of non-market production (L_u). In order to take this distinction into account, the symbols L, *t*, w, *w*, and x should be replaced by the more accurate symbols L_v, t_v, w_v, w_v and x_v, in which the subscript v refers to the wage-earners in the market sector alone (v alluding to the variable capital laid out to purchase their labour-power). So we have :

$$s'=\frac{t_v}{w_v}-1 \tag{1}$$

$$s'=\frac{t_v}{\text{x}_v\cdot p_x}-1 \tag{2}$$

8.2.2. The ratio : productivity/real hourly wage

Formula [2] can be written in a slightly different manner. Dividing the numerator and the denominator by $t_v . p_x$, we obtain :

$$s' = \frac{1/p_x}{x_v/t_v} - 1 \qquad\qquad\qquad [3]$$

The numerator of [3] is the reciprocal of the unit value of the means of consumption (MC) : it therefore represents the number of MC produced per hour of labour (past and present), that is, total productivity in the production of the MC (which approximates macro-economic productivity fairly adequately : see appendix 4, 4.3.2.). As for the denominator, this represents the hourly real wage per worker in the market sector. We see once again that the rate of surplus value may remain constant, or even increase, in spite of an increase in the wage-earners' standard of living : it is sufficient that the hourly real wage increase relatively less than total productivity in the production of the MC.

Formula [3] suggests that one can approach the evolution of the rate of surplus value by the comparison of statistical series describing respectively the evolution of the hourly real wage (x_v/t_v) and the evolution of hourly real productivity in the production of the MC ($1/p_x$). The evolution of x_v/t_v can be easily obtained by dividing the hourly money wage by the index of consumer prices. However, it is not so easy to obtain the evolution of $1/p_x$. In fact, statistics on real productivity are usually obtained by dividing, by an appropriate price index, the money « value added » per worker (or per hour of labour) in industry. These statistics have several defects : first, they only deal with *industry* (while a growing number of MC are produced in the services sector) ; secondly, they only express at best the productivity per hour of *present* labour ; thirdly, « value added at constant prices » is not an adequate measure of the physical volume of production (on these last two points, see appendix 4, 4.3.1.). The calculation of $p_x = p_x/E$ makes it unnecessary to measure the physical volume of production and avoids the other two defects : the consumer price index (p_x) covers *services* as well as industrial goods ; and $1/p_x$ expresses the productivity per hour of *past and present* labour in the production of these goods and services.

8.2.3. The ratio : E/money hourly wage

Formula [2] shows the influences which act upon s', but it cannot be used to calculate the absolute magnitude of s' : this is because the variables x_v and p_x can only be expressed in the form of indices. In order to quantify s', we replace w_v by w_v in formula [1] :

$$s' = \frac{t_v}{w_v / E} - 1$$

We can now express s' as a function of E and the average hourly money wage in the market sector :

$$s' = \frac{E}{w_v / t_v} - 1 \qquad\qquad [4]$$

This formula enables us to easily calculate the rate of surplus value both on the macro-economic level and on micro-economic levels (branch of production, enterprise, category of wage-earners). To calculate the average rate of surplus value in the economy, we take the average hourly wage in the whole sector of waged commodity production (rectangle A in table I.3.). To calculate the rate of surplus value in a particular branch or enterprise, or of a particular category of wage-earners, we take the average hourly wage prevailing in that branch or enterprise or for those workers.

In the same way, we calculate the rate of surplus labour for the wage-earners employed in the non-market sector (rectangle C in table I.3.) : we replace w_v/w_v by w_u/t_u which represents the average hourly wage of the workers employed in that sector. The system profits by increasing the rate of surplus labour of these « unproductive » wage-earners, just like the rate of surplus value of the « productive » wage-earners (see chapter VI, 5.3.2.).

Let us add that formula [4] shows the significance of the workers' struggles over hourly wage : when they demand wage increases, workers are demanding, more fundamentally, a decrease in the degree of economic exploitation to which they are subjected.

8.2.4. The macro-economic profit/wage ratio

The calculation of E was explained in appendix 3 (§ 3.1.). We saw that $E = R/(L_v t_v + L_n t_n)$, where R represents the total revenue created each year in the sector of commodity production, L_v and t_v represent the number of wage-earners in that sector and their average labour-time per year, L_n and t_n the number of non-waged workers (self-employed and capitalists) and their average labour-time per year. Formula [4] can then be developed in the following way :

$$s' = \frac{R / (L_v . t_v + L_n . t_n)}{w_v / t_v} - 1$$

$$= \frac{R \cdot t_v}{w_v \, (L_v \cdot t_v + L_n \cdot t_n)} - 1$$

$$= \frac{R}{L_v \cdot w_v + L_n \cdot w_v \, (t_n \, / \, t_v)} - 1$$

$$= \frac{R}{W_v + W_n} - 1$$

The term $W_v \, (= L_v \cdot w_v)$ gives the sum total of wages *paid* in the market sector : it is the variable capital V. The term $W_n \, (= L_n \cdot w_v \, t_n/t_v)$ can be considered as the sum total of wages *imputed* to non-waged workers, assuming that the latter enjoy the same hourly income as the wage-earners but taking account of their specific labour-time.

The revenue created R is equal to the sum total of incomes in the market sector, these incomes being considered before taxes (taxes constitute levies on the revenue created in the market sector, which are used to finance the non-market sector : see chapter VI, § 3.1. and 5.2., and appendix 2, § 2.2.). If P and B represent the capitalists' total profit and the self-employed's total revenue, we have $R = W_v + P + B$.

We can therefore write :

$$s' = \frac{W_v + P + B}{W_v + W_n} - 1 = \frac{W_v + P + B - (W_v + W_n)}{W_v + W_n}$$

$$s' = \frac{P + B - W_n}{W_v + W_n} \tag{5}$$

The smaller the proportion of capitalists and self-employed in the total working population of the market sector, the smaller the variables B and W_n. We have then :

$$s' \cong \frac{P}{W_v} \tag{6}$$

Formula [6] shows that the macro-economic rate of surplus value can be approximated through the ratio of the sum total of profits to the sum total of wages in the *whole* sector of commodity production (which comprises the production of all marketed goods and services, circulation services included : see theoretical appendix 6, § 6.2.). In formula [5], wages imputed to non-waged workers are subtracted from the sum total of profits and added to the sum total of wages.

Formulae [5] and [6] show that the macro-economic rate of surplus value can be estimated without calculating E. The calculation of E, however, remains necessary for two reasons. In the first place, it is required to estimate rates of surplus value or surplus labour on micro-economic levels, or more precisely on levels other than the whole market sector. It should be used, for instance, to estimate the rate of surplus value in a particular enterprise or branch (where $P \neq S$: see chapter V, § 1.1. and 1.2.), or the rate of surplus value of a specific category of productive wage-earners (or of individual workers), or the rate of surplus labour of wage-earners in the non-market sector (who create no surplus value) : in all these cases the only adequate – and only possible – method of calculation is that given by formula [4] (replacing w_v/t_v by w_u/t_u as far as wage-earners in the non-market sector are concerned). In the second place, the calculation of E is necessary to analyse the evolution of the unit value of the means of consumption ($p_x = p_x/E$), which affects the rate of surplus value in a fundamental way (see formula [2]).

8.3. Effects of the parallel evolution of wages and productivity

8.3.1. Real wages and productivity

We have seen (formula [3] above) that the rate of surplus value remains constant when real hourly wages in the market sector (x_v/t_v) increase in the same proportion as total productivity in the production of the means of consumption ($1/p_x$). Now, the evolution of total productivity in the production of the means of consumption reflects the evolution of macro-economic productivity $Q_{MC}/L.t$ or $Q/L.t$ (see appendix 4, 4.3.2.). Consequently, the rate of surplus value remains constant when hourly wages in the market sector grow parallel to macro-economic productivity.

From another point of view, when hourly real wages in the whole economy grow parallel to macro-economic productivity, enterprises profit by larger markets for a larger volume of production : the increasing production of means of consumption (per hour of labour : $Q_{MC}/L.t$; per worker : Q_{MC}/L) is matched by an equally increasing purchasing power (per hour of labour : x/t ; per worker : x). Consequently, when hourly real wages grow parallel to macro-economic productivity, enterprises profit by *larger markets* while maintaining the *rate of surplus value constant*. (On the expansion of markets by way of rising real wages, see chapter VII, 3.3.1.b.).

8.3.2. Money wages and productivity

When consumer prices rise (Δp_x), real wages necessarily increase less than money wages ($\Delta x = \Delta w/\Delta p_x < \Delta w$). And if *money* wages grow parallel to macro-economic productivity ($\Delta w = \Delta Q/L$ or $\Delta w/t = \Delta Q/L.t$), *real* wages necessarily grow less than the

latter. In that case, the *rate of surplus value increases*, but *markets expand insufficiently :* the production of means of consumption exceeds the wage-earners' purchasing power.

From another point of view, if money wages grow parallel to productivity (per worker or per hour), the *wage-cost per unit of output* (L . w/Q) *remains constant*. This holds true both on the macro-economic and on the micro-economic level. In both cases, we can write :

$$\frac{L.w}{Q} = \frac{w}{Q/L} = \frac{w/t}{Q/L.t}$$

On the macro-economic level, this stability of the wage-cost per unit of output is accompanied, as we have just seen, by a rise in the rate of surplus value and by an insufficient expansion of the wage-earners' demand. These phenomena are still more pronounced if the wage-cost per unit decreases (i.e. if money wages grow less than productivity).

On the micro-economic level, a lower wage-cost (a lower variable capital) per unit of output does not imply a higher rate of surplus value in the enterprises concerned (see chapter IV, 2.1.3., and chapter V, 1.1.1.). But it contributes to improving the competitive position of the enterprises concerned : the latter are able to cut prices and so expand their own markets, at the expense of their competitors' (see chapter V, footnote 6, and chapter VII, 1.2.1.).

9. A « LAW OF THE FALLING TENDENCY OF THE RATE OF PROFIT » ?

In order to discuss the problem of the « law of the falling tendency of the rate of profit », let us first recall the formula of the general (macro-economic) rate of profit (see appendix 8, 8.1.3.c) :

$$p' = \frac{s'}{c'+1} = \frac{t - x \cdot p_x}{(M / L) \, p_m + x \cdot p_x}$$

9.1. The traditional approach

Inherent in the development of capitalism is the *growth of mechanization*. The latter implies that the mass of means of production increases more than the number of workers (increase in the M/L ratio). Since profit is created by labour-power and not by the means of production, a falling *tendency* in the general rate of profit follows logically.

There are, however, *countertendencies* which tend to raise the average rate of profit.

An essential countertendency is brought into play by the *very growth of mechanization*. The latter brings about rises in productivity and therefore decreases in the unit value of the means of production (p_m) and of the means of consumption (p_x). This twofold decrease has a beneficial effect on the rate of profit : the reduction of p_x increases the numerator of p' and lessens the denominator ; the reduction of p_m also lessens the denominator.

Other countertendencies result from the expansion of capitalism, both sectorially and geographically. Updating the analyses of *Capital*, we should mention, among others, the following influences :

- investments in new branches where the volume of means of production is less significant (such as the tertiary sector of commodity production) have the effect of lowering the overall M/L ratio ;

- international trade makes it possible to obtain raw materials and means of consumption which are produced at lower costs (hence reduction of p_m and p_x) ;

- investments in dominated countries, where wages are much lower, have the effect of raising the average rate of surplus value worldwide (see chapter VIII, 3.2.1.).

9.2. A few comments

The « law of the falling rate of profit » was put forward by classical economists, by Ricardo in particular. The latter declared that the rate of profit was *bound* to fall, because

of circumstances *external* to the functioning of capitalism (decreases in agricultural yields, hence increase in the price of subsistence goods and rise in wages).

Marx takes up the issue and transforms it in two respects. First, he explains the evolution of the rate of profit, not by exogenous factors (decreases in agricultural yields), but by *endogenous* factors, which are inherent in the very functioning of capitalism (in particular the growth of mechanization). Second, he shows that the evolution of the rate of profit is affected by contradictory influences (tendencies and countertendencies), the most fundamental of which are due to the very growth of mechanization.

Taking account of these contradictory influences, *Capital* advocates, not plainly a « law of the falling rate of profit », but more precisely a « law of the falling *tendency* of the rate of profit ». Such a phrasing, however, has the defect of suggesting that the « tendency » would be more fundamental or stronger than the « countertendencies ». Now the basic endogenous factor, namely the growth of mechanization, acts both as a « tendency » and as a « countertendency ». This being so, it seems inadequate to speak of a « law », even if the fall is qualified as being « tendential ». We should rather consider the falling rate of profit as the *danger to be avoided* by the system and see in the rate of profit a general indicator of the system's « state of health ». Rather than seeking to verify a hypothetical law through figures, it is better to analyse the actual evolution of the rate of profit *without preconception :* the important point is to analyse all the influences which affect s', c' and p' in contradictory ways.

The evolution of the rate of profit is also influenced by changes in labour-time (t) and in the real wage (x). The development of capitalism has no automatic effect on t : labour-time increased in the early stages of capitalism, but tended to decrease during the twentieth century. On the other hand, the rise in productivity calls for a rise in real wages in the long run.

The (possible) reduction of t and the (necessary) growth of x reinforce the tendency for the rate of profit to fall due to the rise in M/L : the reduction of t reduces the numerator of p', while the growth of x reduces the numerator and increases the denominator. However, the three negative influences (rise in M/L, reduction of t and growth of x) can be offset by sufficient productivity progress (which reduces p_m and p_x) : the evolution of the rate of profit therefore remains undetermined.

10. THE DISTRIBUTION OF SURPLUS REVENUE BETWEEN UNEQUALLY MECHANIZED BRANCHES : THE LAW OF THE EQUALIZATION OF THE PROFIT RATE

Chapter V (§ 1.1.) examined the distribution of surplus revenue between unequally mechanized *enterprises* (having unequal unit individual values) within the same branch of production : the distribution takes place to the detriment of the less mechanized enterprises (which obtain a profit lower than the surplus revenue created) and to the advantage of the more mechanized ones (which obtain a profit higher than the surplus revenue created) ; the effect of this redistribution is to *differentiate* the *individual* profit rates within each branch. Analogous principles apply to the case of unequally mechanized *branches* (having unequal C/V ratios) : surplus revenue is redistributed in the same direction, namely from less mechanized to more mechanized branches ; in this case, however, the effect of the redistribution is to *equalize* the *average* profit rate of the different branches.

In order to explain this redistribution of surplus revenue between branches, we must show that simple prices, which ensure the exchange of equal values in a system of simple commodity production (chapter II, 3.2.2.a), cannot be equilibrium prices in a capitalist system.

10.1. Equilibrium prices in a system of simple commodity production : simple prices

Let us call *equilibrium prices* those prices which ensure stability in the distribution of labour, in the sense that the producers would not benefit by moving to another branch.

In a (theoretical) system of *simple commodity production*, *simple prices* are equilibrium prices, for they guarantee the same income to the average producers in the different branches (labour-time being assumed equal).

Suppose, for instance, three branches of production (I, II, III), each of them being made up of only one producer. Each producer works for 2000h per year and creates a revenue of $2000 (E = $1 per hour). The three branches are unequally mechanized : for an identical amount of present labour (2000h), the value of the means of production differs between branches (6000 > 4000 > 2000). The situation of the three branches is summarized in table A.4, in which the figures for output are arbitrary (since the products are different, the quantities produced cannot be summed and the prices or unit values cannot be compared from one branch to the other).

The exchange of commodities at their simple price (for instance : 1 unit of commodity III = 2 units of commodity I = $16) entails an *exchange of equal values* (1 unit of commodity III = 2 units of commodity I = 16h). Such an exchange brings in an identical income of $2000 for the three producers. Since none of them would benefit by moving to

another branch, the simple prices are equilibrium prices (the producers will only move if market prices diverge from simple prices, causing unequal exchanges and income differentials).

Table A.4. : Simple prices in simple commodity production

	price of MP (past labour)	rev. created (present labour)	turnover (total value)	quantity produced	simple price (unit value)	income obtained
Branch I	6000	2000	8000	1000	8	2000
Branch II	4000	2000	6000	500	12	2000
Branch III	2000	2000	4000	250	16	2000
Total	12000	6000	18000			6000

10.2. Equilibrium prices in a capitalist system : prices of production

10.2.1. The concept of price of production

In a *capitalist system*, the revenue created is divided into two parts $(V + S)$ and a rate of profit must be calculated on total capital $(C + V)$. In such a system, simple prices cannot be equilibrium prices, for they involve unequal average rates of profit in the different branches. Assuming an identical rate of surplus value of 100 % $(V = S)$, the data of the preceding table would be transformed in the way indicated in table A.5.

Table A.5. : Simple prices in a capitalist system

	C	V	S	C+V+S	Q	c+v+s	S/K
Branch I	6000	1000	1000	8000	1000	8	14 %
Branch II	4000	1000	1000	6000	500	12	20 %
Branch III	2000	1000	1000	4000	250	16	33 %
Total	12000	3000	3000	18000			20 %

We see that branch I, the more mechanized branch (higher-than-average C/V), would obtain a lower-than-average rate of profit (S/K), and conversely for branch III, the less mechanized one. This would make capitals move from branch I towards branch III.

Stability in the distribution of total capital and labour requires that the three branches obtain an identical rate of profit, equal to the macro-economic profit rate

(3000/15000 = 20 %). This implies that the profit obtained in each branch differ in most cases from the surplus revenue created in it (P ≠ S). This implies in its turn that C + V + P ≠ C + V + S and hence that c + v + p ≠ c + v + s. These prices c + v + p, which guarantee the same average rates of profit to all branches, are called « prices of production ». The equilibrium situation is given in table A.6.

Table A.6. : Prices of production in a capitalist system

	C	V	S	P	C+V+P	Q	c+v+p	P/K	P-S
Branch I	6000	1000	1000	1400	8400	1000	8.4	20 %	+ 400
Branch II	4000	1000	1000	1000	6000	500	12	20 %	0
Branch III	2000	1000	1000	600	3600	250	14.4	20 %	− 400
Total	12000	3000	3000	3000	18000			20 %	0

10.2.2. A few conclusions

a) When the composition of capital (C/V) varies from branch to branch, the branches where C/V is *lower* than the social average obtain a profit lower than the surplus revenue created in them (P < S) ; those where C/V is *higher* than the social average obtain a profit higher than the surplus revenue created (P > S) ; those where C/V is *equal* to the social average obtain a profit equal to the surplus revenue (P = S). *Total profit remains equal to total surplus revenue*, produced by the surplus labour of all wage-earners. But *this total surplus revenue is redistributed between the different branches of production according to their degree of mechanization, to their composition of capital*. Total surplus revenue is redistributed proportionately to the money-capital invested in each branch, in such a way that the average rate of profit is the same throughout. This process is generally referred to as the « equalization of the rate of profit ». Since it is a necessary process (in a situation of free competition), one speaks of a « law of the equalization of the rate of profit ».

The fact that the *average* rate of profit is identical *from branch to branch* does not imply that the *particular* rates of profit are identical *within* the same branch. Within each branch, as we saw earlier, more efficient enterprises (where the unit value is lower) will benefit from a higher rate of profit, while less efficient enterprises have to be content with a lower rate of profit.

The mechanisms of surplus revenue transfers and equalization of profit rates enable us to explain the profit of an *entirely automated branch* of production (L = 0, C/V = infinity). In such a hypothesis no surplus revenue would be created (S = 0), and the

whole profit would be due to a transfer of surplus revenue from the other, technically less advanced, branches[25].

b) When the composition of capital (C/V) varies from branch to branch, *the equilibrium price is not the simple price* (c + v + s) corresponding to the social value, *but the price of production* (c + v + p) ensuring the equalization of average rates of profit. The price of production is higher, equal or lower than the simple price, according to whether the branch has a higher, equal or lower C/V ratio than the social average[26]. On the aggregate level, the divergences between simple prices and prices of production offset each other : the sum total of prices of production is equal to the sum total of simple prices (in the example : $\Sigma[C + V + P] = \Sigma[C + V + S] = \$18,000$)[27].

c) The exchange of commodities at their price of production (for instance : 1 unit of commodity III = 1.2 unit of commodity II = $14.40) entails an *exchange of unequal values* (1 unit of commodity III = 16h ; 1.2 unit of commodity II = 14.4h). This unequal exchange results from the fact that, in the capitalist system, commodities are not simply exchanged as products of labour (carried out by different producers) : they are exchanged as products

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[25]   And where would the profit be derived from in the extreme hypothesis of all branches being entirely automated ? Obviously not from wage-earners' surplus labour : actually, the hypothesis rules out the existence of waged labour and therefore of capitalist production. The labour theory of value, which is designed for the analysis of capitalist society, would logically be irrelevant to that situation.

[26]   Insofar as differences in the C/V ratios reflect differences in the degree of mechanization, we can say that the divergences between prices of production and simple prices are due to the unequal development of productive forces in the different branches.

[27]   Most authors (both Marxist and non-Marxist) consider that one cannot simultaneously have an equality between the sum total of prices of production and the sum total of simple prices ($\Sigma[C + V + P] = \Sigma[C + V + S]$) and another equality between the sum total of profits and the sum total of surplus revenue ($\Sigma P = \Sigma S$). Such a twofold equality would be due to a « mistake » made by Marx : the latter transformed simple prices into prices of production in order to equalize the rate of profit between branches, but he would have failed to adjust the magnitude of C and V in each branch to take account of the changes in the price of the commodities produced (means of production and means of consumption) ; the « transformation problem » (i.e. the problem of « transforming values into prices of production ») would therefore not have been solved in a complete and satisfactory way. As a matter of fact, however, the magnitudes of C and V which appear in the calculations of the prices of production have *already* been adjusted : they take account of the price actually paid for the purchase of the means of production and labour-power. The two equalities are therefore compatible with one another, and they are perfectly consistent with the general conception of value prevailing in *Capital*. On this issue, see A. Ramos and A. Rodríguez, « The transformation of values into prices of production : a different reading of Marx's text », in A. Freeman and G. Carchedi (ed.), *Marx and Non-Equilibrium Economics*, Cheltenham, Edward Elgar, 1996, p. 49-76.

of different capitals requiring equal average rates of profit. This unequal exchange is not due to differences in the market power of the different branches : it is only due to differences in the composition of capital (C/V ratio) and to the requirement of an equal average rate of profit.

d) Prices of production – just like simple prices – are nothing other than theoretical prices. Market prices diverge from prices of production, depending on the market power enjoyed by the different branches : those enjoying a positive market power sell their commodities at a market price higher than the price of production and obtain an average rate of profit higher than the macro-economic rate of profit ; and conversely for the branches with a negative market power.

e) There are two distinct problems in the transition from values (expressed in hours of labour) to market prices (the only prices which can be observed empirically). The first problem is that of the necessary expression of *value* in a certain *price*, in a certain quantity of money : this problem was examined in chapter II (§ 3.1.). The second problem, which is examined here, is that of the transition from one form of price to another, more specifically from simple prices to prices of production and from the latter to market prices[28].
Table A.7. summarizes the different stages in the transition from values to market prices. At each stage, the money equivalent of value (E) establishes the link between labour concepts and money concepts.

Table A.7. : The transition from values to market prices

Expression of values	At the level of each enterprise	At the level of each branch of production		
In hours of labour	Unit individual value	Unit social value	(Labour-equivalent of price of production)	(Labour-equivalent of market price)
In prices	(Money equivalent of unit individual value)	Simple price	Price of production	Market price

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28 Standard literature on prices of production speaks of the « problem of transformation of values into prices of production » and thus confuses the two types of problem.

11. REPRODUCTION SCHEMES

11.1. Setting out the problem

From the *individual* entrepreneur's point of view, every activity is suitable as long as it brings him a profit. It is all the same to him, whether he obtains this profit by investing in iron and steel, in agriculture, banking, textiles or tourism. It is not the same, however, from the viewpoint of the *system* taken as a whole. All branches of production are interdependent, none of them can exist and expand independently of the others. Thus, for example, an expansion of the automobile industry requires a parallel expansion of the iron and steel industry (which provides the sheet metal) and of road construction. The expansion of the iron and steel industry requires in its turn an increase in the production of iron ore and of energy, etc., while the extension of the road network requires the opening up of new quarries, and so on.

This necessary equilibrium in the development of the different branches of production is not thought out *a priori* or consciously organized. The distribution of money-capital and of productive capital (means of production and labour-power) between the different branches rests on the entrepreneurs' free initiative and on the validation of their decisions by the market. It is the market which ensures the « social recognition » of labour and the interdependence between different kinds of production (see chapter I, 2.1.1.a). More concretely, the fluctuations of market prices – and therefore of profit rates – ensure the necessary reallocations of labour between branches : if for example the production of sheet metal does not keep up with the production of cars, the price of sheet metal will increase, which will encourage entrepreneurs to expand this line of production according to the demands of general interdependence ; the converse adjustment occurs if the production of sheet metal is in excess. Thus the requirements of general interdependence only appear indirectly, by way of the market ; and the equilibrium in the distribution of social labour can only be achieved by trial and error, in response to the indications of the market.

The reproduction schemes aim to elicit *a priori* the requirements of general interdependence or the equilibrium conditions of total production. These requirements or conditions are explicated in an abstract way, disregarding the actual conditions under which production takes place : the reproduction schemes disregard, for example, the uncertainties that any commodity production involves (will the goods or services produced be purchased ?), they also disregard competition between enterprises, market powers, etc. The reproduction schemes may therefore be defined as *schemes illustrating, in a formal*

manner, the theoretical conditions necessary for the equilibrium of capitalist production, taken as a whole[29].

The most usual schemes examine the relations of interdependence, not between the multitude of particular branches of production, but between two main sections : the section producing the means of production (department I) and the section producing the means of consumption (department II). These two departments are necessarily interdependent : the first has to produce the means of production for both departments and the second has to produce the means of consumption for both the wage-earners and the capitalists of the two departments.

The problem of the necessary relations between the two departments is first examined in the (unrealistic) case of *simple reproduction*, assuming that all the surplus revenue would be consumed and that, consequently, the cycle $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$ would constantly be reproduced on the same scale. It is then examined in the (realistic) case of *expanded reproduction*, where a part of the surplus revenue is accumulated and where, consequently, the cycle $M \rightarrow C_0 \rightarrow P \rightarrow C_1^+ \rightarrow M^+$ is reproduced on an ever larger scale.

In both cases, the schemes are based for simplicity's sake on the following assumptions :

- the system consists of capitalist enterprises only : non-commodity production is disregarded, as well as non-capitalist commodity production ;

- the rate of surplus value and the composition of capital are identical in both departments ;

- in each department the purchases of means of production and of labour-power have to be renewed « in one go » at the beginning of each year ;

- the money equivalent of value is \$1 per hour, so that the symbols and figures used can represent either values (in hours of labour) or prices (in dollars).

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[29] Since they disregard the actual conditions under which production takes place, the reproduction schemes cannot by themselves explain the real characteristics and tendencies of the economy : they cannot, for example, explain the increasing mechanization of the production processes, the growing concentration of capital, the conflicts around the rate of surplus value, the contradictory relations between enterprises, etc.

11.2. Schemes of simple reproduction

11.2.1. Principles

In the hypothesis of simple reproduction, *all the surplus revenue is consumed* and there is no accumulation. Simple reproduction therefore appears as a succession of identical cycles of production, a succession which permits the *maintenance of social wealth*, but not its increase.

In such a hypothesis, what do the respective outputs of the two departments have to be ?

a) Department I has to produce means of production of a total value $(C_1 + V_1 + S_1)$ exactly equal to the value of the means of production used up annually in *both* departments $(C_1 + C_2)$.

b) Department II has to produce means of consumption of a total value $(C_2 + V_2 + S_2)$ exactly equal to the consumption of both wage-earners and capitalists of *both* departments $(V_1 + S_1 + V_2 + S_2)$.

In algebraic terms, we ought then to have the following equations, which express the necessary equality between supply (production) and demand for means of production as well as for means of consumption.

a) Means of production : $C_1 + V_1 + S_1 = C_1 + C_2$

b) Means of consumption : $C_2 + V_2 + S_2 = V_1 + S_1 + V_2 + S_2$

Each of these equations gives us after simplification :

$$C_2 = V_1 + S_1$$

This equation expresses the necessary relation between the two departments for simple reproduction to take place. We can read the equation in the following way : the demand for means of production coming from the department producing means of consumption has to be equal to the demand for means of consumption coming from the department producing means of production.

11.2.2. Illustration

We can illustrate these different relations by the example of table A.8 below, where the figures correspond to annual data.

Table A.8. : Example of simple reproduction

	year 1 = year 2 = ... = year n						
Department I	4000 C_1	+	1000 V_1	+	1000 S_1	=	6000
Department II	2000 C_2	+	500 V_2	+	500 S_2	=	3000
Total	6000 C	+	1500 V	+	1500 S	=	9000

We see that the value of supply and the value of demand are equal both for the means of production (6000 = 4000 C_1 + 2000 C_2) and for the means of consumption (3000 = 1000 V_1 + 1000 S_1 + 500 V_2 + 500 S_2). The simplified equation gives us : 2000 C_2 = 1000 V_1 + 1000 S_1. For simple reproduction, the same data are repeated from year to year.

11.3. Schemes of expanded reproduction

11.3.1. Principles

In the case of expanded reproduction, only a part of the surplus revenue is *consumed*, the other part being intended for *accumulation*, that is, for the purchase of additional means of production and labour-power. The successive cycles of production will therefore begin each time with a larger capital (C + V) : they will allow an *increase of social wealth*.

What do the respective outputs of the two departments have to be in the case of expanded reproduction ?

a) Department I has to produce, in the course of a given annual cycle, means of production of a total value C_1 + V_1 + S_1) to satisfy two demands :

- a *replacement* demand, corresponding to the value of the means of production *used up* in the course of a year in *both* departments (C_1 + C_2) : these means of production have to be replaced in order for the following cycle to begin at least on the same scale ;

- an *expansion* demand corresponding to the proportion (c*) of the surplus revenue which the capitalists of *both* departments decide to invest in *additional* means of production (c_1*S_1 + c_2*S_2). These means of production have to be materially produced for the following cycle to begin on a larger scale[30].

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[30] Since the production of department I has to correspond to a demand *exceeding simple replacement*, we have (in contrast to the schemes of simple reproduction) : C_1 + V_1 + S_1 > C_1 + C_2 (from which we get C_2 > V_1 + S_1).

b) Department II must produce, in the course of a given annual cycle, means of consumption of a total value $(C_2 + V_2 + S_2)$ to correspond, in this case too, to two demands :

- a « *replacement* » demand, corresponding to the value of the means of consumption purchased annually by wage-earners and capitalists in *both* departments. If k* represents the fraction of the surplus revenue which is devoted to consumption, this first part is equal to $V_1 + V_2 + k_1*S_1 + k_2*S_2$ [31].

- an « *expansion* » demand, corresponding to the proportion v* of the surplus revenue which the enterprises of *both* departments decide to invest in additional labour-power : this will come into action in the following cycle and additional means of consumption must be foreseen for it (which will be purchased by the *additional* wages paid). This second part is equal to $v_1*S_1 + v_2*S_2$.

In algebraic terms, the necessary equality between supply and demand for both types of production is expressed in the following equations :

a) Means of production : $C_1 + V_1 + S_1 = C_1 + c_1*S_1 + C_2 + c_2*S_2$

b) Means of consumption : $C_2 + V_2 + S_2 = V_1 + v_1*S_1 + k_1*S_1 + v_2*S_2 + k_2*S_2$

Each of these equations gives after simplification[32] :

$$C_2 + c_2*S_2 = V_1 + S_1 (v_1* + k_1*)$$

Here too we see that the total demand for means of production coming from the department producing means of consumption has to be equal to the total demand for means of consumption coming from the department producing means of production.

11.3.2. Illustration

The succession of cycles of production can be illustrated by the example of table A.9, where we assume that $k_1* = k_2* = 50\%$, $c_1* = c_2* = 40\%$, $v_1* = v_2* = 10\%$ (the proportion of 40 % to 10 % reflecting the composition of capital, which we assume equal in both departments and constant through time).

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[31] Since a part of $(S_1 + S_2)$ is not consumed, we have (in contrast to the schemes of simple reproduction) : $C_2 + V_2 + S_2 < V_1 + V_2 + S_2$ (from which we get also $C_2 < V_1 + S_1$).

[32] We know that the surplus revenue of each department falls into three parts : c* for accumulation in means of production, v* for accumulation in labour-power, k* for the capitalists' consumption. Obviously, $c_1* + v_1* + k_1* = 1$ and $c_2* + v_2* + k_2* = 1$. So we obtain :

- for the first equation : $C_2 + c_2*S_2 \quad = C_1 + V_1 + S_1 - C_1 - c_1*S_1$

                                                  $= V_1 + S_1 (1 - c_1*)$

                                                  $= V_1 + S_1 (v_1* + k_1*)$

- for the second equation : $C_2 + V_2 + S_2 - V_2 - v_2*S_2 - k_2*S_2 = V_1 + v_1*S_1 + k_1*S_1$

                                                  $C_2 + S_2 (1 - v_2* - k_2*) = V_1 + S_1 (v_1* + k_1*)$

                                                  $C_2 + c_2*S_2 = V_1 + S_1 (v_1* + k_1*)$.

Table A.9. : Example of expanded reproduction

	year 1						
Department I	$4400\ C_1$	+	$1100\ V_1$	+	$1100\ S_1$	=	6600
Department II	$1600\ C_2$	+	$400\ V_2$	+	$400\ S_2$	=	2400
Total	$6000\ C$	+	$1500\ V$	+	$1500\ S$	=	9000

	year 2						
Department I	$4840\ C_1$	+	$1210\ V_1$	+	$1210\ S_1$	=	7260
Department II	$1760\ C_2$	+	$440\ V_2$	+	$440\ S_2$	=	2640
Total	$6600\ C$	+	$1650\ V$	+	$1650\ S$	=	9900

We see that in the first year the value of the supply of means of production exceeds the simple replacement demand ($6600 > 4400\ C_1 + 1600\ C_2$) and that the value of the supply of means of consumption is less than the sum total of wages and surplus revenue ($2400 < 1500\ V + 1500\ S$).

Of the 1500 of surplus revenue, a half is used for consumption (i.e. 750, of which $550 = k_1*S_1$ and $200 = k_2*S_2$). The rest is used, on the one hand, for the purchase of additional means of production (+ 600, of which $440 = c_1*S_1$ and $160 = c_2*S_2$), on the other, for the purchase of additional labour-power (+ 150, of which $110 = v_1*S_1$ and $40 = v_2*S_2$). We thus have the double equation between supply and demand :

Department I : $6600 = (4400\ C_1 + 440\ c_1*S_1) + (1600\ C_2 + 160\ c_2*S_2)$;
Department II : $2400 = (1100\ V_1 + 110\ v_1*S_1) + 550\ k_1*S_1 +$
$\qquad\qquad\qquad (400\ V_2 + \ \ 40\ v_2*S_2) + 200\ k_2*S_2.$

The cycle of the second year will then appear with all the variables (C_1, C_2, etc.) greater than in the first year (see table A.9.). The same process of expansion of all the variables will recur from year to year.

12. ON SOCIAL CLASSES

It was pointed out at the end of chapter VI that the question of productive or unproductive labour is not in any way linked to that of social class. Although the problem of social class goes beyond the scope of an economic analysis, it may be interesting to introduce a few general points on this subject.

12.1. The problem of class location

This problem involves *defining social class* and determining class membership (class location) of the various social categories. The fundamental criterion to be used in this respect is that of the *workers' relationship to the means of production*. However, this traditional criterion must not be used in a limited way.

First of all, the *means of production* do not only involve those employed in « material production ». All forms of production must be considered, including « immaterial » production, services : « ideological » production must therefore also be included (art, education...) and also « juridical and political » production (defence, maintaining public order...). The distinguishing factor between different social classes is their different relationship with the means of production used, rather than the different sectors of activity.

Secondly, this *relationship of the workers to the means of production* does not only involve juridical ownership or non-ownership. The following three relationships must be distinguished : « real ownership » or having the means of production and labour-power at one's disposal (investment, location, distribution, manpower policies...) ; « possession », or having the capacity to act upon the technical conditions of the labour process (setting up the labour process, coordinating the workers as a whole...) ; « holding » or simple manipulation of the means of labour[33].

From this point of view, the *working class* can be defined as being the class of those wage-earners involved purely in the execution of tasks, under the control of the real owners and possessors. This class of « routine workers » includes just as much the industrial workers themselves as subordinate industrial, commercial and financial employees, as well as subordinate civil servants (in public or private institutions) : the criterion used is complete submission to the real owners and possessors, creating a complete absence of autonomy (total alienation) in their work. Besides the working class, a *« waged petty-bourgeoisie »* can be distinguished, which groups together all the wage-

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[33] For an elementary analysis of these various types of relationship, see Bettelheim C., *Economic Calculation and Forms of Property*, London, Routledge and Keegan, 1976, p. 68-75, 112-116, 134-137.

earners combining « possession » and « holding », whilst being dominated by the real owners : it includes wage-earners (technical executives, teachers, doctors, artists...) who are relatively autonomous in accomplishing their work, but under the control of the real owners. The *traditional petty-bourgeoisie* is made up of independent producers, who combine holding, possession and – in theory – real ownership. The *capitalist class* includes those who have real ownership of the means of production and operate them employing the wage-earners' labour-power. (Some highly placed executives are members of the capitalist class, whilst holding juridical employee status, insofar as they participate in real ownership : this is typical of « managers »).

12.2. Problems related to class struggle

- A first problem concerns assessing which groups hold a determinant *strategical position* : more precisely, this involves analysing which groups' struggle is *the most capable of impeding the reproduction of the system*.

With this in mind, the relevant criterion is undoubtedly whether workers hold a central position or not in the division of social labour (see chapter VII, 2.1.1.b). The more the means of production and products of a sector of activity have diverse origins and destinations, the more a work stoppage in this sector can provoke a chain reaction, capable of affecting the reproduction of society as a whole. In this way, workers in the iron and steel industry have a more determinant strategic position than laundry workers, for example. In the same way, bank employees hold a more determinant strategic position than workers from any other particular industry, as banking products are consumed by every single sector. And employees responsible for maintaining order (policemen, military personnel) hold the perfect strategic position, as they also work for every sector and, what is more, have material power at their disposal. (Employees in the ideological structure have a weaker strategic position, in the sense that a halt to their work or any revolt on their part cannot affect the reproduction of the ideology assimilated by all workers, except in the very long run.)

- Another problem concerns knowing which groups *actually* participate in struggles and show the greatest combativeness. This question refers to the political *conjuncture*, whereas the question of strategic position is more of a structural problem : a group holding a determinant strategic position may be apathetic, in the same way that a very combative group may have no structural power.

As far as the *real degree of participation* is concerned, the criteria are much less obvious : subjective factors, a tradition of struggle, class consciousness, the impact of the crisis, etc., must all be taken into account.

Obviously each of the problems mentioned needs to undergo a thorough analysis. These remarks simply aim to point out that this analysis must be carried out independently from the criterion of productive labour and suggest alternative criteria, adapted to each problem.

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PEDAGOGICAL DEVICES CONCERNING THE THEORETICAL APPENDICES

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CONCEPTS TO ASSIMILATE (see glossary)

- Apparent productivity of labour   - Price of production
- Complex labour   - Simple labour
- Productivity of present labour   - Total labour productivity

EXERCISES (*more advanced knowledge*) (answers at end of book)

A.1.   Explain the differences between (a) the principles and methods of *national income accounting* and (b) the principles and methods underlying tables I.3. and VI.3. (classification of labour) and figure VI.4. (creation and distribution of total income).

A.2.   The *money equivalent of value (E)* :
a) Explain the method used to calculate E ; explain why the magnitude of E thus calculated can only approximate the true magnitude of E.
b) What are the influences bearing on E : in a system of convertible credit money ? in a system of inconvertible credit money ?

A.3.   Comment the following statements concerning the *measurement of changes in labour productivity* (π) :
a) On the level of a branch of production, changes in π :
- are not adequately measured by the evolution of the « (money) value added at constant prices » per hour of labour ;
- are adequately measured by the evolution of the unit social value of the commodity considered.
b) On the macro-economic level, changes in π :
- are adequately measured by the evolution of the unit social value of the means of consumption ;
- are adequately measured by the evolution of the ratio of the consumer price index to E.

A.4.   The issue concerning the *relations between wage and value of labour-power* :
a) What is the traditional viewpoint on that question, as summarized in the appendix ?
b) What critical comments are made against the traditional viewpoint ?
c) What alternative viewpoint is put forward and defended ?
d) What critical comments would you want to make against the way the traditional viewpoint is summarized and/or against the way the alternative viewpoint is argumented ?

e) In what does the discussion on that question matter (for analysing the source of profit, or the general tendencies of the system, or specific problems…) ?

A.5. The issue concerning *productive labour* (productive of value and revenue) : same questions.

A.6. The issue concerning the quantity of value which is created by *more productive or intensive or skilled labour* : same questions.

A.7. The issue concerning the « law of the *falling tendency of the rate of profit* » : same questions.

A.8. *Value of labour-power* and *value created by labour-power* : does labour-power which provides more skilled or intensive labour :
a) *create* more value ? why ?
b) *have* more value ? why ?

A.9. The effects of *more intensive or skilled or mechanized labour* : explain why and how these variables affect (or do not affect) :
a) the productivity of present labour (the number of use-values produced) ;
b) the new value created ;
c) the past value transferred ;
d) the value of labour-power and the wage ;
e) the distribution of surplus revenue.

A.10. The *profits of the financial sector* :
a) According to the alternative viewpoint of this book, what are the sources of profit of the financial sector ?
b) If surplus value is created in the financial sector, does this mean that the latter can develop indefinitely ?
c) If surplus value is created in the financial sector, does this contradict the traditional view according to which « circulation » does not create value ?

A.11. Do wage-earners subjected to *more intensive labour* suffer higher exploitation ?

A.12. The alternative formulae for the rate of surplus value :
a) What is the usefulness of the E/hourly wage ratio ?
b) To what extent is it possible to approximate the rate of surplus value by the profit/wage ratio : on the macro-economic level ? on the micro-economic level ?

A.13. What are the effects of the parallel evolution :
a) of *real* wages and general productivity ?
b) of *money* wages and general productivity ?

A.14. Explain why the distribution of total labour can be considered as being stable when market prices are equal :
a) to *simple prices* in a system of simple commodity production ;
b) to *prices of production* in a capitalist system.

A.15. Are *prices of production* lower, equal or higher :
a) than *production costs* ?
b) than *simple prices* ?

A.16. Do transfers of surplus revenue according to the degree of mechanization result in *differentiating* or *equalizing* profit rates ?

A.17. If profit is derived from surplus labour (which is part of the wage-earners' present labour), how can we explain the profit :
a) of completely automated *enterprises* (with no labour) ?
b) of completely automated *branches* (with no labour) ?

A.18. The *effect of mechanization on the rate of profit* :
a) Does a more mechanized *enterprise* enjoy a *particular* profit rate higher than less mechanized enterprises ? why ?
b) In a system of free competition, does a more mechanized *branch* enjoy an *average* profit rate higher than less mechanized branches ? why ?
c) If the whole *economy* grows more and more mechanized (assuming a closed economy and the maintenance of full employment), what is the effect on the *general* profit rate ?

A.19. *Reproduction schemes* :
a) What is the problem considered by reproduction schemes ?
b) What is the difference between simple reproduction and expanded reproduction ?
c) Considering the case of expanded reproduction, explain the necessary equalities between supply and demand in the two departments (means of production and means of consumption).
d) To what extent are reproduction schemes useful for an analysis of the real tendencies of the economy ?

A.20. Is the criterion of productive labour relevant to the analysis of *social classes* ? What alternative criteria can be suggested ?

GLOSSARY

(Main theoretical concepts used[1])

ACCUMULATION : investment of part of the *profit* in additional *means of production* and *labour-power* (beyond mere replacement) (III, 2.2.2.).

BRANCH (or BRANCH OF PRODUCTION) : all the *enterprises* producing the same type of *commodity* (II, footnote 13).

CAPITAL :

- CIRCULATING CAPITAL : part of the *money-capital* which is used to purchase *labour-power* and *objects of labour* (III, footnote 16).

- COMMODITY-CAPITAL : *commodities* resulting from the capitalist production process, the sale of which enables the *capitalist* to recover the *money-capital* invested and obtain a *profit* (III, 2.2.1.a).

- CONSTANT CAPITAL : part of the *money-capital* which is used to purchase *means of production* (III, 2.2.1.a).

- FIXED CAPITAL : part of the *money-capital* which is used to purchase *means of labour* (III, footnote 16).

- MONEY-CAPITAL : sum of *money* invested by a *capitalist* with a view to obtaining a *profit* (III, 2.2.1.a).

- PRODUCTIVE CAPITAL : the whole of the *means of production* and *labour-power* brought together in a capitalist production process (III, 2.2.1.a).

- VARIABLE CAPITAL : part of the *money-capital* which is used to purchase the *labour-power* (of *productive wage-earners*) (III, 2.2.1.a).

CAPITALIST : private owner of *means of production* who uses the *wage-earners' labour-power* to produce *commodities* (I, 2.1.3.b).

CIRCULATION : transfer of rights of ownership or use over *commodities* and/or *money* (through buying and selling, hiring and letting, borrowing and lending, etc.) (A, 6.1.1.).

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[1] *Italic terms* refer to concepts which are defined in this glossary. *Figures and letters in brackets* refer to the passage of the book where the concept is explained.

COMMODITY : product of human *labour* sold on the market (II, 1) ; product of *indirectly social labour* (II, 2.1.1.b).

COMPOSITION OF CAPITAL : ratio of *constant capital* to *variable capital* (IV, 1.2.).

CONCENTRATION OF CAPITAL : control over an increasing part of total capital exercised by a minority of *capitalists* (VII, 2.2.).

COST OF PRODUCTION : sum of *constant capital* transferred and *variable capital* (IV, footnote 1 ; V, 1.1.1.).

CRISIS :

- CYCLICAL CRISIS : situation of temporary overall overproduction (IX, beginning).

- STRUCTURAL CRISIS : situation in which fundamental problems affect the reproduction of the system (IX, beginning).

DIVISION OF LABOUR :

- DIVISION OF SOCIAL LABOUR : distribution of the whole of *labour* between different specialized and interdependent *branches of production* (VII, 2.1.1.b).

- DIVISION OF SOCIAL PRODUCTION = *division of social labour*.

- INTERNATIONAL DIVISION OF LABOUR : *division of social labour* between countries, distribution of world production between different more or less specialized and interdependent countries (VII, 2.1.2.b).

- SOCIAL DIVISION OF LABOUR : distribution of *labour* between distinct classes or social groups (VII, footnote 8).

- TECHNICAL DIVISION OF LABOUR : distribution of *labour* between different categories of specialized and interdependent workers (VII, 2.1.1.a).

DOMINATION :

- FORMAL DOMINATION : domination that *capitalists* exercise over *wage-earners* from the simple fact that they control the ownership of the *means of production* (VII, 1.2.2.a).

- REAL DOMINATION : domination that *capitalists* exercise over *wage-earners* from the fact that they control the ownership and the functioning of the *means of production* (VII, 1.2.2.a).

ENTERPRISE : *production unit* producing *commodities* (I, 2.1.1.a).

EXCHANGE-VALUE : ratio of exchange between *commodities* (or between *commodities* and *money*) (II, footnote 22).

INDEPENDENT PRODUCER = *self-employed*.

INSTITUTION (or INSTITUTION OF PUBLIC INTEREST) : *production unit* in the professional sphere producing collective non-marketed goods or services (I, 2.1.1.b).

KEYNESIAN POLICIES versus NEO-LIBERAL POLICIES :

- KEYNESIAN POLICIES : policies which increase *real wages* and *public expenditure* (IX, 2.2.2.).

- NEO-LIBERAL POLICIES : policies which decrease *real wages* and *public expenditure* (IX, 2.2.2.).

LABOUR : production of goods or services (as against consumption) (I, 1.1.) ; use of *labour-power* (I, 1.2.2.a).

- ABSTRACT LABOUR : *labour* devoted to the production of *commodities* and considered in its sole aspect as *indirectly social labour* (II, 2.1.1.b).

- AUTONOMOUS LABOUR : *labour* (in the non-professional area), the reproduction of which is subject to its own, internal, norms (I, 2.2.1.).

- COMPLEX LABOUR : *labour* of more-than-average skill (A, 7.1.1.).

- CONCRETE LABOUR : *labour* considered in its material, visible, aspects (II, 2.1.1.b).

- DIRECTLY SOCIAL LABOUR : *labour* that has social usefulness recognized directly by a public authority, independently of a market sale (I, 2.1.1.b).

- DOMESTIC LABOUR : *labour* carried out by and for members of households without monetary compensation (I, 2.2.).

- HETERONOMOUS LABOUR : *labour* (in the professional area), the reproduction of which is subject to external norms (I, 2.1.1.a and b).

- INDIRECTLY SOCIAL LABOUR : *labour* that has social usefulness recognized indirectly, by means of the sale of the product on the market (I, 2.1.1.a).

- NECESSARY LABOUR : part of the *wage-earner's present labour* which creates *corresponding value* (III, 1.1.).

- PAST LABOUR : *labour* embodied in the *means of production* (II, 2.2.1.a).

- PRESENT LABOUR : *labour* carried out by the worker considered (II, 2.2.1.a).

- PRIVATE LABOUR : *labour*, the product of which is useful to the producer alone (I, 2.2.1.).

- PRODUCTIVE LABOUR :
  1. broader sense : *labour* which creates *value* and *revenue* = labour devoted to the production of *commodities* (VI, 5.3.1.a).
  2. narrower sense : *labour* which creates *surplus value* and *surplus revenue* = *wage-earners'* labour devoted to the production of *commodities* (VI, 5.3.1.b).

- PROFESSIONAL LABOUR : *labour* carried out in order to obtain an income (I, beginning of section 2).

- SIMPLE LABOUR : *labour* of average skill (A, 7.1.1.).

- SOCIAL LABOUR : *labour*, the product of which is useful to others than the producer himself (I, 2.1.1.).

- SURPLUS LABOUR : see this item below.

LABOUR-POWER : sum of the physical and intellectual faculties which fit a human being for *labour* (I, 1.1.3.a).

MACRO-ECONOMICS versus MICRO-ECONOMICS :

- MACRO-ECONOMICS : study of economic phenomena considered from a global point of view (a country or a set of countries) (I, footnote 2).

- MICRO-ECONOMICS : study of economic phenomena considered from a particular point of view (individual, *enterprise*, *branch*, or even country) (I, footnote 2).

MARKET POWER : ability to fix or obtain *prices* that ensure a higher-than-average *revenue (obtained)* or *rate of profit* (II, 3.2.2.b ; V, 1.2.1.).

MONEY : specific social bond used to exchange *commodities* (II, 3.1.).

MONEY EQUIVALENT OF VALUE : ratio of *values* expressed in monetary units to the same *values* expressed in hours of *labour* (II, 3.2.1.b).

MEANS OF CONSUMPTION : goods and services used by individuals to satisfy their needs (I, 1.2.1.b).

MEANS OF LABOUR : technical means (tools, machines, etc.) used to carry out *present labour* (I, 1.2.2.b).

MEANS OF PRODUCTION : goods and services used with a view to producing other goods or services (I, 1.2.1.b) ; all the *means of labour* and *objects of labour* (I, 1.2.2.b).

MICRO-ECONOMICS : see MACRO-ECONOMICS…

NEO-LIBERAL POLICIES : see KEYNESIAN POLICIES…

OBJECTS OF LABOUR : objects (raw materials) which are processed by *labour* (I, 1.2.2.b).

OBSOLESCENCE : technological ageing of *means of labour*, in contrast to their physical depreciation (VII, 3.3.2.a).

PRICE : monetary expression of the *value* of a *commodity* ; quantity of *money* for which a *commodity* is exchanged (II, 3.1.).

- ADMINISTERED PRICE : *market price* regulated by a public authority (V, 1.2.1.).

- FREE COMPETITION PRICE : *market price* which fluctuates according to relationships between supply and demand (V, 1.2.1.).

- GENERAL LEVEL OF PRICES : average unit *price* of *commodities* (II, 3.2.1.b).

- MARKET PRICE : *price* prevailing on the market (II, 3.2.1.).

- MONOPOLY PRICE : *market price* fixed by *enterprises* at a level which ensures them higher-than-average *rates of profit* (V, 1.2.1.).

- PRICE OF PRODUCTION : theoretical *price* which guarantees an average *rate of profit* equal to the macro-economic *rate of profit* (A, 10.2.1.).

- SIMPLE PRICE : theoretical *price* exactly proportional to the *unit social value* of commodities ; theoretical *price* equal to the *unit social value* multiplied by the *money equivalent of value* (II, 3.2.1.).

PRODUCTION :

- CAPITALIST PRODUCTION : *commodity production* run by *capitalists*.

- COMMODITY PRODUCTION : production of goods and services intended for the market (I, 2.1.1.a).

- MARKET PRODUCTION = *commodity production*.

- NON-COMMODITY PRODUCTION : production of goods and services which are not intended for the market (I, 2.1.1.b).

- NON-MARKET PRODUCTION = *non-commodity production*.

- SIMPLE COMMODITY PRODUCTION : *commodity production* carried out by the *self-employed*.

PRODUCTION UNIT : social entity within which *labour* is carried out (I, 1.2.3.).

PRODUCTIVE : see CAPITAL and LABOUR.

PRODUCTIVITY (of labour) : quantity produced per worker or per hour of *labour* (II, 2.2.3., including footnote 16.b).

- APPARENT PRODUCTIVITY OF LABOUR : ratio of the quantity produced to the number of workers (A, 4.1.1).

- PRODUCTIVITY OF PRESENT LABOUR : ratio of the quantity produced to the number of hours of *present labour* (A, 4.1.1.).

- TOTAL LABOUR PRODUCTIVITY : ratio of the quantity produced to the number of hours of *past labour* and *present labour* (A, 4.1.1.).

PROFIT : *revenue obtained* by *capitalists* (III, 1.3.1.) ; difference between the *money-capital* recovered and the *money-capital* laid out (III, 2.2.2.) ; *surplus revenue* created by *wage-earners*, increased or diminished by the *surplus revenue* obtained or lost through transfers (V, 1.1. and 1.2. ; A, 10.2.).

PUBLIC EXPENDITURE : expenditure of the sector of *institutions* (VI, footnote 18).

PUBLIC SECTOR CONTRACTS : purchases of *commodities* by *institutions* (VI, footnote 15).

RATE OF PROFIT : ratio of *profit* to *money-capital* invested (*constant capital + variable capital*) (IV, 1.3.).

RATE OF SURPLUS LABOUR : ratio of *surplus labour* to *necessary labour* (IV, 1.1.).

RATE OF SURPLUS VALUE : ratio of *surplus value* (or *surplus revenue*) to *value of labour-power* (or *variable capital*) (IV, 1.1.).

REALIZATION OF VALUE : the fact that *value* is transformed from a mere potentiality into an actual reality (through the sale of the *commodity*) (II, 2.1.2.b).

REAL OWNERSHIP : effective power of decision-making (as opposed to mere juridical ownership) (I, footnote 13).

REPRODUCTION :

- EXPANDED REPRODUCTION : growth of capitalist production (part of the *profit* being *accumulated*) (III, 2.2.2.).

- SIMPLE REPRODUCTION : reproduction of capitalist production on the same scale (all *profit* being consumed) (III, 2.2.2.).

REVENUE :

- REVENUE CREATED : money equivalent of *new value* (II, 4.1.1.).

- REVENUE OBTAINED : income actually earned (by a worker, or an *enterprise*, or a *branch*, etc.) (II, 4.2.2.).

SELF-EMPLOYED (or SIMPLE COMMODITY PRODUCER) : private owner of *means of production*, who produces *commodities* without using *wage-earners' labour-power* (I, 2.1.3.b).

SURPLUS LABOUR : difference between a *wage-earner's present labour* and *necessary labour* (III, 1.1.).

SURPLUS REVENUE : monetary expression of *surplus value* (III, 1.2.1.).

SURPLUS VALUE : difference between the *new value* created by a *wage-earner* and the *corresponding value* (III, 1.1.).

- ABSOLUTE SURPLUS VALUE : increase in *surplus value* due to lengthening *present labour* (VIII, 1.1. and footnote 2).

- RELATIVE SURPLUS VALUE : increase in *surplus value* due to reducing *necessary labour* (VIII, 1.2. and footnote 2).

TECHNICAL COMPOSITION OF CAPITAL : ratio of the number of *means of production* to the number of workers (IV, footnote 10).

USE-VALUE :
1. First meaning : useful product (any goods or services) (I, 1.1.).
2. Second meaning : usefulness of a *commodity* (for the purchaser) or of a non-commodity product (for the user) (I, footnote 1).

VALUE :
1. First sense (qualitative) = *indirectly social labour* (II, 2.1.1.b).
2. Second sense (quantitative) : number of hours of *labour* necessary to produce a *commodity* = sum total of *past labour* and *present labour* required to produce a *commodity* = sum total of *past value* transferred and *new value* created by *labour* (II, 2.2.1.a).

- CORRESPONDING VALUE : part of the *new value* created by a *wage-earner* which is equal to the *value of his labour-power* (III, 1.1.).

- INDIVIDUAL VALUE : quantity of labour required by a particular *enterprise* to produce a *commodity* (II, 2.2.1.b).

- NEW (or PRESENT) VALUE : *value* created by *present labour* devoted to *commodity production* (II, 2.2.1.a).

- PAST VALUE : *value* of the *means of production* purchased (II, 2.2.1.a).

- SOCIAL VALUE : quantity of *labour* required on average to produce a *commodity* (II, 2.2.1.b).

- TOTAL VALUE : *value* of a set of *commodities* (II, 2.2.1.c).

- UNIT VALUE : *value* of a unit of a *commodity* (II, 2.2.1.c).

- VALUE ADDED = *new value* (II, footnote 29).

VALUE OF LABOUR-POWER : *value* of the *means of consumption* purchased by a *wage-earner* (III, 1.1.).

WAGE :

- MONEY WAGE (or nominal wage, or wage in current dollars) :

  1. in a purely capitalist system : sum of *money* obtained from the sale of *labour-power* (III, 1.3.3.a).

  2. in a system with an institutional sector, the following concepts must be distinguished (see VI, 3.3.1.) :

  - COLLECTIVIZED WAGE : part of the *wage-cost* consisting of income taxes due by the *wage-earner*.

  - DIRECT WAGE (or NET WAGE or PRIVATIZED WAGE) : sum of *money* obtained directly from the sale of *labour-power*.

  - GROSS WAGE : *wage-cost* less the employer's contribution to national insurance.

  - INDIRECT WAGE : national insurance allowances (financed in principle by the *solidarized wage*).

  - SOCIALIZED WAGE : sum total of *solidarized wage* and *collectivized wage*.

  - SOLIDARIZED WAGE : part of the *wage-cost* consisting of national insurance contributions (workers' and employers' contributions).

  - WAGE-COST : *price* to be paid for the purchase of *labour-power*.

- REAL WAGE (or wage in constant dollars) :

  1. in a purely capitalist system : number of *commodities* purchased with the *money wage*, or purchasing power of the *money wage* (III, 1.3.3.a).

  2. in a system with an institutional sector, the following concepts must be distinguished (see VI, 3.3.2.) :

  - COLLECTIVE REAL WAGE : number of collective non-marketed products available to the *wage-earner*.

  - DIRECT REAL WAGE : number of *commodities* purchased with the *direct wage*, or purchasing power of the *direct wage*.

  - INDIRECT REAL WAGE : number of *commodities* purchased with the *indirect wage*, or purchasing power of the *indirect wage*.

  - SOCIALIZED REAL WAGE : sum total of *collective real wage* and *indirect real wage*.

  - TOTAL REAL WAGE : sum total of *direct real wage* and *socialized real wage*.

WAGE-EARNER : worker who sells his *labour-power* for a *money wage* (I, 2.1.2.a).

ANSWERS TO QUESTIONS

Chapter I

A. Basic knowledge

1.1.   See footnote 2 (+ glossary).
1.2.   See § 1.1. (+ glossary).
1.3.   See 1.2.1. and 1.2.2. (+ glossary).
1.4.   See § 1.2.
1.5.   (a, b). See § 1.3.
1.6.   See glossary (+ relevant passages of section 2).
1.7.   See 2.1.2.c.
1.8.   a) See beginning of 2.3.1.
       b) - Enterprises produce for the market, other production units do not ;
         - both capitalist and public enterprises employ waged labour and produce commodities, but the former belong to capitalists while the latter belong to public authorities ;
         - both public and private institutions employ waged labour and produce non-marketed collective goods or services, but the former belong to public authorities while the latter belong to private persons ;
         - both public enterprises and public institutions belong to public authorities and employ waged labour, but the former produce commodities while the latter produce non-marketed collective goods or services.
       c) For enterprises and institutions : see 2.1.1. ; for the non-professional sphere : see 2.2.1. (For all production units, see also glossary + hypothetical example in the answer to question 1.15.).

B. More advanced knowledge

1.9.   See footnote 4a.
1.10.   See footnote 3.
1.11.   See footnote 6.
1.12.   a) See footnote 13 concerning capitalists ; the same observation is applicable to the self-employed with respect to means of production and money.
        b) Letting out on hire may be sufficient (the case of cars, houses, etc.) : what matters is that the enterprise succeed in transferring the right of use over the product against payment of a price (rental, etc.).
        c) See footnote 11.

C. Applied knowledge

1.13.   —

1.14.   a) Health, like any production, can take place in several of the rectangles in table I.3., and even in all of them. (See the examples concerning teaching and education in 2.3.1. ; develop similar examples concerning health care).

b) Black labour is hidden professional labour (not declared, non-official, which evades taxation). It can be found in all the rectangles where professional labour is carried out, i.e. in rectangles A, B and C. (It can also be found in voluntary organizations, insofar as the latter employ some wage-earners. But it cannot be found in households, for workers who carry out professional activities within households actually belong to other production units : see footnote 15).

c) Everything depends on the definition of the formal and informal sectors. Some authors assimilate the informal sector with the underground economy, i.e. with all hidden production units (not declared, non-official, which evade taxation) : in that case, the informal sector comprises some capitalist enterprises (A1), some independent enterprises (B1 and B2) and voluntary organizations (D1) (it cannot comprise public enterprises or institutions, which directly belong to public authorities, nor private institutions, which are financed by public authorities). Others assimilate the formal sector to the « classic » production units in a capitalist society, i.e. official (declared) production units employing waged labour, either in the market or in the non-market sector : in that case, the informal sector comprises all the independent enterprises and voluntary organizations, as well as « underground » capitalist enterprises.

d) The student's work is a preparation to professional life, but it does not comply with the definition of labour as production activity (see § 1.1.). The student's work actually constitutes a consumption activity. One exception, however, is worth mentioning : through research activities (a thesis, for instance), a student may very well take part in the production of new knowledge : such a labour (which complies with the above definition) is carried out in a production unit (a university, for instance) which is normally located in C1 or C2, possibly in A1 (or A3 : see footnote 16a).

1.15.   (Hypothetical example)

a) My *professional activities* are of two types :

- I teach mathematics in a state school (thus in a « public institution »). In the latter, I provide directly social labour : for my activity is recognized as socially useful by the state (which finances it), without my having to sell lessons to pupils. The labour I perform is heteronomous labour : for the continuation of the school's activities (and thus of my own activities there) is subject to complying with the norms dictated by the state (concerning programs, or the ratio of pupils to teachers, etc.).

- I earn some more money by giving private lessons (sometimes « in black », I must confess : I do not declare all my earnings to the taxation authorities ; but

the fact is irrelevant to this exercise). In this case, I act as an « individual independent enterprise ». My labour is indirectly social, for it is only recognized as socially useful if people are willing to pay for my private lessons. My labour is heteronomous, here too, but for different reasons : in this case, I am subjected to the market laws, namely the law of demand (is there a demand willing to purchase private lessons ?) and the law of competition (am I competitive with rival producers as far as price, location, etc. are concerned ?).

b) My *extra-professional activities* are extremely varied :

- I prepare meals for my family two days a week. This domestic labour in the « household » production unit is autonomous labour : even though I entirely abide by my wife's decisions, the relevant fact is that my activity need not be validated by a public authority or by the market. My activity constitutes social labour (rather than private labour), since the meals are intended for all the family members (rather than for myself alone).

- From time to time I provide gratis labour in a private clinic. I am not sure whether the latter is a « capitalist enterprise » or a « non-profit private enterprise » ; what is sure is that it employs wage-earners (and other workers) and that health care is sold to patients (who may or may not be partly refunded by national insurance). Labour provided in that clinic constitutes indirectly social labour (it is recognized as socially useful by the fact that patients purchase health care there) and heteronomous labour (it is subject to the market laws) ; the same holds true of my voluntary activities there (for instance : if the clinic in question should close for lack of clients, my activities there would also be sanctioned by the market).

- I occasionally do odd jobs at my neighbours' home. These activities also constitute domestic labour (labour performed by and for household members without monetary compensation), even though they benefit members of another household. Just like domestic labour within my household, these « outside » domestic activities constitute autonomous labour and social labour (for the same reasons as above).

1.16.   —

Chapter II

A. Basic knowledge

2.1.   See section 1 (+ summary).
2.2.   See 2.1.1.b (+ glossary).
2.3.   a) See introduction to 2.1.1.
         b) See 2.1.1.b.
2.4.   a) See 2.2.1.a (+ glossary).
         b) See 2.2.1.b and c (+ glossary).
2.5.   a) See 2.2.3.b.
         b) See 2.2.3.c.

2.6.   See 3.2.1.b (+ summary).
2.7.   a) See 3.2.1.a and b (+ summary and glossary).
        b) See 3.2.2.a.
        c) See 3.2.2.b.
        d) See 3.2.3.
2.8.   a) See 4.1.1.
        b) See 4.1.2.a.
2.9.   a) See 4.1.2.b.
        b) See 4.1.2.c.
        c) In the non-market production sector, there is no creation of value (see 2.1.2.a) and therefore no creation of revenue.

B. More advanced knowledge

2.10.   See 2.1.1.a.
2.11.   See footnote 12.
2.12.   See § 3.1.
2.13.   See footnote 22 (+ glossary).
2.14.   a) See 3.2.2.c and footnote 25.
        b) See footnote 26.
2.15.   A stock of unsold products embodies labour, but the latter is not (yet) recognized as indirectly social labour, as value. See footnote 9.
2.16.   A product of nature has always a use-value, a utility (see chap. I, § 1.1.) ; it has a price if it is owned privately and sold (see chap. II, footnote 3) ; even if it is sold, it is not a commodity and has no value (see chap. II, § 1.1. and 2.1.2.a).
2.17.   See 4.2.2.

C. Applied knowledge

2.18.   There is value creation (indirectly social labour) in the market production sector, not in the non-market production sector. Value is therefore created by the taxi-driver and the farmer (except if the latter lives from self-subsistence alone) and possibly by the teacher (private lessons, or school mainly financed by the *sale* of teaching activities). No value is created by the house-wife or husband (member of a household), or by the civil servant (member of an institution), or by the union representative (member of a voluntary organization).
2.19.   a) Past value transferred each year   = 30,000h. Indeed :
                    1. raw materials : $ 1,000,000/E   = 10,000h
                    2. machines : ($ 20,000,000 ÷ 10)/E   = 20,000h
        New value created each year = 20,000h (= 8h/day x 250 days/year x 10).
        Total value of the annual product = 50,000h.
        b) Past value transferred per unit of commodity = 30h (30,000h ÷ 1,000 units).
        New value per unit = 20h (= 20,000h ÷ 1,000 units).
        Unit value (past + present) = 50h.

2.20. a) Price differences between cars and bicycles are basically due to differences in their respective unit social values.

b) Price differences between different models can be explained by differences in the quantity of value (a larger or improved model embodies more labour) and by differences in the balance of forces (more or less intense competition, customers' preferences : see 3.2.2.b).

c) The evolution of the average price of cars or bicycles depends on the growth of productivity in the branch considered (which results in a decrease in the unit social value) and on the evolution of the money equivalent of value (which tends to increase) : price = unit social value x E. A rise of the average price of cars or bicycles means that productivity gains in the branch considered are less than the increase in E.

2.21. —

Chapter III

A. Basic knowledge

3.1. See § 1.1. (+ summary).
3.2. See 1.3.1. (+ summary).
3.3. See 1.3.3.a (+ glossary).
3.4. Figure III.4. does not in any way contradict figure II.5. ; it complements the latter by introducing the division of present labour (into necessary labour and surplus labour) and that of the revenue created (into wage and surplus revenue).
3.5. a) See 2.2.1.a and b.
b) See 2.2.2., last paragraphs.
c) See 2.2.3.
3.6. See 2.2.2., including footnotes 18 and 20.

B. More advanced knowledge

3.7. See footnote 3 (+ glossary).
3.8. See footnote 8.
3.9. - In the *market* production sector, *all* wage-earners create surplus revenue (see 1.3.2.b), except for some *exceptional* cases where the wage is equal to, or higher than, the money equivalent of value (see footnote 9).

- In the *non-market* production sector, no wage-earner can create value or revenue, no one therefore can create surplus value or surplus revenue (which are part of the value and revenue created). On the other hand, wage-earners in the sector of non-market production provide labour *and surplus labour* : their labour-time is normally higher than the value of their means of consumption (except for the same exceptional cases of wages being equal to, or higher than, E) (see chap. VI, § 5.1. and 5.3.2.).

3.10. See footnote 16.

3.11. The purchase of means of production intended for *replacement* (when the initial means of production are consumed, or physically worn out, or technologically out-of-date) is in principle made with the *constant capital recovered* thanks to the sale of the commodities produced. The purchase of *supplementary* means of production (net investment) is made with the profit.

3.12. See 1.3.3.c.

3.13. See footnote 21.

C. Applied knowledge

3.14. For surplus value creation to take place, we must have *market* production (hence creation of value and revenue) carried out by *waged labour* (hence creation of surplus value and surplus revenue). Surplus value is therefore created by the farmer and the taxi-driver, on condition that they are wage-earners rather than self-employed ; surplus value is also created by wage-earning teachers in the market sector. On the other hand, no surplus value is created by the house-wife or husband (member of a household), or by the civil servant (member of an institution), or by the union representative (member of a voluntary organization).

3.15. See table III.3. (+ footnote 12.b).

3.16. —

Chapter IV

A. Basic knowledge

4.1. See 2.1.1. for the formula, then :
a) See 2.1.2.
b) See 2.1.2. and 2.1.3.
c) See 2.1.2.

4.2. See footnote 4.

4.3. See 2.2.1 for the formula, then :
a) See 2.2.2.
b) See 2.2.2. and 2.2.3.

4.4. (a, b) See 2.3.1.

B. More advanced knowledge

4.5. The rise in the standard of living (= decrease in *physical* exploitation) does not abolish surplus labour (= *economic* exploitation), which may even increase. This economic exploitation is not a postulate : it is an actual reality, which can be proved (by theory, by statistical data, by fact : see chap. III, 1.2.3.).

4.6. See footnote 10.

C. Applied knowledge

4.7.   a) Raising money wages parallel to the rise in the consumer price index ensures stability in real wages (see the formula of the real wage in chap. III, 1.3.3.a). Since the growth of general productivity results in a decrease in the unit value of the means of consumption, the rate of surplus value will increase (see the formula of the rate of surplus value in chap. IV, 2.1.1.).

b) Raising money wages less than the rise in the consumer price index amounts to reducing real wages, which reinforces the increase in the rate of surplus value.

c) Raising *real* wages parallel to the growth of general productivity (+ 10 % for instance) tends to ensure stability in the rate of surplus value : for the rise in real wages is balanced by an equivalent decline in the unit value of the means of consumption.

d) When consumer prices rise, real wages necessarily increase less than money wages (see the formula of the real wage in chap. III, 1.3.3.a). In such conditions, raising *money* wages parallel to the growth of general productivity (+ 10 % for instance) amounts to increasing *real* wages *less* than the growth of general productivity : real wages increase by 6%, for instance, while the unit value of the means of consumption declines by 10 %. This tends to increase the rate of surplus value.

e) Reducing the length of labour-time parallel to the growth of general productivity (parallel to the decline in the unit value of the means of consumption) tends to ensure stability in the rate of surplus value.

4.8. and 4.9. —

Chapter V

A. Basic knowledge

5.1.   a) See § 1.1. (+ summary).
        b) See 1.1.2. and 1.3.1. (+ summary).
5.2.   a) See 1.2.1. (+ summary).
        b) See 1.2.2. and 1.3.1. (+ summary).
5.3.   See introduction to section 1 (+ summary).
5.4.   See 1.3.2.
5.5.   See 2.1.1. and 2.2.1. (+ summary).
5.6.   See 2.2.2.
5.7.   See 2.3.2.

B. More advanced knowledge

5.8.   The higher profit of more mechanized (or automated) enterprises is derived from a *redistribution* of total surplus revenue, which is *created* by the surplus labour of all wage-earners in the sector of market production (see answers to

questions 5.1 and 5.3). Surplus labour as a source of profit is not a postulate, but an actual reality that can be proved.

5.9.   a) Total surplus revenue is *created* by the surplus labour of all wage-earners employed by enterprises. (The commodities produced must actually be sold : if not, labour does not create any value or revenue, surplus labour does not create any surplus value or surplus revenue).

b) Total surplus revenue is *distributed* by market mechanisms, through prevailing market prices : in the first case (distribution of surplus revenue between unequally mechanized enterprises within an « average » branch), by the existence of uniform market price equal to simple price ; in the second case (distribution of surplus revenue between branches with unequal market power), by the existence of market prices different from simple prices.

5.10.   a) Reducing wages enables enterprise 3 to recover a margin of profit (the height of rectangle V is reduced) ; but this solution is only valid in the short term (in the longer term, new technical progress in the more efficient enterprises will reduce the unit social value of the commodity and abolish the profit margin of enterprise 3).

b) Introducing sufficient technical progress is *the* long-term solution (the unit individual value becomes equal to the unit social value, or even lower) ; however, enterprise 3 should be able to borrow the required money-capital.

c) As a result of absorption, enterprise 3 disappears as a distinct legal entity ; enterprise 1 has money-capital available to improve and maintain production unit 3… if it so wishes.

d) Subsidies enable enterprise 3 to survive in the short term ; in the longer term, the decline in the unit social value makes it necessary to obtain increasing subsidies… which are eventually considered as « excessive » and abandoned.

e) As a subcontractor, enterprise 3 can survive in the long term… as long as it is able to conform to the conditions dictated by the large enterprise.

f) The monopoly agreement enables enterprise 3 to survive in the long term… as long as the agreement survives (other branches may fight against the agreement ; moreover, it may be in the most efficient enterprises' interest to get out of the agreement and increase their scale of production by reducing prices, thus eliminating marginal enterprises).

g) Product differentiation is a long-term solution, but it remains subject to market uncertainties (competitors may imitate the product, consumers may find the price too high, etc.).

h) A workers' cooperative does not aim at profit and can therefore survive under the conditions of figure V.2. ; in the long run, however, technical progress in the competing enterprises progressively reduces the unit social value of the commodities, thus reducing the workers' incomes… who eventually disappear (see chap. VI, 1.3.1.).

i) A public enterprise does not aim at profit and can therefore survive under the conditions of figure V.2. ; in the long run, however, technical progress in the

competing enterprises progressively reduces the unit social value of the commodities, which compels public authorities to grant more and more subsidies… until the latter are considered to be excessive (see chap. VI, 2.3.1.).

5.11. *Selective* measures (intended for small enterprises alone) obviously benefit the latter, while showing contradictory aspects for the large enterprises : on the negative side, the burden of taxation ; on the positive side, the continuation of surplus revenue transfers (see 2.1.1.). *General* measures are advantageous, above all, to the large enterprises (see 2.1.2.).

C. Applied knowledge

5.12. and 5.13. —

Chapter VI

A. Basic knowledge

6.1. *All* enterprises produce commodities. *Capitalist* and *public* enterprises (unlike independent enterprises) employ wage-earners. *Capitalist* enterprises (unlike independent and public enterprises) aim at profit and only can survive if they make profit. (See § 1.1. and 2.1.).

6.2. (a, b) See § 1.1. and 1.3.2.a.

6.3. a) See § 1.1. and 1.3.1. (+ summary).
b) See § 2.1. and 2.3.1. (+ summary).

6.4. (a, b) See § 3.1. (+ summary).

6.5. a) See 1.3.2.b.
b) See 2.3.2.
c) See § 3.2. (+ summary).

6.6. (a, b) See 3.3.1.a and 3.3.2. (+ summary).

6.7. See 5.2.3. (+ summary).

6.8. a) See 5.3.1. (+ summary).
b) See 5.3.2.

B. More advanced knowledge

6.9. a) Owing to transfers of revenue from *independent producers*, profit is *higher* than the surplus revenue created by wage-earners (see 1.3.2.a).
b) Owing to the levies required to finance the *institutional sector*, available profit is *less* than the surplus revenue created (see 3.3.1.b, 5th comment).

6.10. See the answers to questions 6.5b and 6.5c (concerning subsidies, see also the answer to question 5.5 in chapter V).

6.11. See § 4.2. (+ summary).

C. Applied knowledge

6.12.   The same labour, defined by the nature of the product (education, health care, agriculture, etc.) can be found in any item of table I.3. or in any column of table VI.3. As a consequence, it can be unproductive in both senses (examples : education and health care in a publicly financed institution or within the household), or it can be productive of revenue but not of surplus revenue (private lessons, activities of a private doctor), or it can be productive of both revenue and surplus revenue (instructor in a driving school, wage-earning doctor in a private clinic).

6.13.   a) Civil servants provide surplus labour, *but not* surplus revenue ;
b) wage-earners in public enterprises provide surplus labour *and* surplus revenue ;
c) wage-earners in capitalist enterprises provide surplus labour and surplus revenue, *provided* that their hourly wage is less than E (see chap. III, footnote 9 : the same observation applies to civil servants and wage-earners in public enterprises) ;
d) self-employed producers provide « surplus labour » and « surplus revenue » *if* market relations are disadvantageous to them (marginal or subcontracting enterprise) ;
e) capitalists create revenue, but not surplus revenue (see chap. III, footnote 8).

6.14.   The growth of a tertiary sector of *market* production can very well offset the decline of the secondary sector as a source of revenue and surplus revenue (see 5.3.1.b).

6.15.   It is in the agricultural capitalists' interest to defend marginal peasants, especially so if the latter are defended by general measures (such as maintaining comparatively high prices for agricultural products) ; industrial capitalists, however, share opposite interests. (See 1.2.1., including footnote 4.)

6.16.   a) Reducing the employers' social contributions amounts to reducing the wage-cost, thus increasing the rate of surplus value and profit. But it results in reducing the indirect wage, to the detriment of both wage-earners (reduction in the living standard) and enterprises (reduction in the markets).
b) Reducing the workers' social contributions and income taxes amounts to increasing the net wage and the direct real wage, to the detriment of the indirect real wage (solidarized) and of the collective real wage (available free of charge). For the enterprises, the rate of surplus value and the size of the market remain unchanged.
(For a) and b), see 3.3.1.b, first comment).

Chapter VII

A. Basic knowledge

7.1.   a) See § 1.1.
         b) See 1.2.2. (+ summary).
7.2.   (a, b) See § 1.3. (+ summary).
7.3.   (a, b, c) See § 2.1. (+ summary).
7.4.   (a, b, c) See § 2.2. (+ summary).
7.5.   See 2.2.1.a (joint-stock companies, bank loans, subcontracting).
7.6.   See § 3.2.
7.7.   See 3.3.1.
7.8.   See 3.3.1.b.
7.9.   See 3.3.2.
7.10.   See § 4.1. and § 4.2. (+ chap. I, § 1.3.).
7.11.   See 4.1.2., second paragraph (including footnote 33).

B. More advanced knowledge

7.12.   a) See 1.2.2.a and footnote 4.
         b) For positive effects, consider footnote 5.a ; for negative effects, see 4.1.1.
7.13.   See footnotes 18 and 21a.
7.14.   (a, b) See 3.3.1.c and 3.3.2.a.
7.15.   See 3.3.2.a.

C. Applied knowledge

7.16. to 7.22. —

Chapter VIII

A. Basic knowledge

8.1.   a) See § 1.1. and 1.2. (+ summary).
         b) The reduction in necessary labour may result either from a simultaneous decrease in the real wage and in the unit value of the means of consumption, or from a rise in the real wage which is more than offset by the decrease in the unit value of the means of consumption.
8.2.   (a, b, c) See 2.1.1. (+ summary).
8.3.   (a, b, c) See 2.1.2. (+ summary).
8.4.   See 3.2.1.

B. More advanced knowledge

8.5. See 2.2.1.
8.6. For enterprises oriented towards the *domestic market*, wages are both production costs and outlets. For *export*-oriented enterprises, wages paid are only production costs ; outlets are constituted by wages paid abroad.

C. Applied knowledge

8.7. and 8.8 —
8.9. Examples :
a) For producers : jobs may be threatened by the use of immigrant workers (official or clandestine), by the transfer of industries abroad, by competition from foreign products ; the lower wages paid to immigrant workers (especially to clandestine ones) push down all wages ; the division between wage-earners (foreign/national) weakens the whole working class.
b) For consumers : the import of cheap raw materials and products diminishes the cost of living, increases purchasing power ; the use of cheap immigrant labour reduces the cost of goods and services produced in the country.

Chapter IX

A. Basic knowledge

9.1. a) See § 1.1.
b) See § 2.1.
9.2. a) See 1.2.1.
b) See 1.2.2.
9.3. a) See 2.2.1.
b) See 2.2.2.
9.4. See 2.2.2. and § 3.1.
9.5. a) and b) See 3.1.2. and 3.1.3.
c) See 3.1.3.
9.6. a) See 3.1.2.
b) See introduction to § 3.2.
c) See 3.2.1. and 3.2.2.

B. More advanced knowledge

9.7. (a, b) See § 2.3. (including footnote 11).
9.8. a) Correct on the micro-economic level and in the short term.
b) See footnote 16.

C. Applied knowledge

    9.9. and 9.10. —

Conclusion

A. Basic knowledge

    C.1.   See section 1.
    C.2.   See section 2.
    C.3.   See section 3.

B. More advanced knowledge

    C.4.   See 2.2.2.
    C.5.   a) See chap. V, 1.1.2. (last paragraph).
             b) See chap. IV, end of 2.1.2., and chap. VIII, section 2.

C. Applied knowledge

    C.6. and C.7. —

Theoretical appendices

    A.1.   See app. 2.
    A.2.   a) See app. 3, § 3.1.
             b) See app. 3, § 3.2.
    A.3.   a) See app. 4, 4.1.1. and § 4.3.
             b) See app. 4, 4.1.2. and 4.3.2.
    A.4.   See app. 5.
    A.5.   See app. 6.
    A.6.   See app. 7.
    A.7.   See app. 9.
    A.8.   a) See chap. II, 2.2.2.
             b) See app. 5 (§ 5.1., including footnote 9, for the traditional viewpoint ; § 5.2.
             for the alternative viewpoint).
    A.9.   a) See chap. II, 2.2.3.
             b) See chap. II, 2.2.2.
             c) See chap. II, footnote 15a.
             d) See app. 5.
             e) See chap. V, footnote 7b.
    A.10.   a) See app. 6, footnote 16.
             b) See app. 6, 6.2.2.a.
             c) See app. 6, 6.2.2.b.
    A.11.   See app. 7, 7.2.3.

A.12.   a) See app. 8, 8.2.3.
        b) See app. 8, 8.2.4.
A.13.   a) See app. 8, 8.3.1.
        b) See app. 8, 8.3.2.
A.14.   a) See app. 10, § 10.1.
        b) See app. 10, § 10.2.
A.15.   (a, b) See app. 10, § 10.2.
A.16.   See chap. V, § 1.1, and app. 10, § 10.2.
A.17.   a) See chap. V, end of 1.1.2.
        b) See app. 10, end of 10.2.2.a.
A.18.   a) See chap. V, § 1.1.
        b) See app. 10, § 10.2.
        c) See chap. IV, 2.3.1, and app. 9.
A.19.   a) and b) See app. 11, § 11.1.
        c) See app. 11, 11.3.1.
        d) See app. 11, footnote 30.
A.20.   See app. 12.

BIBLIOGRAPHY

SUGGESTIONS FOR FURTHER READING[1]

In principle, it is advisable to read Marx himself. Moreover, this is the clue to adequately discriminating among Marxists those who are worth reading and those who are not. Nevertheless, books like this one or those mentioned below seem to be highly recommendable.

1° Some other recent introductory texts

- FOLEY, Duncan (1986) : *Understanding Capital. Marx's Economic Theory*, Cambridge Mass., Harvard University Press. A succinct compendium of the most important issues in Marx's economic approach ; this short book has already become a small classic.

- FINE, Ben ; SAAD-FILHO, Alfredo (2003) : *Marx's Capital,* London, Pluto Press. Fourth revised and enlarged version of a book originally published by Fine in 1975 and then turned into the first of the contemporary classics in this field.

- HARVEY, D. (1982) : *The Limits to Capital*, London, Verso, 1999. Deep approach, written by a prestigious geographer who adequately raises the issue of space in Marx's work, and also presents his economic theory as a whole.

- WEEKS, John (1981) : *Capital and Exploitation*, Princeton, University Press. A very good and brief presentation ; we hope for a re-edition.

- SAAD-FILHO, A. (ed., 2003) : *Anti-Capitalism : A Marxist Introduction*, London, Pluto Press. Very interesting collection of articles written by a substantial group of scholars united around this very readable « Introduction ».

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[1] This bibliography was assembled by Diego Guerrero, whom I warmly thank for his valuable contribution.

2° Some more advanced texts (by topics)

a) On historical materialism and the building of Marx's economic thought

    - COHEN, G. A. (1978) : *Karl Marx's Theory of History*, Oxford, University Press. A classic on the issue of the relationships between the economic categories of Marx and his concepts on history and materialism. It is regrettable that the author does not accept the labour theory of value.

    - ROSDOLSKY, Roman (1968) : *The Making of Marx's Capital*, London, Pluto Press, 1977. The first work on the *Grundrisse*, the immediate precedent of Marx's *Capital*, by one of the first scholars ever having read this work in the West. It is fully updated in many regards.

b) On the labour theory of value

    - RUBIN, I. I. (1923) : *Essays on Marx's Theory of Value*, Montreal, Black Rose Books, 1990. Rubin only began to be known in the West in the seventies, when his book was translated into several languages. Interested readers should read this excellent book rather than works written by « Rubinian » authors, not always faithful to their master's interpretation.

    - BRÓDY, András (1970) : *Proportions, Prices and Planning. A Mathematical Restatement of the Labor Theory of Value*, Budapest, Akademiai Kiadó. This is the most accurate and faithful mathematical restatement of the labour theory of value. Moreover, it sets some analytical solutions that were not available in Marx's times due to the inferior level then attained by instrumental techniques.

    - MARTÍNEZ MARZOA, Felipe (1983) : *La filosofía de 'El Capital'*, Madrid, Taurus. A wonderful synthesis of the essence of Marx's law of value, both as this author's own philosophy (an ontology of the modern social system viewed as the world of commodities and capital) and as an economic system in which all phenomena are interrelated. His interpretation of value is, in my opinion, one of the best articulated in any language, and it connects quite well with Rubin's and Bródy's interpretations.

c) On accumulation, rate of profit and crises

- GROSSMANN, Henryk (1929) : *The Law of Accumulation and Breakdown of the Capitalist System*, London, Pluto Press,1992. A classic book on the topics of economic crises, the breakdown of capitalism, the tendency of the rate of profit to fall, its countertendencies and the inner contradictions of this law in Marx. It provides a very good criticism of many simplistic and erroneous interpretations of Marx.

- GILLMAN, J. M. (1957) : *The Falling Rate of Profit : Marx's Law and its Significance to Twentieth Century Capitalism*, New York, Cameron Associates. A classic book, still very advisable and helpful concerning the empirical measurement of the law of the falling tendency of the profit rate.

- DUMÉNIL, G. ; LÉVY, D. (1993) : *La dynamique du capital. Un siècle d'économie américaine*, Paris, Presses Universitaires de France, 1996. A good and updated book on the topics discussed by Gillman's book, as well as Shaikh & Tonak's book mentioned below.

- AGLIETTA, M. (1976) : *A Theory of Capitalist Regulation. The US Experience*, London, New Left Books. This is the classical site of the « regulationist » approach. For the significance of this school in the history of Marxian economic thought, see HOWARD, M. C. ; KING, J. E. (1989 and 1992) : *A History of Marxian Economics : Volume I, 1883-1929 ; II, 1929-1990*, Princeton, University Press, which is still a « must » on this topic. For a more general analysis of this and other contemporary currents of economic thought, see GUERRERO, Diego (1997) : *Historia del pensamiento económico heterodoxo*, Madrid, Trotta.

d) On the question of productive and unproductive labour

- NAGELS, Jacques (1974) : *Travail collectif et travail productif dans l'évolution de la pensée marxiste*, Éditions de l'Université de Bruxelles. Recommendable as a complement to the treatment given by Gouverneur in this book, especially for the question of the « circulation inside the production process » and its differences from « pure circulation ».

- SHAIKH, A. ; TONAK E. (1994) : *Measuring the Wealth of Nations. The Political Economy of National Accounts*, Cambridge University Press. Very advisable for empirical measures of productive labour and new value added from the viewpoint of the labour theory of value, as well as on the topics of distribution, profits and crises.

- DELAUNAY, Jean-Claude (1984) : *Salariat et plus-value en France depuis la fin du xixe siècle*, Paris, Presses de la Fondation Nationale des Sciences Politiques. Similar to the previous one, but more focused on the question of the different possible measures of the rate of exploitation.

e) On socialism, planning and markets

- BETTELHEIM, Charles (1970) : *Economic Calculation and Forms of Property*, London, Routledge and Keegan, 1976. Classic book on this topic, especially on the question of the survival of market and capital social relationships inside « socialist » societies.

- KANTOROVICH, L. V. (1976) : *Essays in Optimal Planning* (collection and introduction by Leon SMOLINSKY), New York, International Arts and Sciences Press. The extremely important contributions on the subject by this Soviet Nobel prize winner should be read before all else.

- OLLMAN, Bertell ; LAWLER, James ; SCHWEICKART, David ; TICKTIN, Hillel (1998) : *Market Socialism : The Debate Among Socialists*, London, Routledge. This book is the best updated work on the questions of market socialism, the role of the market, planning, etc., in future (post-capitalist) society. Ollman's contribution to this book is especially advisable.

LIST OF TABLES AND FIGURES

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(suggestion for an outside back cover)

Jacques GOUVERNEUR

UNDERSTANDING THE ECONOMY
The hidden face of economic phenomena

This textbook is the product of long experience in both university teaching and extra-university training activities. It provides a clear and rigorous analysis of the structure and deep tendencies of the economy: extension of market production, globalization, concentration of economic power, race for competitiveness, the invasion of advertising, growth of subcontracting, increasing inequalities, attacks on the environment, prolongation of the structural crisis and unemployment, etc.

Each chapter is complemented with a summary, as well as a selection of « theoretical » and « practical » exercises : the former are aimed at checking the assimilation of the material, while the latter enable readers to establish themselves numerous links between theory and present-day realities, whatever the moment and country.

Thanks to its outstanding pedagogical qualities, the book constitutes a first-class textbook for students and teachers, as well as for any interested reader, even without previous knowledge. At the same time, the book expresses (and justifies in appendices**)** a number of non-conventional theoretical viewpoints which deserve consideration by specialists.

Jacques Gouverneur (born in 1940) is Doctor in Law of the Université Catholique de Louvain (1962) and D.Phil. in Economics of Oxford University (1969). Professor at the Université Catholique de Louvain-la-Neuve (UCL), he taught at the department of economics (ECON), the department of population and development studies (SPED) and the open faculty of economic and social policy (FOPES). He also delivered lectures or seminars in several other universities, both in Europe and Latin America.

He is the author of numerous publications. The latest ones – among which the present textbook – are available on the website www.i6doc.com (see p.2).