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THE END OF A DEBATE

by

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THE END OF A DEBATE

The study which follows should, we feel, bring to a conclusion an important debate which has been going on in recent years, the debate concerning "unequal exchange" and the "theory of international trade". It is no accident that this discussion, which like so many others appears at first sight to be purely "economic", can today, in 1973, be concluded by superseding "economics" and restoring historical materialism (i.e. a genuine return to Marx), nor is it merely the fruit of the intellectual effort of all those concerned. Rather it is a reflexion of the Chinese Cultural Revolution and its universal relevance.

From the start, two essential points need to be made, that is the reasons why we think that the debate can now be considered closed.

1. The essential contribution made by Emmanuel is undoubtedly the discovery of the pre-eminence of international values. Our world no longer consists of juxtaposed national systems carrying on "external" relations with each other (even if these are important), as was the case until quite recently. Rather it constitutes a unity, a whole - the world capitalist system. Day-to-day "economic", "political" and "cultural" events prove this to be the case, but it is insufficient to say it; it is necessary to draw the practical conclusions from it. For the essence of the whole is always richer than the sum of its parts. Emmanuel, gradually and perhaps clumsily (though not as regards seeking the answer to the real questions) has drawn these conclusions: the system is defined in the abstract by the great mobility of goods and capital and by a relative immobility of labour. This means that commodities are not first of all national commodities and then, exceptionally or marginally, international. On the contrary, it means that commodities are primarily world wide.

.../...

This implies that, throughout the system, social labour is crystallized in goods which are of an international character. The result is that an hour of simple labour in the Congo and in Germany are as comparable as labour in a Detroit factory and a New York harbour shop, since both generate the same value, that is, the labour of both the Congolese and the German producer culminates in world-wide commodities destined for the same world capitalist market.

We draw the reader's attention to section 2 where this essential argument is developed.

2. The direct or indirect sale of labour power, overt in a capitalist firm or obscured by the intermediary of a non-capitalist mode of production as is often the case in the periphery of the system constitutes the essential problem. We will not understand anything about the world or its real deep-rooted unity unless we grasp the functioning of this sale which gives a universal character to capitalist commodity alienation.

To analyse correctly this sale of labour power, its impact and its forms, two series of difficulties must be overcome. The first danger is that of substituting a mechanistic linear causality for the dialectic of the relations between objective and subjective forces. The dialectic in question implies that we are concerned with historical materialism and not with "economic theory", which has recourse to linear causality. The use of certain methods, particularly the so-called "models" method, accentuates this danger, because these models are in themselves mechanistic tools. We therefore draw the reader's attention to sections 4 and 5 and to the annex in which we have tried to restore the nature of this dialectic and expose the dangers of juxtaposing unilateral viewpoints. The second danger is that of analysing the objective forces/subjective forces dialectic in abstract, general terms, i.e. out of the concrete context of

specific social formations: in other words, forgetting that the unity of the system does not mean that it is homogeneous, but that it is diverse. Hence the dialectic in question must envisage simultaneously and separately the relations between the objective forces and the subjective forces in the centre, at the periphery and in the system as a whole. Sections 6 and 7 as well as section 10, in fact attempt to clarify the specific characteristics of this dialectic at the periphery of the system.

The outline which follows is not systematic. We are not starting with abstract concepts with a view to deducing the concrete reality. On the contrary, we have deliberately chosen to enter into the debate as it occurred. This method will give us a better idea of why the debate has remained ambiguous, why false problems have overshadowed the real ones. Along the line, in the above mentioned sections, we have assessed the situation by returning to the two fundamental elements pointed out above, which were forgotten or insufficiently understood by the participants in the discussion. This was indeed the path we have taken during the last few years. References to "Le développement inégal"^{1/} will enable us to avoid repeating ourselves or giving this article a dimension it cannot aspire to.

The debate on unequal exchange is not the only one which, in our view, should now be closed. It is in close connexion with this that the "files" on the question of the "transformation of values into prices" (section 8), of falling rate of profit (section 9) and of the periodization of the system (section 10) were re-opened. And it is for the same basic reasons that they must be closed. This is the conclusion we reach at the end of the present article.

I. The debate concerning unequal exchange:

We are among those who consider that the publication of L'échange inégal^{2/} by Arghiri Emmanuel marks an important date in the theory of international trade and, beyond that, in the theory of unequal relations of domination/dependence between the centre and the periphery of the world capitalist system. The fact that Emmanuel's argument was rejected out of hand by conventional economists is quite understandable, since the Ricardian theory of international trade is consistent with the subjective theory of value. In fact that was the only exception to Ricardian internal logic, based on the labour theory of value as Emmanuel was the first to point out and very clearly.^{3/}

But how can we explain the total silence of marxists until Emmanuel concerning international trade, and particularly the Ricardian theory of "comparative advantage"? We think, and have written,^{4/} that Marx did not have time to be systematically concerned with the world capitalist system, having devoted his efforts primarily to demystifying the capitalist mode of production. Thus his observations concerning international trade in Capital are in the nature of brief digressions "in passing". Nevertheless we shall see that, as is often the case with Marx, these observations are very valuable. After Marx, marxist thought became ossified. Later, with the birth of the Soviet State, a scientific analysis of the world system was liable to be embarrassing for the politics of that State. Furthermore, the workers' movement in the developed West became part of the "establishment" and tended to adopt paternalist imperialist attitudes and in particular, on the ideological plane, to view the socialist transformation of the world as its own exclusive responsibility, with the oppressed peoples receiving socialism "as a present".^{5/} The theory of comparative advantage then proves useful, since it is tautological: it makes it possible to "justify" the international order and, among

among other things, the insertion of the new State into this order, as well as paternalism towards the periphery. That is why Emmanuel's argument can be regarded as a path in the wilderness.

It is important to note that Emmanuel's criticism of the conventional theory of international trade is today generally accepted by marxists. Bettelheim and Palloix recognize Emmanuel's contribution in this connexion: he highlighted the deficiencies and the "illusory" nature of "classical" (Ricardian) theory and "neo-classical" (marginalist though still Ricardian) theory of international trade. In particular Emmanuel showed "that with the immobility of factors there was a reversal...it was no longer the production conditions which determined trade, but trade which determined production". As Emmanuel says, it is this "reversal", "this denial of the labour theory of value", which explains the marginalists, who rejected Ricardo retained his theory of international trade. 6/

This criticism Emmanuel is the same as the criticism we made as early as 1957. And we shall further see that on many important points our two analysis converged. However, Emmanuel went further. By stressing the immobility of factors, Emmanuel actually goes beyond the criticism; he lays the foundations of a positive theory, because for the first time he characterizes the international system in a way which is to prove particularly fruitful: international mobility of commodities, international mobility of capital, immobility of labour. We have already pointed out that this was a new abstraction and that Bukharin 7/ in 1917 did not see this characterization, nor did Lenin, despite the importance of Imperialism, the highest stage of capitalism.

We feel that this abstract characterization is basically correct, and that it is even Emmanuel's essential contribution. It is a fundamental contribution because, as we shall see, if we reject it we are simultaneously rejecting the idea of unequal exchange.

In this respect Emmanuel certainly does not deserve to be called a "precritical economist".^{8/} However, this hastily-applied adjective deserves reflexion and, having criticized (or accepted the criticism of) "comparative advantage"...we may have to keep it because we do not know what to replace it with. For after all, where is the "marxist theory" of international trade?

The reason why the debate following the publication of L'échange inégal was so confused and so unfair to Emmanuel is that unfortunately he stopped at the threshold of the real problem although he had been the first to formulate it clearly. This real problem, which stems from the correct characterization of the international system, is that of international values. We say that Emmanuel stopped at the threshold of the problem because the question of international values is merely that of the domination of the capitalist mode of production over the others, that of the specific nature of the peripheral capitalist mode with respect to the central one etc. Yet Emmanuel does not deal with any of these essential questions (which are, in contrast, the main subject of our own work); hence his hasty, sometimes even mistaken, conclusions, from which his opponents have drawn too facile arguments...and have themselves really remained at the "precritical" stage.

In our view the confusion stems from the inadequate analysis of the theoretical status of the value of labour power in the capitalist mode of production. Neither Emmanuel nor his critics have properly solved this problem. We believe that on this point we have already helped to advance the debate, and we hope here to cover a further stage.^{9/}

Thus the confusion stems from the fact that, on this essential point, Emmanuel expresses himself in empiricist terms, calling the wage an "independent variable". As we shall see, this formulation reveals a theoretical error, because there is no "independent

variable" in the capitalist mode of production. The very search for unilateral causalities between "independent variables" and "dependent variables" is characteristic of mechanistic economism and is diametrically opposed to the dialectical method where the whole, i.e. the reproduction of the conditions of the mode of production, determines the parts, i.e. the "variables".

But though Emmanuel was here branching into a formalistic cul-de-sac, his opponents were making no progress either. They confined themselves to repeating that the wage was not "independent" but "dependent".....on "productivity". This is of course a hollow marginalist formulation. For the question immediately arises: at what level is the "productivity" in question located? That of the enterprise, that of the nation, or that of the world system?

Are we making real progress when we replace the term "productivity", of marginalist origin, by the marxist term "level of development of the productive forces"? To say that the wage depends on the level of development of the productive forces is only a partly correct, and too general, answer. First of all the verb "depend" itself always betrays the absence of true dialectical thinking. We shall see later how to formulate correctly the dialectic between the objective forces and the subjective forces. Secondly the whole question remains as to the level where the development of productive forces takes place: the enterprise, the branch, the nation, or the world?

2. Emmanuel's contribution: the pre-eminence of world values

Emmanuel considers that his main discovery is that wages are the independent variable of the system.^{10/} We think that this is not so, and that the essential contribution of his theory lies elsewhere: in asserting the pre-eminence of world (international) values.

Emmanuel places his argument in a context in which the production activities of the international partners are governed by the laws of the capitalist mode of production. It is indeed clear that the categories of rate of surplus value and profit, of capital and of value of labour power relate to this mode of production. He assumes that all products of the capitalist mode are international commodities, that capital is mobile while labour is not. Furthermore he considers that the products exchanged have irreducible-use values, i.e. that they are specific products such as automobiles and coffee. This latter observation is essential, and it is precisely on this point that we part company with the author of L'échange inégal, as we shall see.

Of course we cannot compare "productivities" between two enterprises (or two branches) which produce irreducible use values. Emmanuel is quite right when he replies to his opponents who compare productivity in a coffee plantation with that in an automobile factory (saying of course that the latter is higher than the former, and thereby justifying the differences in the level of wages), that they completely ignore the marxist theory of value, that they argue within the marginalist framework which is as we have shown, entirely tautological: the "productivities" are different.....because the remunerations to labour are different".

On this subject, Emmanuel writes with great emphasis that "between different branches, the productivity of labour is incommensurable and the argument on the difference between national and international values is meaningless". 12/

Within Emmanuel's context in which the capitalist mode governs the specific activities of the partners, capital mobility shows a tendency towards equalizing the profit rate throughout the world while remunerations to labour, which is immobile, vary from

one country to another according to historical conditions. Hence the transformation of international values (the only meaningful ones) into international prices (again the only meaningful ones) implies the transfer of value from some nations to others.

Since all products are international commodities, the same quantity of labour used up in different parts of the world and incorporated in the products, also gives rise to a single world value although labour power is not an international commodity as it does not move beyond national boundaries.^{13/} Emmanuel is quite right in stressing this point: the labour-hour of the African proletarian is equal to that of the European proletarian since the product of the labour of either one are international goods. In reply to Palloix who is surprised at the comparison of the value generated by an hour of labour in the two places, Emmanuel says: "how does one compare an hour of African labour with that of a Detroit worker? Well, in the same way that one labour-hour of a Detroit worker is compared with the labour-hour of a New York barber".^{14/}

It is obvious that if the labour-hour in all countries creates the same value while the labour power in one of the countries has a lower value, that is the real wage is lower, the rate of surplus value is necessarily higher. Wage goods which represent the real counterparts of the value of labour power are in fact also international goods with an international value. If the labour-day is the same in countries A and B (8 hours for example) and if the real wage of the proletariat is 10 times higher in B (real wage in B equivalent to 10 kilogrammes of wheat per day as against only one kilogramme in A) and if world output of wheat (where wheat productivity is highest) is 10 kilogrammes in 4 hours, the rate of surplus value in B will be 100% (4 hours of necessary labour and 4 hours of surplus labour) while it will be 1900% in A (24 minutes of necessary labour and 7 hours and 36 minutes of surplus labour). This reasoning does not call for a comparison between the productivities of the two capitalist productions in which A and B specialize : it is even meaningless to do so.

On these assumptions, Emmanuel distinguishes between two types of unequal exchange.^{15/} In the first, the rates of surplus value are identical (hence real wages are also the same) but different countries specialize in branches of production having different organic compositions. Here, the transfer of value is not different from what it is within a national system and since such transfers are inherent in the capitalist mode, Emmanuel does not waste time on these "commonplace" cases. In the second type, the rates of surplus value are different and the transfer of value takes place, not as a result of different organic compositions but because of the immobility of labour which enables real wages to vary. This is the real case of unequal exchange.

Further on, we shall study Emmanuel's assumptions. We shall raise the question of whether it is still possible to talk of unequal exchange when one of the partners involved in the exchange is not governed by the capitalist mode of production. Similarly, we shall attempt to find out whether the assumption of irreducible use values widens or narrows the problem of international trade.

At this stage, we simply want to show that the assertion of the pre-eminence of international values is the very essence of the theory in question.

Emmanuel's critics have in fact clearly noted this and it is precisely this pre-eminence that they question or categorically reject. On this point, Palloix writes: "Is there an international value, which is the basis of world prices, in the same way as there is a national value: Emmanuel assumes that the world is the only reality. On the contrary, it seems that the only reality is the existence of economic blocs: U.S.A.; Europe, Asia, Latin America....." And Bettelheim writes: "Within every national capitalist social formation, the law of value ensures the extended reproduction of the material conditions of production, the specific form of domination by the capitalist mode over the other modes....., a given level of wages. In the capitalist world

market, the law of value guarantees the extended reproduction of the material conditions of world production, the specific forms of domination/subordination of the different social formations, the unequal rates of development..... The level of wages peculiar to each social formation cannot be determined by the world level of development of productive forces; in fact, it is basically related to the specific combination of productive forces/production relations peculiar to each social formation".^{16/}

The position here is quite categorical and it seems to us to be mistaken. Further on, we shall show how we deal with the dialectic between world level and national levels of development of productive forces and how we use this dialectic to determine the wage at the centre and at the periphery of the system.

In any case, this position nullifies the question to be solved. If we follow Bettelheim in accepting that wages are autonomously determined in each social formation, we can no longer have a theory of international trade. We must then accept Ricardo's theory of comparative advantages, i.e., make an exception to the labour theory of value. It is not even possible to speak of the effects of the law of value at the world level. This is no longer meaningful and we can no longer speak of international commodities.

In the last analysis, this position means regarding the world system as a juxtaposition of national systems. Each of the latter being autonomous, it is clear that their trade relations cannot be analyzed in objective terms but rather in terms of subjective theory which can here be applied as opposed to the national context which is governed by objective value.^{17/}

This position was certainly not one adopted by either Marx or Lenin. In fact Marx considered that the import of American wheat in England in the 19th century lowered the value of labour power in that country. Hence already, he regarded "subsistence foods" (corn) as

international goods. Precisely for this reason, Marx considered that the development level of world productive forces, a development which made it possible to obtain wheat more cheaply in the New World, determines the wage and the rate of surplus value in England. Similarly, Lenin clearly upholds the pre-eminence of the world system: this is reflected in his praise of Bukharin's work, as we have already mentioned. Bukharin's shortcoming was not that he gave pre-eminence to the world system, but that he made the mistake of characterizing this system, like the capitalist mode of production, by the triple international mobility of goods, capital and labour ("the tendency towards the equalization of the wage rate" which we have pointed out). In other words, Bukharin regards the world system as an extension of the capitalist mode of production on a world scale: hence its tendency to uniformity.^{18/}

The pre-eminence of world values therefore constitutes the very essence, the core of the affirmation of the unity of the world system, the condition for this unity. The adjective "international" derived from "the economic theory of international trade" is indeed inappropriate. We propose to replace it by "world" system.

Is this assertion a distorting simplification of the actual reality? A "statistically" erroneous assertion: is it not true that the quantity of Congolese products exported or imported is more than 30% of that produced for the domestic market as against 20% in Germany and 5% in the United States? This is indeed a very poor accountant's view of things. For it, it is this 30% which controls everything in the Congo, day-to-day life and "major politics", ideologies and class struggle. And it is the "problems" related to the Germany's 20% and the United States' 5% which puts a stop to American domination and completely upsets an international order which has marked 25 years of contemporary history.

Unity has never been synonymous with homogeneity. There is diversity and inequality within the unity of the world. Things seem to be clear-cut at the centre of the world capitalist system: social formations are close to the pure capitalist mode of production. At its periphery, the pre-eminence of world values is overshadowed by the apparently heterogeneous nature of social formations: only apparently, since here again, there is no juxtaposition of the capitalist mode with the pre-capitalist modes. The nucleus of the problem is to understand the meaning of the domination by the capitalist mode over the other modes, the domination being the basis of this unity. But this analysis does not derive from "economies" but from historical materialism. It is through the alliances among classes peculiar to each formation and to the world system that this integration within the unity of the world takes place.

It is too often forgotten that capital^{19/} was both social and individual (split up). We too often confine ourselves to looking for the capitalist relation at the "micro-economic" level, that of the firm. Although this relation almost always appears obvious in central capitalism, the same is not true in peripheral capitalism. Here for example, the petty commodity production mode may appear to be integrated within the capitalist market, but underneath this appearance, there is domination by capital over the direct producer. The latter is not a petty commodity producer and it is not the law of value in its simple form which determines the price of his product. In fact he is very like the cottage industry proletarian as formerly existed in Europe, exploited by capital to which, in actual fact, he sold his labour power rather than his product. Here, a failure to see that it is the sale of labour power which gears the system is a failure to understand the unity of the world system and yet again substitute for it, a juxtaposition of various modes of production loosely linked with one another, hence, retaining a vision of "dualism".

There is perhaps a reason for this persistent "dualistic" vision, to which in contrast we present the unity of the world system. The fact is that this unity is very recent. It is true that the roots of the world system go back to the beginning of mercantilism, four centuries ago; it is true that the system's contribution was accelerated two-fold by imperialism as from the end of the last century. However, the process of transformation of the relations between the capitalist mode and the other modes of production, (which were originally "periodic" and "marginal"), upon the emergence of domination relations which have radically altered the non-capitalist modes and have reduced them to a simple form, a "shell" whose content has since become a relation of sale of labour power, is a process which was at first, slow but recently quickened its pace. It is possible that in the thirties, the producers at the periphery were still largely small commodity producers. We are convinced that they are no longer so and that today, they are mostly proletarianized and sellers (though indirectly) of their labour power. A thousand social facts prove it everyday. There are certainly important errors of political strategy arising from this inconsistency between the present reality and the picture which is still based on the reality of yesterday.^{20/}

3. The wage is not an "independent variable": A first criticism of Emmanuel and Braun

To us, the very notion of "independent variable" is meaningless. The search for one reveals a mechanistic, linear methodology where the whole is only the sum of the parts. From this point of view, which is that of the conventional economist, the economic system seems to be made up of parts (the "variables") related by interdependent links (the "economic functions" of production and consumption). To get out of this vicious circle, it is necessary to declare arbitrarily that one of these variables is "independent", "primary".^{21/}

Walras' system of general equilibrium typifies the model representing this concept where the whole is equal to the sum of the parts. We have shown that traditional economics had found only one way out of the absurd situation in which it placed itself: the quantity theory of money. We have also shown that the so-called "rationality" of the economic calculus was based on the same linear and mechanistic philosophy: in order to discover that the decisions of the elementary units of production and consumption (the parts) come together to form a whole, not only consistent but also "optimal", it must be assumed that the demands are given (hence "independent variables"). These therefore determine the set of relative prices on which producers and consumers base their "behaviour". Hence it is not surprising that the decisions based on "profitability" give rise not to "optimality" but to the more prosaic reproduction of the system: a distribution of income which ensures the demands in question.

This whole methodology is entirely foreign to Marxism where the whole comes before the parts, these being meaningful only in relation to the whole. The social system (the production mode, the social classes it gives rise to) is prior to its component parts (prices, incomes, demands, etc.). The operation of the system must be analyzed in terms of the mode of reproduction of the system, globally and of its negation. This is why the real situation cannot be understood merely by studying the phenomena (the inter-connected parts of the whole); we must go further, to the very essence (in fact, the whole).

We now understand why Emmanuel speaks of "independent variable" simply because he remains at the level of the phenomena. He himself openly declares it and, like Sraffa, chooses to remain within the framework of the system of production prices whereby "the only quantity we can cling to is the wage, which is the first deduction to be made from the social product, profit being only a residue. If this

quantity is missing, if wage is not given, if it is not an independent variable, then the problem of value on an objectivist basis becomes insoluble and it is not possible to determine any abstract equilibrium price (of production)^{22/}

Emmanuel believes he can justify this description of the wage by asserting that production prices are not obtained on the basis of the phenomena but from some source other than value, the problem of "transformation" being, according to him, insoluble. We shall have the opportunity to come back to this related question of "transformation".

Sraffa^{23/} obviously does not have these difficulties. From the start, he adopts the system of interdependence of the parts. Wage, profit rate and relative prices are interdependent within his system. Sraffa's formulation is nonetheless important since it puts an end to the "scientific" claims of marginalism by showing its tautological nature.

Oscar Braun and Jagdish Saigal^{24/} have made the most of what could be obtained from Sraffa's analysis applied to the international field. Their arguments are a decisive contribution to the understanding of the mechanism of unequal exchange and international transfers (we do not mean "of value", we shall see why later). The models set out by Braun and Saigal have the same assumptions as Emmanuel's model: the capitalist mode of production among the partners (without which the concepts of wage and profit are meaningless), the international nature of goods, the mobility of capital (equalization of the profit rate) the immobility of labour (wage differences).

Oscar Braun's model has the great advantage of having been the first systematic analysis of the interdependent relation between wage differentials and international price ratios. It contains no more assumptions than those of Emmanuel: partners' specialization in specific products (whose use values are irreducible) for whose production,

the technologies are already given. However, Braun reverses the order of causality: unlike Emmanuel who says that wage differentials determine the structure of international prices, he asserts that it is prices which constitute the "prime variable". Braun's arguments are cogent. The "discriminatory practices" based on the centre's monopoly in matters of capital equipment and technology, the non-substitutability between the imports and exports of the periphery, the perverse nature of the export offer curve of the periphery, i.e. the constraint to produce more when prices fall since the equilibrium of the balance of payments must be maintained at a level where imports cannot be reduced, all these are obvious facts. However, these hard facts again relate to the question of the phenomena, in this case, the economic policies of the countries. This analysis leads Braun to believe that he can answer the question he raised: that is, which is the prime variable, wages or international prices? But is the question itself not superficial? The method itself, based on interdependence, leaves no choice but to deal with the isolated phenomena and thereby bears the risk of asking false questions. To ask the true question, which is not the present one, we must go back to the ~~essence~~.

As for Saigal's model, it has the obvious advantage of examining various assumptions concerning production functions (the technologies, hence comparative productivities, in the same sectors obviously). Starting with the model based on values and turning it into a model based on prices (with the assumption of equal profit rate in all branches), Saigal illustrates our definition of unequal exchange as we shall see later.

Therefore Emmanuel simply evades the question of the theoretical status of the value of labour power. As Palloix puts it, this means that "wage is left out of economic analysis".^{35/} This is the meaning which Emmanuel places on Marx's considerations regarding the "historical and moral element" which enters into the determination of

the value of labour power. In formal logic, in a system of generalized interdependence, along the lines taken by Sraffa, real wage can be "anything" (of course, less than the net product, a necessary condition for profit rate to be positive), the other variables adjusting themselves accordingly.

We question this arbitrary nature of the wage and here, we agree with Bettelheim who states that "the wage is not an independent variable but is the value of labour power".^{26/} From our standpoint, wage (the value of labour power) and the development level of the productive forces are closely related to one another. Our disagreement with Emmanuel begins precisely here. We shall therefore see how this relation should be formulated, at the level of the capitalist mode of production and at that of the international capitalist system.

4. The theoretical status of the value of labour power within the capitalist mode of production.

The problem of international trade cannot therefore be properly studied on the basis of the direct relations, i.e. those of exchange. We must go back to the very essence, i.e. the production process, the sale of labour power. This takes place in different ways in the central and in the peripheral formations, precisely because of the complex nature of the latter (the domination of the capitalist mode over other modes).

However, the discussion concerning unequal exchange has shown how far the formation of the value of labour power in the "pure" capitalist mode has been misunderstood. In Marx, this formation is analysed, like the rest, in terms of a dialectic between the objective forces (the laws of accumulation) and the subjective forces (class struggle). This dialectic has been gradually replaced among some authors, by a "simple" unilateral view, revealing the extent to which the mechanistic bourgeois philosophy is rooted in people's minds. Some - like Emmanuel as we have just seen - consider only the subjective

forces and, in this context, the wage becomes "anything", an "independent variable". Others - his critics - have equally unilaterally affirmed the pre-eminence of the objective factor. This simplification has necessarily led them into erroneous formulations of the objective aspect of the dialectical relation: the "wage-productivity" relation, badly formulated in this way, takes us right back to mechanistic economism.

We now return to this fundamental question. We shall start by explaining the mechanism of this objective aspect. We shall see that this first presentation, still unilateral although it may appear to be precise, has serious limitations which can only be overcome by re-establishing the dialectic between the objective and subjective forces. Moreover, the re-establishment of this dialectic disengages us from "economic theory", taking us to the level of reality, that is, historical materialism.

Is this method of exposition a "dangerous" one? ~~Yes~~ it is for those who are not receptive to the dialectic and always substitute linear causality for it. However, this method of exposition belongs to Marx himself: in Book I of Capital, he deals with the "subjective" aspect (the moral and historical element); in Book II, he uses a model of accumulation which highlights the "objective" aspect. Marx's critics, non-receptive to the dialectic, have always found a "contradiction" in it. And since to them contradiction is the opposite of reason, they reject Marx. To us, the contradiction lies within the reality, in everyday life. This is precisely why it cannot be overcome within the narrow framework of "economic theory", by nature linear and mechanistic, but only by integrating theory within historical materialism. This integration which is a matter of course in Marx, has never been achieved by non-Marxist social sciences which therefore remain forever saddled with the problems of "pluridisciplinarity".

Let us therefore begin with the "objective" aspect. In order to bring out its characteristics, we shall use a linear method, that of the "model", of which we shall see the limitations quite clearly in the annex.

We have always asserted that the wage level depended, among other things, on objective forces: the development level of productive forces. The reproduction models in Book II of Capital describe the nature of this objective relation. We shall retain this framework of the capitalist mode of production defined by its rate of surplus value and the division of its productive forces between two departments: I (capital goods production) and II (consumer goods production). That the nature of the models has not been sufficiently understood is proved by the later debates on "markets" (Rosa Luxemburg, Tugan Baranowsky, etc.) etc.)^{27/} or on some aspects of the falling rate of profit (a related question which will be examined further on). Moreover, should we abandon our arguments in value terms which characterize these models in order to express the conditions of dynamic equilibrium directly in production prices? We do not think so: the models based on prices add nothing essentially to what is already contained in the models worked out in value terms; on the other hand, they hide some essential aspects of the nature of the system.

It would seem that we can bring out even more clearly the relation in question by reasoning directly in terms of physical quantities.

Our model therefore directly covers the technical production relations (capital goods inputs and direct labour, outputs), for example:

Department	I	$1 e + 4 h$	\longrightarrow	$3 e$
Department	II	$1 e + 4 h$	\longrightarrow	$6 c$

Constant capital inputs are given directly in capital goods units e , direct labour inputs in hours h ; and outputs in capital goods units e for Department I and in consumption units c for Department II. In this example, it will be noted that the organic composition is the same in both Departments.

It is assumed that the product of labour is shared between the proletariat and the capitalist in identical proportions in the two Departments (identical rates of surplus value). It is also assumed that wages constitute the sole source of demand for consumer goods c , i.e., that the purchasing power incorporated in the remuneration of labour enables the entire output of Department II to be absorbed, during each successive phase described. On the other hand, the surplus value is "saved" in toto, in order to finance gross investment (replacement and additions), i.e., the purchasing power incorporated in the surplus value generated during one phase enables the installation of the capital goods necessary to maintain the dynamic equilibrium of the next phase.

Speaking of a dynamic equilibrium, we define the progress achieved between one phase and the next by the rate of increase of labour productivity (the output divided by the input of direct labour). For example, if productivity in each department doubles between one phase and the next, the technology for phase 2 will be given as follows:

$$\begin{array}{lcl} \text{Department I} & 2 e + 4 h & \longrightarrow 6e \\ \text{Department II} & 2 e + 4 h & \longrightarrow 12c \end{array}$$

The same quantity of direct labour utilizes twice the quantity capital goods, raw materials etc., to produce a doubled output. The physical organic compositions are doubled.

How, under these conditions can equilibrium be maintained from one phase to the next? Let us assume that at the start, the quantity of labour available in the society (120h) and the available stock of capital goods (30e) are given. Their distribution between the two Departments, the rate of surplus value and the rate of growth (the surplus production in I over replacement needs) are simultaneously interdependent. For example, we shall have:

Phase	I	Capital goods		necessary labour		surplus labour		output
Department I	I	20e	+	40h	+	40h	→	60 e
Department II	II	10e	+	20h	+	20h	→	60 c
Total		30e		120h				

Here, the output of I during Phase I is twice what is necessary to replace the capital equipment and makes it possible to obtain during phase 2 an output which is itself doubled. We check that the proportions $2/3 - 1/3$ which represent the distribution of the productive forces between I and II and a surplus value rate of 100% i.e. unchanged (hence double real wages) are the conditions of dynamic equilibrium, where phase 2 is expressed in the following way:

Phase 2		capital equipment		necessary labour		surplus labour		output
Department I	I	40 e	+	40 h	+	40h	→	120 e
Department II	II	20 e	+	20 h	+	20h	→	120 c
		60 e		120 h				

We note here that the purchasing power incorporated in the wages corresponding to 120 hours of labour (of which 60h of necessary labour) should make it possible to purchase 60c during phase I and 120c during phase 2, i.e. that real wage should double in the same way as labour productivity. Capital equipment output being doubled between one phase and the next finds an outlet in the following phase. We note that the rate of increase of available capital equipment governs the total quantity of labour used and not the reverse. This is a very important point: the accumulation of capital governs employment and not the reverse (as claimed by bourgeois economics in general and marginalism in particular). Here, by the very choice of assumptions, the volume of employment remains unchanged from one period to another. Under the assumption of an increase in the working population, for instance a natural increase, the rate of accumulation does not make full employment possible.

This very simple model, in our view, amply illustrates the nature of the objective relation between the value of labour power and the development level of the productive forces in the capitalist mode of production. We add nothing by using a common denominator (values and wages) so as to be able to add up the inputs, by substituting prices for values in the computation (equalization of the profit rate which is here, in any case, equal to the rate of surplus value, the organic compositions being the same in both Departments), or by introducing more complicated assumptions: different organic compositions and/or different increases in productivity in the two Departments.

In our model for example, the conditions of equilibrium can obviously be expressed in homogeneous terms. Assuming the price of unit of C to be 1F, that of E, 2F and the wage rate per hour 0.50F, the surplus value (here equal to the profit) being obtained as the difference,

we have:

Phase I	capital equipment	wages	surplus value	output
Department I	$20e \times 2 = 40F$	$80h \times 0.5 = 40F$	40F	$60e \times 2 = 120 F$
Department II	$10e \times 2 = 20F$	$40h \times 0.5 = 20F$	20F	$60c \times 1 = 60 F$
	60F		60F	180 F

For the following phase, if the money wage rate remains the same, the prices of the products are reduced by half, productivity having doubled:

Phase 2	capital equipment	wages	surplus value	output
Department I	$40e \times 1 = 40F$	$80h \times 0.5 = 40F$	40 F	$120e \times 1 = 120F$
Department II	$20e \times 1 = 20F$	$40h \times 0.5 = 20F$	20 F	$120c \times 0.5 = 60F$

We note that there is no difficulty of absorption. For the absorption of consumer goods, the wages paid in each phase (60F) make it possible to purchase the entire output of Department II in the same phase: in the first phase, 60 C at 1 F per unit; in the second phase, 120 C at 0/50F per unit, etc.

To capitalize the surplus value, there must necessarily be a system of credit between one phase and the next. The surplus value generated during phase I can only be capitalized in the following phase. If the credit system allows the capitalists an advance of 60F i.e., the amount of the surplus value generated during phase I, this advance would enable them to purchase the 60E at the beginning of phase 2, at the equilibrium prices ruling during that phase. At that price, they would obtain during phase 2 a surplus value of 60 F which would have to put in for a new advance of 60 F which would enable them to purchase 120e at the equilibrium price ruling in phase 3 (0.50 F per unit), and so on. Here we return to our previous argument concerning the rôle of credit on the "question of markets", in reply to Rosa Luxemburg's arguments.^{27/}

It is obvious that one can also argue in terms of constant prices of the products while money wages increase at the same rate as productivity.

The introduction of a common denominator in order to calculate in terms of homogeneous units therefore adds nothing to our method of establishing the conditions for dynamic equilibrium.

Saigal uses our model but converts it in terms of production prices (equal profit rates between one department and another and proportional to capital equipment). If the organic compositions are different between one department to another, equilibrium will require a different distribution of the productive forces between I and II since the profit rate will be different from that of surplus value. Here again, we come across the difficulties arising from "transformation". But the logic of the relation remains expressed at the level of the immediate phenomena.

Before approaching the third series of problems, those concerning the effects of more complex assumptions with regard to organic compositions and productivities, we must examine the possibility of finding a solution to the problem of dynamic equilibrium in the most simple case when real wages do not increase at the same rate as productivities, for example, when real wage per hour remains stagnant.

There are only two sets of mathematical solutions to the problem: an absurd one corresponding to Tugan Baranowsky's "roundabout" and the other one, realistic, introducing the consumption of the surplus value.

Joining in the twin debate concerning markets and the trade cycle Tugan Baranowski^{28/} as early as the beginning of the century, considered a succession of phases in dynamic equilibrium in spite of stagnation in real hourly wage. The additional equipment produced in the course of each phase, and in increasing quantity as a result of

increased productivity is allocated to Department I in the following phase in order to produce other equipment, capital and so on indefinitely; while Department II only expands in so far as the use of the additional equipment requires a quantitative increase in labour, since the hourly wage rate remains unchanged. In our example where productivity doubled from one phase to the next in each of the two departments, we have:

Phase 2

Department I	50 e	+	100h	(25h, 75h)	—————>	150 e
Department II	10 e	+	20h	(5h, 15h)	—————>	60 c
<u>Total</u>	<u>60 e</u>		<u>120h</u>	(30h, 90h)		

Phase 3

Department I	137.5e	+	137.5h	(17.5h, 120h)	—————>	412.5e
Department II	12.5e	+	12.5h	(1.5h, 11h)	—————>	75 c
<u>Total</u>	<u>150e</u>		<u>150h</u>	(19h, 131h)		

etc..

The utilization of 60e produced in the course of phase I requires 120h of direct labour during phase 2. The labour, with its real wage rate unchanged is able to purchase 60c which require only 10e and 20h of direct labour. The surplus equipment (50e) will enable 150e to be produced. These equipments will require in phase 3 an extra labour of 150h, hence an output of II of 75c which only requires 12.5e and 12.5h. Equilibrium is achieved from one phase to the next in spite of the stagnation in the real hourly wage, combined with the growth in productivity which is doubled from one phase to the next in each department, with a rise in the physical organic composition which doubles from one phase to the next in both Departments. Equilibrium is obtained through a distortion in the distribution of the

productive forces in favour of I and the increase in the rate of surplus value, as follows :

	Phase 1	Phase 2	Phase 3
Organic composition	30e/120h	60e/120h	150e/150h
(Index)	100	200	400
Productivity in Department I	60c/80h	150e/100h	412.5e/137.5h
(Index)	100	200	400
Productivity in Department II	60c/40h	60c/20h	75c/12.5h
(Index)	100	200	400
Distribution I/I + II	2/3	5/6	0.91
Rate of surplus value	100%	300%	690%

This "roundabout" solution is obviously absurd since the balance between consumption and capital equipment must be obtained from one phase to the next and cannot be indefinitely postponed. If each phase corresponds to the life of the capital equipments, this period coincides exactly with the "planning" period for investment decisions. Capital goods will be produced in the course of one phase only if in the following phase, the output of consumer goods which they bring about finds an outlet. Hence, in fact if hourly wages are stagnant, there will be an over-production crisis as from phase 2, with the equipment produced in phase 1 remaining unused while that proportion of it which does get used will only give rise to a reduced demand for labour. This is the Keynesian problem and the source of the great depression: the system has broken down (available equipment and unemployment) and can only be started up again by a rise in wages.

The absurd part of it can be avoided if the surplus value is consumed. In our very simple scheme, the surplus value is "saved" in toto; but if we assume that a constant proportion of it is consumed, there will be no change in the nature of the equilibria. Hence if real hourly wages remain stagnant or increase at a lower rate than productivity, an increasing proportion of the surplus value must be consumed in order to maintain a dynamic equilibrium. There are three theoretical possibilities to satisfy this requirement. We shall examine them further on in relation with the question of the dialectic between objective and subjective forces in determining the value of labour power.

We can now remove the provisos concerning organic compositions and productivities.

The assumption of different organic compositions in the two Departments does not alter the results. If for example, for phase 1, we have:

Phase I	capital equipment	necessary labour	surplus labour	output
Dept. I	20 e	50 h	30 h	60 e
Dept. II	10 e	50 h	30 h	100 c
Total	30 e	160h		

Equilibrium is achieved with an hourly wage of $\frac{5}{8} F$, $e = 2F$ and $C = 1F$. The rate of surplus value is 60%. If productivity doubles in each of the two Departments, the equilibrium in phase 2 will require the same rate of surplus value, hence a real wage which is doubled ($w = \frac{5}{8} F$, $e = 1F$, $c = 0.50 F$).

Phase 2

Dept. I	40 e	50 h	30 h	120 e
Dept. II	20 e	50 h	30 h	200 c

It will be noted that the organic compositions in value terms remain unchanged although they still differ from one Department to another (50/40 for Department I in each of the two phases and 50/20 for Department II). Thus what we have said before concerning Tugan Baranowski's "solution" is also valid here.

We must now examine the assumption of a different growth of productivity between one Department and another. Let us assume that the technology enables productivity in Department II to double from one phase to the next while that of Department I only increases by 1.5, for example:

Department I	Phase 1	:	1e + 4h	5e
	Phase 2	:	1e + 3h	5e
Department II	Phase 1	:	1e + 4h	6c
	Phase 2	:	1e + 2h	6c

It will be seen that dynamic equilibrium is achieved when, for example,

Phase 1

Department I	:	40e + 160h	(40h, 120h)	= 200 e
Department II	:	<u>10e + 40h</u>	(10h, 30h)	= 60 c
Total	:	50e	200h	(50h, 150h)

Phase 2

Department I	:	160e + 480h	(94h, 386h)	= 800 e
Department II	:	<u>40e + 80h</u>	(16h, 64h)	= 240 c
	:	200e	560h	(110h, 450h)

where the unit price of equipment is $e_1 = 1$ and $e_2 = 3/4$, that of consumer goods is $c_1 = 5/6$ and $c_2 = 11/24$ and hourly money wage is $w_1 = 1/4$ and $w_2 = 11/56$.

Generally speaking, as soon as an improvement takes place in I or II or in both Departments, the real hourly wage must increase in a proportion which is a combination of the productivity growth rates in Departments I and II. As regards the surplus value rate and organic compositions, they vary according to whether this productivity growth is faster in one Department than in the other. In the annex, we give a detailed proof of these conclusions.

5. The dialectic between objective and subjective forces in determining the wage in the capitalist mode of production.

The scheme developed above illustrates the fact that dynamic equilibrium in the pure capitalist mode of production brings into an objectively necessary relation: on the one hand, the value of labour power (rate of surplus value and real hourly wage) and on the other, the organic compositions in each Department and the improvements in productivity between one phase and the next. The obvious condition which the system requires for this relation to manifest itself is the total mobility of capital and labour from one industry to another and hence from one region to another, etc., that is, the completion of the proletarianization process which is implicit in the assumption of the "pure" capitalist mode.^{29/}

Having forgotten this necessary objective relation, Emmanuel committed the error of separating the wage from the level of development of the productive forces and of turning it into an "independent variable". In order to determine the level of this "variable", forces other than those which govern accumulation must be brought into operation: for example, some sort of law of population such as Ricardo, Malthus or Lassalle devised and which is severely criticized by Marx. Or else, it can be decided that this level is "conventional", i.e., that it results from the autonomous social and political equilibrium, the ruling social forces, there being no objective limits to it (other than the output ceiling, this is obvious): this is the interpretation

given by Joan Robinson to one stage of her evolution and by Emmanuel to the content of Marx's expression concerning the "historical and moral element" which intervenes in the value of labour power. 30/

We revert to economism if we go so far as to assert that the "objective level of equilibrium" is spontaneously obtained by the interplay of the economic laws of supply and demand. These mechanistic modes of expression characteristic of conventional economics are entirely foreign to Marxism. For the level of wages is determined through the class struggle (the subjective element) which takes place within a context governed by the conditions of accumulation (the objective element). The spontaneous tendency of the system is in fact to lower the level of wages, to maximize the rate of surplus value which is the condition for maximizing the profit rate. We have already mentioned that the dialectic between subjective and objective forces was, for one century, reflected in the cyclical movement while, since the second world war, conditions have emerged at the centre for this movement to be controlled through a "social contract" of a social-democratic nature. 31/

The economistic error leads to the ideology of universal harmonies, to an idealization of historical solutions which capitalism has in the past found and still finds for its fundamental contradiction; it also leads to these solutions being regarded as the only possible ones. In fact, we have seen that if the real wage does not rise with increased production, the system can find a solution in the consumption of surplus value.

The first "solution" - the individual consumption of an increasing proportion of the surplus value by the capitalist - is not "normal" since competition between capitalists requires "savings" and the ideology of the system, which reflects the basic features of the capitalist mode, is opposed to it. However, we shall see that in the peripheral capitalist mode, this solution to the problem of markets is a real fact.

Whereas in England throughout the first 65 years of the last century and in Japan up until the morrow of the second world war, internal disequilibrium was counteracted by expansion abroad, in the present-day periphery, with expansion being forbidden or very restricted (later, we recall the thesis of sub-imperialism), absorption takes place by means of a prodigious growth of consumption by the capitalists. This is possible, for the reasons which we shall examine, characterizing the specific nature of the peripheral mode in contrast with the central mode, with the dual aspect of modern technologies (with high productivities) and low wages, conditioned by the maintenance of pre-capitalist dominated modes (and the class alliances which it presupposes), and technological dependency which frees the local bourgeoisie from the exigencies of competition.

Once more, we stress that these are the conditions which enable us to understand the specific nature of the peripheral mode of reproduction as such: reproduction of conditions of low wages and of dependency on central capital.

The second "solution" is one discovered by the central system itself in order to overcome its contradictions. We have repeated that there were no "unsurmountable" contradictions - the theory of catastrophic collapse, of "general crisis", etc., but only different alternatives to overcome them: those of capitalism which maintain the essential features of the system and those of socialism which supersede them right from the start. Monopolistic competition, the inclusion of "selling costs" in the price of the product and the subsequent development of tertiary parasitism which were well described long ago by Chamberlain and Joan Robinson constitute, as Baran and Sweezy have said, the "spontaneous" solution of the system.^{32/} Falling within the same group of solutions, there are those which derive from the distortion of relative prices and the wider spread dispersal of capital. Difficulties of absorption in fact give rise to price distortions. Capital,

concentrated at one pole is dispersed once again to the other pole in response to market conditions. Hence there is a continuous recreation of conditions which cause new activities to become profitable, these activities perpetually giving rise to a "petty capitalism". This is not a vestige of the past but the result of concentration itself. Within this petty capitalism (services, high class agriculture, etc.) individual capitalism is also consumer of a large part of its own profits.

The third "solution" involves the direct intervention by the State in the absorption: public, civil and military expenditure etc. Baran's ^{33/}great intuition was to understand that henceforth the analysis of dynamic equilibrium could not be made within the framework of the "pure" two-sector model but within a new framework - with three sectors (the third sector in fact being the State, consumer of an increasing proportion of the surplus). This analysis which corresponds to the reality, required the introduction of a concept wider than that of surplus value and directly linked with the productivity of productive labour. The concept is that of surplus.

Does the introduction of these "solutions", the third in particular, remove the objective status of labour power? The answer is yes for those who regard this status from an economic point of view. But in actual fact, these "solutions" remind us only of the existence of a dialectic between subjective and objective forces. For state intervention must be placed within the context of class struggle which gives it its meaning.

Dialectic does not mean juxtaposition of autonomous elements. Class struggle in all its varied manifestations outlined here, does not "reveal" the objective necessities of equilibrium by a lucky chance. Class struggle modifies the objective conditions. The model, as the reader will understand when he studies the annex, is necessarily unilateral, but the reality is not. The results of class struggle alter the

conditions of the "model": act upon the allocation of resources, the rates of growth of productivity J and P etc. Objective conditions and subjective forces act and react upon one another.

A final remark: our analysis of dynamic equilibrium did not contain assumptions regarding the trend of the profit rate. We shall return to this question later, in relation to the stages of the evolution of the capitalist system and the related question of the falling rate of profit.

6. The remuneration of labour and its status in the world system : unequal exchange

We can now return to our starting point: the question of international values. If the world system were nothing more than a juxtaposition of autonomous national systems, each reduced to a pure capitalist mode of production, our exposé on the objective status of the value of the labour power in relation to the level of development of national productive forces would suffice. Henceforth, the trade between nations will not be governed by the law of value. Ricardo's analysis - in fact in subjective terms - would then be the only possible rationalization of international trade. We have already said that the subjective theory of value can be applied in trade relations between autonomous precapitalist formations (the question of distant trade and its monopoly profits);^{34/} the same will apply for the contemporary world system.

This does not make sense precisely because this system is not the juxtaposition of autonomous national capitalist modes of production. The question of the status of the reward to labour in the system (both at the centre and the periphery) must therefore be examined.

Let us therefore return to Emmanuel. We share his view that goods being international, the problem of the value of labour power must be examined at the world level. But we do not agree with him that the

productions exchanged on the world market are specific, that they have irreducible use values. Furthermore, we do not share his view that the study of international trade can be contained within the framework of relations between national capitalist modes of production. These are the two problems that we shall now deal with.

Are the products exported by the periphery "specific"? Such is not the case when the facts are looked at. Most of the third world exports are raw materials produced both at the centre and at the periphery: crude oil is produced by the United States and the Arab countries, cotton in the United States and India, iron ore in Europe and Africa, etc. Many of these raw materials are close substitutes for one another: tropical oilseeds and those from the temperate zones, natural fibres and rubber and their synthetic substitutes, tropical fruits and those of Europe, etc. The truly "specific" products supplied by the periphery are few in number and represent only a small proportion of the trade of the Third World. In our view we must also add that tea, coffee and cocoa have substitutes though these may not be as close as for the other products mentioned above. Broadly speaking, traditional economics has exaggerated the role of use value. This is understandable: to base the economy on "consumer choice", an irreducible nature must be attributed to the use values of the products which, in fact, are close substitutes. Yet we know how the capitalist producers manipulate demand and, depending on the strategies which they want to use, impose such or such a substitute; in the last resort, consumption is geared to production and not the reverse.

The point relating to "specificity" is not a secondary one. We came to it in the course of our discussion on trade. For a long time, Emmanuel and I^{35/} have argued with one another, each of us being on a different wavelength precisely for this reason. Our assumption has always been spontaneously - but too implicitly - the opposite of Emmanuel's. As far as we are concerned, the "specificity" of products

was always a myth, the result of commodity alienation. Since we consider that the centre and the periphery produce the same use values, a comparison of the level of productive forces ("productivities") becomes necessary within the branches which produce the same use values. To Emmanuel, this question did not arise; the result was that he could completely separate exchange from the production process.

This "mistake" by Emmanuel is a serious one; it reveals a stance fundamentally opposed to Marx, an unawareness of the decisive importance of the first chapters of Capital in which the criticism of economics is based on a debunking of commodity alienation (commodity fetishism). This explains why, later, Emmanuel reverted to marginalism, as many others before him, on the question of transformation, examined later. It is because we believe that there is here an essential element which is not clearly understood by many "Marxists" that we wish to clarify things in a positive way.

Marx believed that production and consumption are also related dialectically: consumption negates production but they are both closely linked with another at a higher level of unity. As it happens elsewhere, this unity is not symmetrical: in the last resort, production governs consumption.

The method of marginalism rests on the reverse proposition: at the root, there are a variety of "human needs" which are potentially limitless; these needs can be satisfied through the consumption of "things"; these "things" will be produced.

Social science could therefore be reduced to economic science and economics made on "psychology" - the relation of man (natural but not social man) to "things" which enable his needs to be satisfied. That men, having become "consumers" should believe this to be so does not come as a surprise to someone who has really understood that capitalism is, in its highest stage, the rule of the commodity, that commodity alienation is the condition of its reproduction, that the things

in question are not produced for any intrinsic use value they may have, but for their exchange value, that their use value is not intrinsic but a social product created by the production mode. There is no "specific" need which must be satisfied such as a need for plastic flowers which is different from a need for paper flowers. Plastic and paper flowers are produced because it is profitable to do so; this is possible because there are men who have only their labour power to sell and who must do so to survive; and the need for these flowers follows, it is created simultaneously with the making of the flowers.

We must constantly recall these basic facts of social science because, living in an alienated world, we are never entirely "pure".

In our conclusion, we shall return to this essential problem. For the present, let us try to define the nature of unequal exchange in the context of the non-specificity of goods.

We have already observed that the techniques used to produce most of the exports from the third world are the same as those used at the centre, in the same branches. But real wages are very much lower at the periphery. Furthermore, the framework in which these productions are organized is that of the capitalist mode. Under these conditions, our analysis of the transfer of value in the way we have done, it seems to us better than that of Emmanuel; it is the only analysis that enables us to give a correct definition of unequal exchange: the exchange of products whose production involves wage differentials greater than those of productivity.

The observation made by Marx "in passing" concerning the exchanges between two countries which produce and export the same product under different conditions of productivity, was too hastily discarded by Emmanuel who only noted that "this special case in no way affects my (his) theory of unequal exchange which concerns the exchange relations between two countries where each specializes in different branches".^{36/} We repeat that Marx's observation, even though a marginal

note, proves to be a profound one and corresponds to the real problem we have to study.

It is true that the productivity of labour does not only depend on the technologies used but also on the normal framework within which labour, supplied with suitable capital equipment, operates in a given social system. These natural resources have no intrinsic productivity, but they have an effect on that of labour. But the social and economic conditions of capital's access to these resources vary and, as we have already seen, we perceive a whole series of cases of "unequal exchanges" which are characterized by factors other than unequal reward to labour.^{37/}

Obviously, if we regard use values as entirely irreducible, the "natural" element can be determining. Emmanuel bases himself on this remark when he declares that the developing countries have a relative advantage in their exports much higher than the disadvantage in their imports.^{38/} For obviously it would cost relatively more to grow cocoa in England than to produce textile goods in Ghana. But this remark is meaningless where non-specific products are concerned. However, the social and economic conditions of access to natural resources which Emmanuel ignores are here determining in what we have qualified as "other forms of unequal exchange".

The idea that the products exchanged are in no way specific is difficult to accept. Firstly because this is an attack on the marginalist preconception as we have already said. Secondly because the analysis directly raises the question: why does the centre not abandon the production of these products? And, taking the argument further, since goods and capital are international, why is it that capital does not emigrate in large quantities to the periphery to produce everything at lower wages and flood the centre with exports from the periphery?^{39/}

There are two reasons why this is not so. The first is historical: capital was national before becoming international, i.e., its international mobility is only a trend, admittedly an increasing one, which has occurred in conjunction with centralization and the monopolies. Furthermore, with regard to Ricardo's assumption of capital immobility, Emmanuel rightly observes that "the optimum solution would be for the English to migrate to Portugal with their capital to produce both cloth and wine".^{40/} This first reason leads us to study, further on, the relations between the theory of unequal exchange and the historical stages of the development of the capitalist system.

The second reason, of a theoretical nature is a more important one. What we have said concerning the objective relation between real wage and the level of development of the productive forces is as true for the world system as it is for the pure capitalist mode of production for the same reason. If all industries were to emigrate to the Third World where they would have the advantage of a lower wage, their production would find no outlet in the developed world. The argument put forward by Minian that the assumption of mobility of goods and capital but not labour makes a theoretical solution impossible therefore has no basis. The necessity of a balance of payments equilibrium at the centre and the periphery, put forward in reply to this type of criticism, is correct: this equilibrium is nothing more than a reflexion at this level of the necessity of a more essential equilibrium between the level of the reward to labour and that of the development of the productive forces.

We must now examine the second limitation Emmanuel imposed on himself. The framework within which certain exports from the periphery are produced is not the capitalist mode of production. In broader terms, the products which form part of the workers' consumption at the periphery are not necessarily derived from capitalist production. This is so not only with regard to the workers' consumption in the capitalist export sectors of the periphery but also as regards local industries with a domestic market. How are these different modes of production interrelated? What exactly does the domination of the capitalist mode mean?

Does regard for these questions alter in any way the analysis of unequal exchange?

When the production mode in one of the trading partners, external or internal, is not a capitalist mode, we can no longer use the basic concept of capitalism (capital, wage and profit, rate of surplus value and of profit, etc.). Does the very term of unequal (or equal) exchange then still have any meaning here?

The production modes of pre-capitalist origin which have trading relations with the capitalist mode obviously vary a great deal. In order to simplify things, we can reduce them to the simple petty commodity mode of production. Let us imagine, for example, the capitalist society described above (producing 60e and 60c with given technologies) entering into trading relations with a simple commodity mode which produces consumer goods of a similar use value but with an artisan technique, without capital equipment, according to the formula:

$$0e + 100h \longrightarrow 20c$$

Here, we cannot make any distinction between necessary labour and surplus labour since we are dealing with a simple commodity mode. Product c is competitive if the reward to labour accepted here is 0.20F/hour (against an hourly wage of 0.50F in the capitalist mode producing the same product). There is already "unequal exchange" in the sense that the rewards to labour for the same amount of working time are unequal (in the ratio of 2:5), but this differential is here identical with that of the productivities.

If from phase 1 to the next the improvement in productivity reduces the price of the c unit in the capitalist economy from 1 to 0.50F while the artisan economy makes no progress, in order to be competitive, the latter must accept a reduction in the money reward to labour from 0.2F to 0.1F per hour. Whereas at the centre real wage increases along with productivity, at the periphery, the real reward to labour remains

stagnant since the consumer goods which form part of the consumption of the workers in both cases are international goods whose price has been reduced from 1 to 0.50F per unit. We have already examined this problem, i.e., the deterioration of the factorial terms of trade: international trade, contrary to the optimistic assertions of conventional theory, does not allow the profits derived from the unequal improvement in productivity to be shared.^{41/}

Obviously if the simple commodity economy supplied a specific product, there would be no reason for it to be forced to accept a reduction in the money reward to its labour. The supply price for its product could remain the same. The capitalist economy would therefore have to accept sharing the profits from improvement in its productivity. It is nevertheless likely that the simple commodity economy would accept a drop in the price of its product, for which in any case cheaper substitutes would be developed at the centre, particularly so long as the real reward to artisan labour - through substituting cheaper imports for local consumption goods - was not affected.

This argument in no way prejudices the equal or unequal nature of the exchange. It only enables us to establish the conditions under which the partners benefit, or do not benefit from the unequal improvement in productivity.

However, by analogy with the situation studied above where both the partners are organized within the framework of capitalist production, we have extended the concept of unequal exchange to situations where - whatever may be the production mode of the partners - the differential in the reward to labour is greater than that of productivities. This extension seems to us fully justified in view of the very close integration of all contemporary trade activities within the international capitalist system. In many cases, the extent of this inequality of exchange can be quite easily measured. It is true that in some cases where the products are not close substitutes, it is more

difficult to do so.^{42/} However, if we feel confident to venture so far, it is because capital is not only individual (fragmented), it is also social (global).

With regard to the model of the successive stages of exchange, it illustrates the fact that the conditions of exchange between the capitalist mode and the simple commodity mode can have an effect on the conditions of reproduction in the former, i.e., alter the rate of surplus value; the real dynamic-equilibrium wage with exchanges would then be different from what it would be without exchanges. There is no alteration in the conditions of accumulation in the capitalist mode if the products offered by the simple commodity mode enter into competition with those it itself produces: the capitalist mode "protects" its own autonomous dynamics by imposing its prices. The economic measures adopted which develop this competition are either the parallel organization, at the centre and the periphery, of the production of identical products or close substitutes, with unequal productivities, or the emigration of capital towards the periphery in order to produce there, at a higher productivity, even marginally, products which the dominated domestic economy also supplies. The contrast between industrial crop plantations (Unilever, United Fruit, etc.) and the dominated handcraft production comes under this strategy. In broad terms, this explains the organization of capitalist production competing against the dominated and maintained handcraft production. Of course the "economic" means are not separated from the "political" means used at the same time in order to force the pre-capitalist modes to become integrated within the capitalist trade system. No model of this type can replace the concrete analysis of formations in transition from pre-capitalism to peripheral capitalism and the specific class alliances of this transition.^{43/}

If however capital does not succeed in developing this competition, the precapitalist society "resists" and the conditions of reproduction of the capitalist society become altered in so far as it is

compelled to obtain, through trade, essential specific products supplied by the other.

Can one be clearer on this essential point concerning the dialectic between objective and subjective forces at the periphery and within the entire system? "Economists" always want what they term "rigorous proofs", those which can be formulated in models. This is not the case here. As we show in the annex, the "objective status" of labour power in the pure capitalist mode can be illustrated - not proved - in a simple model which nevertheless has the shortcoming of any model - that of being unilateral.

The argument remains strong in spite of appearances when it is not possible to have recourse to such mechanistic illustrations. This is the case in this instance where we are deep in historical materialism and therefore outside the sphere of "economics". We have stressed that the unity of the world is revealed in the fact that the producers integrated within the complex formations dominated by the capitalist mode, sell their labour power and not its products. We will be asked to prove it. We refer the reader to our exposé on the creation of peripheral formations, in our book entitled "Le Développement Inégal".^{44/} This is a first attempt to give a demonstration in terms of historical materialism. This embraces what the universities stupidly keep separate: history, "national phenomena", sociology and social classes, political struggles and ideologies, economic evolution, and the representation of all these in the alienated consciousness of men, their "scientific theories" and their value systems. A great deal remains to be done, but in this direction rather than in the field of unilateral models which leads nowhere.

Can it be proved that human beings are mortal? No statistician can do it: searching the birth registers for the year 1600 and attempting to discover what has happened to the people born in that year, he would (with great difficulty) find that many of them are dead, he would certainly find no survivors but then he would conclude: it is not established that all the people born in 1600 are dead although we have found no survivors. And after all, the unity of the world, as an artist friend of mine reminded me, is like paint and dung: you can smell it.

7. From unequal exchange to unequal development:

In lifting the two restrictions which Emmanuel imposed on himself, that is, in considering that the products exchanged 1) are not "specific" and 2) that they can be produced within the framework of non-capitalist modes of production, we have the feeling of having achieved some considerable progress in theory.

Firstly, we have succeeded in correctly defining unequal exchange. In our view, there is unequal exchange in the world capitalist system when the differential between rewards to labour is greater than that between productivities. On the one hand, this definition relates to a phenomenon which is peculiar to the world capitalist system; it is not able to give an account of phenomena which are peculiar to other systems, for example, to precapitalist distant trade. On the other hand, capitalist unequal exchange does not necessarily imply that the two production modes integrated by trade within the world capitalist system are themselves capitalist. Our definition is therefore more precise but at the same time more general than that of Emmanuel.

The results we have achieved are also achieved independently by Saigal who argues directly in terms of production prices because in his models, he assumes equal rates of profit not of surplus value. His models show that there is unequal exchange when real wage differential is greater than that of productivities. In whichever Department (I or II) the partner whose relative wages are lower specializes, he loses, because of this specialization, not only in terms of exchange (as against the situation where he is isolated) but also in terms of potential growth. Saigal also repeats our criticism of Ricardo and our assertion that the long-term interest lies in developing those sectors of production with the best prospects for improvement in productivity, even if this choice must be made at the expense of trade.^{45/}

The only necessary condition for unequal international trade to appear is obviously that we must be able to compare real wages, i.e. that wage goods must be international goods. For if they were not, national systems would be isolated from one another, only juxtaposed but not integrated. The world capitalist system would not exist since, by definition, it implies that goods have an international, world nature. But at the risk of repeating ourselves, we stress that unequal exchange does not necessarily imply that the partners' production modes must necessarily be capitalist: it is sufficient that the goods produced are intended for the international capitalist market.

Is this the case? Undoubtedly. Firstly, at the empirical level, the major proportion of wage goods in the developing countries are imported or supplied by domestic import-substitution industries and or by capitalist agriculture. The prices of these products are therefore subject to the laws of international competition just as much as the prices of the products which constitute the real counterpart of wages at the centre. Even when some wage-goods at the periphery are still supplied under precapitalist modes of production, their prices have to be brought into line with those of international substitutes. This is indeed a general characteristic which we have stressed in our description of underdevelopment: the transfer to the periphery, of the centre's relative price structure which becomes the international relative price structure, whereas the distribution of productivities is different from that which is characteristic at the centre.^{46/}

But while we were reaching a correct definition of unequal exchange, at the same stroke, we were able to define the limitations of a theory of exchange. In fact, the cost of the reward to labour must be explained: the international immobility of labour is only the condition under which it is expressed. This immobility makes unequal exchange possible because the capitalist mode dominates other modes of production. The analysis of this domination must therefore be made the core of the study of accumulation on a world scale, of the unequal development of capitalism.

In choosing to adopt this point of view, we have succeeded in defining the peripheral capitalist mode as opposed to its central form. Let us recall our essential conclusion that the peripheral form has, in contrast to the central form, the dual feature of a modern technology (hence high productivity) and low wages within the framework of the capitalist social organization. From this specific characteristic, of which we have given the historical background, dependency is derived. Integration implies that the balance between the level of development of the productive forces and the value of the labour power is not to be found at the level of the peripheral formation but only at the level of the world system in which the latter is integrated. From this lack of internal correspondence between the two elements in question we have the vicious circle of peripheral development: in order to reproduce its own conditions of existence, the peripheral formation must still contain pre-capitalist modes of production or else produce non-capitalist modes which, being dominated, provide the capitalist mode with its cheap labour.

It is within this framework that we have relocated the problem of "marginality".^{47/} This is an unfortunate expression since it suggests that the "marginalized" masses are not integrated within the system. But they are, since they supply the dominant capitalist mode, either directly with cheap labour or indirectly with cheap labour incorporated into products which make it possible to lower the value of labour power in favour of the dominant capitalist mode, or products which enable a reduction in the value of the various components of constant capital, again in favour of the capitalist mode, or again, products which make it possible to raise the real value of "luxury" consumer goods (the fraction of the surplus value which is consumed by the bourgeoisie). In the last resort, all these mechanisms can be analyzed in terms of transfers of surplus generated in non-capitalist modes in favour of the dominant capitalist mode.

We can therefore understand that the "marginal" sectors are not "vestiges". They may appear to be so where sectors of precapitalist origin are concerned although the domination they suffer has caused them to

lose their original autonomy. But they are not always so: thus some "modern" marginal sectors are reproduced by the system.

If the dependency which we have here defined is expressed at the international level by an asymmetry and the transfer of value (unequal exchange) which accompanies it, it is necessarily also expressed at the same time, at the "internal" level, by a transfer in favour of the peripheral capitalist mode. It is therefore understandable that the dependency is not imposed from outside but is necessary. On the political level, the local bourgeoisie is the agent which shapes a dependent structure since this serves its interest. This is how it is able to benefit from the levels of consumption of the "international" bourgeoisie when the average level of development of its own productive forces would not allow it.

The overall analysis thus conducted enables us to reject two series of myths to which Emmanuel's narrow analysis was bound to lead us: the first is the myth that "development" can be achieved by an "artificial" increase of the "independent" variable - i.e., the wage. The second is the myth that international transfer automatically benefits the working class at the centre.

Emmanuel's analysis concerning the effects of an increase in wages on the conditions of development remains naive.^{48/} It is true that, assuming that a strike leads to an increase in wages on the coffee plantations in Brazil, Emmanuel believes that this increase would not be possible if competitors were to take Brazil's place in the world market, but would be possible if the increase in wages could be matched by an improvement in productivity on the plantations. He nevertheless concludes that if the rise in wages affects all producers, consumers will have to pay more for their coffee. This is logical only because Emmanuel assumes that the products supplied by the periphery are specific. But they are not. It is also true that Emmanuel quite correctly draws attention to the fact, overlooked by his critics, that the peripheral producer receives only a small fraction of the price that the consumer at the centre pays

for his product. The profits of middlemen, advertising, taxes paid at the centre are so large that, in spite of the deterioration in the terms of trade for the producer and the wide fluctuations in the world wholesale prices of these products, their prices to the consumer are constantly rising and are never seen to fall even as a result of slumps: a wide buffer therefore exists which would enable an improvement in the reward to labour if social relations were to allow it. This essential problem which we place at the centre of our analysis of the peripheral mode is not analyzed at all in the theory of unequal exchange.

This is why Emmanuel practically ignores the dialectic interaction between wage and development which he replaces by an inaccurate linear analysis. Only the analysis of the objective status of the value of labour power as we have explained it enables the linear economic mechanism to be superseded. It is once more true that here, Emmanuel, on occasion, makes some interesting observations. Referring to England, he points out that wages which remained low until around 1870 did not hinder development because "rent absorbed the surplus and prevented it from going abroad". The observation is no doubt correct but we must qualify it since, precisely between 1800 and 1870, the terms of trade were deteriorating for England: part of the gains in productivity achieved by that country's industry were actually benefiting her trading partners. We must therefore clarify the historical conditions which made unequal exchange possible.^{49/}

Because he ignores these historical conditions, together with, broadly speaking, the analysis in terms of peripheral mode and central mode, Emmanuel confuses what we have clearly distinguished: the young centres and the periphery.^{50/} For if it is true that the prospects of an influx of white migrants into Rhodesia can, in its turn, cause capital to flow in, thereby creating employment with high wages which a unilateral decision in the Central African Republic to raise wages would have no effect on development, it is because Rhodesia is a young centre as formerly were the United States, Canada, Australia and South Africa,

characterized by clear-cut capitalist production relations. If we reintroduce production relations into the analysis as we have done, we can see that foreign capital does not have the same "development" effect at the periphery because the relations of capitalist mode domination of the precapitalist modes characteristic of the peripheral structure lead to the specific distortions which we have analyzed. Ignoring this type of analysis, Emmanuel made a monumental error with regard to the respective rôles of colonization by the "petits blancs" ("poor whites") and of the establishment of multinational corporations. To claim that these are agents for "development" as opposed to the former is purely and simply to revert to Rostow's line of reasoning. On this point, Bettelheim's criticisms are right: Bettelheim contrasts the homogeneity of the centre with the heterogeneity of the periphery.^{51/} Here however, like P.P. Rey,^{52/} we went further in showing that this heterogeneity was necessary, that it enabled, through specific class alliances at the periphery, the reproduction of the system as a peripheral system.

The analysis of unequal exchange shows that the rate of surplus value at the periphery is undoubtedly higher than it is at the centre. What precisely characterizes the peripheral mode and results, among other things, in unequal exchange, is the dual element of low wages and modern technology both in the peripheral capitalist export sector and in the sector which finds its outlet on the domestic market. It is precisely because the rate of surplus value is higher at the periphery that international capital finds it profitable there: emigration of capital to the periphery is a means of raising the profit rate. It is also because such is the case that the peripheral mode reproduces itself as such both in the economic terms of the distortions which characterize it and in the political terms of specific class alliances which define it. To deny this glaring evidence necessarily takes us back to Rostow: peripheral capitalism would then be only a stage towards mature central capitalism. Therefore Bettelheim, who unfortunately expressed the view that the rate of exploitation was higher at the centre, was forced to deny the existence of a system of international values.^{53/}

However, the fact that the rate of surplus value is higher at the periphery does not automatically mean that the proletariat at the centre benefits from the transfer arising from unequal exchange. If labour were to be paid the same rate at the periphery as at the centre, assuming equal productivity, the overall equilibrium, at the level of the entire world system, between the reward to labour and the level of development of the productive forces would require a different distribution of the comparative rates of growth of the centre and the periphery. Unequal exchange is above all at the root of unequal development. There is no doubt that the working class at the centre "benefits" from the higher rates of growth which this exchange allows because at the level of the central formations also, it is essential to have equilibrium between real wage and level of development. However, the "high" wages at the centre are mainly due to the high level of development of the productive forces and not to international transfers. It is equally obvious that the bourgeoisie at the centre exploits - unfortunately with success - the myth of national solidarity and the faster the growth, the easier this is to do.

In this field, the studies made by Marini and Cardoso^{54/} seem to us more to the point. The first observes that the overexploitation of labour at the periphery makes it possible to increase the overall surplus value in comparison with the centre by lowering the price of certain means of subsistence while at the same time raising the profit rate by reducing the price of some components of constant capital. We shall here introduce a slight qualification: the resulting rise in the rate of surplus value at the centre is limited by the objective requirement of an equilibrium between real wages and the level of development of the productive forces. We also endorse Cardoso's observations: firstly that this process of exploitation of the periphery is not necessary (since there is no theoretical problem of an absorption impossible within the framework of the pure capitalist mode), but that it explains the functions of dependent capitalism in the world system. Secondly, that the importance of the products imported by the centre from the periphery is decreasing (precisely because of the unequal development brought about by unequal exchange). Our

qualification here is that this "marginalization" of the Third World, noticeable in the course of the last development phase (1950-70) of the world system is also not a phenomenon whose development has been linear throughout the history of capitalism: between 1880 and 1913, the opening up of this world to imperialistic capital has been decisive; to-morrow, with a possible spurt in the development of runaway industries, it could be the same again.

•. TRANSFORMATION: A RELATED QUESTION

The importance attached by some authors to the question of "transformation of values into prices" reflects, in our view, a fundamental error in the understanding of the nature of the Marxist concept of value. It is clear that it is impossible to derive the system of prices mathematically from the system of values while maintaining an equality between rates of profit and the rate of surplus value.^{55/}

Because of this impossibility Emmanuel deduced that "the irreducible nature of production prices" (which cannot be "derived from values") means that, in passing from one system to the other, "it is not a question of change of form but of content" and as a result, the cost price "bears no relation with phenomena but is of an essence other than that of value".^{56/}

We have already given our view on this subject.^{57/} There is no reason for the profit rate to be equal to the rate of surplus value. On the contrary, for if the two rates were equal, economic exploitation would be obvious in the capitalist mode as it is in the production modes which preceded it. If there is a deception, if the phenomenon hides the essence instead of revealing it openly, if "capital" appears to be "productive" independently from labour, it is precisely because, through "transformation", the rate of surplus value seems to disappear. However, in the last analysis, it remains present, for if we choose $R = 0$ in Sraffa's system, the rate of surplus value of the corresponding value system will also be zero.

Our view is similar to those of Claudio Napoleoni and Oscar Braun. The former writes "value and production prices correspond to two distribution patterns (term underlined by us) and to two systems of exchange of which we cannot consider the one as being the transformation of the other since the structural assumptions are changed."^{58/} And Braun says: "the Marxist theory of value does not require the sum of prices to be equal to the sum of values since value and surplus value derive from the analysis of the production process whereas prices and profit derive from the analysis of overall production process."^{59/}

It is obvious that the function of the theory of value is precisely to reveal what does not appear openly at the distribution level (including the sale of labour power and capital circulation on the one hand and the exchange of goods on the other) by going to the very heart of the matter, i.e., the production process.

It is absolutely essential to understand correctly the relation between value and price, that the price category is not universal but peculiar to the capitalist mode in order to understand how socialism is not capitalism without capitalists. We have placed a great deal of emphasis on this subject. For, as Sraffa himself rediscovered,^{60/} "competitive optimum" is far from being synonymous with "social optimum". The first depends on a social relation, i.e. the opposition between the proletariat and the bourgeoisie which is reflected in the rate of surplus value. Sraffa qualifies as "sub-optimal" any equilibrium where profit is not zero. What does this rediscovery of Marx mean? That society can achieve a true "social optimum" when the "profit rate" is zero, hence when the rate of surplus value is also zero, in other words, when class exploitation has disappeared and the task of accumulation has been completed. We draw two conclusions from this analysis. The first is that a period of transition to socialism - which is not mature socialism - is essential to the extent that capitalism has not completed its historical task of accumulation. Therefore, for this very reason, the allocation of means of production requires that "time" be taken into account,

though in a different way from that which characterizes capitalism: in placing oneself directly at the overall national level instead of at the level arising from competition among capital, i.e., the capitalists. The second is that mature socialism is not Stuart Mill's "stationary state". Socialist society is simply entirely master of its decisions: the decision to expand production is taken directly by a clear, disalienated collective consciousness capable of directly working out the amounts of socially necessary labour required to produce the desired use values without passing through the indistinct stage of attributing a "value" (pseudo-value) to "time".

This is why it has seemed absolutely necessary to us to establish the essential laws of the system both as regards the objective status of the value of labour power and as regards unequal exchange, in value terms. Of course, we can also obtain the same results directly in terms of prices, as Oscar Braun and Saigal have done.

9. The question of the falling rate of profit:

Before approaching the problem of the stages of formation of the world system, it is useful to recall our position regarding this important related question.^{61/} Moreover, we have shown in the annex that the organic composition and the surplus value rate in value terms remained unchanged if improvements in productivity were equal in both departments, that they both increase if the improvements are more rapid in the production of consumer goods (wage goods) and decrease together in the reverse case.

The debate concerning the law of the falling rate of profit,^{62/} started towards the end of the 19th century by Bernstein, Conrad Schmidt, Cunow, Otto Bauer, Rosa Luxemburg and Kautsky was taken up in the twenties and thirties by Louis Boudin, Henryk Grossman, Hans Beiss, Kei Shibata and Nathalie Moszkowska. The contenders were, on the one side, the "revisionists" who, noting that the profit rate did not necessarily fall to a level which would jeopardize "the inducement of capitalists to invest", concluded that the system would be perpetuated. On the other

side, there was an "orthodox" pseudo-Marxist school which asserted that the rate of profit would gradually fall until it entailed a "general crisis" and the "collapse" of the system (in German, "Zusammenbruch").

Both interpretations seem to us to share the same basic fault of economic mechanism, for we have always rejected the theory of "general crisis" and "spontaneous collapse" as well as that of the "necessary perpetuation" of the system.

In our view, the real problem consists of examining how the system reacts in itself and attempts to adjust to a possible fall in the profit rate. The adjustment of economic quantities to one another in the context of dynamic equilibrium takes place with time-lags which determine the shape of the cycle (or of fluctuations) as we have always seen. These cycles (or fluctuations) fall within a framework characterized by long-term trends peculiar to each phase of the actual history of the system.

The historical facts relating to the period extending from the industrial revolution (beginning of the 19th century) to the crisis of the thirties point to an actual tendency for the rate of profit to fall. The industrial revolution is above all a revolution in the capital equipment of large industries producing consumer goods: the power loom and the steam engine introduced immediately in their almost final form enabled the utilization of a much larger volume of raw materials for the same amount of direct labour time. The organic composition in value rose. The necessary tendency for the rate of surplus value to increase followed - with a time-lag - to adjust itself to the continuous improvements introduced into the consumer goods industries. Such, indeed, is the argument of Marx as Steindl, in our view, correctly interpreted it. ^{63/}

The discussion relating to the falling profit rate was resumed in the forties and fifties in terms derived from the microeconomic marginalist definition of labour-saving and capital-saving innovations.

Memories of the slump of the 1930s were still fresh and the Keynesian analysis which was based on the assumption of a collapse of the profit rate (the marginal efficiency of capital), faced with the absolute barrier of "liquidity preference" together with the tendency to stagnation which the depression had entailed, marked the entire discussion. ^{64/}

The inherent tendency of the capitalist mode of production to raise the rate of surplus value induces it to favour innovations which are labour-saving for the whole economy, that is, innovations centred on Department II. These innovations in fact make it possible to reproduce the reserve army of unemployed and therefore to put pressure on wages. This is Blaug's argument when he wrote in his comments on Gillman, "labour-saving innovations are induced by the increase in real wages which erodes the profit margin, while capital-saving innovations occur haphazardly for technical reasons, in particular, in advanced capitalism. In Gillman's book, capital-saving innovations are given the same attention as trade-union pressure. They enter into the analysis as ~~exogenous variables~~". ^{65/}

Is the contemporary technological revolution precisely of this capital-saving nature? Perhaps in part at least, a concentration of major innovations having been transferred to the production of Department I. The consequent reduction in the organic composition tends to raise the profit rate particularly if the reduction of the surplus value rate necessary for dynamic equilibrium only follows with a time-lag.

Hence in any case it would not be possible to adopt a mechanical trend in the rate of profit in order to divide the history of the capitalist system into periods. Similarly we shall see that there is not a mechanical tendency towards an excess (or insufficiency) of surplus. The phenomena around which the periodization of capitalism should be organized are to be found at an entirely different level.

An examination of the possible future of the system enables us to understand its inner nature. Can one envisage a capitalist system surviving the general spread of automation? Applied to the production of

Departments I and II automation, in this world of science fiction, would free mankind from work. But if the ownership of production means were to remain private and in the hands of a few, the total products of the automated machines should go to the owners of these miraculous machines. We would have a curious society composed of a bourgeoisie without a proletariat. The latter, being superfluous, would have to be destroyed or reduced to the status of non-productive domestic servants.^{66/} Although this is peering far into the future, we can already notice certain trends of the system in this direction. Before getting to this imaginary situation, automation tends to make an increasing proportion of the population redundant. Our dynamic equilibrium model suggests to us that the system could give rise to growing mass unemployment while the decreasing minority of proletarians employed in Departments I and II would find their real wages rising at a phenomenal rate. If in fact progress in automation is the same in both Departments, the organic composition and the surplus value rate would remain unchanged and the real wages of the decreasing employed minority would increase at the same rate as productivity.

The slump of the 1930s already showed this tendency. The polarization of the world into developed and under-developed countries is an even more obvious example. The tendencies of the system to the genocide of the superfluous population should therefore not be underestimated. But at the same time, the system reacts to this "marginalization" of the labour force. On the one hand, rather spontaneously, by the changes in relative prices and demand structures which regenerate a "small modern capitalism", in particular, consumer services. This tendency is visible and once again precludes us from seeing the concentration as a linear phenomenon: like all social phenomena concentration also gives rise to its dialectical opposite. But also, on the other hand, in a "non-spontaneous" way, at least from the narrow economic point of view. Class struggle and the state intervention falling within this framework, lead to the development of other means of absorption of the surplus. A tax tapping of the surplus generated in Departments I and II in favour of a non-productive Department III would be accompanied by a lower increase in real wages in

Departments I and II and by an increase in employment in Department III. For Departments I and II, this trend would probably lead to a reduction in the profit rate since the portion extracted from the surplus which they generate would have to increase very rapidly to ensure the "full-employment" equilibrium of such a system.

10. The historical periodisation of the capitalist system:

The discussion concerning the stages in the evolution of the capitalist system was greatly obscured by the tendencies to link this problem with that of the law of the falling profit rate and to the pseudo laws concerning the absorption of the surplus. These aberrations have led to expansionism, the general trend of the capitalist mode, being confused with imperialism, a special stage of the latter.

We suggest that there are two main stages in the history of capitalism,^{67/} The first is marked by the industrial revolution, at the beginning of the last century. During the three previous centuries covering the mercantilist period, the capitalist mode of production was not mature. Its essential components, i.e., the accumulation of money wealth at one end and proletarianization at the other, gradually began to emerge. The expansionism characteristic of the period which Cox^{68/} has carefully emphasized should not be confused with the subsequent imperialism. It is true that the system, in its developing stages was, from the start, international and unequal and the function of the periphery of the time was essential in the accumulation of money wealth. But this function is entirely different from that of the periphery which followed.

The second stage is that which Lenin defined in terms of imperialism. It was this particular part of the history which was challenged, in particular by Emmanuel,^{69/} who denied that the export of capital appeared at the end of the 19th century. His argument was that British assets abroad having increased from one billion pound sterling in 1870 to 4 billions in 1914, this accumulation was hardly more than the reinvestment, on the spot, of a part of the profits for, at the rate of return

of only 5%, one billion invested in 1870 would reach a figure of more than 4 billions by 1914, and that the repatriation of profits to Britain was therefore larger than the flow of British capital exported. Furthermore Emmanuel observed that the volume of American assets invested abroad in 1970 is, in relative terms, at least 40 times larger than the volume of British assets in 1914.

The facts mentioned are correct, it is their interpretation which is in question. For the profits which are reinvested are equivalent to new capital exports, as S. de Brunhoff points out: investment transforms income into capital. We have also always analyzed the problem of international capital flows by making a distinction between capital flows and repatriation of profits, refusing to consider their balance directly.

As we have already shown, capital exports do not occur as a result of some theoretical impossibility to utilize the surplus within the central capitalist formations. They are motivated by the search for higher profits which are made possible precisely by the coexistence of a modern technology and low wages. This search is not related to the trend in the profit rate: rising or falling. Furthermore, the repatriation of profits shows that capital exports do not solve a pseudo problem of absorption. Thus Lenin never regarded capital exports as due to internal difficulties of absorption but purely to a search for a higher profit rate. It is true that the picture of a Europe of small investors living off the returns of their investments abroad, a typical trend of the period, was shattered by the subsequent ruin of the same investors. The domestic absorption of the surplus was no longer made through the consumption of these small investors but by other means, related to the structure of monopolistic competition (selling cost, etc.) and the development of State monopoly capitalism (public expenditure, etc.).^{70/}

If capital exports began at the end of the 19th century and not before, it was not at all because capitalism was not, until then, "expansionist". It was, but in different forms, fulfilling other functions.

It was because capital exports became possible only when the concentration of capital brought about a separation between the function of "entrepreneurs" (which could henceforth be fulfilled by paid agents) and that of capitalists, these two functions being, until then, combined. Therefore Lenin was right in establishing the link between the appearance of monopolies and the export of capital. Before the emergence of monopolies, capital could not emigrate without the capitalist himself emigrating since in the system of family enterprises of the time, these functions were cumulative.

We must also avoid confusing imperialism with colonialism. The latter preceded the former by a long period and fulfilled far too many functions in history to constitute a significant homogeneous category. During the imperialist era itself, the colonial conquest resulted from the competition between national imperialist countries, particularly in Africa but this was in no way necessary as shown by the continued independence of Latin America, China and the Ottoman Empire.

The result of imperialism, i.e., of the international emigration of monopoly capital, was unequal exchange, one of the conditions of which, as we have seen, was precisely the international mobility of capital.

Until then, during the period 1800 - 1880, goods tended to circulate more and more freely and gradually acquired their international character, but capital movement was seriously hindered because of its dispersal. This first limitation of the world capitalist system, which was not yet complete as such, was accompanied in history by low European wages. We can therefore hardly speak of unequal exchange, as we have emphasized. However, the periphery already existed and fulfilled certain definite functions: expand the industrial base of Britain or raise the profit rate by lowering the value of labour power (corn import from America which did not pay land rent) or that of the components of constant capital (import of raw materials in which the countries of the periphery specialized). International trade did not at any time fulfill a decisive rôle in absorption since this trade was balanced without any large capital movements.

We can certainly speak of expansionism by Britain in the 19th century, but not of imperialism, in the same way as we can speak of expansionism of mercantilism which fulfilled other functions.

An example of the mistakes which accompany the confusion between the expansionism of capitalism and imperialism is shown in the remark made by Palloix on Britain's exports. According to him, since the system of competition leads to a fall in profit rate, the function of foreign trade was to raise it. Hence, he describes the "industrialization pattern of Britain as imperialist in so far as the removal of domestic constraint was achieved by a reorientation of exports, throughout the 18th century, towards the dominated territories".^{71/} We must replace the term "imperialist" by "expansionist". We must also note that the trend of the profit rate is independent of whether the production system is competitive or monopolist. Thus we find a great deal of ambiguity in Palloix's remark that because in the monopoly mode, there is no falling profit rate, the Third World only plays the part of a safety valve to which all non-profitable activities are directed and that, since the absorption of the surplus is organized internally, the Third World loses its function and tends to become "marginalized". Before Palloix, Oliver Cox,^{72/} also confusing imperialism with expansionism, hastily concluded that capital was of an international nature right from the start - during the mercantilist period. In our view, capital became really international only from the time when, thanks to the monopolies, it acquired a mobility unknown until then.

Of course the imperialist era which is still continuing should be sub-divided so that we can avoid too-wide generalizations based on mechanistic theories of the falling profit rate or of absorption. A first phase of imperialism which could be termed "classical" stretches from 1830 to the first world war and perhaps to the 1930s. This phase opened with a structural crisis at the centre, a crisis which was overcome by the appearance of monopolies and capital exports. At the same time, the period of relative stagnation of real wages at the centre ended while a period of relatively high wage increase began.

Capital exports to the periphery lead to the development of primary export sectors. The periphery retained the characteristic of the predominance of organization modes of precapitalist origin, though henceforth integrated into the world system through commodity exchange with the capitalist world, the bulk of the capital being foreign and limited to the export sectors. Unequal exchange began. It helped to raise the average profit rate of capital. At the periphery, primary exports constituted almost the sole engine of growth, with imports covering manufactured consumer goods. The refusal to industrialize was accompanied by a division of the local bourgeoisie into a compradore section whose future was linked with foreign domination, and a national section which came into conflict with imperialism. This first phase of imperialism was characterized by very high growth rates of both the product at the centre and world trade.

This first phase underwent a period of structural crisis from the first world war to the end of the second world war, marked by the slump of the 1930s and the stagnation of capitalism. During the thirties, the industrialization process through import substitution began at the periphery, particularly in some countries of Latin America. It gathered speed and spread to other areas after the second world war, in the course of the last 25 years.

This second phase of the imperialist system was marked at the centre by large-scale state intervention and the new forms of absorption of the surplus which we have analyzed. At the periphery, the main engine of growth shifted from exports to import substitution industries. And this is how the complete peripheral capitalist mode was achieved. The reproduction of class domination conditions here required a policy different from the one followed by the bourgeoisie of the centre: in order to maintain "low" wages despite advanced technology which can henceforth be imported, proletarianization must be slowed down and precapitalist production modes exploited. The unequal exchange which continues outside is accompanied by an internal unequal exchange of a similar nature. On

the political level, whereas the development of capitalism at the centre was accompanied by the progress of bourgeois democracy, here on the contrary, this prospect was excluded right from the start. At the same time, the foreign trade structure of the periphery was changing: exports remained of the same type mainly primary, but the import of capital equipment (due to the import of modern technology) and the import of food products due to the distortions peculiar to the peripheral mode in the allocation of resources, particularly at the expense of agriculture, which were necessary for the reproduction of the system of low wages) was substituted for the import of manufactured consumer goods. The forms of dependency were themselves changing: there was a tendency for direct domination by foreign capital, particularly during the latter part of the period, to be replaced by indirect domination through the adoption of the consumption patterns of the developing countries and through technological domination. One can therefore understand Emmanuel's pertinent remark concerning the decrease in the relative volume of central capital at the periphery, a remark which complements that of Cardoso on the "marginalization" of the Third World and ours on the increasing inequality in development.

The theoretical problem of absorption of the surplus is no greater in this stage than in the preceding one. But the new forms of absorption at the centre heighten the inequality in development. At the same time, the distortions characteristic of the peripheral mode create a problem of absorption which is solved by the export of capital to the centre and by increasing the proportion of the surplus value spent on luxury goods. The importing of technology and the protectionist policies with respect to small local import-substituting monopolies permit this form of consumption of surplus value. This in turn encourages the adoption of "European" consumption patterns and enables the system to be reproduced as a dependent system. The bourgeoisie as a whole stops being national: it cannot fulfil the historical function of primitive accumulation, i.e., radically destroy the precapitalist modes, "save" the surplus value, etc. It has

to be reactionary ("protect" the precapitalist modes in order to dominate them), wasteful (consume the surplus value) and dependent. We can therefore understand that "dependency" is not "imposed" but necessary to generate the surplus.

In this framework, we see that an internal market is formed. However, this market bears certain characteristics which distinguish it from that of the centre. It is principally a market for products both from industry and submissive precapitalist agriculture, but it is really neither a labour market since proletarianization is limited, nor a capital market, which remains largely foreign (multinational corporations) and state-controlled (since domestic private capital, being spread too thinly cannot reach modern technology). It is in this sense that the peripheral mode remains specific and that Frank's intuition in speaking of "development of under-development" can be upheld.

This periodization which we have suggested is very different from that of Braun.^{13/} He ascribes the exports of capital during the period 1880-1930 to the low wages at the centre (whereas it is precisely as from 1880 that wages really began to rise at the centre). Thus Braun considers that the phase of unequal exchange only began after 1930, whereas we actually trace it back to 1880.

Is it possible that we are about to enter a new third phase of imperialism? And what are its characteristics likely to be? For the crisis which began with the seventies is a structural crisis of which the monetary aspect is only a symptom. In our analysis of the possible alternative solutions for the system, we have stressed the internal transformations at the centre of the system (the evolution of "national" monopolies into multinational corporations, the emergence of cartels, technological revolution marked by automation, electronics, the atom and space exploration) moving from there to the new form of unequal international division of labour which could be a feature of this third phase. The peripheral bourgeoisie itself hopes to speed up this evolution begun by the establishment of runaway industries in East Asia and Mexico, in the context of which, it would

take advantage of low wages to export manufactured products to the centre. This type of specialization would undoubtedly reproduce the distortions peculiar to the peripheral mode, a condition for a continued differential in wages, and at the same time reproduce unequal development. An apparently paradoxical structure of world trade would develop: the under-developed countries would become exporters of industrial products and importers of food products. Giovanni Arrighi and André Frank have also tried to describe these possible alternatives.^{74/} In this connection, Frank recently stressed the phenomena of unequal development within the periphery, the theory of which was first put forward by Mauro Marini. The development of "sub-imperialisms" in Brazil, Mexico, India and perhaps a few other countries falls within this category. The rôle which the USSR could play in this new division of labour, with a view to greater integration into the world system, would be somewhat similar to that of other sub-imperialisms which import advanced technology from the centre while exporting towards the periphery, the more common products.

CONCLUSIONS:

Vulgar and dogmatic Marxism has reduced the social dialectic to the old unilateral causality of natural sciences. The specific quality of social science which makes social man both object and subject is lost and with it, social dialectic. In this respect, vulgar Marxism approaches very closely the whole of bourgeois thought which never went beyond unilateral causality.

Abandoning the dialectic has meant losing sight of the inner meaning of commodity alienation whereby man's consciousness becomes a false consciousness, causing the "laws of society" to appear on the immediate plane of phenomena, as external to the society itself, as imposing themselves on it. We do not seem to have understood the meaning of the first chapters of Capital: commodity and value, these most abstract concepts which form the culmination of Marx's discovery and hence by a necessary reversal, the starting-point of his exposé, have been relegated to the level of the common-place. As a result, the pseudo-problem

of "transformation" of values into prices has been raised in terms of "economic theory" while no attempt is made to understand the true import of this problem which lies at the global level of the alienation of society. For this reason, the debate is closed as far as we are concerned. In the course of the discussion on international trade, the same "economistic" interpretation of the problem of value appeared: this is shown in the strong bias towards the specificity of goods. This prevents an understanding of both how and why the unity of world system is a reality: precisely because this unity is situated at the level of the universality of commodity alienation and is manifested in the universality of the reduction of labour power to the status of commodity.

The world vision based on unilateral causality is responsible for the university's inextricable compartmentalizations, the creation of false sciences for every "discipline". Vulgar Marxism has done the same thing. And yet Marx had pointed out that capital was a critique of political economy. By that, he meant the debunking of "economics", this false, compartmented science and the discovery of the common basis on which the whole social fabric rests. This critique has been taken to be a "university economics" critique of an economic theory. While the critique of political economy culminated in historical materialism, people have continued to practise economistic economics and to reduce historical materialism to a pseudo science of history, as in the universities.

Economistic Marxist economics has led to dealing with the trends of the system in mechanistic, unilateral terms. This is shown in the debate on the status of the value of labour power, and the debate on the law of profit rate and the tendency of the surplus, etc. These are false debates which come to an end once they are placed in their proper context: defined not by economics but by historical materialism.

The truncated historical materialism for its part has become "a science of history", a history which is necessarily mechanistic and linear. The dialectics between productive forces and production relations, base and superstructure, production modes and social formations and capitalist social formations and system of capitalist formations, have been replaced by systems of linear causality where productive forces determine production relations which in turn determine the superstructure.

The theoretical and practical consequences of this return to linear causality are very serious indeed. Socialism was to be born in linear terms in the most developed capitalist countries when the level of productive forces had reached peaks which they could not surpass without the transformation of the production relations. The "philosophy" of the "general crisis" derives from this set of distortions.

This meant at one and the same time failing to understand the dialectic unity of the world system reducing the inequalities of development to "time-lags" (as Rostow has done) and reducing socialism to capitalism without capitalists. For in this linear perspective, the progress of productive forces comes first and is autonomous; science and technique are neutral. We forget that they are themselves a product of society.

In this alienated line of thought, socialism simply becomes capitalism without capitalists: it involves producing the same goods, in the same way to satisfy the same "needs". The new production relations, adjusted to the high level of productive forces are reduced to their legal form: the abolition of the private ownership of the means of production. These new relations "free" the productive forces in so far as they speed up "progress" along the lines developed by capitalism. Once again, this vision is linear. At the same time, the true former production relations are retained along with their varied forms (the dichotomy between the work of policy-making and execution, between town and country, etc.).

Since the cultural revolution, this has become quite clear. In his latest work,^{75/} Bettelheim has forcefully shown that socialism questioned everything simultaneously: what to produce and how to produce it. It is no longer a question of "catching up" and later to "overtake"; we can no longer speak of socialist accumulation. It does not make sense since accumulation necessarily gives rise to capitalist alienation. In order to catch up on the development of the productive forces, we must do something entirely different. Neither the Stalinists nor the Trotskyists had seen that: they were discussing the forms - the tactics - of "socialist accumulation".

So today, the question has come to a head. This is why Chou En Lai was able, at the 10th Congress of the Chinese Communist Party, to formulate it in three lines: "the principal contradiction is that which opposes the proletariat to the bourgeoisie and not that between the advanced socialist system and the backward forces of social production". For the bourgeoisie cannot be got rid of once and for all. It reappears continually so long as the new production relations are not fully established and the dichotomy between intellectual work and manual labour removed, etc.

Another aspect of the same problem is the impossibility of understanding the unity of the world system, as was revealed in the explanation on international trade. It has been possible to exchange controversial arguments which were sometimes cogent and just, and remind those who were apt to forget international inequalities of Marx's sentence:

"If the free traders cannot understand how one country can get rich at the expense of another, we should not be surprised since they themselves are also not prepared to understand how, within a single country, one class can get rich at the expense of another class".^{77/}

However, we remained within the narrow framework of "international economic relations". As we have already said, Mao, like Rossana Rossanda and Charles Bettelheim, has re-established Marx.^{78/}

ANNEX

Real wages, rate or surplus value, development of the productive forces and extended accumulation in the capitalist mode of production.

The following exposé takes the form of a "model" based on that of Book II of Capital.

A "model" is no more than an illustration. Whether simple or sophisticated, it rests on an unambiguous and non-dialectic definition of "quantities"; it points out and formulates the relationships between them and deduces the "consequences" through mathematical treatment of these relationships. These are already included in the initial assumptions: choice and definition of the quantities and relationships. A "model" is therefore always weak because it cannot be dialectic. It is only of didactic interest: to make clearly explicit what is implicit in a unilateral view.

Economics can be expressed in equations while historical materialism cannot. Why? simply because economics artificially separates one aspect from other aspects of the single social reality, makes of it a special field and therefore a false science. Thus the importance of the model is reduced and we must be aware of its two basic limitations. The first is that the main interest of the model lies in its "peculiarities" (the mathematical discussion of its conditions): they pinpoint the location of the problems which cannot be solved by the linear method. The second is that the model, abstract in its formal presentation, is no more than the abstract of a concrete matter, i.e. of a reality which can be located in time and space. One does not construct an illustrative model of a phenomenon covering the entire history of mankind from Adam and Eve to our day. One constructs a model for a particular situation, i.e., in our case, of a production mode. Therefore the model starts from a specific point in time. This point is not "freely" artificially chosen by the author if he wants to be a social scientist rather than a mathematician. On the contrary, he must be aware of the "prehistory" of his "model", that

is, of the concrete historical formation of the situation he starts with a problem which derives from historical materialism.

We shall take note of these points in our exposé below:

1. Parameters of the system:

We shall give a broad analysis of the system linking real wages (and surplus value rates) with the development rates of the productive forces.

Each Department (I for production of means of production E and II for production of consumer goods C) is defined, for each phase, by an equation in value terms, as follows:

Phase 1

$$\text{Department I : } 1 e + a h = p e \quad (1)$$

$$\text{Department II : } 1 e + b h = q c \quad (2)$$

Phase 2

$$\text{Department I : } 1 e + a^2 h = p e \quad (1)$$

$$\text{Department II : } 1 e + b^2 h = q c \quad (2)$$

Phase 3

$$\text{Department I : } 1 e + a^3 h = p e \quad (1)$$

$$\text{Department II : } 1 e + b^3 h = q c \quad (2)$$

etc.....

The first term of each equation stands for the value of (constant capital consumed in the productive process, reduced to a physical unit of equipment E, estimated at the unit value e ($e_1 \neq e_2 \neq e_3$, etc.)). The second term represents the physical quantity a , b , a^2 , b^2 , etc. of total direct labour (necessary labour and surplus labour) employed by one unity of E in each Department and for each phase. The parameter h measures the value product of one hour of labour (not to be confused with hourly wage). The physical product of each Department, p and q respectively, is estimated at its unit value e and c (similarly $c_1 \neq c_2 \neq c_3$, etc.)

The system comprises 3 pairs of parameters (a , b , p , q , λ and τ) and 2 unknowns (e and c) for each pair of equations which describe one phase. Parameters a and b measure the physical labour intensity in the productive processes (their reciprocals are related to the organic compositions), parameters p and q represent the physical product of the productive processes using one unit of equipment E in each Department, parameters λ and τ represent the rates of technical progress in each Department. Obviously λ and τ are less than 1 since technical progress enables us to obtain, with less direct labour, a higher physical product per unit of equipment.

2. Determination of unit prices e and c

If we assume $h = 1$, the equations supply the pairs e and c :

$$e_1 = \frac{a}{p-1}$$

$$c_1 = \frac{a + b(p-1)}{q(p-1)}$$

$$e_2 = \frac{a\lambda}{p-1}$$

$$c_2 = \frac{a\lambda + b\tau(p-1)}{q(p-1)}$$

$$e_3 = \frac{a\lambda^2}{p-1}$$

$$c_3 = \frac{a\lambda^2 + b\tau^2(p-1)}{q(p-1)}$$

etc.....

As equations (1) show that we produce the capital equipment from capital equipment and direct labour, the unit prices of e fall from one phase to the next at the rate of growth of productivity in Department I. On the other hand, consumer goods being produced from capital equipment and direct labour, the unit prices c fall at a rate which is a combination of λ and τ .

3. Equations of the extended reproduction:

If the capital equipment E is distributed between Departments I and II in the ratios n_1 and $1 - n_1$, for phase 1, n_2 and $1 - n_2$ for the next phase, the equations for the production in value terms are as follows:-

$$\text{Phase 1 D I } n_1 c_1 + a n_1 = p n_1 e_1$$

$$\text{D II } (1 - n_1) e_1 + b (1 - n_1) = q (1 - n_1) c_1$$

Phase 2

$$\text{D I } n_2 e_2 + a^2 n_2 = p n_2 e_2$$

$$\text{D II } (1 - n_2) e_2 + b^2 (1 - n_2) = q (1 - n_2) c_2$$

Phase 3

$$\text{D I } n_3 e_3 + a^3 n_3 = p n_3 e_3$$

$$\text{D II } (1 - n_3) e_3 + b^3 (1 - n_3) = q (1 - n_3) c_3$$

Each term of each pair of equations carries the same quantitative coefficient E_1, E_2, E_3 etc.

Let the hourly money wage (or salary) be represented by s (s_1, s_2, s_3 etc...). Obviously $s < 1$, the difference $1 - s$ representing the surplus value whose rate $t = \frac{1 - s}{s}$.

The dynamic equilibrium of the extended reproduction requires that 2 conditions be fulfilled.

1 - that the wages distributed for each phase (in both Departments) enable the entire output of consumer goods produced during that phase to be bought.

2 - that the surplus value generated during one phase (in both Departments) makes it possible to purchase the entire output of Department I during that phase at the equilibrium price of the next phase.

a) equations of supply/demand of consumer goods:

$$s_1 [an_1 + b(1 - n_1)] = q(1 - n_1)c_1$$

$$s_2 [a\delta n_2 + b\mu(1 - n_2)] = q(1 - n_2)c_2$$

etc.....

b) equations of dynamic supply and demand of equipments:

$$(1 - s_1) [an_1 + b(1 - n_1)] = pn_1 e_2$$

$$(1 - s_2) [a\delta n_2 + b\mu(1 - n_2)] = pn_2 e_3$$

etc.....

We can check that the system is actually expressed in values and not in production prices since the rates of surplus value are identical in both Departments.

We derive 2 series :

$$s_1 = \frac{(1 - n_1) [a + b(p - 1)]}{(p - 1) [an_1 + b(1 - n_1)]}$$

$$s_2 = \frac{(1 - n_2) [a\delta + b\mu(p - 1)]}{(p - 1) [a\delta n_2 + b\mu(1 - n_2)]}$$

etc.....

and $1 - s_1 = \frac{pn_1 a \delta}{(p - 1) [an_1 + b(1 - n_1)]}$

$$1 - s_2 = \frac{pn_2 a \delta^2}{(p - 1) [a\delta n_2 + b\mu(1 - n_2)]}$$

4. Determination of money wages and the inter-sectorial distribution of the productive forces

The two pairs of unknowns s and n are determined by each pair of equations: by summation of s and $1 - s$, we obtain n which, taken in the equation determining s , gives us s .

We have:

$$n_1 = \frac{1}{p(1-d)} \quad s_1 = \frac{p[(1-d)-1][a+bp(p-1)]}{(p-1)\{a+bp[(1-d)-1]\}}$$

$$n_2 = \frac{1}{p(1-d)} \quad s_2 = \frac{p[(1-d)-1][ad+bp(p-1)]}{(p-1)\{ad+bp[(1-d)-1]\}}$$

etc!....

We therefore obtain s in terms of the parameters. We note that the distribution of productive forces must remain constant from one phase to the next.

Discussion of the parameters :

1 - Condition $n < 1$ requires $p > \frac{1}{1-d}$

as also: $d < 0$ and $p > 1, n > 0$.

2 - Condition $s < 1$

a) condition $s < 1$

It requires the numerator of the s < than the denominator of the s which, after simplification, is expressed:

for s_1 by $-pa^d < 1$
 for s_2 by $-pa^{d^2} < 1$

These conditions are always fulfilled, the parameters being all positive.

b) Condition $s > 0$

the condition $p > \frac{1}{1-d}$ means that :

$$p - 1 > 0$$

$$a + b(p - 1) > 0$$

$$p(1 - d) - 1 > 0$$

$$\text{and } a + b[p(1 - d) - 1] > 0$$

Since each component of the numerator and of the denominator of s is positive, s itself is also positive.

Similarly, we have :

$$p(1 - d) - 1 > 0$$

$$ad + b(p - 1) > 0$$

$$ad + b[p(1 - d) - 1] > 0$$

$$\text{Hence } s_2 > 0$$

We therefore have only one limiting condition as follows:

$$p > \frac{1}{1-d}$$

Rate of surplus value and organic compositions

The ratio of money wages is defined by :

$$= \frac{[a\bar{r} + b\bar{r}(p-1)] \{a + b [p(1-\bar{r}) - 1]\}}{[a + b(p-1)] \{a\bar{r} + b\bar{r}[p(1-\bar{r}) - 1]\}} \text{ and } \frac{1 - s_2 - \bar{r}[an + b(1-n)]}{1 - s_1 - a\bar{r}n + b\bar{r}(1-n)}$$

As regards the organic compositions in value γ_1 and γ_2 , they are defined as follows:

$$= \frac{[n_1 + (1 - n_1)] e_1}{[an_1 + b(1 - n_1)] s_1} \text{ with } e_1, s_1 \text{ and } n_1, \text{ known}$$

$$= \frac{[n_2 + (1 - n_2)] e_2}{[a\bar{r}n_2 + b\bar{r}(1 - n_2)] s_2} \text{ with } e_2, s_2 \text{ and } n_2, \text{ known.}$$

Simplifying, we have :

$$= \frac{ap(1-\bar{r})}{[p(1-\bar{r}) - 1][a + b(p-1)]} \text{ and } \gamma_2 = \frac{a\bar{r}p(1-\bar{r})}{[p(1-\bar{r}) - 1][a\bar{r} + b\bar{r}(p-1)]}$$

ie,

$$\frac{\gamma_2}{\gamma_1} = \frac{\bar{r}[a + b(p-1)]}{a\bar{r} + b\bar{r}(p-1)}$$

1st case: $\bar{r} \uparrow$ (improvement in productivity is faster in Department II). We can check that the organic composition rises ($\gamma^2 > \gamma^1$) so does the rate of surplus value ($s_2 < s_1$).

2nd case: $\bar{r} \downarrow$: productivity rises more rapidly in Department I). organic composition and the rate of surplus value fall.

Hence, since organic composition and surplus value rate must vary for time for dynamic equilibrium to be achieved, we can attempt to find what happens to the profit rate.

If it is defined in value terms by relating the surplus value to the amount of equipment utilized, that is:

$$\pi_1 = \frac{(1 - s_1) [an_1 + b(1 - n_1)]}{n_1 e_1 + (1 - n_1) e_1}$$

and
$$\pi_2 = \frac{(1 - s_2) [a\delta n_2 + b\mu(1 - n_2)]}{n_2 e_2 + (1 - n_2) e_2}$$

we have, by replacing e_1, e_2, s_1 and s_2 by their values in terms of the parameters.

$$\frac{\pi_2}{\pi_1} = \frac{an + b(1 - n)}{a\delta n + b\mu(1 - n)} \times \frac{a\delta n + b\mu(1 - n)}{an + b(1 - n)} = 1$$

The conclusion is that, as a trend, the profit rate in dynamic equilibrium is independent of the relative improvements in productivity in each of the 2 Departments, since, the change in the surplus value rate required for supply and demand to be in dynamic equilibrium must compensate for that of organic composition which is precisely determined by the ratio of productivity improvements δ and μ .

6. Real hourly wages

We define them as $s'_1 = \frac{s_1}{e_1}$ and $s'_2 = \frac{s_2}{e_2}$

After simplifying, we have :

$$\frac{s'_2}{s'_1} = \frac{a + b[p(1 - \delta) - 1]}{a\delta + b\mu[p(1 - \delta) - 1]}$$

since δ and μ are positive and less than 1 we can check that $s'_2 > s'_1$, that is, real hourly wage must rise in all cases as soon as technical progress is achieved in I, II or both.

7. Growth of production and labour power:

The growth of production (at constant prices) in Department I is defined as :

$$\frac{E_2}{E_1} = pn = \frac{-1}{1-d}$$

That of labour power is :

$$\frac{T_2}{T_1} = \frac{adn + b(1-n)}{an + b(1-n)} \cdot pn$$

or, if we replace n by its value:

$$\frac{T_2}{T_1} = \frac{ad + b \left[\frac{p(1-d) - 1}{1-d} \right]}{(1-d) \left\{ a + b \left[\frac{p(1-d) - 1}{1-d} \right] \right\}}$$

As for the growth in net product (production of equipment over and above replacement needs plus consumer goods production) at constant prices (prices during phase 1), it is given as follows:

$$\frac{P_2}{P_1} = \frac{(E_2 - E_2') e_1 + C_2 + c_1}{(E_1 - E_1') e_1 + C_1 + c_1}$$

where E_2 and E_1 represent capital equipment production during phases 2 and 1, and E_2' and E_1' , the capital equipment replacement need (obviously $E_2' = E_1'$). Furthermore, as we have

$$\frac{E_2}{E_2'} = \frac{E_2}{E_1} = \frac{E_1}{E_1'} = \frac{1}{1-d}$$

$$C_1 = E_1 q (1-d)$$

$$C_2 = E_2 q (1-d)$$

as well as e_1 , c_1 and n, we find

$$\frac{P_2}{P_1} = \frac{1}{1-d}, \text{ identical to } \frac{E_2}{E_1}$$

The growth of the net product is governed by the improvement in productivity achieved in Department I.

Labour power grows only if:

$$\frac{a}{b} > \frac{(1-d-r) [p(1-d) - 1]}{2d - 1}$$

8. Numerical Examples

The Table below gives the solution of the dynamic equilibrium problem with different values for the parameters:

Case		1	2	3	4	5	6
<u>Parameters</u>	{ a	4	4	4	4	4	4
	{ b	4	0	4	4	4	4
	{ p	3	3	5	5	3	30
	{ q	6	10	6	6	6	6
	{ d	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	0.95
	{ r	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$\frac{1}{2}$
<u>Prices</u>	{ e ₁	2	2	1	1	2	0.14
	{ e ₂	1	1	$\frac{3}{4}$	$\frac{1}{2}$	1	0.13
	{ e ₃	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{1}{4}$	$\frac{1}{2}$	0.12
	{ c ₁	1	1	$\frac{5}{6}$	$\frac{5}{6}$	1	0.69
	{ c ₂	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{11}{24}$	$\frac{7}{12}$	$\frac{5}{6}$	0.36
	{ c ₃	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{25}{96}$	$\frac{5}{12}$	$\frac{3}{4}$	0.19
<u>Proportion</u>	n	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{4}{5}$	$\frac{2}{5}$	$\frac{2}{3}$	$\frac{2}{3}$
<u>Wages</u>							
Nominal (money)	s ₁	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	0.34
	s ₂	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{11}{56}$	$\frac{21}{26}$	$\frac{5}{8}$	0.22
Proportion	s ₂ /s ₁	1	1	$\frac{11}{14}$	$\frac{14}{13}$	$\frac{5}{4}$	0.63
Real	s ₁ '	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{10}$	$\frac{9}{10}$	$\frac{1}{2}$	$\frac{1}{2}$
	s ₂ '	1	$\frac{5}{4}$	$\frac{24}{56}$	$\frac{18}{13}$	$\frac{3}{4}$	0.63
Ratio	s ₂ '/s ₁ '	2	2	$\frac{10}{7}$	$\frac{20}{13}$	$\frac{3}{2}$	1.25

		1	2	3	4	5	6
<u>Organic composition</u>	γ_1	1	3/5	1	1/3	1	1/10
	γ_2	1	3/5	15/11	5/21	3/5	0.18
	γ_2/γ_1	1	1	15/11	15/21	3/5	1.84
<u>Growth</u>	E_2/E_1	2	2	4	2	2	25
	T_2/T_1	1	1	14/5	13/10	4/3	16

- Case 1 : equal organic compositions, equal improvement in productivity in the 2 Departments.
- Case 2 : unequal organic compositions, equal improvement in productivity in the 2 Departments.
- Case 3 : equal organic compositions, unequal improvement in productivity (here $\alpha > \mu$).
- Case 4 : the reverse assumption to the preceding case ($\alpha < \mu$)
- Case 5 : limiting case of 4 - improvement in productivity is confined to Department I. ($\alpha = \frac{1}{2}$ while $\mu = 1$)
- Case 6 : case 3 tending to be limiting, improvement in productivity being confined to Department II ($\mu = \frac{1}{2}$ while $\alpha \rightarrow 1$)

The first three cases are those dealt with in the main text.

We note :

1 - that in all cases, the real hourly wage rate must rise
($s_2'/s_1' > 1$)

2 - that the surplus value rates and the organic compositions do not change from one phase to the next if improvement in productivity is the same in the 2 Departments.

3 - that the results of 3 and 4 with respect to the surplus value rates and the organic compositions are the reverse of one another.

4 - that the results of 5 are similar to those of 4 of which it is only a limiting case with respect to the evolution of the surplus value rate and the organic compositions.

5 - that, on the other hand, case 3 cannot be taken to the extreme limit ($\bar{a} = 1$) since the problem only allows a solution if $\bar{a} \neq 1$ (and $p > \frac{1}{1-\bar{a}}$). In case 6, we only approach it ($\bar{a} = 0.95$).

When \bar{a} tends to 1 ($\bar{a} \rightarrow 1$), p on the other hand must tend towards ∞ . Quantities n , s and δ remain finite. We note that $\frac{s'2}{s'1} \rightarrow \frac{a-h}{a-bp}$ which is always > 1 . The rates of growth $\frac{E_2}{E_1}$ and $\frac{T_2}{T_1}$ tend towards infinity.

6 - that the necessary labour force increases in all the cases examined here. If on the other hand, we had chosen $\bar{a} = 3/4$, $r = 1/8$, $a = 1$, $h = 20$ and $p = 5$, we would have had a contradiction as regards the labour force ($T_2/T_1 = 11/12$).

9. Final Remarks : the limitations of the model

This model has no more merit than any other model.

Its first limitation is that the first two equations which describe the initial situation in year 0 already define a real wage level for phase 1, technologies for each Department and an allocation of resources (a distribution of capital equipment and labour power between the two Departments). These three exogenous "data" are interdependent. We can start with a different situation, another real wage level and a different corresponding "resource" allocation. A mechanistic philosophy which equates social science with natural science would raise the question of which is the "independent variable" among wage, technologies and

resource allocation. The question raises a false problem since the starting point derives from actual history, i.e., the situation as it was shaped by the previous class struggle. The model simply shows us that, starting with this situation, accumulation in a capitalist mode requires real wages to grow. If the model illustrates the history of central capitalism in England, the starting point would be the year 1850 when the model already represents the essence of what has become English society which can justifiably be termed a capitalist mode. This initial situation is the result of a previous historical period, i.e., the transition from the feudal to the capitalist mode. The model does not apply to this other period since the nature of the system is different. We cannot eliminate historical materialism to replace it by economics.

The second limitation stems directly from the first. Economics - hence the functioning of the capitalist mode - can be put into equation forms. Historical materialism - hence the history of a social formation, whether central or peripheral capitalist, in transition or not - cannot be put into equation forms. Among others the transition to capitalism both at the centre and at the periphery cannot be so treated - and each of these transitions is specific - characterized by its own class alliances, and entails different situations as starting points. Furthermore, the peripheral formations have such a specific nature that this model cannot be applied to them. The limitation can therefore be expressed as follows: the model unilaterally gives the meaning of the objective forces in the capitalist mode; it does not solve the question, which must be placed within the context of historical materialism (of the analysis of concrete social formations) because it cannot even raise this dialectical question.

The result is that the model meets some definite barriers. A striking example lies in the discussion of its conditions. In the hypothetical case where $\alpha = 1$, i.e., where the technology is Department I, is stagnant, p becomes infinite, i.e. equilibrium from one phase to the

next becomes impossible unless one regards each phase as having an infinite duration, which is meaningless. Therefore technology is not neutral and dynamic equilibrium requires it to improve in the context of capitalism. Furthermore, in the same way as the system is governed by the rule of profit maximization, technological research - and hence its results - will be oriented in a certain way so that C and M will be such that the main result of the dynamic equilibrium for the bourgeoisie (the rate of profit) is "acceptable".

Built in order to illustrate unilaterally one aspect of the problem, this model is necessarily a simple one. Firstly it is discontinuous; equilibrium is achieved from one phase to the next by a sudden change in ratios and relative prices, whereas in reality, the adjustment is continuous. Secondly, we assumed that the surplus value was accumulated in toto. This assumption excludes from the model the necessary condition for the reproduction of the bourgeoisie, which is obviously absurd. However this absurdity does not hinder the demonstration of the unilateral aspect of the question concerned. Here, a digression may be useful to throw light on some aspects of the problem: reduced in this way does our model describe a "pure" capitalism without capitalists, that for example of an abstract state? The answer is no since that capitalism would have the characteristic that capital would not be both social and individual (fragmented) but only social. It is a new mode of production and for this reason, we have described the Soviet mode as sui generis.⁷⁹ The dominant state class must certainly consume a proportion of the surplus value to reproduce itself. But with the disappearance of capital circulation, the law which determines this proportion is different from that which characterizes the capitalist mode.

The assumptions also give us a high growth rate : the G.D.P. doubles from one phase to the next (in cases 1, 2, 4, 5) thanks to the "saving" of a high proportion of the product (between 25% and 50% according to the case). We could have come closer to realistic assumptions by considering the proportion of the surplus value consumed to be such

that the "saving rate" would be about 20% of the G.D.P., by considering a different "resource" allocation between the two Departments, and adequate rates of improvement of productivity (α and ρ), in order to obtain for example, a doubling of the GDP from one phase to the next, each phase lasting about 10 years (or an annual rate of growth of 7%), this period corresponding to the period of gestation of investment decisions, obsolescence of equipment and formerly, that of the economic cycle. The model would have been "realistic" but in no way more illuminating.

N O T E S

1. Samir Amin, le Développement inégal, Ed. Minuit, 1973.
2. A. Emmanuel, L'échange inégal, Maspéro, 1969.
3. A. Emmanuel, op. cit, introduction.
4. Samir Amin, L'accumulation à l'échelle mondiale, Anthropos, 1970, pp 173 et suiv; Le développement inégal, Minuit, 1973, pp 171 et suiv.
5. Such, for example, is the mechanistic linear view of Trotskyism according to which the socialist revolution must first originate from the developed capitalist countries. According to Trotsky, the degeneration of the Russian Revolution stemmed from the failure of the German revolution. It does not occur to the Trotskyists that the breakdown of the worker/peasant alliance beginning with the collectivization of the 1930s (in the forms in which it was carried out) was the root basis of the formation of the new class, as pointed out by the Chinese.
6. Bettelheim, L'échange inégal, op.cité, Préface et Remarques théoriques. Politique Aujourd'hui, N° 12, 1969, débat sur l'impérialisme, rapports internationaux et rapports de classe.. Palloix, l'impérialisme et l'échange inégal, l'Homme et la Société N° 12, 1969, citation, Palloix, art. cité p.219.
7. N. Bukharin, "L'économie mondiale et l'impérialisme (1915). Anthropos 1967. See our comments on this error of Bukharin in "Le Développement Inégal" Minuit, 1973, p.125.
8. Bettelheim, Préface et Remarques op. cité.
9. The main purpose of our two last publications (L'accumulation à l'échelle mondiale and Le Développement Inégal) was precisely to try and understand the meaning of the domination of the capitalist mode over other production modes, and to draw the main conclusion concerning the specificity of accumulation at the centre and at the periphery, since our first critique in 1957 (which was still economistic) of "the economics of underdevelopment" we have arrived, as from 1965, at what now seems to us a lucid understanding of these fundamental questions.
10. Emmanuel, Echange inégal et développement inégal, Politique Aujourd'hui, N° 12, 1969.

11. See "Le Développement Inégal" Chap.II: the internal critique of marginalism with which we started in 1957 has led us, from the beginning, to see this tautological feature which reveals the ideological, non-scientific nature of university economics.
12. Emmanuel, Politique Aujourd'hui, art cité, p 79.
13. The movements of peoples throughout history, emigration to the new world, the migrations of labour within the centre, belong to other sets of problems. The international migrations from the periphery to the centre which began with the groups of skilled people (brain drain) have only just begun and are negligible in relation to the size of the labour force still being exploited inside the periphery itself.
14. Palloix, H et S N° 18, La question de l'échange inégal, une critique de l'économie politique, Emmanuel, Politique Aujourd'hui, art. cité p 78.
15. L'échange inégal, op cité, chap 2, section II.
16. Palloix, H et S, N° 18 art. cité p. 21 Bettelheim, Politique Aujourd'hui, art cité, p.87.
17. As we have already shown with respect to precapitalist distant trade which brings autonomous production modes into contact with one another.
18. See note 6.
19. The social, global nature of capital was especially highlighted with regard to its consequences concerning value and "transformation" in chap.VI of Capital (Marx - an unpublished chapter of capital, p.10-18, Paris, 1971). See Claudio Napoleoni, "Lezioni sul capitolo sesto inedito di Marx," op cité.
20. Rossana Rossanda and Charles Bettelheim (II Manifesto, Paris 1971, pp 208 et seq.) have rightly pointed out that it is this proletarianization, completed or not, which has transformed the peasant masses of the periphery into a reserve army for socialism.
21. "Le Développement Inégal" Chap.II. We give in it an internal critique of general equilibrium and quantitativism by showing the necessary nature of this "formal" solution and hence, the ideological, "non-scientific" nature of "economics". Once again, we see that the critique of economics was necessary to reach the level of the underlying philosophy and epistemology, to abandon economism in order to understand history (historical materialism).

22. Emmanuel, H et S N° 18, art. cité p 54.
23. Piero Sraffa, Production of commodities by means of commodities Cambridge 1960.
24. Papers published in this publication.
25. Palloix, H et S, art cité N° 18.
26. Bettlheim, Remarques théoriques, op. cité.
27. For the debate on "markets", see :
Lenin: Economic Romanticism; on the question of markets. Rosa Luxemburg: The accumulation of capital (complete bibliography of the debate at the time) Tugan Baranowsky, "Les crises industrielles en Angleterre" (First German Edition, 1901). Our solution to this debate which we regard as closed is given in "Le Développement Inégal" pp 146 et seq. See further on the question of law of profit rate.
27. We believe we have established the rôle of credit which had not been seen until then. See "Le Développement inégal" Chap.II. This is our answer to the "question of markets".
28. Tugan Baranowsky, op.cit. Our criticism of the "roundabout" goes back to 1957.
29. The question of the mobility of labour obviously falls into this context. It is essential and calls for an inclusion of "national phenomena" (which derive from the political and ideological planes) into the overall analysis which cannot remain at the level of the base (the economic plane). We must therefore go beyond economics into historical materialism.
30. Joan Robinson, The rate of interest and other essays (1951), An Essay on Marxian Economics (1941).
31. Le développement inégal, chap II.
32. E.H. Chamberlin, The Theory of Monopolistic Competition, Boston 1931, Joan Robinson, Imperfect Competition, London 1935, Baran and Sweezy, Monopoly capital, Maspero 1968.
33. P. Baran, The Political Economy of Growth, Maspero 1964, H. Magdoff, L'âge de l'impérialisme Maspero 1970.
34. Le développement inégal, pp 24 et suiv.

35. Orally and in private letters.
36. Emmanuel, Politique Aujourd'hui, art. cité p 79.
37. Le développement inégal, pp 127 et suiv.
38. Emmanuel, Politique Aujourd'hui, art. cité p 80.
39. This, indeed, is the real tendency of the system as can be seen from the development of runaway industries (Le Développement Inégal, pp.157 et seq.) For this discussion see Isaac Minian, Costes comparatives e intercambio desigual et Comercio internacional e intercambio desigual, doc. reunidos, Santiago, 1972 cité plus loin.
40. L'échange inégal, op. cité, p. 30.
41. See "Le Développement Inégal" pp 139 et seq; where we deal with the question of double factorial terms of trade.
42. "Le Développement Inégal", p 117 et seq. Chapter VI. (unpublished) of Capital and Napoleoni's work (op.cit.) support our original thought.
43. This is why we devoted whole chapters of "Le Développement Inégal" to the history of the transition which P.P. Rey has dealt with elsewhere, in empirical terms (colonialisme, néocolonialisme et transition au capitalisme, Maspéro, 1971) and theoretical terms (Les alliances de classes, Maspéro, 1973).
44. Le développement inégal, pp 257 et suiv.
45. "Le Développement Inégal", pp 113 et seq; where we deal with this question at the abstract level, using Ricardo's assumptions. Saigal (article published in this publication) shows that one of the partners loses not only in trading terms but also in potential growth.
46. Le développement inégal, pp 186 et suiv.
47. Le développement inégal, pp 308 et suiv (débat sur la "marginalité").
48. Emmanuel : "L'échange inégal, pp 163 et seq.;
Politique Aujourd'hui, art. cité;
"Le colonialisme des "poor whites" et le mythe de l'impérialisme d'investissements, H et S N° 22, "Les salariés des pays développés sont-ils plus exploités que ceux des pays sous-développés" and "Les effets des variations des salaires dans un système économique ouvert" - Two mimeographed documents, University of Grenoble, June 1969.

49. Hence our conclusion that unequal exchange only started as from the end of the 19th century, in conjunction with monopolies and imperialism, *Le Développement Inégal*, pp 139 et seq.
50. *Le développement inégal*, pp 320 et suiv.
51. Bettelheim, *Politique Aujourd'hui*, art cité.
52. P.P. Rey, *Les alliances de classes*, op cité.
53. Bettelheim, *Le Monde* 11-69 et *Politique Aujourd'hui*, art cité.
54. Ruy Mauro Marini: *Dialectica de la dependencia*, CESO, doc renéoté, Santiago 1972, F.H. Cardoso, notes sur l'état actuel des études sur la dépendance, doc renéoté, IDEP, Dakar 1972.
55. On "transformation" see the complete bibliography in Napoleoni (op.cit) or P. Sweezy's global study "The Theory of Capitalist Development" N.York, 1942 which analyses the original contributions by Bortkiewicz, Nathalie Moszkowska, Konrad Schmidt, etc. See also the articles by J. Winternitz (E.J., Jan 1948) and F. Seton (R.E.S. June 1957).
56. Emmanuel, H et S N° 18.
57. "Le Développement Inégal" (Chap. II, Section I where we deal with the question of relations between planes in the various modes of production.
58. Claudio Napoleoni: "Le zioni sul capitolo sosto inedite di Marx, Torino 1972, Lezionie 15-16-17, (our translation).
59. Oscar Braun, *Comercio internacional e imperialisme*, Sizlo XXI, Buenos Aires, 1973, p 89, notre traduction.
60. This is why we were able to understand that socialism was not "capitalism without capitalists". To think that, in full socialism one should indulge in "economic calculations" similar to those of capitalism is to show the lack of imagination which is a result of economistic alienation. Bettelheim has forcefully highlighted this point, showing that the Chinese, in practice, discard the very concept of accumulation, even so-called "socialist" accumulation. "Révolution culturelle et organisation de la planification", Maspéro, 1973).
61. See "Le Développement Inégal, Chap. II, sections II and IV," for this question in relation to the cycle.