Unequal Exchange Revisited

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Summary

This preliminary paper develops some themes in the author's earlier work, published in *Unequal Exchange* (New Left Books, London 1972).

The paper can be divided into four main sections. The first deals with the international division of labour and foreign trade, developing the critique of Ricardo's theory of comparative advantage using both algebraic and numerical examples. The critique of the theory of comparative advantage is extended to deal more fully with the Heckscher-Ohlin theory of factor proportions. The second section deals with the formation of international values. After spelling out what is called 'the unmanageable reality' for the factor proportions theory, it shows how the assumptions of the factor proportions theory should in fact be reversed.The Theorem of Unequal Exchange is then stated and proven in terms of the Sraffa system modified to encompass international exchange. The section ends with an analysis of the tendency towards the international equalization of the rate of profit. The third section examines in some detail the economic and political factors which determine wages, and the final section deals with the question of unequal exchange and uneven development. Here, the relationship between consumption and accumulation, and the revolutionary consequences of the analysis are set out.

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1 International Division of Labour and Foreign Trade

1.1 Private Exchange and the Social Framework

All economic relations between men or groups of men – communities, nations, etc., – are directly or indirectly connected with a certain division of labour. inside of each community this takes the form of a "social division of labour"; outside it takes the form of an "international division of labour".

In turn, every division of labour, be it "social" or "international" implies some given rules of distribution of the product, in such a way that the one is the necessary condition of the other.

But neither the social division of labour nor the international division necessarily implies a private exchange of the product. This is important for it is on this point that the basic mistake of Adam Smith lies.

On the one hand, he noticed that no human society could exist without some division of labour, human needs being too great to be satisfied by an individual effort. He considered, on the other hand, that in the societies known to him the distribution of the products was indeed carried on through exchanges between independent producers. He therefore came to the conclusion that the propensity to exchange privately is as much an integral part of human nature as is the division of labour.

Now, we should of course admit that individual man – a social animal – having to appropriate nature in order to reproduce himself, is unable to do so without some sort of collaboration with other men. This entails the dividing up of the many tasks that this appropriation involves. It is, further, to be admitted that such cooperation in production implies a distribution of the whole product among the participants. But it does not follow at all from these premises that the only way of distribution is the private one.

In the primitive (tribal) community, a social division of labour does exist, but there is no private exchange, except occasionally, and to such a marginal degree that the essential process of the reproduction of social life is in no way interfered with. The same holds for the future socialist society when the market will have disappeared.

In these two types of integrated society, the social division of labour and the subsequent distribution of the product form a single inseparable process, set up *ex ante* by a single direct act of the decision-making centre, be it the chief and elders in tribal collectivism, or the plan in the advanced socialist society.

On the contrary, in the type of society where the distribution of the product is carried out by means of a system of privately agreed-upon exchanges (mercantile relations), it is those exchanges and their *ex post*ex outcome that determine *indirectly* the social division of labour through a series of micro-economic decisions taken at the level of *independent* producers.

Consequently, the second part of Adam Smith's statement is unsupported. Social division of labour is indeed a permanent constituent of the social nature of man; private exchange and commerce are just one of its historic elements.

1.2 Private Exchange and the International Framework

Things are somehow different when considered in the international context. The Central planning of either division of labour or distribution of the product has never existed.

Even in the epoch of tribal collectivism, when the primitive communities exchanged their products between them, they always did it on a transactional basis and it is this fact that led some economists to contend that foreign trade historically preceded domestic trade. As regards the present, even the so-called States of transition towards socialism, more or less planned, regardless of the extent to which they have abolished their domestic trade, still present themselves internationally as independent bargaining dealers.[1]

However, the fact that, up to the present time, the market has always conditioned the international division of labour and its extension is not sufficient in itself for reaching the conclusion that things could not be otherwise. One can perfectly well conceive of a socialist world plan implementing centrally the division of labour and the distribution of the produce on a planetary scale.

1.3 The Determination of an International Division of Labor

When we say that the International division of labour has always, up to now, taken place on a private trade basis, we must add an important qualification. Although not centrally co-ordinated (planned) the international division of labour was nonetheless to a certain extent socio-historic (institutionally and politically) instead of being geo–economic. Instead of being the outcome of objective laws, that is, the effect of the variety of the natural resources of each country, the international division of labour has often been determined, if not globally, at least piecemeal, for the dominated countries by the deliberate action of the dominant countries.

Products which today seem indigenous such as cocoa, palm oil, and groundnuts in Western Africa, grapes in Algeria, cotton in Egypt, maize, maioc, many varieties of bananas in Black Africa have often been the object of either entirely artificial transplantation or a deliberate expansion of preexisting cultivation, far exceeding the proportions which would be suggested by the geo-climatic environment. The famous comment by Marx in his *Discourse on Free-Trade* seems in this connection quite plausible.

[1] We do not take into account here certain attempts of *ex ante* planning of exchanges and of the international division of labour within certain groups of countries, as, for instance, the COMECON. By any standard, these attempts do not seem to have gone very far.

> "You believe, perhaps, gentlemen, that the production of coffee and sugar is the natural destiny of the West Indies. Two centuries ago, nature, which does not trouble herself about commerce, had planted neither sugar-cane nor coffee trees there."*

Despite the existence of an international market and of a foreign trade based on transactional exchanges, which created a certain international division of labour, the evolution of that division was marked by innumerable discontinuities set up by the interference of the most advanced states when dealing with the rest of the world.

This interference either took place with the political domination of certain areas in the "rest of the world" or without this domination. We can include under the first heading all official measures implemented in the context of conquest and colonization, ranging from the open violence of direct plunder to the enactment in dependent territories of customs tariffs favourable to the home country. In between lay all other legislative restrictions on the products of the dominated country as well as regulations regarding maritime transport, such as the so-called "Navigation Act", and so on. In the second category – deliberate interference with free trade without the political domination of the partner – we include all protectionist measures, direct or indirect, taken within the advanced countries themselves. Direct measures include prohibitions or quotas on certain imports or exports, legislative restrictions on the free circulation of monetized metals etc. indirect measures include customs duties of any kind on imports or on exports.

1.4 Mercantilism

The official steps mentioned above, were, during the whole period, from about the beginning of the 16^{th} to the end of the 18^{th} century, influenced by the economic infrastructure of the dominating country. An ideological superstructure called "mercantilism" corresponded to this infrastructure.

Mercantilism is less a system of Political Economy and more a doctrine of economic policy. Mercantilist authors, particularly those of the 16^{th}, 17^{th} and the early 18^{th} century, are not theoreticians and it is admitted that Economics did not yet exist as a science. These authors appear as experts who endeavoured to create for their respective governments useful trade policies for the beneficial management of the affairs of the State, particularly in the field of its economic relations with foreign countries. They did not worry about rationalizing the world economy, the very concept of which was beyond their scope. Assuming that the only possible profit in international economic relations is the "alienation profit", they unhypocritically sought, each one for the benefit of his own country, ways and means of getting richer to the detriment of the others. "The city in its trade must care about itself, never about other peoples", Aristotle had already said.

*See: *Marx/Engels Collected Works* Vol. 6, p. 450 - Editors

Mercantilists could not even imagine that it was at all possible for one to get richer without a proportionate impoverishment of one's partner. According to Colbert, trade is like war. The victory of the one party meant *ipso facto* the defeat of the other.

Obsessed by the fear of unemployment which (notwithstanding widespread opinion to the contrary) was in their time more severe than in any other later period under advanced capitalism, the mercantilists were mainly interested in seeking outlets abroad for the national product. For this purpose, they recommended two sorts of measures, the first one quantitative, the second, qualitative.

1. A policy of simultaneous autarky and trade expansion. The apparent contradiction between these two targets was resolved by a one-way trade, that is, by a permanent surplus on the balance of trade.

2. A policy of close selection of exports and imports so that the exports embody the most possible, and the imports the least possible amount of living labour. This meant that they attempted to export manufactured goods and import raw materials.

John Law, who was not a mercantilist in the proper sense, was nonetheless clearly asserting towards the end of the 17^{th} century that the greatest blessing in foreign trade was for a country to be supplied with raw materials from other countries and to find a market for its own manufactured products in those same countries. In this context, he complained about French wool being sent out to Holland and coming back afterwards under the form of manufactured articles.

The orthodox mercantilists of the 16^{th} and 17^{th} centuries were more outspoken. Thus Forbonnais could write:

> "It is a law, springing out of the very nature of the colonies, that they ought to have no crops or industry which could compete with crops and industry of the home country".

He blamed the Europeans, particularly the British, for having let sugar-refineries be established in the colonies which produced sugar. [2]

[2] *Elements du Commerce*, Ed 1754,Vol 1, p. 372, 393. The economic policy of the mercantilists, indifferently called the mercantilist system or nationalist system, has survived its promoters and constitutes a constant element of the everyday practice of developed capitalist countries. As late as 1907, Andrew Bonnar Law, afterwards Prime Minister of Britain, contended that the preferential regime for the Empire meant merely that a greater part of our imports must be composed of raw materials destined to be processed in the country, and that a greater and greater proportion of our exports must be composed of manufactured products providing jobs for our workers. (quoted by Bennett, *The Concept of Empire*, Edinburgh, 1952).

As regards the quest for specialization in, (and consequently the quest for outlets abroad for), those products embodying more manpower, a qualification must be added. The point obviously is more manpower in relation to the *consumed* constant Capital, that is, in relation to the other material inputs entering into the production of a unit of the output, not in relation to the fixed Capital or to the total Capital invested.

Consequently, the matter is *not* one of "labour intensive" branches ("low organic composition of Capital"), which on the contrary are considered as disadvantageous.

1.5 Classical Economics and Free-Trade

Absolute Costs – Comparative Costs

A first reaction against mercantilism came from Quesnay and the French Pysiocrats towards the middle of the 18^{th} century. But regarding foreign trade, it is Adam Smith and Ricardo in England who mark the decisive turning-point in economic thought.

For the first time a class – the industrialists – came into power that was interested in a two-way trade, in real exchanges, which would widen the international division of labour.

This class did not wish merely to import raw materials and export manufactured goods, something which everybody agreed upon. It also needed cheap provisions for its workers and this was something which ran totally counter to the interests of landowners whose rents weighed considerably on corn prices. It is on this point that Ricardo diverges from Adam Smith.

The latter had already realised the futility of seeking surplus for surplus' sake, if only for the simple reason that if all countries did the same thing, international trade would be blocked and there would be no surplus anywhere. It is the equilibrated balance of trade with a greater turnover in both directions which was the goal to reach.

However, by linking international exchange to absolute cost, Adam Smith prevented the solution to the problem. For, in absolute terms, Britain was more productive than the rest of the world not only in manufactures, but also, to a lesser, but still considerable degree, in agricultural production. [3] Now, if landowners rents were reduced, British corn prices would become lower than those of foreign countries. Under these conditions it was not clear what Britain would import from abroad (except some raw materials like cotton or sugar, or some particular commodity like tea) in order to counter-balance her massive exports of manufactured goods. That is, it was not clear if substantial imports of corn were to provide a counter-part, or if corn outflows – however irregular were to be added to the export side.

It is the solution of this problem that Ricardo attempted with his comparative costs theorem. The solution consists in suggesting that, notwithstanding the superiority of Britain in corn production, free exchange would not induce exports of corn but imports because her superiority in manufactures was even greater than the one she enjoyed in production from the land.

[3] Here we have one of those forgotten facts of economic reality. Britain was a great exporter of corn, up to and including the 18^{th} century. At that time she was considered as one of the granaries of Europe. It is only during the 18^{th} century that little by little this status declined and it is only during the 19^{th} century that the situation was reversed.

Torrens formulated this idea in his "Essay on the external corn trade", 1815, in the following words:

> "If England should have acquired such a degree of skill in manufactures, that, with any given portion of her Capital, she could prepare a quantity of cloth, for which the Polish cultivator would give a greater quantity of corn than she could, with the same portion of Capital, raise from her own soil, then tracts of her territory though they should be equal, nay, even though they should be superior to the lands in Poland, will be neglected; and a part of her supply of corn will be imported from that country. For, though the Capital employed in cultivating at home might bring an excess of profit over the Capital employed in cultivating abroad, yet, under the supposition. the Capital which should be employed in manufacturing would obtain a still greater excess of profit; and this greater excess of profit would determine the direction of our industry."

At about the same time. Ricardo completed his theorem with the famous example of Portuguese wine and British cloth: Portugal is able to produce one unit of wine with 80 units of labour (hours, days, etc.,) and one unit of cloth with 90, while Britain needs 120 units of labour to produce the former and 100 to produce the latter.

Countries	Wine	Cloth
Portugal	80	90
Britain	120	100

Although, according to absolute cost; both products cost less in Portugal, this country will nevertheless specialize in wine and leave cloth to Britain. The respective specializations are determined by the fact that the wine/ cloth cost ratio is more favourable in Portugal than in Britain and the cloth/wine ratio more favourable in Britain than in Portugal, that is, by the fact that:

$$\frac{8}{9} < \frac{12}{10} \quad \text{or that} \quad \frac{10}{12} < \frac{9}{8}$$

In this example, it is Portugal which is the most productive country in both branches under consideration. But this ordering is merely an assumption, outside the real scope of the theorem. What matters is that, despite the general absolute disadvantage of one of the countries, this country (Britain, under the circumstances) will be able to specialize in one of the products, namely in the one in which she has a relative advantage reflecting the fact that her absolute disadvantage in it is less important.

Formulated in this way, the theorem looks like an unfruitful intellectual exercise. But what Ricardo was interested in was to show that under whatever circumstances, the opening and liberalization of international trade was profitable to all participating countries.

This optimization could be expressed in two ways: maximization of the output for the same productive effort (cost), or minimization of this effort for the same output. It is this second form which was adopted by Ricardo in his example.

Before trading began, the whole system (Britain-Portugal) had to spend a total of 390 units of labour in order to produce two units of wine and two units of cloth. With the opening up of trade and the subsequent specialization of each of the countries in one of the two products, 360 units of labour would be sufficient for the same result:

	Before Trade			After Trade		
	Wine	Cloth	Total	Wine	Cloth	Total
Portugal	80	90	170	160	-	160
Britain	120	100	220	-	200	200
			390			360

Such a theory could provide a century-late vindication of the Methuen treaty of 1703 establishing freedom of trade between the two countries for the greatest "mutual benefit" (according to the wording of the treaty)and assigning to Portugal the agricultural vocation. The theory has constituted ever since then the cornerstone of the free- trade argument. It was such a glaring and at the same time unexpected truth, that it seemed consistent with the common interests of mankind to send out the British gunboats in order to bring the good message to the most distant Barbarians, who persisted in opposing the free penetration of liberating and welfare-generating trade.[4]

1.6 Some Critical Comments on 'Comparative Costs'

Physical and Monetary Costs

The first fact to be acknowledged on reading the comparative costs theorem is that its author argues as if each of the trading countries – Portugal and Britain – was a single economic subject possessing the decision-making power (for example, as if Britain was Billy-Rose and Portugal his secretary) to produce and exchange wine and cloth.

If this were the case it would be obvious that each of these two countries would be interested only in the physical costs involved in each line, in other words, in the social costs. So, if the wine-cloth social cost ratio is 8/9 in Portugal, it is obvious that Portugal will readily give up cloth production and devote herself to the production of wine, as soon as she is offered on the foreign market

[4]At the same time, this theorem was given the force of dogma by academic economics. It became a commonplace reproduced in all textbooks on foreign trade. A humorous version presented by Kindleberger enjoyed a wide audience: Billy-Rose a well known personality of New York, was a theatrical impressario, but it so happened that he was, at the same time, a world Champion typist. In spite of this, he found it advantageous to hire a secretary, because notwithstanding his absolute advantage over his secretary in the field of typewriting, this advantage became negligible when compared with the one he enjoyed over her in the other activities of his profession. It was therefore advantageous that both specialize.

more than 8/9 of a unit of cloth for one unit of wine. Likewise, Britain, where wine costs 12/10 cloth will give up production of wine, as soon as she can get it through exchange by giving less than 12/10 of her cloth. The choice of the "right" specialization within both countries is, under the circumstances, beyond doubt.

But in the real world, the one of capitalist relations, and more particularly the one of free-enterprise, which, furthermore, is the one advocated by the promoters of the theorem, there are not merely two countries, but a crowd of Portuguese business-men on the one hand and a crowd of British business-men on the other. These independent producers are acting individually and with a view to maximizing their profit, which means that what they are interested in minimizing is not the social (physical) cost of wine and cloth but their private monetary cost.

In order that the actions of business men lead to the optimal specialization, it is therefore necessary that the ratio of monetary costs be equal to the ratio of physical costs. In other words, it is necessary that the quantity ratio of the factors, needed for producing wine and cloth, be equal to the price ratio of these factors. For this price is the only element which is of interest to the independent producers.

This equality holds if there is but one factor of production. It does not if there are several.

A Single Factor

Let us assume that the only factor of production in our system, and the before the only constituent of the social cost, is labour, which is homogenous, that is, simple labour of an identical quality everywhere.
Let:

P_{wl} be the quantity of labour for producing one unit of wine in Portugal.

P_{cl} be the quantity of labour for producing one cloth in Portugal.

E_{wl} be the quantity of labour for producing one unit of wine in Britain.

E_{cl} be the quantity of labour for producing one cloth in Britain.

Ricardo's says that if:

$$\frac{P_{wl}}{P_{cl}} < \frac{E_{wl}}{E_{cl}}$$

Portugal will specialize in wine and England in cloth and that these are the optimal specializations.

We contend that independent producers do not take into account quantities of labour spent on the production of wine and cloth but what they pay for these quantities. We should therefore examine whether or not the two ways of assessing cost lead to the same results.

If the remuneration of one unit of labour is x in Portugal and y in England, the cost ratios which will be relevant for the independent producers will no longer be $\frac{P_{wl}}{P_{cl}}$ in Portugal and $\frac{E_{wl}}{E_{cl}}$ in England, but $\frac{x(P_{wl})}{x(P_{cl})}$ for the former and $\frac{y(E_{wl})}{y(E_{cl})}$ for the latter.

Nevertheless, there can be no bias therefrom for respective decisions. For it is obvious that:

$$\frac{x(P_{wl})}{x(P_{cl})} = \frac{P_{wl}}{P_{cl}} \quad \text{and} \quad \frac{y(E_{wl})}{y(E_{cl})} = \frac{E_{wl}}{E_{cl}}$$

for any value of x and y.
In other words if

$$\frac{P_{wl}}{P_{cl}} < \frac{E_{wl}}{E_{cl}}$$

then

$$\frac{x(P_{wl})}{x(P_{cl})} < \frac{y(E_{wl})}{y(E_{cl})}$$

whatever x and y may be.

Consequently, in the case of a single factor, the capitalist's cost calculation made on the basis of the remuneration of this factor, leads to the same results (therefore it is optimal) as the cost calculation which would be made by an integrated (planned) society on the basis of the quantities of this same factor.

To go back to Ricardo's example, we say that Portugal will specialize in wine and England in cloth because $80/90 < 120/100$. If wages were 10 escudos for one unit of labour in Portugal and 20 shillings in England, the above inequality would become $800/900 < 2400/2000$ and nothing would be changed. One can vary the rate of wages in the one and/or other country (and also, if one likes, the rate of exchange): it will always be more profitable for Portugal (or its entrepreneurs) to get cloth through exchange rather than to produce it locally. Likewise, it will always be more profitable for England to get her wine through exchange rather than produce it herself, and this holds, irrespective of whether the specialization is decided in a macro-economic way by the society or in a micro-economic way by the individual firm.

Several Factors

a) In equal proportions

The situation would be the same if we had several factors of production, with each entering in the same proportion into both wine and cloth in each country (i.e. equal organic compositions).

Suppose there were any two factors (labour and capital, or simple and qualified labour, or labour and land etc.,) symbolized by 1 and r, so that $P_{wr}, P_{cr}, E_{wr}, E_{cr}$ are the quantities of the second factor needed to produce respectively one unit of wine in Portugal, one unit of cloth in Portugal, one unit of wine in England, and one unit of cloth in England, respectively.

If:

x = remuneration of one l in Portugal

y = " " " r in Portugal

z = " " " l in England

w = " " " r in England

if, further:

$$\frac{P_{wl}}{P_{wr}} = \frac{P_{cl}}{P_{cr}} \quad \text{and} \quad \frac{E_{wl}}{E_{wr}} = \frac{E_{cl}}{E_{cr}}$$

(i.e., if the organic compositions of both branches in each country are equal) and, if, lastly:

$$\frac{x(P_{wl}) + y(P_{wr})}{x(P_{cl}) + y(P_{cr})} < \frac{z(E_{wl}) + v(E_{wr})}{z(E_{cl}) + v(E_{cr})}$$

then

$$\frac{x'(P_{wl}) + y'(P_{wr})}{x'(P_{cl}) + y'(P_{cr})} < \frac{z'(E_{wl}) + v'(E_{wr})}{z'(E_{cl}) + v'(E_{cr})}$$

for any value of x', y', z', v'. That is to say, the choice of specialization is independent of the variations in the rates of remuneration.

Example

Let us suppose that there are two factors, labour and capital (l,k), entering into the production of these two commodities in the proportion of 1:1 in Portugal and 3:1 in England. In this case, the costs assumed by Ricardo, 80, 90, 120, 100, respectively could be split up as follows:

$$\frac{40l + 40k}{45l + 45k} \qquad \frac{90l + 30k}{75l + 25k}$$

If entrepreneurs pay the unit of l (labour) 2 escudos in Portugal and 3 shillings in England and the unit of K, one escudo in Portugal and 1 shilling in England, we will have the following cost ratio in Portugal:

$$\frac{2 * 40 + 1 * 40}{2 * 45 + 1 * 45} = \frac{120}{135} = \frac{8}{9}$$

and the following ratio for England:

$$\frac{2 * 90 + 1 * 30}{2 * 75 + 1 * 25} = \frac{210}{175} = \frac{12}{10}$$

and nothing will have changed as far as the ratios are concerned.

One can vary at will the respective rates of remuneration of l and k, in the one and/or the other country – wine will always be the most advantageous specialization for Portugal and cloth for England, whatever the multiplicand of factor quantities in each country. Consequently the micro-economic reckoning leads us to the same results as the macro-economic reckoning and Ricardo's theorem remains valid.

b) In unequal proportions

However, up to now, the assumptions upon which our analysis was based have been unrealistic.

In the real world, not only is there more than one factor entering into the various products but their respective proportions are unequal from branch to branch. In certain branches the proportion of Capital as compared to labour (the organic composition of capital or the capital-intensity) is greater than in others. The same can be said for the proportion of skilled to unskilled labour, or for the proportion of land as compared to other factors, etc.
In that case:

$$\frac{P_{wl}}{P_{wr}} \neq \frac{P_{cl}}{P_{cr}} \quad \text{and} \quad \frac{E_{wl}}{E_{wr}} \neq \frac{E_{cl}}{E_{cr}}$$

and, consequently the inequality,

$$\frac{x'(P_{wl}) + y'(P_{wr})}{x'(P_{cl}) + y'(P_{cr})} < \frac{z'(E_{wl}) + v'(E_{wr})}{z'(E_{cl}) + v'(E_{cr})}$$

does not necessarily hold for any value of x', y', z', v', and it may be reversed. This means that the micro-economic decision-making of the enterprise based on the remunerations of the factors may lead to the "wrong" (suboptimal) specialization.

Example

Let us assume that to produce wine and cloth in these two countries we only need two factors, engineers and labourers. Let us further assume that their proportion in the production of wine is one hour of engineer 's work for every 70 hours of labourer's work and in the production of cloth, one hour of engineer's work for 5 hours of labourer's work. Let us lastly assume that in both countries one engineer's hour is equivalent to 10 labourer's hours. Comparative costs in Ricardo's example will be split up as follows:

Before trade (in hours of living labour)

	Wine			Cloth			Totals	
Countries	concrete labour	coefficient	abstract labour	concrete labour	coefficient	abstract labour	Engineers	labourers
PORTUGAL								
Engineer	1	10	10	6	10	60	7	
Labourer	70	1	70	30	1	30		100
			80			**90**		
ENGLAND								
Engineer	$1\frac{1}{2}$	10	15	$6\frac{2}{3}$	10	$66\frac{2}{3}$	$8\frac{1}{6}$	
Labourer	105	1	105	$33\frac{1}{3}$	1	$33\frac{1}{3}$		$138\frac{1}{3}$
			120			**100**		
							$15\frac{1}{6}$	$238\frac{1}{3}$

Portugal will therefore specialize in wine and England in cloth.

After trade (in hours of living labour)

	Wine			Cloth			Totals	
Countries	concrete labour	coefficient	abstract labour	concrete labour	coefficient	abstract labour	Engineers	labourers
PORTUGAL								
Engineer	2	10	20	-	-	-	2	
Labourer	140	1	140	-	-	-		140
ENGLAND								
Engineer	-	-	-	$13\frac{1}{3}$	10	$133\frac{1}{3}$	$13\frac{1}{3}$	
Labourer	-	-	-	$66\frac{2}{3}$	1	$66\frac{2}{3}$		$66\frac{2}{3}$
			160			200	$15\frac{1}{3}$	$206\frac{2}{3}$

Balance of the whole (in hours of living labour)

	Engineers	Labourers	Abstract
Before Trade	$15\frac{1}{6}$	$238\frac{1}{3}$	390
After Trade	$15\frac{1}{3}$	$206\frac{2}{3}$	360
Differences	$+\frac{1}{6}$	$-31\frac{2}{3}$	-30

With trade and specialization, the whole system, Portugal and England, spends, for the same final result, an extra 1/6 of an engineer's hour and saves 31 2/3 labourer's hours. Since in neither country is the engineer's hour worth more than 10 labourer's hours, the total system draws an absolute advantage from the opening of the trade. This advantage is equivalent to 30 hours of abstract labour. Let us now assume that, following a socio-cultural change in Portugal, the engineer's hour is no longer worth 10 but only 5 labourer's hours, the English wage-rates and all other conditions remaining unchanged. Comparative costs would work out as follows:

Before trade (in hours of living labour)

	Wine			Cloth			Totals	
Countries	concrete labour	coefficient	abstract labour	concrete labour	coefficient	abstract labour	Engineers	labourers
PORTUGAL								
Engineer	1	5	5	6	5	30	7	
Labourer	70	1	70	30	1	30		100
			75			**60**		
ENGLAND								
Engineer	$1\frac{1}{2}$	10	15	$6\frac{2}{3}$	10	$66\frac{2}{3}$	$8\frac{1}{6}$	
Labourer	105	1	105	$33\frac{1}{3}$	1	$33\frac{1}{3}$		$138\frac{1}{3}$
			120			**100**	$15\frac{1}{6}$	$238\frac{1}{3}$

Although the objective conditions of production have not changed – the amounts of concrete labour appearing in the two last columns remain unchanged – Portugal has now a comparative advantage and will specialize in cloth, since $60/75 < 100/120$, while England has a comparative advantage and will specialize in wine, since $120/100 < 75/60$.

But then the effect for the whole system is detrimental, as is shown in the following tables:

After trade (in hours of living labour)

	Wine			Cloth			Totals	
Countries	concrete labour	coefficient	abstract labour	concrete labour	coefficient	abstract labour	Engineers	labourers
PORTUGAL								
Engineer	-	-	-	12	5	60	12	
Labourer	-	-	-	60	1	60		60
ENGLAND								
Engineer	3	10	30	-	-	-	3	
Labourer	210	1	210	-	-	-		210
			240			120	15	270

	Engineers	Labourers
Before Trade	$15\frac{1}{6}$	$238\frac{1}{3}$
After Trade	15	270
Differences	$-\frac{1}{6}$	$+31\frac{2}{3}$

The balance-sheet of the International division of labour carried out on the basis of comparative cost is therefore negative, since, for 1/6 of an engineer's hour saved, the whole System, Portugal-England, spends 31 2/3 extra labourer's hours, in order to obtain the same output as in the before-trade situation, that is, two units of cloth and two units of wine. Given that in neither country is the engineer's hour worth more than 10 labourer's hours, the overall result is disadvantageous.

We conclude that Ricardo's theory of comparative cost can only provide the optimal specialization if we accept the hypothesis that the monetary cost, made up of the market prices of the factors, reflects accurately the social cost, or in other words, that the price of each factor is proportionate to its actual contribution to the social product. Here again, we come across the basic postulate of the liberal economists: what is good for society is good for the private firm and vice versa. If we reject this postulate, the theorem of comparative costs collapses.

It is this postulate that the Heckscher-Ohlin theory of the proportions of factors has added to the Ricardian theory of "comparative costs", in order to be able to cope with objections of the sort we have raised above.

1.7 The Theory of Specialization According to Factor Endowments

Bertil Ohlin begins, as we ourselves have done above, by refuting the hypothesis of the equality of factor proportions entering into each product. Different products require different factor proportions. But, at the same time, each country is *endowed* with given quantities of each factor. The latter are assumed to be not only immobile from country to country, but entirely fixed within each country.

Under these circumstances, each country specializes in the branches which provide the largest employment for her most abundant factor and avoids the branches which require relatively large proportions of her most scarce factor.

By so doing, she increases the demand for her most abundant factor and reduces the demand for her most scarce factor. It follows that as she advances on the specialization path, her most abundant factor becomes less and less abundant and her most scarce one becomes less and less scarce. The equilibrium is reached at the point of full-employment of all her factors. This point of equilibrium corresponds to the optimal specialization for the whole world and for each country taken separately.

How can it be that a country is able to choose her specializations according to her most abundant factors, since it is not the country but her independent producers who decide?

Heckscher-Ohlin do not tackle this question. For them, as for all the neoclassicals, it is an established fact that the price of a factor, like the price of any other commodity, is proportionate to its relative scarcity. It follows that the most abundant factor is automatically the cheapest one just as the scarcest factor is the most expensive one. So, it is by endeavouring to minimize their own cost of production that the entrepreneurs will choose the specializations which are optimal for the society as a whole.

To the argument regarding suboptimal specialization, Heckscher-Ohlin would answer that if the price of engineers drops in Portugal from 10 to 5 times the labourer's wage, or if the price of land doubles in this country, as we have assumed in our example, this means that engineers have become abundant in Portugal, scarce in England or that land has become scarce in Portugal and abundant in England.

Under these circumstances, there is nothing abnormal or suboptimal in Portugal specializing in cloth and England specializing in wine. Portugal, being unable to export her excess of engineers, exports goods embodying much engineer work and England, being unable to export her land, exports goods rich in "land". Mobility of goods serves as a substitute for mobility of factors. Instead of importing Capital one imports capital-intensive goods and instead of importing technicians one imports goods embodying much technical work, and so on.

In this manner, a close link is set up between international trade and the distribution of revenue. Trade will tend to equalize not only prices of goods, but also prices of factors. This is because, on these premises, if trade is free, countries where land and unskilled manpower are abundant and cheap, while

Capital and technicians are scarce and expensive, would specialize in agricultural production and give up manufactures. Consequently, the demand for land and unskilled labour will be increased and the prices of these factors will increase, while the price of Capital and of skilled labour will decrease.

The opposite effect will take place in the countries which are well supplied with Capital and technicians but "poor" in land and unskilled labour. These two movements will finally bring about an equalization of the price of each factor, labourer's wage, ground-rent, salary of technicians, rate of profit, etc., within all trading countries.

1.8 Criticism of the Theory of Factor Proportions

The theorem of Heckscher-Ohlin is grounded essentially upon two very strong assumptions: distribution of income proportionate to the relative scarcities of factors, and immobility-immutability of all factors. Both are unacceptable.

The first assumption rules out any idea of the distribution of national income being influenced by the struggle of antagonistic classes and groups, or, more generally, by the relationship of power between them. This is inconsistent with all historical experience. The rate of profit is surely not a scarcity price, if by that notion we mean that in each country it increases or decreases as available Capital per head of inhabitant decreases or increases. Neither is the wage a scarcity price in the sense that it rises of falls as the number of labourers per unit of Capital decreases or increases.

The second assumption not only denies Capital any mobility on the international plane, but does not allow at all for the fact that, with the exception of certain geo-climatic factors which are indeed given and immutable, factors of production are themselves produced within each country and consequently cannot be considered as inelastic, however immobile they are on the International plane.

When one points out that Germany's traditional specialization in Chemicals is due to her availability of an abundance of chemists, we feel that the effect is somehow substituted for the cause. Nobody is a chemist by birth and it seems to us hard to admit that Germans have a congenital predisposition for handling test-tubes. Chemists have to be formed, "produced", by picking them up out of the same rough human stock and it seems to us more likely that it is on the contrary *because* there are so many important Chemical plants in Germany‘ offering attractive jobs to chemists that a relatively high proportion of young Germans choose this discipline when entering University. As Kindleberger (*Foreign Trade and the National Economy*, Yale 1962) very adequately puts it, instead of making her foreign trade fit the proportions of factors, a country can modify these proportions to make them fit the orientations of her trade.

Factors of production are neither as immobile in space nor as immutable in time, as Heckscher-Ohlin assume them to be.

But the Heckscher-Ohlin theorem is not only theoretically unsatisfactory; it has also, in its main aspects, been challenged empirically.

1. After more than a century of expansion of international trade, not only is there not to be found at world level the slightest tendency of the equalization of factor revenues, but, moreover, if we consider the main factor of production, the labour force, we are faced with a continuous widening of the gap, at least of the gap between developed and underdeveloped countries.

   Heckscher-Ohlin have reacted to these historical facts by outlining a set of factors which counterbalance the effects dof their law: shift of techniques within the same branch, replacing a shift of branches, economies of scale, transport expenses, taxes, etc. All this, however, could explain a possible slowing down of the rhythm of the equalization of revenues suggested by the theory; it could by no means explain the actual existence of an opposite tendency towards a greater inequality.

2. All attempts made up to the present moment for a statistical verification of the theorem have failed. Furthermore, a thorough study of American specializations and exports, carried on by Leontieff, led to the unexpected conclusion, known henceforth as the Leontieff paradox, that the specializations and exports of a country as rich in Capital as the United States are on the whole and on average, labour–intensive and not capital-intensive.

2 International Value

As we have already seen, Ricardo was only interested in the process of specialization and in the advantage the whole system could reap from an international division of labour based on comparative costs. In so far as these reflect objective conditions of production, they set two limits between which actual terms of trade fluctuate: 8/9 cloth < one wine < 12/10 cloth.

The comparison between these two limits determines respective specializations and this is as far as Ricardo is interested in the matter. How the actual terms of trade $\frac{1\,wine}{1\,cloth}$ will move between these limits, Ricardo does not care about. For him, this zone is an indeterminate zone.

James Mill, in his *Elements of Political Economy* (1826) was the first to notice that Ricardo had not solved the problem, that is, he had not answered the question about the way the two countries will share the advantage of comparative costs. However, he did not develop this point any further.

A few others, such as Longfield and Torrens, suggested that the point of equilibrium depends on the demand. But it was J.S. Mill, in *Essays on some unsettled questions*, published in 1844 and containing essays dated 1829 and 1830, who systematically dealt with the matter.

> "... the exchangeable value of these commodities relatively to each other will adjust itself to the inclinations and circumstances of the consumers on both sides, in such manner that the quantities required by each country, of the article which it imports from its neighbour, shall be exactly sufficient to pay for one another ..." (Mill, J. S., *Essays on some unsettled questions*, I. p.12).

However, it is in his *Principles* that J.S. Mill studies this question thoroughly. He then notices that in international trade the classical law of value which established a direct link between the rate of exchange of two commodities and their respective conditions of production is no longer valid:

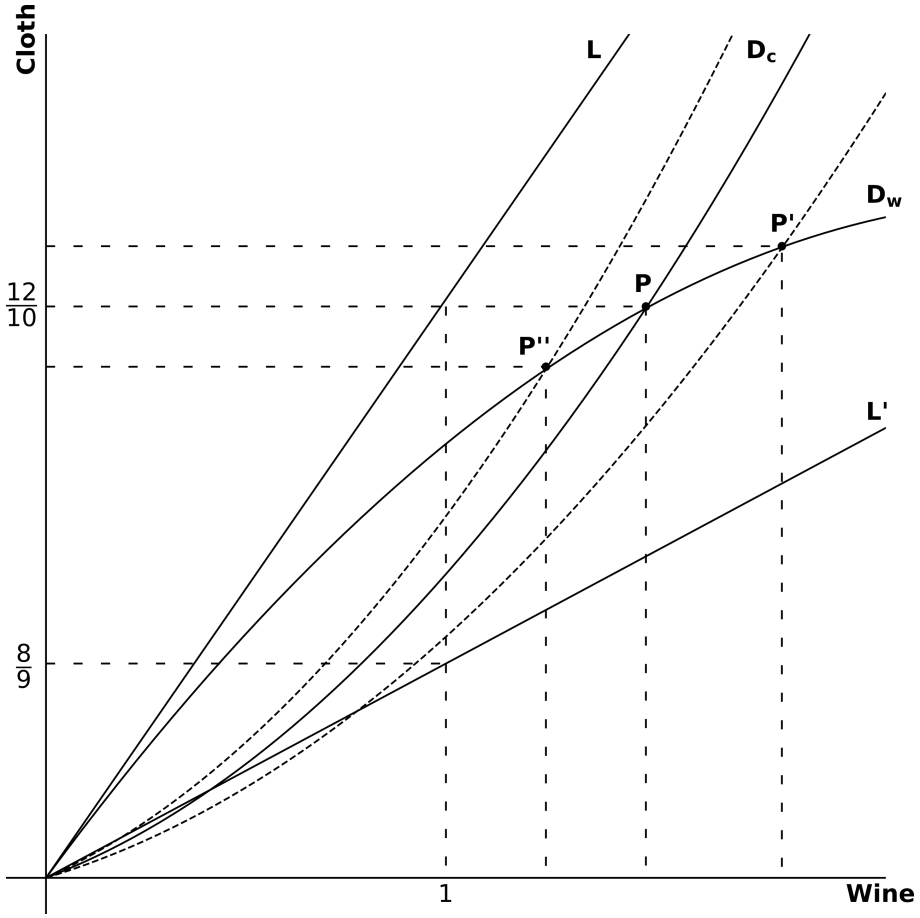
> "... the values of foreign commodities depend on the terms of international exchange. What, then, do these depend upon? ... We have seen that it is not their cost of production... We must accordingly... fail back upon an antecedent law, that of supply and demand." (J.S. Mill, *Principles* II, p.122)

And some pages further on, he puts forward the notion of the elasticity of demand without using its name:

> "If, therefore, it be asked what country draws to itself the greatest share of the advantage of any trade it carries on, the answer is, the country for whose productions there is in other countries the greatest demand and a demand *the most susceptible* of increase from additional cheapness." (idem. p.131)

So, it is the interplay of reciprocal elasticities of demand which determines the point between the two limits set up by the theory of comparative costs, where the actual rate of exchange will be fixed. J.S. Mill called this proposition the "Law of the Equation of International Demand."

This law was afterwards further developed by Alfred Marshall in his work, *The Pure Theory of Foreign Trade*. By synthesizing these developments we can illustrate the theorem by the following diagram:



Line OL represents the upper limit of the wine terms of trade, viz., 1 wine = 12/10 cloth. OL' represents the lower limit: 1 wine = 8/9 cloth. The two demand curves can only cross each other between these two limits. Otherwise, trade stops. Indeed, at 1 wine < 8/9 cloth, to the right of OL' Portugal prefers to produce her own cloth rather than to get it through exchange. And at 1 wine 12/10 cloth, to the left of OL, England prefers to produce her own wine rather than get it through exchange. Point P, where the two curves meet is the actual rate of exchange, naturally situated between the two limit-lines.

If the demand for cloth (ODc) becomes more elastic, all other things remaining equal, its curve (dotted line) will move towards the right and will meet the curve 0Dw at P'. The cloth terms of trade will improve.

If this same demand becomes less elastic, its curve (dotted line) will move towards the left and will meet ODw at P".

The wine terms of trade will improve. Mutatis mutandis, if the demand for wine (ODw) becomes more elastic, the wine terms of trade will improve, and in the opposite case they will deteriorate.*

2.1 The Problems and Contradictions in the Neo-Classical Theory of International Value

We have seen how the classic theorists and after them the neo-classic theorists explained the formation of international value. On the assumption of the immobility of capital and men, they had admitted for more than a century that it was the prices of the commodities dealt with in international trade which determined the remunerations of their producers and not the other way round. It was a perfectly acceptable theory satisfying common sense.

It is the yield of man's economic activity which determines his earnings; one cannot conceive that it is his earnings which determine the yield of his activity.

How were prices themselves, then, determined? The answer to that question was given once and for all by the theorem of comparative costs of Ricardo and by the theory of demand (reciprocal elasticities) of J.S. Mill. The former set up limits to the movement. The upper limit was the price beyond which it became preferable for a country to produce for herself the imported article. It corresponded to the lower limit of the exported article and vice-versa, since imports were paid for by exports. Within these limits, the actual rate of exchange was fixed by the interplay of respective intensities of consumer needs for each commodity at stake. In short, this is nothing else than the law of supply and demand, the supply being expressed by comparative costs and the demand by human needs.

If that was so, the terms of trade should have moved. in favour of agricultural and mineral countries and to the detriment of industrialized countries. On the supply side, the geo-climatic advantage of the former is far more substantial than the technological advantage of the latter; on the demand side, the needs met by raw materials are much more pressing than the needs met by manufactures.

It would surely be very onerous for the Congo or Algeria to produce their own cars or transistors, but relatively less than it would be for France or England to grow groundnuts under glass, or to bore in every square foot of ground in order to draw out the last drop of oil. Besides, one can, if need be, do without cars or transistors; one can less easily do without oil or fats.

So, economists did not take long to draw the conclusions which were consistent with their doctrine. All forecasts from Ricardo to Colin Clark, passing

*Based off of the original, the above graph was kindly produced by our friend Marc. - Editors

through Mill, Marshall, etc., (with a unanimity quite remarkable for a discipline in which nobody has ever agreed with anybody else) were unconditionally pessimistic regarding the future of manufactured goods and categorically optimistic as regards the future of raw materials. All through the 19^{th} century and up to the last war the belief in the existence of such a trend was the most unshakeable and unwavering element in economics.

The classical theorists had already made out of the forecast of the constant rise of primary product prices and the subsequent increase in the cost of the worker's subsistence and wages the basis of their law about the tendency of the rate of profit to decline. Malthus, Torrens, Ricardo, J.S. Mill were categorical: as societies progress, a gap is created and widened between relative values of manufactured and primary products respectively, the price of the former declining constantly and the price of the latter increasing unceasingly.

Although considerably less explicit and not linking his own law of decline of the rate of profit with the movement of prices, Marx seems to share the core of the pessimism of the Ricardian school as regards the evolution of the prices of manufactured commodities. Later on, Bukharin pointed out that one of the causal factors of imperialism is the general and universal advance in prices of primary goods inducing a relentless struggle among industrial countries to secure their resources.

Marshall foresaw the day when backward countries, thanks to their primary products, would possess an inexpugnable monopoly in their international bargaining. Keynes, principally in the works of his youth, came to similar conclusions.

Figures were produced. In 1942, Colin Clark, in *The Economics of 1960*, forecast for 1960 an improvement of the terms of trade of primary products of about 90% as compared with the 1925-1934 level! And not only had contemporary scholars seen nothing paradoxical or reckless in such a forecast but some authors such as, for instance, E. Moret and H. Aubrey, extrapolated this data and extended this certainty of improvement up to 1970 and 1975!

An Unmanagable Reality

The publication, in 1949, of the famous study by the United Nations showing a 40% deterioration in the terms of trade of the countries of the Third World since the end of the nineteenth century, as well as later statistics, particularly after the Korean war, pointing to an acceleration of the movement, cruelly denied these prophecies. However, instead of giving up the idea of the determination of prices by demand and so enabling the theory to explain the reality, economists did their utmost to look for new and original elasticities of demand which would back up the faltering theory.

Without going into all the details of the debate, one can nevertheless say that the new peculiarities of demand, discovered in order to save the argument, are as unacceptable as the previous arguments and this for very simple reasons.

1. An unfavourable demand for primary products, if it ever existed, could in no way account for the deterioration of the terms of trade, given that what deteriorates, according to the statistics, is not the prices of primary products in general, but the prices of any commodity (either primary or secondary), exported by the Third World.

   Now, if the majority of Third World exports are primary, the majority of primary products exported in the world is not exported by the Third World. For example, in 1970, 11% of the exports of the under-developed countries were primary, but 60% of the world's primary exports were exported by the developed countries.

   Developed countries produce and export many primary products, timber, various minerals, dairy products, wines, spirits, etc., whose terms of trade hardly deteriorate. Similarly, the Third World exports some secondary products, textiles, (among others) which, however secondary they may be, undergo the same deterioration as the rest of its exports.

2. With the passage of time, several productions have changed sides. Once, again the example is textiles. As soon as they became the specialization of under-developed countries, they started undergoing the same deterioration in the terms of trade which affects anything these countries decide to produce and export. By what coincidence can the tastes and needs of world consumers change at the very moment at which a change occurs in the location of production.

3. The demand which is in question here is the final consumer's demand. It can only affect the retail price. Now, the only price which is of interest for the producing country is the F.O.B. price.[5] Between these two there is such a long chain of middlemen and, particularly, such an accumulation of taxes imposed by the consuming country and, consequently, such a gap, that the sensitiveness of the F.O.B. price to the effects of demand on the retail price turns out to be negligible or nil. When the F.O.B. price of coffee is something like 20 pence a pound and its retail price about 80 pence or more, when the taxes of the consuming country on oil amount to a multiple of 3 or 4 times the price received by the exporting country, can it seriously be maintained that it is unfavourable demand, at the level of retail prices, that prevents an increase in F.O.B. price? This would mean that the demand of the European consumer is patriotically elastic and obliging when the price differential accrues to the public Treasury of his country in the form of taxes, but it becomes inelastic and reticent as soon as this same differential is due to flow into the pockets of a foreign producer!

4. The world demand for mineral raw materials originating in the Third World, namely for oil and, to a lesser degree, for oil seeds, is to-day particularly intense. We are witnessing a dependence, which is steadily in-

[5] Free on board

creasing, of developed countries on under-developed countries for their supplies in a certain range of vital materials. In a whole set of ores of prime importance, the geological reserves of the industrial countries are diminishing dangerously; in others, it is the percentage of pure metal contained in the ores which decreases considerably compared with those of the Third World (for example: iron ore). As to some agricultural products of the under-developed countries, (other than oil-seeds), such as coffee, cocoa, exotic fruits, etc., the matter is, in most cases, of luxury articles and as such they enjoy the advantage of an income elasticity of demand responding well to the rise of revenues in the consuming countries.

5. It is simply not true that the world consumption of agricultural and mineral products coming from the Third World was, in the 20^{th} century, declining or stagnant, either in absolute or in relative terms. As one can see in the table below, in 11 products, among the most representative of third world exports (oil excluded), world consumption from 1913 to 1969, has multiplied by $8\frac{1}{2}$, increasing from 23.1 to 202 million tons, and, as regards oil, it has multiplied by 143, increasing from 8 to 1150 million tons. If the increase in value has not followed the same pattern, this is the *effect* of the deterioration in the terms of trade and cannot be its cause.

World consumption of 11 Third World products

	Yearly Averages (In thousands of tons)	
	1889–1913	1969
Groundnuts	1,800	16,630
Bauxite	1,000	53,960
Cocoa	232	1,422
Coffee	1,199	4,231
Palmoil and Palm Kernels	266	1,594
Phosphates	7,194	82,010
Cane-sugar (China excluded)	9,581	29,500
Tobacco (production of under-developed countries only)	565	2,857
Natural Rubber	100	2,900
Copper	900	5,940
Tea (China excluded)	288	1,048
	23,125	202,092

	In millions of tons	
Oil (production of under-developed countries only)	8.2	1,150

6. But it is another consideration that probably constitutes the strongest point against the thesis of price determination by demand. This is that there simply is no specific and autonomous demand for Third World primary products, since most of these products are used as raw materials in

processes of further production located in the developed countries themselves.

Under these circumstances, the only demand which could be determining is the demand for the final product, since this is the only product which can be related to the consumer's needs and which is affected by the various elasticities of demand. If this demand was unfavourable in any respect, it would depress the demand for the final product, fully and before any transmission of its effects to the raw material "upstream". But this final product is a product of developed countries and enjoys, as such, the benefit of the excellent terms of trade of these countries.

Let us take the example of cocoa and examine the make-up of the retail price of chocolate in Italy and West Germany:

In percentage of world retail price

	Italy	West Germany
CIF price of cocoa-nib	12	10
Other constituents	5	3
Custom duties and import taxes	17	5
Cost and profit in the import activity and in the manufacturing process	20	36
Gross charges of distribution	46	46
	100	100

We had better give up any idea of comparing what the consumer of chocolate pays with what the cocoa-nib grower receives. It may be granted that there is no common denominator to the two magnitudes. It nonetheless remains that cocoa-nib is the exclusive raw material (without possible substitution) of chocolate and that, consequently, the demand for cocoa-nib is but a derivative of the demand for chocolate. This means that the former must follow the latter for better or worse.

To say that the cocoa-nib price declines or stagnates because of an unfavourable demand amounts to saying that the demand for chocolate is slack. But if the demand for chocolate is slack and if it is the demand which determines the price of the product and, subsequently, the earnings of the producers, one cannot see clearly how it is that the same demand for the same final product determines rates of wages as different as those of cocoa growers in Ghana and those of chocolate factory workers in Europe, the latter being 20, 30 or 40 times the former, all differences in qualification and skill having been allowed for.

Nothing essential would be changed if the entire process from the cocoa-nib fields in Ghana up to the supermarket in Germany or in Italy, passing through the chocolate factory and the conditioning and packing processes, was controlled by a single enterprise whose workshops were thousands of miles away from one another. It would then become quite clear that if demand determined anything it would first of all determine the same rate of wages through the whole chain.

Actually, at each stage, the price of the output of the stage is, on the contrary, formed by local wages, on the one hand, world rate of profit on the other, plus the price of the output of the preceding stage. If this is what happens in the real world, this means that the determination is going down, from "upstream" towards "downstream", and not in the opposite direction. Now, demand springs from downstream.

The demand for raw material could perhaps be dissociated from the demand for the final product, only if there were substitute raw materials produced, or capable of being produced, within the developed countries themselves. These do not exist, at least not for the major part of raw materials coming from the Third World, despite a widespread belief to the contrary. In any case, it is certain that there is no commercially valid substitute either for cocoa or for oil, or a certain number of other products, even if there are substitutes for some other materials. Yet both categories of products undergo exactly the same deterioration of their terms of trade.

The other way round, there scarcely exists an export article of developed countries which does not contain some material coming from the Third World. Finally, one can roughly say that international trade generally exchanges industrial commodities against their own constituents: chocolate against cocoa, soap against fats, steel against iron ore, tyres against rubber. Since for each couple there is only one single demand in operation, to claim that the variation of the terms of trade is determined by a characteristic of the demand becomes an unintelligible proposition.

We can therefore conclude that the phenomenon of the long run deterioration of the terms of trade of Third World exports is unexplicable within the framework of prevailing ideas and all attempts which aim at saving the essentials of traditional theory by putting forward new inelasticities, or lack of elasticity of demand, seem quite vain to us; and more so as the matter is of post-factum adjustments with a view to accounting for troublesome historic facts. The contradiction is unavoidable. Only a thorough revision of the theory will make the Science cope with the reality.

This revision cannot be made unless the causality is turned upside down. One must then reject any determination arising "downstream" and look for determining factors "upstream" in the production relations themselves.

And this is of prime importance. Because if it was deficient demand which was responsible for the prices of Third World exports, and if it was these prices, normally formed in the world market, which, in turn, determined the incomes of the producers, their increase by artificial means, namely by state-to-state agreements between producing and consuming countries, would constitute a liberal goodwill action, at best a moral duty, of rich countries. Now it is clear that present under-developed countries do not mean to make an appeal to the generosity of industrial countries. Their claims look much more like attempts to recover something that has been taken from them than like anything else. When one reads, for example, the programme of action that the underdeveloped countries have drawn up on the occasion of their last Santiago meeting, one is impressed by the clarity with which this document puts forward the principle

of the responsibility of rich countries in the present situation. It is therefore to be asked whether Science will continue to ignore this consciousness-raising.

2.2 The Determination of the Terms of Trade by the Relations of Production

We think it would be better to pass quickly over the theses which explain the terms of trade by the influence exercized on the world market by monopolies. To be sure, we do not want to under-estimate the existence of certain price distortions due to monopolistic practices, but:

1. Once the brief statement has been made that prices are such because monopolies have made them such, there is nothing very substantial to add.

2. It seems to us illusory and even inconsistent with our own criticism of comparative costs to believe that the situation of under-developed countries could be substantially improved by the elimination of monopolies and the resuming of pure free-trade.

3. It seems furthermore dangerous for the Third World to make itself the Champion of free-trade. Industrial countries would certainly not dislike this, particularly in certain fields such as oil.

If we disregard monopoly prices and if we reject, as we have already done, the neo-classical theory which explains prices by the peculiarities of reciprocal demand, there remain two theses to consider: the thesis of the differences in labour productivity, and the thesis based on the exogenous distribution of income, that is, unequal exchange.

2.3 The Determination of International Prices by Differences in Labour Productivity

This thesis has been mainly presented by some Marxian economists in the Eastern bloc within the framework of a tendency to rehabilitate Ricardo's theory of comparative costs. The protagonist of this rehabilitation was indisputably Gunther Kohlmey of the Faculty of Foreign Trade in East Berlin. He has been followed quite closely by other economists of the Eastern bloc especially Hungarians.

One can enunciate the essential points of this theory in the following manner:

Just as on the national plane each commodity has several individual values (according to the conditions prevailing in each unit of production), but only one social value, so also on the international plane each commodity has several national values related to labour productivity in the different countries producing it, but only one (average) international value.

Given that the value is inversely proportionate to the labour productivity, the national value of under-developed countries (less productive) is greater than the international value, whereas the national value of the same commodity in developed countries (more productive) is smaller than its international value.

National value in underdeveloped countries	>	International values	>	National value in developed countries

It follows that when a developed country exports a product, it gains, by selling it at its *right* international value, the want of its national value as compared with the corresponding international value. When an underdeveloped country exports a product it loses, by selling it at its *right* international value, the excess of its national value over its international value.

These economists argue as if, in international trade, there were no other commodities than industrial products, in which the productivity of labour in underdeveloped countries is often (but not always) inferior to the productivity in developed countries. They simply ignore the mineral and agricultural products exported by the Third World countries in which these countries enjoy an overwhelming superiority. Their analysis is on the whole correct as regards the commodities *imported* by underdeveloped countries; it is incorrect as far as the *exported* commodity by these same countries is concerned. Regarding this latter commodity, the above inequalities are reversed:

National value in underdeveloped countries	<	International values	<	National value in developed countries

In fact, we have here not only a rehabilitation of the theory of comparative costs but, moreover, an unskillful one, for what was just a simplification in Ricardo's presentation becomes with these economists the essential element.

Indeed, Ricardo assumes that one of the two countries in his example is more productive in both commodities involved. But this all-embracing superiority of one country over the other is neither a sine qua non of the law of comparative costs nor a realistic hypothesis.

If a British car costs 500 hours of labour, it is plausible to assume that the same car could cost 1,500 or 2,000 hours if it were to be fabricated in Ghana. It follows that if the International price ought to be situated somewhere around the average of the two values, one understands easily that Britain. gains the difference. (One understands less easily what Ghana loses in the deal). But if one ton of cocoa costs Ghana 200 or 300 hours of labour, it is just as plausible to presume that the same ton of cocoa would cost several thousands of hours of labour if it were to be produced (by artificial means) in Britain. We should conclude, according to the logic of this theorem, that Ghana, by selling Britain one ton of cocoa at a price between the Ghanaian and British costs, gains considerably more than what Britain gains by selling Ghana one car under similar conditions. In comparison with the reality, we are very wide of the mark.

2.4 Unequal Exchange

We have seen the deadlocks to which we are led by the prevailing doctrine of comparative costs and the doctrine of the determination of international value by the interplay of reciprocal demand.

In the presence of a reality so diametrically opposed to the theory, it seems necessary to abandon any idea of patching up the theory but rather to turn it upside down by refuting its most basic hypotheses.

These hypotheses are two:

1. Determination of the prices of factors by the market.

2. Immobility of the two main factors, labour and Capital.

The first hypothesis enables one to allow the distribution of income to depend on external prices; the second makes it possible to set up, from country to country, different prices for the same factor.

Regarding the first hypothesis one must distinguish the classical point of view, that of Ricardo, from the Marxian and at the other end, from the neo-classical view.

For Ricardo, the only factor whose price could vary from country to country in accordance with the return from foreign trade was Capital.

On the contrary labour was paid everywhere the physiological subsistence minimum. Granting that this minimum could differ from one region to another because of climatic causes, this differentiation was not linked to the prices of goods and to the hazards of foreign trade.

Consequently, any advantage or disadvantage connected with foreign trade was reflected in corresponding variations of the other factor, that is, the rate of profit prevailing in the region under consideration.

The disparity of profit rates from one country to another was made possible on the basis of the hypothesis of the international immobility of Capital. This does not mean that for Ricardo labour was mobile. But the degree of its mobility was irrelevant. For the theory to work it was necessary and sufficient that Capital be immobile.

Therefore, from Ricardo's point of view, the price of labour was an exogenous price; the price of Capital was a residue. As such it was the only magnitude to be affected by gains or losses occurring in external relations.

The Prices of Factors in the Marxian System

The introduction of a moral and historical element among the factors determining the value of labour-power make things change fundamentally with Marx. As the class struggle, and more generally, the relation of power between social classes fill a large place within this moral and historical element, they become the main determinant of the distribution of income and, consequently, of the price of labour power.

As regards the influence that this income distribution can have on values and prices, Marx tackles this problem only as far as the national framework is concerned. He left the formation of the international value to be dealt with in the chapter about the world market and foreign trade which he planned for the end of his work and which he never managed to write.

On the national level, we must distinguish:

a) The theory of simple value

Here, the income distribution has no influence on the formation of value.

Any variation of the value of the labour power entails an opposite variation of the surplus-value, the value of the output remaining unchanged.

b) The theory of prices of production

Here, on the contrary, any variation of wages gives rise to a variation in the same direction in the branches whose organic composition is lower than the social average, a variation in the opposite direction in the branches whose organic composition is higher than the social average and no change at all in those branches whose organic composition is equal to this average:

c.	v.	s.	Rate of profit	Profit	Price of Production
90	10	10		20	120
80	20	20	20%	20	120
70	30	30		20	120
240	60	60			

50% increase in wages

c.	v.	s.	Rate of profit	Profit	Price of Production
90	15	5		$9\frac{6}{11}$	$114\frac{6}{11}$ (Decreases)
80	30	10	$\frac{1}{11}$	10	120 (Unchanged)
70	45	15		$10\frac{5}{11}$	$125\frac{5}{11}$ (Increases)

(Ricardo in chapter IV of his *Principles* had put forward the same theorem under a different form).

Consequently, while values depended only on material, physical, conditions of production, prices, according to Marx and Ricardo, depended not only on these conditions but also on the distribution of income.

But this concerned only national value and prices, that is, the magnitudes formed within an area where both factors were competitive, this competition entailing two equalizations, that of wages and that of the rate of profit.

Neither Ricardo nor Marx have extended this determining power of the distribution of income into the international plane, the former, because he considered Capital as immobile and therefore the rate of profit as not being subject to equalization on the international level; the latter because he had nowhere systematically tackled this question.

International Value Neo-Classical Theory

What was perhaps a correct hypothesis in Ricardo's time, namely the immobility of Capital, became unrealistic with the neo–classicals, that is, in the third quarter of the 19^{th} century. Yet, the neo-classicals grappled with it and continue to do so.

Besides, the neo-classics rejected not only the Ricardian determination of wages in terms of a subsistence minimum, something which indeed had meanwhile lost all realism but even the Marxian determination in terms of class struggle and power relations.

Against this background, determinations can only proceed from "downstream".

The State of international demand determines the prices of export products, the prices of these products determine the level of national revenue, the level of the national revenue, namely the total of factor earnings, jointly with the relative scarcities of these factors, determine the distribution of revenue, and therefore finally, wages and profit. One is poor or rich because one sells cheaply or dearly. If Arab countries are poor this is because they specialized in oil, the terms of trade of which have been falling for the last three quarters of a century.[6] If Sweden and Canada are rich. this is because they produce and sell timber, the terms of trade of which are constantly improving during the same period, and so on. Prices are given, the cause; factors earnings, the effect.

The Reversal of the Assumptions

The dominant economic doctrine outlined above ignored two historic facts.

1. A particularly efficient trade-union movement since the end of the nineteenth century, in the developed countries, coincident with
   (a) the repression of similar activities in the underdeveloped countries under colonial or semi-colonial regimes, and
   (b) the draining off by direct means of surplus which could have enabled negotiated wage increases in these countries.
2. A growing mobility of capital throughout the same period, which put in motion the mechanism of the equalization of the rate of profit on an international level.

These historical circumstances rendered wages rigid, either upwards or downwards, in both developed and underdeveloped countries, and unresponsive to market impulses. Besides, the tendency towards an equalization of the rate of profit on the world plane prevented wage disparities from being passed on to profits, that is, it prevented low-wage countries from offsetting low wages by high profits in order to retain within the country the extra surplus-value

[6] This was written before the last authoritative rise.

extracted from their own workers. The simple rule of market laws and the internal competition of the capitalists of each underdeveloped country, as well as the competition among these countries, removed this extra surplus-value to the benefit of the consumers in developed countries.

As the internationalization of the rate of profit prevented the differentials in national wages from being passed on to national profits, these differentials had to be passed on to prices.

So, for the two hypotheses of the dominant theory, (a) determination of the price of labour power by the market and (b) the immobility of labour and capital, the thesis of unequal exchange substitutes:

- for the first, an extra-economic, institutional determination of wages, qua the effect of the relationship of power between social classes in each country at each epoch;

- for the second, a relative mobility of capital, sufficient to give rise to a tendency for the world-wide equalization of the rate of profit, and a relative immobility of labour allowing considerable predetermined disparities in the wage rates of various countries.

The causality is set upside down: the price is no longer the datum and the wage the unknown; it is the wage that is the datum and the price the unknown. From this point of view, oil itself does not impoverish Arab countries, any more than timber has enriched Sweden. It is because oil is produced by people who are paid a wage of pure subsistence that its price is falling continuously as compared with that of manufactures, and it is because timber happened to be the product of countries such as Sweden, Finland, Canada, where historical and institutional factors, namely efficient trade-union action, have set up a wage 20,30 and sometime 40 times higher than that in underdeveloped countries, that its relative price has been constantly rising during the same period. *One is not poor because one sells cheaply, one sells cheaply because one is poor.*

It is the same phenomenon of reverse determination that is perceptible today in the context of the ability to spend the huge amounts accruing to the Middle East oil producing countries, following the unexpected rise in prices. International experts find it difficult to match an approximate hundred thousand million dollars of additional income, on the one hand, with the large empty spaces inhabited by a few million Bedouins on the other.

As soon as one has counted arms supplies, some oil refineries and the possible purchase of some giant tankers, that is, the only pre-existing available outlets – thirst for power of the governments involved on the one hand, and subordinate operations linked with the foreign oil market itself on the other – one has completed the survey of the potentialities of absorption of the countries concerned. all this however, covers no more than a small part of the windfall-gain of the rest, to be found somewhere in Zürich or in London, sowing disorder in the International monetary system.

This shortcoming is certainly not due to foreign political domination – one can be easily convinced about this by watching Western delegates crowding the capitals of Arab countries and queuing up in the waiting-rooms of their ministers. Nor is it due in any way to problems in the transfers of technology. Prompted by competition and acting in diverse ways, Westerners offer "on the cheap" all possible and desirable technologies. This is simply due to the economic fact that the internal revenue, I emphasise *internal*, of these countries is too low and pre-existing outlets too small to enable these countries to materialize external assets of such an importance.

For there are only two means to stimulate investments: an imperative central plan "upstream" or the market "downstream"; socialist dynamics or capitalist dynamics. The majority of these countries having barred the former, there remains only the latter. But in the latter system they are seriously and helplessly handicapped by the narrowness of their market.

Then a remarkable phenomenon occurs. Being in real terms too poor to be able to develop themselves by capitalist channels, they are doomed to remain underdeveloped although being nominally wealthy in terms of Bank entries and financial paper in various foreign centres. After having for a long time been too poor to be able to sell their oil at normal prices, when at last they managed by extra-economic means to increase the price they proved too poor to be able to collect the benefit.

The foregoing means that the relatively high Standard of life in our industrial countries is due, at least partially, to the fact that the rest of the world's workers work at starvation wages to produce some of our raw materials and some of our consumer goods; in the last analysis, it is due to the fact that there exists a particular group of people basically endowed with the same physical and mental faculties as ours and therefore able to handle modern tools, without having modern needs or requirements or without being able to make the most of them. That is what I call exploitation of one country by another and that is what leads me to assert that the working classes of our industrial countries are part of it.

Once triggered, this process becomes cumulative. Low wages give rise to a transfer of value from backward countries to the advanced countries and this loss reduces, in its turn, the material potential of a future improvement in their wages. It provides, on the contrary, recipient countries with the necessary potentiality for employers' concessions which further widen the gap between national wages. This widening of the gap worsens the inequality of exchange, and eventually, the resulting value transfers. The poorer one is, the more exploited one is, and the more exploited one is the more impoverished one becomes: as in the relations between proletarians and capitalists within a nation, likewise between countries; poverty conditions exploitation and exploitation reproduces through its effects its own condition.

The theorem of Unequal Exchange is therefore simple and can be enunciated in the following manner:

> If the wage is exogenous (institutional, independent variable), and if a tendency exists for the formation of a general International rate of profit, then any autonomous variation in the wage-rate in one branch or in one country will entail a variation in the same direction of the respective price of production and a variation in the opposite direction of the general rate of profit.

Our task is therefore two-fold:

A) To demonstrate the theorem.

B) To show the realism of the two assumptions on which it is based.

A) Demonstrating the Theorem

a) Intuitively

At any moment, the total of world revenue, that is the sum of world wages and profits, is a given magnitude. It follows that any variation of wages in a particular country, leading to an identical variation in the world total of wages, must entail an opposite variation in the total amount of world profits and, therefore, in the profits of the country under question. However, this variation of the profits is spread out among all countries and it is only a part of it that affects the products of the country under question, while the equivalent but opposite variation of wages is passed on in its entirety to these products alone. Consequently, the *relative* prices of these products will vary in the same direction as that of the supposed variation of wages whereas the general rate of profit will vary in the opposite direction.

b) By the Marxian scheme of prices of production

Branch or Country	c.	v.	s.	Value	Rate of profit	Price of Production
A	240	60	60	360	25%	375
B	120	60	60	240		225
	360	120	120	600		600

If the wages rise by one third in A, all other things remaining equal, the scheme becomes:

Branch or Country	c.	v.	s.	Value	Rate of profit	Price of Production
A	240	80	60	360	20%	384
B	120	60	60	240		216
	360	140	120	600		600

The inequality of exchange is expressed by:

$$\frac{384}{216} > \frac{375}{225}$$

The increase of the wages in A has entailed this increase of the relative price ($384/216 > 375/225$) of the output of A and a decrease (from 25 to 20%) in the general rate of profit.

c) By input-output matrices

The above scheme has been contested by the well-known objection of Bortkiewicz. We had better avoid this controversy by making use of a system of equations of the Sraffa type.

Let us suppose that a system made up of two countries produces the goods A and B which are at the same time consumer goods and means of production. It follows that the invested Capital in each one of the two countries is constituted by certain quantities of these two goods. We shall further assume that B is the numeraire-commodity.

Country A disposes of a stock of 70A and 35B and of 200 hours of labour force. With these means it produces 32A and spends for that production, on intermediate consumption and depreciation 6A and 1B.

Country B disposes of 20A and 45B and, also, of 300 hours of labour time and, by spending 16A in intermediate consumption and depreciation, produces 21B. If the wage rate is $\frac{1}{40}$ B per hour and if p_a is the price of a unit of A and r the rate of profit we will have the following simultaneous equations:

$$(6p_a + 1) + 5 + (70p_a + 35)r = 32p_a$$

$$16p_a + 7.5 + (20p_a + 45)r = 21$$

$$\text{Solution:} \quad p_a = 0.5, \quad r = 0.1 \quad \text{(i.e. } 10\%\text{)}$$

If wages are doubled in A (from $\frac{1}{40}$B to $\frac{1}{20}$B), the equations will become:

$$(6p_a + 1) + 10 + (70p_a + 35)r = 32p_a$$

$$16p_a + 7.5 + (20p_a + 45)r = 21$$

$$\text{Solution:} \quad p_a = 0.614, \quad r = 0.0641 \quad \text{(i.e. } 6.41\%\text{)}$$

As was expected, the price of A has varied in the same direction as the wages in A and the general rate of profit has varied in the opposite direction.

We can generalize:

Two Equation System

If A_a, B_a are respectively the quantities of A and B consumed (as intermediate consumption and as depreciation) in A; and A_b, B_b, respectively the quantities of A and B consumed in B; and if W_a, W_b are the wages in A and B, and if A,B are the quantities produces in each one of the two branches, we will then have the following two equations:

$$(A_a p_a + B_a)(1 + r) + W_a = A p_a \quad (1)$$

$$(A_b p_a + B_b)(1 + r) + W_b = B \quad (2)$$

(Contrary to the previous numerical example, it is here assumed that the speed of rotation of all inputs is equal to 1; that means that the total fixed capital is used up in a single production cycle). *There are two unknowns: r,p_a*

All terms are positive.

We have to demonstrate that any autonomous variation of W necessarily entails a variation of the same sign of P_a and a reverse variation of r.

We can write:

$$W_a = A p_a - (A_a p_a + B_a)(1 + r) \quad (1')$$

$$1 + r = \frac{B - W_b}{A_b p_a + B_b} \quad (2')$$

If W_a increases there are only nine possible combinations of respective variations in r and of p_a:

r	p_a					
Unchanged	Unchanged	Inconsistent	w/	equation	1'	
"	Increases	"	"	"	2'	
"	Decreases	"	"	"	1' & 2'	
Increases	Unchanged	"	"	"	1' & 2'	
"	Increases	"	"	"	2'	
"	Decreases	"	"	"	1'	
Decreases	Unchanged	"	"	"	2'	
"	Increases	Consistent	"	"	1' & 2'	(i.e. both)
"	Decreases	Inconsistent	"	"	2'	

Therefore, if W_a increases, the combination *"r decreases and p_a increases"* is possible and necessary: possible, because it is consistent with both equations; necessary, because it is the only one possible.

Mutatis mutandis, we can demonstrate that if W_a decreases, r will increase and p_a will decrease.

n equation system

Theorem
Given a system of n prices (p), n wages (w), and single rate of profit (r) satisfying

$$p = (1 + r) \cdot \underline{A}p + \underline{L}w \quad (1)$$

$\underline{A}$ symbolizing the square input-output matrix

$$\begin{bmatrix} a_1 & \cdots & a_{k-1} & A \\ b_1 & \cdots & b_{k-1} & B \\ & \cdots & & \\ k_1 & \cdots & k_{k-1} & K \end{bmatrix}$$

whose lines represent a given process of production and the columns a given material input. $\underline{L}$ symbolizing the diagonal matrix of inputs in living labour

$$\begin{bmatrix} l_1 & \cdots & 0 \\ \vdots & \ddots & \vdots \\ 0 & \cdots & l_k \end{bmatrix}$$

in which system prices and wages are ≥ 0 and expressed in physical quantities of commodity k ($p_k = 1$); and any autonomous variation w_i of the i^{th} wage will entail corresponding variations of p_i and of r, such that:

$$\delta p_i \cdot \delta w_i \qquad o \quad (2)$$

$$\delta r \cdot \delta w_i \qquad o \quad (3)$$

Proof
Writing (where I: identity matrix)

$$B = (I - (1 + r)A)^{-1} \quad (4)$$

prices are given by:

$$p = B\underline{L}w \quad (5)$$

To the variation $\delta w = \delta \begin{bmatrix} 0 \\ \vdots \\ w_i \\ \vdots \\ 0 \end{bmatrix}$ correspond a δp and a δr satisfying

$$p = \frac{dB}{dr}\underline{L}w \cdot \delta r + B\underline{L}\delta w \quad (6)$$

dB/dr is obtained by differentiating $B(I - (1 + r)A) = I$

$$-BA + \frac{dB}{dr}(I - (1 + r)A) = 0$$

$$\frac{dB}{dr} = BAB$$

(6) then gives:

$$p = BAp \cdot r + b^i \cdot l_i w_i \quad (7)$$

(b^i is the i^{th} column of B and l_i the quantity of L entering in the branch line i.)
δr must be consistent with the invariability of the price of commodity k ($\delta p_k = 0$), i.e., noting b_k the k^{th} line of B,

$$p_k = b_k A_p \cdot \delta r + b_{ki} l_i \delta w_i = 0 \quad (8)$$

while δp_i is given by:

$$p_i = b_i A_p \cdots \delta r + b_{ii} l_i \delta w_i \quad (9)$$

We assume that commodity i enters directly or indirectly into the production of k, (that is $b_{ki} > 0$), and that no commodity is produced with labour alone. ($Ap > 0$). Equation (8) then does show that the variations δw_i and δr are of an opposite sign to each other, as required by (3). By eliminating δw_i between (8) and (9) we obtain:

$$\delta p_i = (b_i - \frac{b_{ii}}{b_{ki}} b_k) A_p \cdot \delta r \quad (10)$$

We shall show that

$$u' := b_i - \frac{b_{ii}}{b_{ki}} b_k \leq 0$$

which entails $\delta p_i \cdot \delta < 0$ and thus completes the proof.
By the definition of B, one whatever line b_j of B verifies $b_j(I - (1+r)A) = e'j$ (a vector in which all elements are null except the j^{th} one which is equal to the unit, 1).
Let us consider now the matrix A*, identical to A except for its i^{th} column which is null (a*i = 0). It is easy to see that:

$$u'(I - (1+r)A*) = -\frac{b_{ii}}{b_{ki}} e'_k \quad (11)$$

Rate of profit r realizable for A is all the more so for A* and consequently (I - (1 + r) A*) has an inverse non-negative which we shall call B*.
(11) gives then:

$$u' = -\frac{b_{ii}}{b_{ki}} e'_k B^* \quad (12)$$

$$u' = -\frac{b_{ii}}{b_{ki}} b^*_k \quad (13)$$

where b^*_k is the k^{th} of B* and greater than 0. Therefore, we do have $u' \leq 0$.
(13) and (10) give finally:

$$\delta p_i = -\frac{b_{ii}}{b_{ki}} b^*_k A_p \cdot \delta r \qquad \square$$

N.B. The above demonstration has been obligingly provided by Antoine Delarue, member of the staff of the French Plan. It replaces my own one presented in another paper which was clumsy and unrigorous.

The Same Theorem in Plain Language

Assuming that in each individual country (area of mobility of the labour factor) there is only one process of production, corresponding to one line of the input-output matrix, we can say:

The country, in which a rise of monetary wages has taken place, will try to pass it on in the form of an increase in the sale price so as to preserve the previous rate of profit. Since wages are only one of the constituents of cost, a rise in the price less than proportional to the increase in wages will be sufficient for profits to be maintained.

Given that all prices, including that of the labour force (the wage), are expressed in physical quantities of the numeraire-commodity (in a convertible currency system), and given that the variations in monetary wages are autonomous (exogenous), it follows that, if the commodity under question is *exclusively* a consumer commodity, there will be no change in the prices of the other countries and in the general rate of profit. The only consequence of the rise in the price of the export article of one country, after, and because of, the increase in the monetary wages in this country, will be the increase in the real revenue of the workers in this same country and, consequently ' the fail in the real revenue of the workers of all *other* countries, and/or of the real revenue of the capitalists in the whole world, (those of the first country included), according to whether the commodity under question is consumed by workers or by capitalists or by both.

If the commodity in question is a means of production (whether exclusively or jointly), the following process of interaction will operate:

The countries (branches) which use this product as an input will react to its rise in price in the same manner as the first country has done in the face of the rise in wages. As in the first case and for the same reasons, the resulting rise in the price of the output will be proportionately less than the rise in price of the corresponding input (wages held constant in the other countries branches).

So the prices of all items except one-we shall immediately see which one – will rise in the same direction though unequally, of course. The branch which has endured the increase in wages will maintain its lead over the others, this being the only means by which the constancy of the rate of profit can be secured.

Nevertheless, there is a commodity which will not vary, for the simple reason that it has no price at all, being itself the Standard of all prices. Besides, it is this constancy that allows the general rise of prices to make sense. This is the numeraire-commodity. As a matter of fact, each time the input-output Chain crosses this branch – generally the gold mines – the process of the transmission of the rise in price from one product to the other is interrupted, since this branch produces directly nothing but money, selks nothing and consequently has nothing to pass the rise on to. This makes it possible for adjustments made by the equalization of the costs to stop somewhere and not go on indefinitely.

However, at the close of this first cycle of adjustments the general equilibrium is not yet reached. The "other" branches have maintained their "status quo ante" rate of profit, whereas the gold mines have been compelled to bear the

whole loss, since the prices of all their inputs (except wages) expressed in gold have been increased but physical production of gold has remained unchanged.

Then a second cycle of adjustments begins, that of the equalization of profits. Capital leaves the gold mines and flows into the other branches. This movement is at the outset undiscriminating, given that all the other branches have maintained the equality of rates of profit. Following this, the prices will undergo new changes but this time not because of the equalization of costs, but because of the imbalance between the relative quantities produced, as they are influenced by the inflow of Capital, on the one hand, and the structure of demand which has not changed, on the other.

The final equilibrium can only be reached when the general level of prices expressed in gold falls sufficiently (or – what amounts to the same thing – the value of gold rises sufficiently), to allow gold mines to realize the same rate of profit as every- body else. This will entail a fail in the general rate of profit. But if the rate of profit falls (or remains unchanged), no branch, among those where wages remain unchanged can, in the same terms, have an output which rises proportionately more than *every one* of its inputs. There must exist *at least one* input which increased more than the output.

Let us take the process line i:

$$(A_i p_a + B_i p_b + C_i p_c + \cdots + I_i p_i + K_i)(1 + r) + l_i w_j = I p_i$$

It is clear that, r having decreased (or remained unchanged), $l_i w_i$ and K_i having anyhow remained unchanged, pi cannot increase at a rate greater than each one of $p_a, p_b, p_c, \cdots$. At least one of these prices must have risen at a rate greater than that of p_i. Let p_j – price of input J_i – be this price. But the input J_i of branch I is the output of the branch J. There exists therefore one branch,

$$(A_j p_a + B_j p_b + C_j p_c + \cdots + I_j p_j + K_j)(1 + r) + l_j w_j = I p_j$$

in which the rise of the output at a higher rate than *any* input is indeed *possible*. Now, considering the invariability of K_j and the decrease of r, it is clear that p_j can rise *more* than $p_a, p_b, p_c, \cdots$ only if w_j has increased.

In other words, the existence of a branch, whose price advances more than all others, being necessary, and this effect being possible only in the branch hit by the increase of wages, it follows that this effect is necessary in this same branch. Then, with the price of the product of this branch rising more than that of any other in absolute terms (numeraire-commodity), it follows that this price rises in relative terms with regard to any one of the others. Hence, the necessary improvement of the terms of trade of the country producing and exporting this article.

Lastly, it is obvious that the temporal separation of the two equalization processes – costs and profits – is only logical; as a matter of fact they overlap each other. Any change of level puts all relative prices back into the melting-pot and, consequently, triggers a new chain reaction in respective costs, which, in its turn, modifies again the cost of production of the gold mines and sets capital again in motion towards or from this branch. However, this simultaneity in no

way alters the co-ordinates of the resultant of the two movements, as appears from the foregoing analysis.

So we can conclude that following an increase in wages in a given branch, the price of the product of this branch will rise in relative terms – with regard to the other branches – as well as in terms of physical quantities of the numeraire-commodity. All other prices will fail in relative terms, with regard to the one branch where wages have risen, and some of those prices may even fail in terms of physical quantities of the numeraire-commodity. This last fail is, in that case, the only way of securing the equalization of the rate of profit while maintaining the relative gap between these prices on the one hand, and the branch which initiated the movement on the other.

The general rate of profit will thus fail.

The opposite result will occur in the case of a reduction of wages in a single branch.

B) The Realism of the Unequal Exchange Hypotheses

Having demonstrated the basic theorem of Unequal Exchange, it remains to vindicate its premises, namely: (a) the hypothesis of autonomous (exogeneous) variations of wages, and (b) that of the equalization of profits, and, hence, of the tendency towards the formation of a general (worldwide) rate of profit.

a) The wage as an independent variable

We are here on one of the main crossroads between the marginalist doctrine of the formation of prices on the one hand and the Marxist and Recardian theories of value on the other.

The marginalists do not consider the wage as a special theoretical object. It is a price, like any other price, and all prices are endogenous. They are simultaneously formed on the market. Each price is determined by the other prices in the circular chain of general inter- dependence and equilibrium. If indeed there is any anteriority at all, this applies to the prices of the goods and services used for final consumption in relation to the prices of goods and Services used for production (the factors of production).

In such a framework, the wage is an endogenous and dependent variable in two senses: on the one hand as a price linked to other prices in general; on the other hand, as the price of a commodity which serves only to produce other commodities and whose utility consequently derives from the utility of the latter. The impact of the price fixing on the distribution of income is, according to this point of view, a secondary and subordinate effect.

For the Classics and the Marxists – more clearly for the latter, and less so for the former – the system endows itself, prior to anything, with a distribution pattern. It is this pattern, plus the technical conditions of production, which constitute the two exogenous data determining the formation of all other prices.

The wage as the price of the labour force, is not a price in the same way as other prices. Representing the portion of the national income accruing to the working class, it is not only the price of a commodity, but, at the same time,

the necessary and sufficient constituent element of distribution, the income of non-workers being a residue. It constitutes one of the main elements of political strife within the capitalist system. As such, it is fixed in an extra-economic, hence exogenous, way.

As the direction of all determinations is from the exogenous to the endogenous, the wage possesses a logical precedence over the other prices. It is an independent variable.

Here are some of the empirical reasons which support this status for the wage-rate:

1. The marginalist hypothesis implies the existence of a wage infinitely flexible and susceptible to fluctuation without limit in both directions. Now, as opposed to all other commodities, there is, in the case of wages, a lower limit, absolute and exogenous, qua physiological.

2. There has never been something which could be described as a "labour market". The price of labour (labour power) cannot be a matter of balance between supply and demand in the same way as the other commodities. Such a balance is based on a certain symmetry of the positions of the seller and of the buyer, respectively, each deciding freely to make the deal or to withdraw from the market, according to whether prices are convenient or not. Now, as opposed to all other sellers, the seller of labour power is not a free seller, in the sense of being able to withdraw his commodity at will from the market. The reason is quite simple: his particular commodity is not susceptible to being stocked. Each hour that elapses is one hour of labour lost. To some extent, the matter is the same as in the case of an *instantly* perishable commodity.

   A "labour market" is just a construct of the mind. As far as we can go in the historical past, there always existed "norms" either formal or informal.
   Our experience teaches us that the issue of a bargain (violent or non-violent) between employers and employees depends more on those norms and on a certain amount of previous acquisition than on the state of the market or on the profitability and the financial situation of the enterprises concerned. Clearly, these norms and acquisitions reflect at each point in time certain power relations between social classes.

3. The wage is from the outset (and therefore before any process of equalization has taken place) negotiated and fixed on a national scale and very often on an inter- professional basis (e.g. the French S.M.I.G.*). It is even more so as far as the accessory advantages of the worker are concerned. On the contrary, a hypothetical labour market conceivable, at least in the short term, only on the level of each individual trade and within narrower geographical limits.

4. If, in the short-run, a genuine "market wage" should be determined by strictly localized factors, in the long term, on the contrary, such a wage should transcend the political framework of the nation and comply with the common tendency of goods to move towards a common price on a world scale. However, nothing of the sort actually happens. The prices of all the other commodities vary very sharply in time and very little through space. The wage, on the contrary, varies enormously through space and very little in time.

   From remotest antiquity to the beginning of the 19^{th} century, the wage has, in real terms, hardly varied in any country; from the beginning of the 19^{th} century up to the present it has, in certain countries, moved slowly and steadily upwards. Such a constancy in certain periods or certain countries, such an evenness and duration of a one-dimensional movement in certain other periods and other countries, are contrary to the endogenous economic determinations which are plastic and multiform. An extra-economic (institution) vector alone can generate them.[7]

   At any rate, on the international plane, the multiplicity of wage rates is inconsistent with the existence of a market since the essential function of the market is precisely to secure one price for each item. Now, in the case of wages, this disparity continues without the slightest attenuation, even when, here or there and in certain epochs, the labour-factor enjoys a relatively important mobility. Neither the great immigration of Europeans into the United States during the 19^{th} century and the beginning of the 20^{th}, nor the contemporary considerable immigration of North Africans,

*S.M.I.G. stands for "Salaire Minimum Interprofessionnel Garanti" or translated the *Interprofessional Guaranteed Minimum Wage*. Introduced in 1950, it was the first national minimum wage in France. However, there were exceptions for French colonial holdings, as well as agricultural professions, who had their own rates. -Editors.

[7] "All these texts show clearly that, from the Peloponese war to Augustus Caesar, the price of one day's labour of the free man .... was hardly 1/3 below the average price of this same quantity of labour in France nowadays (1840). Fabroni .... had substantially pointed out that the price of a day's labour in aıcient Greece was the same as in Toscane in 1804 .... This statement, seemed to me, at first sight, to be a paradox, but when I have göne deeper in the subject .... I have been compelled to bow to the facts." (Dureau de la Maile, *Political Economy of the Romans*, pp.128f).

"The limited information available suggests that only after the Napoleonic wars did the level of real wages take off on the path of elimb that was to take it by the end of the nineteenth century to levels never reached before. In the course of that elimb it regained for the first time the level of the fifteenth century plateau .... in 1880". (A.Glyn and B.Sutcliffe, *Britişh Capitalism*, p.18).

Portuguese, Greeks, etc., into the developed countries of Western Europe after the last war, have given rise to the slightest tendency towards the equalization of wages between the countries of origin and the hoşt countries.

Moreover, this inflow gives rise within the recipient countries to an internal discrimination of wages based on ethnic factors, a phenomenon which is inconsistent with any idea of the determination of wages by the free play of the law of supply and demand.

5. There is no relevance between the conjunctural fluctuations of employment in different countries and the comparative rates of wages in these same countries. For example: during the 1929-1934 crisis, unemployment in the United States was 36.47% of the active population against 13.42% in France and only 7% in Italy. Yet the American wage remained, during the worst of the crisis, two to three times that in France and three to four times that in Italy.

We can conclude that the determination of wages is more a political than an economic process. Its variations reflect the fluctuations of the relations of power between social classes. This extra-economic institutional determination makes possible a lasting gap between the price and the value of labour power.

However, these two magnitudes continue to be connected to each other in a dialectical interaction. A wage greater than the value of labour power, if it prevails for a long time, ends by driving upwards this value itself, since the extra consumption which it allows ends by being transformed into vital needs – what Marx calls a second nature – and, hence, by being incorporated into the real cost of reproduction of the labour force.

Reciprocally, the rise in the value of labour power shifts the terms of the bargaining, being a component of the relationship of power itself. For, the more one approaches the point which, in each epoch and in each country, is considered as the vital minimum, the better the resistance of the working class and the stronger its backing by other social strata, while the opposition of the employers diminishes. Conversely, the further one moves away from this same vital minimum, the less efficient proves the trade-unionist action of the workers, while the resistance of the employers gets tougher and tougher.

b) Equalization of profit rates on the international plane.

If the physical mobility of labour, even when now and then it becomes quite important, is not – as we have seen – sufficient to bring about the equalization of wages, generally a marginal mobility of capital on the international plane is indeed quite sufficient – experience shows – to generate a clear tendency towards the equalization of its rate of remuneration. The economists who deny this tendency generally base their position on logical inferences, while all those who have undertaken empirical investigations are unanimous in acknowledging the fact that there are no meaningful differences in the rates of profit between developed and under-developed countries.

R.A.LehfeİdtR.A.Lehfeİdt, quoted by Feis in 1913 – 1914, stated that "the average return, 1893 – 1910, obtained on colonial and dominion securities was higher than that obtained on home securities of the sarae type by 0.2 per cent; the yield on foreign issues was 1 per cent higher..." (Feis, *Europe: The World's Banker*, p.4.).

"In the late fifties and early sixties", comment A.Glynn and B.Sutcliffe, "domestic and foreign investment were about equally profitable, and again between 1963 and 1967 there were comparable falls... Between 1955 and 1963 the average post-foreign-tax rate of return on manufacturing investment overseas was about 8 per cent, according to the Reddaway Report on Foreign investment, and our comparable figures for U.K. companies as a whole... was 7.1/2 per cent." (*British Capitalism.* p.147).

It is noteworthy that Klaus Busch, intending to refute the theory of Unequal Exchange by showing the non- equalization of the rates of profit, publishes the following table:

Yields of direct investment in:

U.S.A firms established in manufacturing	Under-developed Countries	Developed Countries
1951-70	11.2%	11.7%
1951-60	11.6%	13.9%
1961-70	11.0%	11.0%
Other branches		
1951-70	10.2%	11.6%
1951-60	11.1%	11.8%
1961-70	9.6%	11.5%
British firms idem. all branches except oil		
1961-69	10.4%	10.0%

(*Critique de l'Economie Politique*, Paris, Oct–Dec 1973,p.94).

whereby on the contrary, it is shown that, with the exception of oil, the rates of profit are practically equal in the two groups of countries. As far as oil is concerned, the estimates of the First National City Bank of New York point out that the net return of Capital in the seven biggest oil companies of the world which was 14.2% in 1960 fell to 11.2% in 1970, thus falling into line with the average rate shown in the above table.

More complete and more meaningful statistics have been published by the "Documentation Française" of 15 March 1971.

American direct investment in manufacturing industry.
Movement of the rate of profit.

Year	Canada %	Latin America %	Europe %
1960	8.2	9.9	12.8
'61	5.2	10.0	12.4
'62	8.6	8.7	10.1
'63	9.0	7.7	11.1
'64	9.1	9.6	11.8
'65	8.7	9.8	11.3
'66	8.1	10.3	9.6
'67	7.5	7.5	8.6
'68	7.9	10.2	9.6

It appears that, with the exception of Canada which enjoys preferential conditions due to neighbourhood, language and other links, the two other groups, Latin America and Europe, the one under or semi-developed, the other developed, show a remarkable convergence with or even a slight superiority to Europe, which runs counter to what the supporters of the non-equalization thesis want to prove.

Generally, those who deny equalization on the world plane base their position on the hypothesis that the big international "monopolies" restrict the mobility of Capital. We must, first of all, point out that no precise definition of "monopoly" is formulated in the argument. Indirectly, we understand that the writers who use this term do not have in mind the veritable monopoly which this category referred to in the nineteenth century and which is, anyhow, practically non-existent today. They rather describe by this word corporations of a certain size, such as General Motors, United States Steel, Imperial Chemicals, I.B.M., Philips, Siemens, Pechiney, etc.

Why would corporations like these forbid the free circulation of capital? The only motive we can imagine is to protect their super-profits from the competition of outsiders. This would imply that the *average* rate of profit of firms of this kind exceeds the average rate of the others. Now, such a difference in the rates of profit is simply mythical. Not only is there no statistical proof of such an assertion, but, to the best of our knowledge, nobody has ever attempted to look for such a proof.

Curiously, it is orthodox Marxists who usually talk about the super-profits of great corporations, thus losing sight of Marx's belief that the regular rate of profit of the big impersonal firms is, on the contrary, below the social average. Marx has even gone so far as to make out of this case one of the factors which counter-balances the tendency of the general rate of profit to fail. He suggested

that the remuneration of the capital invested with those big corporations at a reduced rate of profit, generally equal to the rate of interest, allows small and medium firms, participating in the equalization pool, to maintain a higher rate than the mathematical general average.

But let us assume that the rate of profit is directly proportional to the degree of monopoly. Such a situation will prevent equalization within each nation, not at all between them.

Let us take two nations or two collections of nations, A and B, exchanging their products. Within each region we will have all the range of rates of profit according to the degree of monopoly of each individual branch, say from 5 to 15%. There is no equalization.

But according to the law of great numbers, the average rate of profit incorporated on the assortment of exported articles of A will be about equal to the national average. The same thing will happen in B. If monopolies are equally spread in A and in B there is no problem. The equalization is carried on adequately on the international plane. There can be a problem if, and only if, the general average degree of monopoly is not the same in A and in B.

But if we assume that it is in the most developed area, for instance in A, that the degree of monopoly is higher, then the inequality of exchange not only is not reduced but is aggravated, since, in that case, the developed country 'charges' its sales not only with its super-wages but also with its super-profits. It is only in the case where it can be demonstrated that the degree of monopoly is higher in the underdeveloped region, B, that the theory will be weakened, super-profits offsetting sub-normal wages.

It follows, that to refute the theory of unequal exchange it is not enough to show that there are monopolies and that the rates of profit are unequal. It must be shown too that there exists an inverse functional link between the rates of wages of one region and the rates of profits of the same region. We have no reason to believe in the existence of such a function.

As Somakni puts it:

> "... whereas the wages run apart along national lines, profits run apart mainly along different lines (per industry or branch), irrespective of the proportion in which these industries or branches are introduced in the different countries and there is no precise relevance between the rationale of variations of relative levels of wages and that of variations of relative levels of rates of profit... There is no evidence of the existence of a profit rates gap as deep as one of wage rates and especially of a profit rates gap being systematically correlative to the wages gap. This allows us to rule out the idea either that the circumstances which depress the wages in a country could tend to depress the profits too, or that the low wages of certain countries entail "constantly and systematically" higher profits in these same countries. The best approximate analyses of national rates of profit between advanced and under-developed countries are those of J.H. Dunning on the average rates of profits realized in various countries

> by British investments abroad. (*Studies in International Investment*, London 1970). The scale of growing rates of profits is distributed quite erratically among low wages countries and high wages countries." (Salari, *Sottosviluppo, Imperialismo, Einaudo*, Turin).

Lastly, we can add that, in any event, possible disparities in the rates of profit, even if they move in the right direction, are of another order of magnitude than the disparities of wages, so that it is excluded that the one offsets or diminishes the others.

3 Wage Differences and International Exploitation

3.1 Financial Imperialism and Mercantile Imperialism

Division of Labour and Distribution of the Product

As pointed out at the beginning of the chapter on the International Division of Labour, one of the forgotten truths of political economy, beyond any question of ideology, is that all economic relations between men and between groups come down in the end to the division of labour and to a certain distribution of the product of this labour.

It follows that if these relations involve even a small amount of exploitation, this can only be the appropriation by one man or group of men of part of the product of the work of another man or group of men. And as work only produces goods and Services, this appropriation-exploitation must necessarily appear in the circulation of goods and services.

Transfer of Value on the International Level

It follows that between one country and another no other means of transferring wealth or value exists but the transfer of material goods or services.

All financial operations, interest on loans, dividends on capital invested abroad, repatriated profits and official or clandestine capital movements, when they are not mere book- keeping devices without real significance, can therefore only be either the simple reflection of this kind of transfer of real values on the book-keeping and banking level, or else the means of achieving this transfer.

Exploitation and Imperialism

Consequently, all exploitation of one country by another must, in the last resort, correspond to some kind of inequality in the transfer of goods or services; in turn this inequality either concerns the quantities exchanged, valued according to prices on the world market, or it lies in the structure of these prices themselves.

Simplifying, one can say that a hundred francs or a hundred dollars moving from one country to another either represents human work or are just hot air. If they are just hot air, it can hardly be said that their transfer constitutes any kind of imperialistic spoliation. If they represent human work, one ought to be able to find a trace of them in the movement of goods and services, since – for the time being at any rate – human work does not produce francs or dollars but goods and services.

Double Entry

It is because they have forgotten this elementary fact that some people blame the theory of unequal exchange for giving mercantile imperialism priority over financial imperialism.

But when, in their balance sheets of imperialistic exploitation these authors distinguish between financial transfers from the periphery to the centre, on the one hand, and the transfer of values through terms of trade on the other, they are simply counting the same thing twice over.

The *net* transfer of capital from one country to another cannot *materially* be anything but an export of goods unpaid for by an equivalent import. A transfer of this kind can therefore only be made through a trade-balance surplus, whether a purely formal one (i.e. entered in the accounts as non-equivalent volumes in terms of current prices) or an informal one (i.e. concealed in the composition of these prices themselves, as the non-equivalence of their elements).

The Only Means of Transfer: Prices

To simplify still further: one country can only gain something at the expense of another by taking more goods than it provides or by buying the goods it obtains too cheaply and selling those it provides at too high a price. However, since on the whole and in the long term, exports from the Third World towards developed countries, calculated according to world prices, do not exceed imports, calculated on the same basis, only the second means remains, – i.e. the only mechanism for transferring value unilaterally is through the distortion of prices described in the unequal exchange.

This seems to me so obvious – a mere truism in fact – that I would not think it worth repeating if the very people who present imperialistic domination over underdeveloped countries in the darkest light did not persist in neglecting the terms of trade and treating them as a mere secondary instrument of exploitation. As though there could be any other! For so far as exploitation is concerned, there is indeed no other, and one has to choose: either the exploitation concealed in the unequal exchange is far from negligible or the economic aspect of imperialism is itself negligible.

Oil

But the oil crisis has probably helped to clarify a number of questions. For it illustrates admirably the two points being discussed here.

First, it is now clear that an increase in price will be illusory and will bring no benefit to Arab countries if structures for absorbing the goods and services imported in exchange for oil are not created inside the producing countries.

Secondly, the sums concerned are by no means negligible for the economy of the industrialised nations.

When, without making any precise calculations, I once wrote in an article of 200 or 300 billion dollars as the *possible* amount of unequal exchange between the Third World and the developed countries, many people laughed at me. But it is now obvious that the price adjustment (and it is only an adjustment) of one single product from the Third World amounts to over 100 billion dollars.

Capital Movements

Until now, criticism of the capitalist system on the international level has been distorted by the effect of two important myths.

The first of these, confusing the external *assets* of Britain and France accumulated up to 1914 with a supposed *net* export of funds by these two countries during the period in question (1870-1914), makes this "exodus of capital" responsible for "unblocking" the process of extended reproduction in the advanced countries through deflating their internal financial markets.

The second myth, examining only the effects of these assets, irrespective of their origin, claims, on the one hand, to explain imperialistic domination by the stranglehold of developed countries on the productive apparatus of underdeveloped countries, and on the other hand tries to limit the contents of international exploitation to the repatriated income from this capital.

1. On the first point, the briefest analysis of the external balances of Great Britain and France during the period in question shows that the two main imperial powers at the time, far from exporting funds derived from their domestic product to the rest of the world, drained towards themselves funds produced abroad.[8]

   Foreign investments held in Great Britain and France just before the first world war – i.e. roughly £4,000m. for the first and half this for the second – were in fact the product of the ploughing back of profits in the place where they had been made. What is more, only part of these capital earnings were reinvested: the rest were repatriated to the two "mother countries" over the years. Instead of a net export of funds, there was a net import.

2. As for the second point (i.e. that whatever the origin of these funds, the volume of investments constituted the main or even a significant instrument of subjection of the underdeveloped countries by the industrialised countries and an important means by which value was transferred from the former to the latter), this is contradicted by the following facts:

   a) Both in the first period (before 1914) and in the present day, most of this capital (then from England and France, now from the United States) was not invested in underdeveloped countries but in developed ones.[9]

   b) If external investment is really an essential element of imperialism, it would follow that the latter has considerably diminished since Lenin's time, since the total volume of this investment has never ceased to decrease since then. Compared with the 1914 rate, it is now very much less in *absolute* terms and wholly negligible in relative terms.

[8]Cf. A. Emmanuel: 'Le colonialisme des "poor whites" et le mythe de 1'imperialisme d'investissement,' in *L'Homme et la Societe*, No.22, Dec. 1971. 'White-Settler Colonialism and the Myth of Investment Imperialism' *New Left Review* No.73, 1972.

[9]Of the 70.7 billion dollars of American foreign investment in 1970, 47.7 billion were invested in developed countries, 20 in underdeveloped countries and 3 unlocated.

i. In Absolute Terms
Taking into account the real value of the currencies in question, the £4,000m. of 1914 corresponds to some 300 billion dollars today, i.e. nearly double the total American public and private holdings abroad.[10]

ii. In Relative Terms
In 1914, £4,000m. represented about twice Britain's annual national income, whereas today 150 billion dollars hardly represents a sixth of the United States' annual national income.

c) Finally, if one abandons historical comparisons and tries to measure the impact of these investments in the underdeveloped countries today, one finds that private investment (the only kind that ought to be considered here) by the United States in the underdeveloped countries, which amounted to 20 billion dollars in 1970, represents some 2% of the total capital invested in production in these countries.

It should also perhaps be pointed out in this connection that in the whole of Latin America, a region particularly favoured by multinational companies, the net influx of foreign capital during the period 1964-68 only represented 1.3% of the total gross capital formation in this area. If instead of the net influx of foreign capital one takes the total amount of current investment in foreign hands (therefore including profits made locally and reinvested), *one finds that for the period 1966-69* this amounted to less than 5% of the gross domestic investment.[11]

To conclude then, it is not because the Third World is inundated with foreign capital that its development is blocked, but, on the contrary, because it has been starved of this capital. Lenin was right in saying that the effect of capital movements was to accelerate the development of the countries in which the investments were made and to slow down that of the investing countries, but he was wrong in believing that these movements were in actual fact large enough to produce such an effect.

'Upstream' Determinants and Political Implications

The reversal of the causality has considerable implications in the field of international relations. For, if prices of Third World exports were fixed according to the objective laws of the market, any project to raise them or to simply stabilize them would only reflect some willingness to give aid, or, at best, the recognition of a moral duty of the rich countries. On the contrary, if it is the institutionalised remuneration of factors which determine the decline of prices, their rising again

[10]This does not even take into account the fact that if the United States has some 150 billion dollars worth of medium or longer term claims against the rest of the world, the rest of the world has sight-claims against the United States for about the same amount, in the form of Eurodollars or dollar balances accumulated in the reserves of the Central banks.

[11]Cf. Statistics and detailed discussion on this point between Bill Warren 'Myths of Underdevelopment', in *New Left Review* No.81., Sept-Oct 1973, and A. Emmanuel, 'Myths of Development versus Myths of Underdevelopment', in *New Left Review* No.85, May-June 1974.

would constitute a simple cancelling out of an undue enrichment of industrial countries.

If the only price which deserved to be considered as normal for Middle-East oil was that which was determined by free competition among sellers on the world market, to call black- mail its authoritative fixing by Arab countries would be justified. On the contrary, if market priceis but the price corresponding to their underdevelopment, one could hardly call blackmail their simple refusal to respect a price the only norm of which is their own poverty.

But let us imagine that for some reason, wages in the Middle- East had sharply increased and had reached American levels. Let us further imagine that rapid economic development had followed with an intense urbanization and a soaring of rents and of land prices up to Californian standards; that as a result of this, the real cost of extraction had risen from 10 cents to 10 dollars a barrel.

Although material conditions of extraction remained unchanged, and this rise would only reflect an increase of revenues of the producers as present rises do, nobody would think of describing this as blackmail.

Pure Science, the Alibi of Exploitation

It is understandable, therefore, that the spokesmen of the developed countries should reject this theory. Their references to pure scientific principles are an alibi for the conscious or unconscious defence of the status quo. For these principles are soon forgotten when it comes to products form the Third World competing with the national production of the developed countries. Formerly, import quotas were imposed against Japanese goods, and today nobody hesitates to protect its own national textile or clothing industries etc. against imports from underdeveloped countries, invoking the abnormally low wages paid in these countries and the resulting "social dumping". In other words, people suddenly accept the fact that wages are the cause and prices the effect. Whereas, elsewhere, in the name of a diametrically opposite cause any increase in the price of coffee is said to be artificial and any increase in the price of oil is stigmatised as blackmail and extortion. Seen in this way, whether low salaries produce "abnormal" prices or "normal" prices produce low salaries depends on whether the product in question is transistors or coffee.

It is also easy to understand that the underdeveloped countries do not see the raising of their export prices in the same light. More and more often nowadays one reads in official statements that their demands are not an appeal for aid but a frank transfer of responsibility for the present state of international trade and for underdevelopment in the world onto the developed countries.

Wage Differences and Productivity

Another argument used by spokesmen of the developed countries, which some Marxists unfortunately also adopt, is that the impact of high salaries on prices does not constitute an exploitation of foreign purchasers since these high salaries merely compensate for the higher productivity of the labour involved.

They forget that with equal qualifications any difference in productivity can only result from an improved tool, i.e. equipment that is heavier and more costly (higher organic composition of capital). But since profits are proportionate to the capital invested, this equipment has already weighted the selling price of the product by a sum which the system's own logic considers to be strictly equivalent to its differential contribution. To try to increase it by the difference in salaries as well is simply to try to obtain payment for the same thing twice over.

According to neo-classical theory, there are several production factors, and no distinction is made between use value and value as such. According to Marxists there are indeed several factors in the production of use value but one single factor in the production of value as such; i.e. labour. But whatever the number of factors, each of them can only produce something (use value or value) in proportion to its own quality and quantity. One hour of work done by an African workman with certain qualifications is no different to one hour of work done by a French workman with the same qualifications. The two things are identical. In themselves, neither can produce more than the other. No economic reasoning can account for any difference in payment or justify this difference being added to the price payed by the foreign purchaser.

The 'Primum Movens'

Analysing earlier the reversal of assumptions implicit in the theory of unequal exchange, we concluded at the end of the paragraph in question that "as with relations between proletarians and capitalists in any one country, so with relations between different countries: poverty conditions exploitation and exploitation reproduces the conditions necessary to its own continuation".

But if the exploitation of one country by another can be explained by the division of the world into rich and poor nations and if this exploitation in its turn consolidates and increases the gap, the question arises (and it has been raised): how was this situation created in the first place?

For the dialectic between exploitation and poverty only explains the reproduction of the relationship; it does not explain its original production.

To answer this question it must be remembered that the problem here is the same as the one concerning exploitative relations inside a given country. All capitalistic profit refers back to some pre-existing capital, and therefore to an earlier accumulation of profit. And all wages refer back to a proletarian, i.e. to a man poor enough to have nothing to sell but his two arms, and therefore to some previous salary, adequate to reproduce those two arms but not leaving their owner any surplus that would allow him not to sell the use of them. For

this is all the separation of the worker from the means of production signifies. Unlike earlier systems, capitalism does not give the means of production any institutional privileges. They are at the disposal of anybody who is willing and able to purchase them. The depossession and proletarianisation of men must therefore reproduce itself automatically and perpetually.

But if wages reproduce the proletarian and profit reproduces the capitalist, and if once established these relations reproduce themselves automatically (violence once again only serving to protect the existing order against the violence of those who seek to disturb it), there has to have been at some given moment a first or original accumulation of "capital" which was the product of something other than a previous capitalistic profit, as well as a first proletarian who was deprived by something other than the wages system.

According to Marx this "primum movens" was the direct spoliation or plundering of a certain category of men by an initial act of violence: i.e. primary accumulation.

In the same way, on the international level the "primum movens" was an initial act of direct spoliation of certain nations by others: i.e. a primary accumulation. When capitalism establishes itself somewhere, men or nations already exist who are exploitable without violence because they have been deprived of everything by a previous act of violence.

3.2 The Impact of Wage Variations

How can workers in underdeveloped countries be affected by increased wages in developed countries, since all wages are supposed to be *independent* variables? And if they are not affected, how can one say that by obtaining increases in their money wages, workers in developed countries exploit or share in the exploitation of workers in underdeveloped countries.

It is clear that money wages in underdeveloped countries – which, according to the premises of the theory of unequal exchange, vary independently and extraneously – are not affected by variations in money wages in developed countries – at any rate not immediately or directly.

But it seems equally clear that the *real incomes* of workers in underdeveloped countries are significantly affected by these increases, because of the resulting increases in the price of products imported from developed countries, in so far as these products are par t of their consumption, either directly, in the form of goods, or indirectly, as the raw materials of other consumer goods produced locally.

In other words, variations in the money wages of one group determine variations in the corresponding relative prices, and it is *these* variations of money prices that determine in turn the respective variations in the real wages of the other group.

But if one takes an imported product not directly or indirectly consumed by workers in the underdeveloped country, can one say that in this case at least the only losers in that country are the local capitalists, first, because of the fail in the world rate of profit and therefore of their own earnings, and secondly, because of an eventual rise in the price of imported luxury goods?

In the short term, the answer is yes. But in the long term certainly not. Whatever their opposition to their own capitalists, it is not at all a matter of indifference to workers in poor countries that increased wages in foreign countries whittle away the profits of their own national capitalists, which constitute in any case a potential subject of bargaining and a factor influencing their own demands for future wage increases. However determined these workers may be to expropriate their own capitalists, they cannot favour an expropriation which would only benefit the working classes of another country.

The Share of Surplus Value Contained in Certain Wages and the International Solidarity of Workers

Since exploitation in capitalistic relations consists of an appropriation of surplus value, a worker cannot benefit from capitalistic exploitation, even involuntarily and objectively, unless his wages contain surplus value extorted from other workers.

So long as this point is not reached, so long as the increases obtained by workers of industrialised countries only represent a partial *recuperation* (however large) of the surplus value extorted from them by their own employers, there is no share in exploitation and no antagonism between the working classes of different nations.

So those who believe in the continuing international solidarity of the proletariat in the present day world argue as follows:

If for one reason or another American workers are less exploited than Mexican workers, this is no reason for the latter to try to diminish American wages, thus achieving equalisation from below. They should, on the contrary, act hand in hand with American workers, so that together they may expropriate the exploiters, recover all the surplus values, however unequal these may be, and improve their respective conditions, although one group will probably automatically gain considerably more improvement than the other.

This argument might be valid if the premises were well founded. For it is true that in so far as a worker is a *donor* of surplus value, however reduced this may be, there is no breach of solidarity, whatever the rates of pay. But this is not the case. Today, the vast majority of American workers, and even those in other large OECD countries, are no longer *donors* but *receivers* of surplus value; and naturally this surplus can only come from the labour of workers of other nations, even though it is not directly extorted by those at the end of the line.

This is what upsets the basic pattern of the class struggle on the international level. It means that even if one were to expropriate all the capitalists of the planet, the value produced would not be enough to ensure equalisation from

above; and a fraternal socialistic world would have to expropriate not only the capitalists but also – partially and to the amount of foreign surplus value appropriated today – large sections of the working classes of certain nations. This is enough to make these sections, who know very well what they are doing, turn their faces resolutely against any kind of fraternal socialistic world.

None of this is merely theoretical. No Marxist would deny that certain wages, far from providing surplus value, contain it. The question of whether this only happens with the 200,000 dollar annual salary of an Executive Director at General Motors, or with a Sub-Director's 100,000 dollar salary, or already with the wages of a qualified French worker at 4,000 francs a month, is a mere matter of calculation, not of conceptual analysis. In the same way, whether the "workers' aristocracy" as defined by Lenin includes 5% or 10% or 90% of the working class of this or that nation at this or that moment is not a question of principle but a matter of history and of general economic conditions. The calculation can be made as follows (1969 figures, but the proportions today are about the same or even more pronounced):

a) Even in the most developed countries, wages could not be aligned at the highest (American) rate without the global surplus value of the area as a whole becoming negative:

   In 1969, the total income of wage-earners in the United States was

   $$\$566,558 \text{ millions}$$

   less the wages of the armed forces

   $$\$20,229 \text{ millions}$$

   Wage income of civilian labour force

   $$\$546,329 \text{ millions}$$

   The total number of salaried civilians being 70,274,000 at the same date, the average annual income per wage-earner in the United States in 1969 was $7,775.
   The number of civilian employees in the 22 OECD countries, i.e. for the whole area less Turkey, was in the same year:

   $$282,000,000$$

   of which employees

   $$218,900,000$$

   employers and the self-employed, i.e. what the United Nations statistics call "independent traders"

   $$63,100,000$$

   Admitting that "independent traders" only have a right to the same average salary although they have higher average qualifications (all the liberal

professions, lawyers, doctors, artists, etc., are included in this category), equalising wage incomes within the developed group of countries would mean paying 181 million active workers at $7,775, i.e.

$$\$2,192 \text{ billion}$$

But the total national income at factor price in these same countries was in 1969 only

$$\$1,487 \text{ billion}$$

There would therefore be a negative surplus value of

$$\$705 \text{ billion}$$

Equalisation from above is therefore impossible, even inside the richest countries in the world. (It is clear that this negative surplus value would have been still higher if we had not left Turkey out of our calculations. But Turkey is obviously not a developed country.)

b) If we include in this calculation the non-communist underdeveloped countries, extrapolating certain missing data, we shall have in the first place to add an additional 1,680 million people to the total population. The average active population in these countries is 40.8%. Rounding it off at 40%, we have an additional 672 million men and women to pay at the American rate of 7,775 dollars, i.e. a wage bill of 5,224 billion to add to the 2,192 of the developed countries, i.e. a total of 7,416 billion dollars for the whole of the non-communist world.

Now, the national income at factor price of the non-communist underdeveloped countries was 248 billion dollars in 1966. According to Paul Bairoch's estimates, it increased by about 5% a year between 1966 and 1968. Leaving a margin and calculating at the rate of 6% a year to 1969 (at compound interest), we arrive at the figure of 275 billion dollars for 1969. Added to the developed countries' 1,487, this gives us a total income at factor prices for the whole non-communist world of:

$$\$1,782 \text{ billion}$$

As the wage bill at North American rates would be

$$\$7,416 \text{ billion}$$

There would be a negative surplus value of

$$\$5,634 \text{ billion}$$

i.e. a sum *eleven to twelve times* higher than the total surplus value at present produced in all 22 OECD countries and about ten times higher than that of the whole non-communist world.

c) At a zero amount of surplus value (that is to say if, after expropriating the capitalists and other receivers of surplus value all over the world, one decided to distribute the whole social product in wages and stop all accumulation and all technical progress) each active worker of the non-communist world would receive an average of

$$\frac{1,782b.}{954m.} = 1,868 \text{ dollars per year}$$

In other words, a quarter of the present North American wage, and a good deal less than the wages of all advanced countries of the western world – i.e. roughly equivalent to wages in Greece or Portugal. And even this result depends on the assumption of simple reproduction alone.

An in Real Terms...

6% of the world's population already consumes over 40% of the world's raw materials. Present world production in physical terms could only feed, clothe, house, etc., about 600 million people on the American level.

Americans consume nearly 700 kilos[12] of steel per head per year. If the whole world started to consume as much, all known reserves of iron ore would be completely exhausted in 40 years, – provided the world's population ceased to increase, otherwise depletion would come even sooner.

The same equalisation of world consumption from above, still with a stable population, would exhaust the known reserves of copper in 8 years, tin in 6 years, etc.

But where the deadlock is total is once again oil. At the level of North American consumption, the world needs some 14-15 billion tons a year. But known world resources only amount to about 80 billion tons, which, with a stable population and economy, would be enough for 5 $\frac{1}{2}$ years.

If we add reserves yet to be discovered or those which might be exploited with new technological inventions, we could, according to OECD experts, count on twice that amount, or about 160 billion tons. in other words, and assuming the same stable situation, there would be enough to last 11 years. Finally, taking into account the marine subsoil of the whole planet, we arrive, according to certain experts, at a total of 320 billion tons, i.e. 22 years' consumption at the American rate.

3.3 Ecological Constraints

But exhaustion of present and future resources is not the only factor preventing world equalisation from above. Ecological limits constitute another factor.

If the present developed countries can still get rid of their waste products by dumping them in the sea or expelling them into the air, it is because they are the only ones doing it.

[12] 1,400 pounds.

Just as their inhabitants can still travel by air and fill the world's skies only because the rest of the world does not have the means to fly and leaves the world's air routes to them alone. And so on...

3.4 International Solidarity

In all these calculations it is not a matter of abstract concepts like surplus value, capital, etc., or book-keeping categories like profit, interest rates etc., but of the consumption of real substances. So it is the vast mass of the population and the wage-earners themselves who are implicated. Similarly, leaving aside all other considerations and all other antagonisms, and given the objective natural and technological conditions of today and the foreseeable future, the rich countries can only consume all the commodities that make up their material welfare, which they seem keen to preserve, *because* the others consume very little or nothing at all.

They can only abstain from recycling their waste products because the others do not have much to recycle; otherwise the ecological balance of the world would be irrevocably disturbed. This is what destroys working-class solidarity between the rich and the poor countries.

Everything happens today as though certain natıons had been able to fuse into a sort of class-nation, while others remained merely nations divided into classes. This means that in the first type of country a true political struggle becomes more and more impossible: there can only be a strictly economic struggle, as there has always been inside any class. This also means, in a sense, that the countries on the periphery are henceforth not the weakest link in the chain but the only true revolutionary area. Their local conservative forces are allied, not with certain classes in other countries, but with certain nations belonging to the same class. At any rate, the physical terms of the problem as set out above show clearly that its solution has as its framework and parameters mankind as a whole. Any class contradictions that may remain in the developed countries become secondary. The main contradiction – the motive force of change – is henceforth to be found in international economic relations.

4 Unequal Exchange and Unequal Development

What is the implication of unequal exchange for development? Is this value transfer from backward countries to industrial ones directly jeopardizing the development of the former and enhancement of the latter?

The answer is no! And the reason is quite simple. According to the foregoing analysis, gain or loss from the inequality of exchange originates in the disparity of wages in different countries. Gain or loss correspond, therefore, to an increase or a decrease respectively of unproductive consumption of the workers. As such, they are irrelevant to the process of development. Development is a result of accumulation and investment. Under capitalist relations it is a matter of profits not of wages. Now, when wages rise, profit is decreasing not increasing. Therefore, if you raise your wages and you succeed in getting foreign customers to pay the difference, you get a better standard of living, you increase your national revenue, but you do not advance along the path of development.

But it so happens that the same cause, namely the variation of wages, which affects the terms of trade and generates one-way value transfers, affects simultaneously the rhythm of development. However, this is done directly and without passing through the terms of exchange.

In other words, the acceleration or the slowing down of development is not the effect of the inequality of the exchange. Both inequalities, that of development and that of exchange, are, jointly, the two effects of a common primary cause: the wages gap.

What is the process that links development directly to wages? It is twofold, extensive and intensive.

I. The Extensive Process

The main problem of capitalism being to sell and not to produce, investment opportunities are directly proportionate to the size of the market and not to the differential cost of production. But the size of the market is directly proportionate to the level of the wages. It therefore follows that the external balance of capital transfers is unfavourable for the low wages country. This is the extensive (quantitative) negative element for development.

II. The Intensive Process

The depreciation of the labour force and particularly the existence of low qualifications in backward countries orientates the investor's preference towards socially disadvantageous investments, i.e. towards labour-using branches, and among them, towards unskilled labour-using branches. As I say in my book: "low-paid labourers keep machines and engineers out of the underdeveloped countries while machines and engineers take the place of highly paid labourers in the advanced ones. This is the intensive (qualitative) negative element."

In both processes, the effect is cumulative. In the former, the exiguity of the market keeps foreign capital out of low-wage countries and encourages local capital either to also invest out of the country or to squander on sumptuous consumption. But the rarer the capital, the greater the downward pressure on wages. The result is a further contraction of the market and a further curtailing of investment opportunities.

In the latter, man's muscles cost relatively less than (and displace) tools and brains. But without tools and brains man's muscles become less productive. And the final effect is to further depreciate muscles.

What we said about the direct influence of wages on development without passing "through the terms of trade can be well illustrated by the present example of oil producing countries. We can see, in this instance, that even when the terms of trade are corrected by artificial, extra-economic means and the foreign trade balance sheet shows a gain of tens of thousand million dollars, a great part of it cannot be used for development purposes and cannot even be collected, in the real sense of the word, by its beneficiaries, for lack of an adequate level of domestic purchase power, in other words, of an adequate level of domestic wages.

For a national economy can materialize external revenues only by receiving an equivalent quantity of goods from abroad, be they destined for final (unproductive) consumption or for investment (productive consumption). Both forms imply the previous existence of purchasing power within the recipient country and this is what is lacking in a number of Arab countries. Eventually, these countries will get nothing out of the huge piles of dollars but perpetual book-entries in the banks and a pile of credit notes.

To quote myself again:

> "After having been for a long time too poor to be able to sell their oil at a normal price, when at last they had the opportunity to unite and dictate the price, these countries turned out to be too poor to be able to ensure that they are really paid for it"*

4.1 The North American Precedent

All this may seem absurd in that it puts the cart before the horse, but I believe it would be truer to call it a caricature – that is, something that distorts the outward appearance of the thing represented but respects and even reveals its basic physiognomy. For if one looks closer, one finds that generally speaking this is exactly how the United States' extraordinary development in the 18^{th} and 19^{th} centuries happened.

At that time America was a typically underdeveloped country, and labour there was doubly expensive, first because wages were considerably higher than in England and secondly because the quality of the labour was particularly low.

*Emmanuel has slightly misquoted his own words from earlier in this document, see page 33. - Editors

Paradoxically enough, though, it was not in spite, but because of, the high salaries and the low quality of labour that the country developed. Not through terms of trade but through the influx of men and capital and above all through the Americanization of this capital, due to the enlargement of the market, and finally through the channelling of these investments into labour-saving equipment, precisely in order to dampen the effect of the high cost and low quality of the available labour, thus setting in motion the great wave of mechanization and automation on which the American take-off was based.

Reversed Dynamics

All this seems quite absurd. To accept that high unproductive consumption and low productivity are factors of development is like admitting that the mouth of a river determines its source. But this is only a reflection of the objective absurdity of the economic System in which we live. It has been realised for a long time now that the capitalist system of production is topsy-turvy, the world stood on its head. But if that is not a mere metaphor it means just this: that the downstream events determine what happens upstream.

In all other systems of production it is the other way round. One produces first, according to the productive means at one's disposal; then one consumes, after distributing what has been produced according to some chosen sharing procedure. The rate of consumption depends on the previous volume of production. In the system of mercantile relations, the dynamics are reversed. Production depends on real or anticipated pre-existing outlets. So all the decisive factors are downstream. Instead of an increase in production making increased consumption possible, it is a previous increase in consumption that stimulates production.

Reversal of the Accumulation-Consumption Function

In an integrated society, accumulation is inversely proportionate to unproductive consumption, and this maintains the equilibrium, since the two quantities are integral parts of a given whole, which is the current production potential. in a free-enterprise society, investment and therefore development itself are directly proportional to unproductive consumption, which is truly topsy-turvy. In all other types of society the basic problem is to produce; under capitalism the main problem is to sell.

This reversal of dynamics has considerable implications. Many prejudices and myths have to be abandoned. It is not upstream, in the sector producing the means of production, in the machine-tool industry and high-technology manufactures, that one finds the most dynamic branches today, whatever many people persist in thinking. It is at the other end of the chain, in the industries that are as close as possible to the most everyday consumption that the growth points are to be found. To convince oneself one has only to glance at the main stock market curves for the last dozen years or so. Whether in New York, London or Paris, it is not the shares of the great chemical firms and even

less those of the metallurgical industries that are growing fastest, but those of pharmaceuticals, of well-known brands of food and drink, and also of gadgets: all those small articles whose materials are a negligible factor compared with their packaging and presentation, and where technology is nothing and publicity everything. If we take the shares in the electronic sector, which would seem to be among what are called growth stock, one finds that it is not the upstream electronics, i.e. that of the great electrical undertakings, that lead the field, but the downstream group manufacturing transistors, colour television sets, etc. Even the production of computers is losing ground. But typically enough, if one studies in this last sector the struggle going on for several years between for instance IBM and Univac or – for office machinery – between IBM and Remington, between the United States and Britain, one finds that although IBM is considerably less advanced than its competitors from the scientific and technical point of view, it gets the better of them in a decisive way because it is more advanced and better equipped than they are where marketing is concerned.

The Example of Oil Again

In the same way, if we take the case of oil and examine what happened before the producers got together and turned the situation upside down by a veritable *coup de force*, we find that what conditioned their reaction and obliged them to deliver their oil to the oil companies and to the great Western countries at ridiculously low prices was neither political domination (as we can see now, this was not very strong) nor the impossibility or even difficulty of having their own refineries and tankers, but quite simply lack of outlets, lack of a network of sales points. The advantage which Western countries had over them was neither capital, technological know-how, nor trained technicians: all this the Arabs either had or could easily acquire. What they had not got was quite simply petrol pumps and service stations,- i.e. consumers.

And the same thing can be seen today when one studies the use of the enormous funds now available to these countries as a result of the new prices. International experts cannot find any connection between roughly a hundred billion dollars on the one hand and great open spaces with a few million Bedouins inhabiting them on the other.

When one has counted the purchase of armaments, the installation of various refineries and the eventual purchase of some giant tankers, i.e. the only outlets now available (the princes' thirst for power on the one hand, operations linked with the foreign oil market itself on the other), one has already exhausted the absorption capacity of these countries, which finally represents only a small part of these enormous holdings. The remainder is to be found in Switzerland or London upsetting the international monetary System.

This is certainly not due to political domination – as one ca easily convince oneself by watching Western ministers rushing to Arab capitals and dancing attendance on their rulers. It is not due, either, to any difficulty concerning the transfer of technology. Driven by competition and acting separately fem one another, Western powers offer them every kind of technical assistance today

at reduced prices. It is quite simply due to the purely economic fact that the internal – and I said *internal* – incomes of these countries are too low and that they therefore lack pre-existing internal outlets.

For there are only two ways of stimulating investments: either a mandatory centralized plan upstream or else the capitalist dynamic. And as most of these countries refuse the first, only the second remains open to them. But they are ill-placed here because of the minute scale of their home market.

So something remarkable happens. Being too poor in real terms to develop their countries in the capitalist way, they are condemned to remain underdeveloped, while still being extremely rich in the account books of the banks and in paper bonds in various foreign financial centres. After having been, for a long time, too poor to sell their oil at a normal price, it happens that when they are finally able to adjust the prices they are too poor to collect the real money these prices represent.

This deadlock is one of the signs of capitalism's basic contradiction between social production and private appropriation. On the basis of the Bedouins' *actual* incomes, no businessman will import new products into the Arabian deserts or install factories to manufacture them. But without new means of production the Bedouins' incomes cannot be increased.

A socialist country (or just a country with central planning) does not have this problem. If dozens of billions of dollars fail from the blue one day, it will have no difficulty in converting them into real assets. On the contrary, it would take advantage of its Bedouin's frugality to accelerate accumulation, devoting the major part of this additional income to the purchase and installation of capital goods, importing machines to build blast furnaces with which to produce steel with which to manufacture sheet metal with which to make refrigerators or washing machines in ten or twenty years time.

During the intervening period, these intermediary operations will have transformed the Bedouins into industrial workers with incomes sufficient to consume the refrigerators or washing machines. Accumulation and consumption have been treated as inversely proportional quantities, as in effect (by nature) they are. The drama of the capitalist System is that it can only function by treating these quantities as directly proportional to each other, whereas this is objectively impossible, since they are the twin components of a given entity, the national income.

Domination through Market Power

This is the main element of the domination which is so often mentioned and so seldom defined. Remember that Denmark has a home market larger than all the North African Arab countries and Saudi Arabia together; that Denmark and Sweden together have a larger domestic market than the whole African continent, South Africa excepted; and, if we add Norway, that the three Scandinavian countries together have a market greater than that of the whole African continent (including South Africa) and roughly equivalent to that of India; while Germany and France together have an internal market considerably larger than

that of all the countries of the Third World together, and the United States three times as large as this again.

This is why the American economy dominates the world. And this is what is represented by vague notions such as domination, hegemony, power etc. The American market absorbs of each thing about as much as all the rest of the developed and under- developed capitalist world together. This is what counts in a society where the market-place takes precedence over technology.

The Economics of Development

There is at present no generally agreed definition of development and therefore none of underdevelopment; and it is enough to follow any debate on the subject to realise immediately that the participants do not give the same meaning to these notions. Confusion on this point is total.

For lack of consensus as to the nature of the phenomenon, economists are led to rely explicitly or implicitly on certain indicators of highly unequal value. These have proved illusory or insufficient as the inapplicable cases continue to pile up.

Industrialization in general and manufacturing industries in particular have long seemed the main criteria of development. During recent decades an exceptionally rapid rate of growth in industrial production in the Third World (though in fact only concerning certain countries in this group) has discredited these criteria, which otherwise would have obliged people to recognise that development is not irrevocably blocked by dependence and that countries like Taiwan or the Ivory Coast are on the way to emerging from their underdevelopment without abandoning the framework of the capitalist production system (which these thinkers consider to be impossible) or that on these terms Greece is less developed than Brazil (because considerably less industrialized), which seems absurd. And if we define industrialization in relative terms as the proportion of the labour force working in the industrial sector or as the proportion of this sector's production in the total product, we risk considering Argentina as being as highly industrialized and Hong Kong as being even more highly industrialized than the United States, while Spain would be near the level of Australia or New Zealand.

So the indicators have been altered, and a kind of hierarchy has been established between the various industrial branches. It was discovered in turn that heavy industry, metallurgy, the chemical industry, or even some sector situated upstream from all the others (which could be called la) producing the means of production, were the vectors of development. So Australia, New Zealand, Denmark and Canada suddenly found themselves excluded from the club of developed countries, and Belgium became a marginal case since it lacked any electrical engineering industry worth mentioning.

Other development specialists have decided that what matters is not the degree of industrialization in itself, but the place each country occupies in the international division of labour and therefore its specialization in international trade not the proportion in which it produces industrial goods or agricultural

produce, but that in which it exports them. In this case Holland, Denmark, Sweden, Canada, Australia, New Zealand and even the United States are less developed than Japan.

The inadequacies are accentuated when, begging the question so to speak, one ceases to try and measure development and considers only the prerequisite conditions – whose effective action has never been demonstrated, whether positively or negatively. Thus the underdevelopment of Latin America is explained by the domination of multinational corporations, after which the pernicious character of these firms is explained by the underdevelopment of the countries they invest in, particularly those in Latin America.

In the end, if the penetration of foreign capital were the essential blocking force and the main factor of underdevelopment, we should be obliged to say that Canada is the most underdeveloped country in the world and India the most developed one, since the former beats all records in the field of the foreign takeover of national industries and the latter is the country *par excellence* where it was the local bourgeoisie that promoted industrialization and where foreign investments are relatively insignificant.

The uncertainties grow when one resorts to lateral indicators like the relative importance of the service sector or the existence of a so-called pre-capitalist sector. The first indicator is quite useless, since excess growth in the service sector can be found at both extremities, whether of development or underdevelopment. As for the second, it is an illusion. For in the first place "distribution dominates production" and the various branches acquire a capitalistic character because of their dependence on a dominant capitalist market, not because of their own labour conditions. And secondly it is not at all clear, according to generally admitted criteria, that agriculture (the sector in question) is really more capitalistic in developed countries than in other countries.

In fact those who point to the existence of pre-capitalist relations themselves situate the change from simple commodity relations to capitalist relations at the moment when the labour force itself becomes a commodity. In this view, the measure of the capitalist character of social production relations is the existence and relative number of the wage-earners.

But on this basis, as odd as it may seem, the agriculture of the industrialized countries is, on average, *less* capitalist than that of Third World countries.

The following table is very revealing in this respect:

Number of wage-earners per 100 persons in agriculture, in 1969

Chile	68	France	25
Portugal	59	Netherlands	23.6
U.K.	53.5	Denmark	23
Mexico	51	Finland	21.5
Argentina	49	Morocco	21
Ceylon	45	Indonesia	17
Colombia	43	Pakistan	15
Australia	37	Ghana	14
Sweden	36	Korea	12
U.A.R.	35	Philippines	12
Italy	33.4	Norway	12
Venezuela	33	Germany	11.8
U.S.A.	33	Austria	10
Peru	32	Greece	8.2
Spain	31	Belgium	7.7
Canada	27.6	Luxembourg	6.5
Brazil	26	Japan	3.5
Iran	25		

As can be seen, on the whole it is the underdeveloped countries that head the list here. In the first 7 places 6 belong to underdeveloped countries and only one – the United Kingdom – to a developed country; while the seven last all belong to developed countries. There are only four countries where there are more wage-earners then independent farmers and three of these are Latin American countries. On the other hand, countries as developed as Belgium, Luxembourg and Japan have from $2\frac{1}{2}$ to 1 wage-earner for 30 independent farmers. The most capitalistic country in the world, the United States, only has one wage-earner for two independent farmers, which would give it a pre-capitalist image if one confined oneself to production relations alone. And anyway if one kept to these relations one would have to conclude that world agriculture as a whole is pre-capitalist, since in the overwhelming majority of cases – developed and underdeveloped countries alike – the number of wage-earners is considerably less then that of independent farmers.

4.2 Economic Development and Social Transformation

Quite apart from these ambiguous definitions there is also the fact – which is one source of ambiguity – that many economists, particularly among those who criticize dominant economic theory and study unequal development in terms of exploitation and antagonism, identify economic development with the revolutionary or socialistic transformation of society. They therefore deny the existence of the former in so far as they perceive the absence of any sign of the latter.

Such a position is completely mistaken in a world where the capitalist system of production dominates and where it is the capitalist countries that are ahead in economic development. It ends up by obscuring instead of clarifying the problems.[13]

All production systems have a given economic development potential which forms the basis both of their validity and of their historical limits. Where the capitalist system is concerned, this historical role is very much more marked than in the Systems that preceded it. For it is directly linked to the factors conditioning the dominant class.

One can therefore indicate the limits that this or that system of production, and particularly the capitalist one, impose on the development of certain countries under certain historical conditions. But one cannot say that the system of production itself is necessarily contrary to development as such.

In spite of their interaction, it is finally economic development that determines social development. One can therefore try to explain the economic backwardness of this or that country – Brazil for instance – by the "blockage" resulting from its insertion into world capitalist relations and perhaps *attribute* this economic backwardness to the social backwardness. But one has to *observe* the existence of the first kind of backwardness on its own terms and not *deduce it logically* from the existence of the second kind.

What are these terms? It is precisely the answer to this question that contains the key to the solution of the wider problem.

There was a time when these terms were simple. If people spoke of development they knew what they were talking about. It was clear to everybody that "development" could not mean anything but *development of the productive forces*.

In this sense, development and under development were defined relatively (quantitatively) in comparison with the technical and technological *potential* corresponding to the dominant system of production during the period under consideration.

If development is nothing but development of the productive forces and if we take into account the fact that the productive forces open to development are first the labour force, and secondly the material means of production (produced by man himself), we must conclude that what is developed is the quality of the labour force itself (qualification of the worker) on the one hand, and the quality and quantity of the tools (in the widest sense) on the other.

This implies not only the progress of human knowledge, but also and above all the accumulated product of past labour. In other words, to improve production techniques it is necessary not only to have reached a certain technological level but also to be able to "finance" its application to production.

A long apprenticeship training of the worker corresponds to a relative lengthening of his inactive life, during which he consumes without producing. The product of the work of those who are actively employed must therefore leave

[13]Cf. the article by Bill Warren, 'Imperialism and Capitalist Industrialization,' in the *New Left Review* No.81. Also the article by A. Emmanuel, 'Myths of Development versus Myths of Underdevelopment,' in *New Left Review* No. 85, May-June 1974.

enough surplus to supply the needs of this additional number of inactive persons. Moreover it is not enough to invent new manufacturing processes. One must have been able, previously, to devote working time and other necessary resources to effectively producing the corresponding machinery and other equipment.

In this sense, economic development allows men to increase the contribution of natural forces to their productive effort and – for a given environment and given natural resources – to obtain a greater effective production of goods and Services per unit of labour.

The productivity of labour thus becomes the only relevant measure of development. Why of labour alone? Because it is the only physiologically limited factor. For a given number of persons whose material well-being has to be ensured, for a given number of mouths to be fed, a community can dispose of any amount of land or equipment, but it will never dispose of more than a certain number of hands, a certain number of active workers and therefore of a certain amount of labour- power. And since the proportion of active workers is given, the productivity of labour – i.e. the amount of use values produced per active worker – provides us with a direct measure of the material well-being, and therefore an *immediate* measure of development.

But as we have just seen, the amount of use values produced per unit of labour depends (apart from given natural conditions) on the one hand on the mass of available equipment of all kinds and on the other hand on the qualifications of the workers themselves. It depends on the respective ratios of machines and brains to the total labour force. The first ratio is expressed by what Marx called the organic composition of capital; the second comprises what we have suggested calling the organic composition of labour.

But both the training of brains and production of machines, in any system of production, or their acquisition from outside the community in question in mercantile production relations, imply their "financing" by a previous accumulation.

Consequently (and leaving aside all question of the unilateral transfer – and perhaps exploitation – between one group of men and another), development presupposes the existence of a current production surplus over and above current consumption and the later *productive* use of this surplus.

Accumulation

The possible existence of a surplus appears as soon as a day's production provides even a little more than the minimum daily subsistence essential for the mere survival of the worker and those of his family who are unable to work and whom he must therefore support.

This type of situation arose very early on, as soon as man had been able to improvise a few rudimentary tools, perhaps in neolithic times, certainly with the cultivation of the land.

But this potential surplus could only become effective, i.e. effectively subtracted from current consumption and accumulated, under certain social conditions. For even if the surplus is produced by the individual worker, it can

only be accumulated and mobilized at the level of the community. Hence the decisive importance of social production relations for the effective creation of the surplus and its use for the purpose of accumulation.

It still has to be added, though, that an accumulated surplus does not automatically become a surplus used to increase the productivity of future work (training of brains and production of tools). it is not necessarily and in all cases invested productively. It can be used unproductively, particularly to constitute treasures, to build mausoleums, cathedrals etc. so not only its creation – the passage from potential surplus to effective surplus – but also its use depends on social production relations.

In this connection, a first distinction must be made between integrated and antagonistic societies. in an integrated society, for instance that of a primitive community, the producers themselves give up part of their unproductive consumption. Whereas in antagonistic societies, the mobilization and accumulation of the surplus is carried out through appropriation and therefore through exploitation of the direct producers.

It then becomes important to know, not only whether the society being considered is an integrated society or a class society, but also the exact nature of the exploiting class. In particular a clear distinction must be made between the capitalist system on the one hand and the class systems that preceded it on the other. In all those systems the accumulation of the surplus was aimed essentially at unproductive ends, such as prestige. its productive use was merely a by-product, whereas with the bourgeois revolution a class came to power for the first time for whom productive accumulation was an end in itself and unproductive use of the surplus the by-product.

It is in this context and on the basis of a very long previous technological accumulation that what is called the industrial revolution happened.

The Two Types of Bourgeois Revolutions

At the time when the bourgeois class emerged as the vector of a radical transformation of society (the most radical of all since the dislocation of the primitive community and the beginnings of the class struggle), almost the only source of surplus was the labour of peasants on small plots of land. The problem of the industrial revolution was therefore the problem of the extraction, mobilization and use of agricultural surplus on the one hand, and the transfer of part of the active population from that sector towards the industrial sector on the other. The two operations are not possible unless the productivity of agricultural labour is sufficiently increased above a certain threshold allowing the creation of a surplus, which will help to finance the development of the other sectors on the one hand and enable the same quantity of goods to be produced with less manpower on the other. in other words, those who remain in agriculture must be able to feed those who leave the land.

The problem of the "industrial revolution" therefore becomes a problem of the mechanisation of agriculture, and (except where socialistic procedures speed up the various stages, which is only possible in certain historical conditions), this

mechanization implies the introduction of capitalist relations into agriculture itself, since the capitalist farm has a far higher capacity to absorb machines than the peasant holding.

If this is so, there are only two ways it can be achieved: by the direct transformation of the property of the main landowners into capitalist property, or by the transformation of peasant holdings into bourgeois properties, until such a time as mercantile relations transform them (through the proletarianization of some and the enrichment of others) into capitalist property. In both cases, and willingly or not, one has to expropriate the peasants - immediately and violently in the first case, slowly and gradually in the second. (In the first case they are directly expropriated, which seems the most rational way; in the second their rights are consolidated at first and they are expropriated afterwards, which seems absurd).

It is here that we come up against the political factor of the power relations of the moment. The revolutionary bourgeoisie cannot fight on two fronts. Either it reaches a compromise with the feudal lords and both of them expropriate the peasants, the feudal lords themselves become capitalists (as happened in England), or it allies itself with the peasants and abolishes feudal rights (as in France). In the first case, the "revolution" is a peaceful one, politically speaking, and - paradoxically enough - it therefore manages a total take-over on the economic level, thus allowing the productive forces to leap ahead. In the second case, the political revolution is a drastic one, and through it a hybrid system is established, which results in a pre-capitalist peasant agriculture becoming a brake on the economy and a burden for the future.

4.3 Development and Industrialization

We have seen that the main motive forces behind development are mechanization and education; the replacement of hands by robots and of muscles by brains. But blinded by the fact that it is industry that produces robots and stimulates the training of brains, many economists have lost sight of the fact that it is not *production* of machines in certain specific branches that raises productivity, stimulates the technical education of the worker and finally produces abundance, but the *use* of machines and technicians in *any branch* (including the machine-tool branch, where, it so happens, relatively fewer machines are used than elsewhere!).

It is true that all branches do not have the same capacity to absorb robots and brains. Development strategy therefore implies certain choices. But if it is the manufacturing industry that produces machinery, it is not *necessarily* the branches of this sector that have the greatest potential *use* for machines and technicians. In agriculture, stock breeding, fisheries, mining industries and even in the service sector there are branches that have the capacity to absorb machines and engineers (and through capital and qualified labour) greater than that of certain branches of the manufacturing industries. This is reflected in the output per active worker, since it is this output that remunerates the capital and the qualified labour engaged in its production. It also varies according to

the techniques used in each branch in each country under consideration. Just as there is an advanced industry and backward agriculture, so there can be modern agriculture and backward industry.

The annual return per active worker in the manufacturing industries of the underdeveloped countries was $592 in 1959. So these industries were very backward, since during the same period the manufacturing worker in the OECD area produced an average of $3,760, and in North America $7,180.

During the same period, the *agricultural* worker of the main OECD countries produced an average of $31,860 a year and the North American agricultural worker $33,638. This is truly modern agriculture.

If we jump a decade and take 1970, we find that the gap between the *modern agriculture* of one group of countries and the *backward industry* of the other group has widened instead of narrowed. The *manufacturing* worker in the Third World has certainly progressed, passing from a product of $592 to $3994, at current prices. But the average *agricultural* worker in the developed countries has passed from $1,860 to $34,488 and in North America from $33,638 to $38,095. in constant prices, the productivity of the *manufacturing* labour force in the Third World passed from an index of 100 to an index of 129, while the productivity of *agricultural* labour in the whole OECD area went from an index of 100 to 171. As for industrial productivity in the developed countries, it went during the same period from an index of 100 to an index of 160.

It is therefore clear that it is not by transferring its factors from agriculture to industry that a country develops, but by modernizing both sectors. The superiority of OECD countries over the Third World docs not consist in the larger place held by industry in their national production, but in the fact that both their industries and their agriculture are far superior to those in the Third World. The development frontier does not run between agriculture and industry but between two totally different kinds of agriculture and industry.

The difference between a mechanized agriculture and an unmechanized one is considerably greater than the difference between agriculture and industry both of which are undermechanized and underdeveloped.

In the extreme case, if the Third World completely abandoned agriculture and transferred the whole of its labour force to an industry of the same type as it had in 1959, its GNP would only rise from $140 to $244 per head and it would still be very far from crossing the development threshold; whereas if by some miracle it had been able to modernize its agriculture in 1959 to the American standard, it would - using the whole of its active population - have raised its GNP from $140 to $1,370 per head, which was the average at the time for the OECD countries.

Naturally this is a purely theoretical exercise. In the impure realm of reality it is impossible to mechanize one's agriculture without going in for a certain amount of industrialization at the same time. So economic development is necessarily accompanied by a transfer of the active population from agriculture to industry. But between the two phenomena the causal link is not a linear one: it is merely a question of concomitance or co-existence. Industrialization is not the structural condition of development, but only its symptom or syndrome.

In other words, the transfer from agriculture to industry does not happen because agriculture is backward in itself and industry advanced, but simply because the range of industrial goods is so much wider than the range of agricultural produce, and their proportion in the housewife's shopping basket is an increasing function of a rising standard of living, with the result that - the constraints of foreign trade and certain minimal dimensions of the country being given - the *outlets* of agriculture are soon saturated.

Suppose that in the United States the other sectors were to produce less value per worker than the agricultural sector; suppose the rest of the world agreed to completely abandon its own agriculture and to import from the United States all the agricultural produce it needed, supplying in exchange all the industrial goods required; suppose the natural factors of cultivatable land etc., were unlimited in the United States, that the transfer of equipment and men from one sector to the other raised no problems and that transport charges were nil: it would still be impossible for the United States to profit from this situation and specialize 100% in agriculture, for the simple reason that the 80 million American workers, working in an agricultural sector as productive as theirs, would produce a *volume* of agricultural produce more than twice that consumed under present conditions by the whole population of the globe (communist countries included).

So it is not because agriculture is *backward* that men leave the land, but on the contrary because it is *relatively* too productive in relation to the scale of needs. What development presupposes is not industrialization but first and foremost a rise in agricultural productivity sufficient for those who remain on the land to feed those who leave it.

So the most decisive factor among those that facilitated England's industrial revolution in the middle of the 18^{th} century was the considerable superiority of her agriculture over that of the continent (England was at that time a net exporter of cereals) so that she was able to organise the transformation of part of her peasants into urban proletarians without risk.

4.4 Growth and Development

Because they confuse the idea of development with that of socially satisfying development and consider that the latter can only be obtained after a radical transformation of social production relations (which is tautological for those who desire this transformation), some people have been rather badly shaken by the "stubborn" facts of concrete reality.

So they have either had to beg the questions or to resort to the ambiguities of certain ill-defined qualitative distortions.

An example of the first procedure: the concept of "independence", taking care not to clarify whether and to what extent it is political or economic and how the two elements are determined. One begins by explaining that "dependence" blocks economic development. When this explanation is belied by the fact that certain countries enjoy a certain amount of development in spite of an influx of foreign capital and the stranglehold of multinational companies, one

simply denies the existence of this "perverse" development on account of the "dependence" of the country in question.

So what is the good of wasting time looking for causal relations between dependence and underdevelopment when *by definition* the latter is nothing but another word for the former .....

Once this identification has been made and "development" simply raised to the status of a mere synonym of non-dependence, one naturally has to find another word to describe the condition of certain dependent countries (and even *very* dependent ones) in which the productive forces have undergone some development, accompanied by a certain degree of industrialization and an increase in both labour productivity and gross industrial product. This word is "growth", considered to be something quite different from development.

So what has happened in Taiwan, the Ivory Coast and Brazil is by no manner of means development, but only growth. Thanks to this word, a certain kind of neo-dialectics is saved. The "paradox" of countries that appear to be particularly dependent yet which nevertheless enjoy an exceptional rate of industrialization is thus swept aside.

And how can one distinguish this false, illusory growth from true, sound development? By the fact - or so we are told - that the *present* industrialization of the periphery is structurally different from the *past* industrialization of the centre. The difference is said to consist essentially in that, unlike the centre, whose industrialization resulted from the spread of the benefits of technical progress the creation of mass markets, the generalized consumption of new products, and therefore from an increase in real wages, in the present ("dependent") countries on the periphery, industrialization is taking place on the narrow basis of consumption by an elite, while the vast mass of the population lives outside this isolated enclave, has a qualitatively different kind of consumption, and only interests the advanced sectors in so far as it is a reservoir of cheap 1abour.

To make the story more believable, one compares the present situation of the peripheral countries concerned, particularly Brazil, with that of the advanced capitalist countries at the end of the 19^{th} and the beginning of the 20^{th} centuries.

But it is not at all true that, on a comparable level, the range of consumable incomes of the various classes was narrower in the developed countries at the time of the "takeoff" than it is in Brazil today.

Naturally the comparison between Brazil now and England, the United States or Germany at the end of the 19^{th} or beginning of the 20^{th} century can only be wholly false. Those "central" countries were at that time so far above the present level of Brazil that any idea of making a comparison is lunacy.

If one really wants to compare Brazil with England at any point in her past development, one has to go back, not to 1930 or 1900, but beyond 1830. At that date England already had an annual national income of about £400m. for a population of 14 millions. In other words £28 or £29 of the money of that time per head per year, which corresponds in purchasing power to 700-725 dollars today, i.e. 70% higher than Brazil now. What is more, (a) 37.5% of this income came from the manufacturing industries against only about 20% in Brazil today; (b) some 2% of the English labour force was engaged in manufactures as against

less than 10% in Brazil today; and (c) the Great Britain of 1930 consumed 1,400 kilos of the equivalent of coal-energy per head and produced 64 kilos of pig-iron per head, against respectively 347 and 38 (steel) for Brazil in 1965.

But according to all the available estimates (Marx, Malthus, Baines, Brassey, etc.), the average English manufacturing wage (men and women) in 1830 was not more than 2 shillings a day, which in purchasing power corresponds to 2.50 of today's dollars for + 12 hours' work without social security or paid holidays; whereas in Brazil in 1970 the same salary was 429.19 cruceros a month, i.e. 3.40 dollars per 8-hour day, plus the usual social security benefits,and paid holidays.[14]

Those who say that underdevelopment is something qualitatively different from developmental backwardness have not shown that their theory is well founded - to put it mildy.

On the other hand, if one must link the idea of development with a more equitable distribution of incomes, the development / growth alternative is absolutely sterile since - historically speaking and in the long term - the highest levels of growth are always accompanied by greater equality. It is this same equalization and the resulting extension of the internal markets that stimulate the process of growth and allow a threshold to be crossed.[15]

4.5 The "Quality of Life"

Another tactic in the face of certain embarrassing phenomena today is to the underdeveloped countries against the abominations of the "consumer society" into which the developed countries have been led by a *quantitative* growth which has become an end in itself.

What is in question here?

As we have already had occasion to point out, the developed countries consume enormously more than their share of the world's raw materials. But in the midst of this extraordinary abundance, people are bored - among other things by the monotonous routine of their working lives. (What the French call "metro-boulot-dodo" - travel-work-sleep). We find that our affective life is impoverished instead of enriched, that human relations become impersonal, that our cities are polluted and our motorways inhuman.

So people advise the poor countries to look for other ways of development, without, of course, saying which these are. Height of the paradox: the fact that we previously proposed our quantitative growth model to the underdeveloped countries is called "Euro-centricity". It is not difficult to see what is particularly

[14] In fact, if we chose 1830 it was because it is the earliest date for which we have figures confirmed by several sources; otherwise we would have to go back to some time before 1800 to look for a valid date to compare the *present* level of productive forces in Brazil.

[15] Which incidentally prevents us from extrapolating Brazil's growth curve into the future and saying that its development problem has already been solved. On the contrary, it would be plausible to say that where the future is concerned, the development of Brazil beyond a certain level would seem impossible without a substantial increase in wages and the resulting enlargement of the internal market.

European (indecent into the bargain) about making the boredom of the dyspeptic rich into the main problem of a world where hundreds of millions of men are hungry, deprived of medical care, unable to read and write, and with only an average life expectancy at birth of 40 years. Surely it is completely ridiculous to condemn technical progress and "productivism" on the pretext that one risks sing one's soul to the private car and the washing machine, in a world where two thirds of the population go barefoot and are underfed.

The development of the productive forces inside the capitalist system is a "for-better-and-for-worse" commitment. It makes for man's transformation into a consumer of gadgets, but also for his general education; for pollution as well as for abundant and efficient medical services; for the greatest possible exploitation as well as for proteins for adults and milk for children; for the alienation and desocialization of man and the dessication of his affective life as well as for a certain material comfort, for children's nurseries and a considerable lengthening of the expectation of life at birth.

If one is obliged to dispute the ends one cannot simply ignore the problem of the creation of the means.

It is quite true that a social revolution would not only radically change our choices and our ends, but would also rationalize and speed up the creation of the means themselves. It still remains, though, that considerable means are already being created before the advent of the socialist revolution and this creation itself constitutes a very important problem, not only because while capitalism still exists and in spite of all the "negative fall-out" affecting social conditions it is raising the material standard of the masses, but also because to a certain extent it conditions the advent of the socialist revolution itself.

What is more important though is that these same means are necessary, at least in part, for the various ends that will still persist uncontested. For it is all too often forgotten that steel, cement, copper, tin, oil and plastics not only serve to produce private cars and gadgets but also, for instance, doctors - a lot of steel and cement and all kinds of materials are needed to make a good modern doctor - healthy leisure, concerts, books and so on.

If "the quality of life" has any meaning at all, which I am not very knowledgeable about, it ought to mean, among other things and perhaps most of all, replacing individual consumption by community consumption. But materials like those just mentioned are needed just as much for one type of consumption as for the other; and the needs of this second kind, though they may be healthier and more suited to man's nature, are just as limitless.

So first and foremost we must produce these materials; and for this we must improve technology, accumulate the product of past work, and increase the productivity of living labour. in other words, we need growth, and never mind the type of production and consumption.

And even if the social system that replaces the so-called consumer society opts for more leisure time instead of greater consumption, an increase in the productivity of labour will still be necessary to produce what is essential in a shortened working period. More and yet more growth will be needed, if not that of product per inhabitant, at least of product per unit of active work. Whatever happens, economic problems are by their very nature quantitative ones.