European Economic Development: The Contribution of the Periphery*

By PATRICK O'BRIEN

Economic history has enjoyed a revival in the study of development. Provocative interpretations of the course and causes of long-term growth continue to emerge from the writings of Immanuel Wallerstein, Gunnder Frank and Samir Amin.1 While the basic purpose of their research is to explore the origins of underdevelopment, their commitment to a "global perspective" has led them into wide ranging excursions into the economic history of Western Europe because, to quote Wallerstein, "Neither the development nor underdevelopment of any specific territorial unit can be analyzed or interpreted without fitting it into the cyclical rhythms and secular trends of the world economy as a whole".2

According to the new school of development history, the critical period when different parts of the world set off along contrasting paths of economic growth occurred between 1450 and 1750—three centuries which witnessed the emergence and consolidation of "European world economy based upon the capitalist mode of production".3 The evolution of trade and commerce under this old international economic order (over long cycles of expansion (1450-1600), stagnation (1600-1750), and upswing again from the middle of the eighteenth century) created conditions for development and underdevelop-

* In my attempt to navigate the perilous waters of this topic I was guided by helpful comments from: Alan Angell, Paul Bairoch, Nick Crafts, Stan Engerman, Mark Elvin, Paul Gootenberg, Tony Hopkins, Herb Klein, Bill Parker, Christopher Platt, Roger Owen and Barry Supple. I also gained from listening to Jan de Vries, Stephen Fisher, Don McCloskey and Tapan Raychaudhuri discuss their papers with the St. Antony's Seminar in International Economic History.


ment in the nineteenth and twentieth centuries. As they perceive it, the relative backwardness of Asia, Africa, Latin America, and Eastern Europe, which became visible after 1800, originated in the mercantile era when Western Europe turned the terms and conditions for international trade heavily in its favour. Through the deployment of military power and superior forms of state organization, the Europeans either plundered and colonized territories in Asia, Africa, and the Americas or reduced weaker economies to conditions of dependency. They actively promoted or encouraged forms of labour control (slavery, peonage, serfdom) at the periphery (sharecropping in the semi-periphery) which maintained the cost of producing exports for Western Europe close to the level of subsistence wages. Patterns of trade evolved in which the mineral wealth and primary products of the periphery were exchanged for the manufactured goods and high quality farm produce of the core on highly unequal terms. Over time, such patterns of specialization pushed the economies of Western Europe towards industrialization and higher standards of living and the economies of the periphery towards primary production, monoculture, and far lower levels of per capita income.

Summaries are simplifications, and distortions occur in “boxing” scholars together in “schools”. Obviously there are salient differences in the treatment and coverage of global history from one author to another and in the precise significance imputed to the effects of international economic relations on long-term development. Furthermore, the new school’s primary concern is with the economic development of the periphery and the distribution of gains from trade and not with the economic history of Western Europe. But I do not propose to consider the view that specialization on primary produce for export to Europe, together with the modes of labour control utilized by the economies of the periphery, hampered their long term evolution towards industrial societies. Nor will I attempt to unravel the logical and empirical difficulties involved in the application of the concept of unequal exchange to the history of commerce between nations. For present purposes I can accept the view that restraints on the evolution of free markets for labour and impediments to the reallocation of resources from primary production to industry and urban services hindered progress towards a modern economy. And there can be no dispute that rewards from participation in foreign trade were unequally distributed during the mercantile era when military force formed an integral part of the international economic order. My response to the new history of development will be rigidly confined to the views its authors have promulgated about the “significance” for Western Europe of its connexions with markets.

Dates for long cycles vary from author to author. I have quoted Wallerstein, ‘Underdevelopment and Phase-B Effect’, p. 74.


For the most clear statement of the “development of underdevelopment” hypothesis, see A. G. Frank, Capitalism and Underdevelopment in Latin America (New York, 1967).

and sources of supply at the periphery. The hypotheses, which are of central importance for the economic history of Western Europe, can be abbreviated and tabulated as follows:  

(a) the long-run growth of Western Europe in general, and Britain in particular, can only be meaningfully analyzed on a global scale;  
(b) the expansion of the international economy for some three centuries after 1750 generated supernormal profits which became steadily more concentrated in the hands of the capitalists of certain core states;  
(c) their investments made a "large" contribution to the accumulation of capital in Western Europe; and by the end of the eighteenth century this region had been placed on a path of economic growth which left other parts of the world (the periphery and the semi-periphery) in conditions of under-development.  
(d) furthermore, spinoffs and externalities from trade with the periphery (operating through specialization and the acquisition of key imports, particularly bullion) promoted the economic growth of Western Europe in decisive ways.  

Clearly it is necessary for historians of Europe to analyze connexions between the mercantile era and the progress of industrialization after 1750. They have not neglected foreign trade and where relevant they will adopt a "global perspective". But I wish to argue that commerce between core and periphery for three centuries after 1450 proceeded on a small scale, was not a uniquely profitable field of enterprise, and while it generated some externalities, they could in no way be classified as decisive for the economic growth of Western Europe. In brief, the commerce between Western Europe and regions at the periphery of the international economy forms an insignificant part of the explanation for the accelerated rate of economic growth experienced by the core after 1750. I propose to conduct my argument within the geo-political categories, world systems perspectives, and time spans adumbrated by the new history of development. The debate has been set up in these terms and will surely continue at local, national, and continental levels.  

This essay will be divided into four parts. Section I attempts to measure the contribution of trade with the periphery for the growth of output and the formation of capital at the core. The essay then takes up the issue of supernormal profits; moves on to analyze the range of spinoffs and externalities generated by trade between core and periphery; and explores the relationship of imported bullion to the money supply in Western Europe and offers some general conclusions.  

I  

A striking feature of the new history of development is the absence of systematic statistical underpinning for several of its basic hypotheses. An important omission is its failure to measure the economic significance of intercontinental trade. Yet for Europeans international trade at the beginning
of the mercantile era meant exchange across the boundaries of states located mainly on the continent of Europe. Intercontinental trade with Asia, the Middle East, and Africa, although inflated in value terms by silks, spices, jewels, gold, and silver, formed only a tiny percentage of exports and imports. By the late eighteenth century that proportion had definitely increased because trade with the Americas grew rapidly after 1492 to supersede trade with other continents by a large margin. For the 1790s the geographical destination of commodity exports which crossed the boundaries of European states was: to other European states 76 per cent, to North America 10 per cent, to Latin America and the Caribbean 8 per cent, to Asia 5 per cent and to Africa 1 per cent. The "periphery" (of Latin America, the Caribbean, Africa, and Asia) purchased about 14 per cent of Europe's exports and in 1830 these same regions supplied some 27 per cent of European imports.9 But to comprehend the term periphery used in this paper it should be redefined to include the Southern colonies of British North America, where African slaves worked the tropical plantations of Virginia, Maryland, the Carolinas, and Georgia.10 Then by the end of the eighteenth century the flows of commodities transhipped between Western Europe and regions at the periphery of the "modern world system" might amount to 20 per cent of exports and 25 per cent of imports.

A fortiori, the importance of such trade would have been far less as we go back in time to the upswing of the "long sixteenth century" and decades of "crisis" during the seventeenth century. National statistics for trades in sugar, tobacco, coffee, tea, slaves, and cotton and the tonnage of ships cleared from European ports indicates that the real upsurge in inter-continental trade occurred after 1650. Although the Americas entered the world economy early in the sixteenth century, flows of commodities across the oceans of the world did not begin to amount to a significant percentage of aggregate European trade before the second half of the seventeenth century. Throughout the mercantile era Europeans sold and purchased far more merchandise from each other than they did from other continents.

Furthermore, external trade formed only a small share of economic activity. Around 1780-90 when something like 4 per cent of Europe's gross national output was exported across national frontiers, perhaps less than 1 per cent would have been sold to Africa, Asia, Latin America, the Caribbean, and the southern plantations of the young United States.11 A higher but still tiny percentage of total consumption by Europeans took the form of imports from these same parts of the world. For particular countries such trade would be more important; especially for smaller maritime powers such as Portugal, Holland, and Britain, where ratios of domestic exports to gross national product probably approached 10 per cent by the second half of the eighteenth century; but less than half of these sales overseas consisted of merchandise sold to residents of the periphery. Imports for maritime economies perhaps

10 The definition and geographical boundaries of the "periphery" varies from author to author. The definition used in this paper is appropriate for the argument under discussion and is in line with the concept deployed by Gunder Frank and Samir Amin.
fell within a similar range of 10 per cent to 15 per cent of gross national product, again with smaller proportions purchased from the periphery.12 Interconnexions with the periphery, as they developed during the mercantile era, might on this kind of evidence be dismissed as being of no great importance for the long-run growth of Western Europe.

But that obvious deduction could be superficial. National (or core) output was a product of history—of all the forces which over the long run generated a stock of capital, a trained labour force, a body of technology, and a set of institutions to produce that output year after year. What is germane is not simply the relative importance of trade but sources of progress over the pre-industrial period. Economic growth takes place at the margin, and the problem is to specify and measure ways in which trade generated additions to output. Surely the new history of development is correct to locate the contribution of foreign trade where Adam Smith and Karl Marx first located it—within the process of capital formation? Europeans undoubtedly invested some portion of their gains from commerce with Africa, Asia, and the Americas in fixed and circulating capital, and thereby added something to the acceleration of domestic agricultural and industrial output observed during the “run up” to the industrial revolution. But, how important was capital formation for the economic growth of Western Europe, and did profits from trade with the periphery supply a significant percentage of the funds utilized to finance the investment required for economic growth after 1750?

If Bairoch's data for 1800 are even roughly correct and commodity trade between core and periphery accounted for not more than 4 per cent of the aggregate GNP for Western Europe, and if a very high proportion (say 50 per cent) of the value of that turnover (exports plus imports) accrued as profits to core capitalists, and if they reinvested 50 per cent of their profits; then the outer bound estimate for the contribution of these trades amounts to only 1 per cent of GNP. And that could perhaps equal not more than 10 per cent of gross investment. These calculations for the early nineteenth century would represent the upper limits of probable ratios of profits, savings, and investment for any decade of the mercantile era.

The assumption that commerce with the periphery was significant for the formation of capital at the core might be rendered more plausible if it could be shown that it was important at some turning point over the long span of history from 1450 to 1750. Economic growth is a cumulative process. Perhaps it could be argued that some critical leap forward occurred in response to trade with the periphery and thereafter core economies continued to build upon this initial stimulus and gradually they formed modern industrial systems.13 Here and there the Braudelian concept of “conjuncture” does surface in the new history but the argument is never sustained beyond the adjectives deployed to define particular historical sequences as critical or vital.

A more detailed look at British data, and my estimates of profits derived


Table 1. Estimated Flows of Profits to British Capitalists Engaged in Trade and Commerce with the Periphery

<table>
<thead>
<tr>
<th>Description</th>
<th>1784-86</th>
<th>1824-26</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Imports from the periphery (c.i.f.)*</td>
<td>10.50</td>
<td>26.80</td>
</tr>
<tr>
<td>2. Exports to the periphery (f.o.b.†)</td>
<td>6.00</td>
<td>15.90</td>
</tr>
<tr>
<td>3. Re-exports of produce from the periphery (f.o.b.‡)</td>
<td>3.60</td>
<td>9.60</td>
</tr>
<tr>
<td>4. Profits from imports accruing to:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Shipping firms§</td>
<td>0.84</td>
<td>2.14</td>
</tr>
<tr>
<td>(b) Brokers and Commission Agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Insurance Companies¶</td>
<td>0.16</td>
<td>0.35</td>
</tr>
<tr>
<td>5. Profits from re-exports accruing to shipping firms, brokers and commission agencies, and insurance companies. ¶</td>
<td>0.90</td>
<td>2.41</td>
</tr>
<tr>
<td>6. Profits from re-exports accruing to the above groups. ●</td>
<td>0.54</td>
<td>1.44</td>
</tr>
<tr>
<td>7. Profits remitted to Britain on investments at the periphery. *</td>
<td>0.48</td>
<td>3.00</td>
</tr>
<tr>
<td>8. Profits from the sale of services to the periphery. ◊</td>
<td>1.00</td>
<td>2.04</td>
</tr>
<tr>
<td>9. Profits from commodities made or grown for export to the periphery. ○</td>
<td>1.20</td>
<td>3.18</td>
</tr>
<tr>
<td>10. Total flows of profits (4+5+6+7+8+9)</td>
<td>5.66</td>
<td>15.95</td>
</tr>
<tr>
<td>11. Gross investments expenditures at home and abroad by British investors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(annual averages 1781-90, 1821-30)</td>
<td>10.30</td>
<td>34.30</td>
</tr>
</tbody>
</table>

* Imports (c.i.f.) in current prices from the Near East, Africa, Asia, the Southern States of the U.S.A. (estimated on a population basis), West Indies, and Latin America. Source: R. Davis, *The Industrial Revolution and British Overseas Trade* (Leicester, 1979) table 40.
† Exports (f.o.b.) in current prices to the regions listed above. Source: Davis, *Industrial Revolution*, table 38. For 1784-86 I assumed 60 per cent of British exports to Spain were re-exported to Spanish colonies.
‡ Re-exports (f.o.b.) in current prices. I assumed all re-exports emanated originally from the periphery—an overestimate. Source: Davis, *Industrial Revolution*, table 39.
§ 20 per cent of the gross revenue from imports was estimated as the revenue of shipping firms. Of this 40 per cent was assumed to be profits. The 20 per cent figure is from Davis, p. 82. The 40 per cent profit rate is from R. P. Thomas, 'The Sugar Colonies of the old Empire: Profit or Loss for Great Britain?' *Econ. Hist. Rev.* 2nd ser. XXI (1968), p. 39. Davis put profits at 26 per cent.
|| Factors and brokers aggregate revenue was estimated as 18 per cent of the f.o.b. values of imports. On this revenue I calculated profits at 36 per cent. Both ratios are from Thomas, 'The Sugar Colonies', p. 40.
¶ Gross insurance revenue calculated at 6 per cent of gross revenue accruing to shipping firms plus a markup for the insurance of ships. Their profits were estimated at 40 per cent on gross revenue. The ratios were derived from data in Thomas, The 'Sugar Colonies', pp. 39-40.
● I assumed the profits on exports came to a comparable percentage to the profits received by shipping firms, brokers, commission agents and insurance companies for handling imports—about 15 per cent of turnover.
• Calculated as flows of profits on the charges made by shippers, brokers, commission agents and insurance firms for the re-export of commodities valued at £3.6m. and £9.6m. f.o.b. Britain. I assumed the profit rate on this turnover compared with imports and used 15 per cent.
* The calculations for 1784-86 were based on the following assumptions:
(a) that 80 per cent of British overseas investment were located in the periphery;
(b) that the rate of return was 10 per cent;
(c) that 60 per cent of the gross profits were remitted to Britain. The value of overseas assets, according to Feinstein's estimates, was about £10 million for 1800. Feinstein, 'Capital Formation', table 15.
◊ I calculated by assuming sales of services (invisibles) to the periphery were proportionate to trade (exports plus imports) with the periphery. In 1824/26 42 per cent of British trade was with the periphery. I assumed that 50 per cent of the flow of invisible earnings came from sales of services to the periphery. According to Imlah, *Economic Elements*, pp. 68-9, invisible earnings for 1824-26 came to £15 million. If half originated in the periphery and 40 per cent of that gross revenue was profits then at an informed guess this particular flow of profits could be around £3 million. The “guess” for 1784-86 was derived by backward extrapolation.
○ I followed Thomas, 'The Sugar Colonies', p. 41 and assumed 20 per cent of value of exports sold to the periphery were profits.
▼ Feinstein, 'Capital Formation', tables 7 and 16.
from trade with the periphery, will reinforce the argument developed for core economies as a whole. Britain not only passed through an Industrial Revolution before the rest of Western Europe; it traded with the periphery on a larger scale than any other core country. And capital formation played an important role in the growth of the British economy from 1760-1850. That role should not be exaggerated to the point where it is defined as “the motor of economic development”. In modern industries (such as textiles, metallurgy, energy supplies, and transport) growth emanated more from technical progress and organizational efficiency than from capital formation. Taking the long period of industrialization from 1760-1860, recent exercises in growth accountancy suggest that around 35 per cent of the growth in Britain’s domestic product could not be explained by the enlargement of the work force and additions to the stock of reproducible capital. Elsewhere in Europe that proportion could (at a guess) be as high as 50 per cent.

But the main issue is not the role of capital but to determine what commerce with the periphery contributed towards the finance of its accumulation. Put in that form the problem cannot be solved until historians construct financial flow tables which reveal the sources of funds actually used to pay for the net and gross investment expenditures which occurred in Britain for a century after 1760. Since that is not even a remote possibility, the estimation of profits gained from trade with the periphery is simply an exercise to reveal potential orders of magnitude and their real significance will remain conjectural.

Let us now speculate on the basis of these crude numbers. The overall savings rate for the British economy amounted to between 12 per cent and 14 per cent for the period 1781-1860 and scattered evidence now available on reinvestment, from property incomes, suggests that rates of 20 per cent to 30 per cent could be on the high side for the capitalists of that period. Assuming that investors engaged in this type of international business were exceptionally frugal men, and reinvested 30 per cent of their profits, it would then follow that commerce with the periphery generated a flow of funds sufficient, or potentially available, to finance about 15 per cent of gross investment expenditures undertaken during the Industrial Revolution.

Since Britain traded with and invested in other continents on a far larger scale than any other European country (with the possible exception of Holland), it appears that the conclusions offered by historians of world economic systems and accumulation on a world scale exaggerate the impact of inter-continental trade on capital formation in Western Europe in the early stages of industrialization. Their misplaced emphasis has arisen basically because they failed to consider the place of trade in relation to the totality of economic activity and also because they remain convinced that commerce with the periphery (based upon “exploitation”, “unequal exchange”, and “pillage”) must have been a uniquely profitable field of enterprise. To support this view the new school has marshalled vivid descriptions of tropical trades, selective

data on profits, and several graphic quotations from Adam Smith, Karl Marx, and Maynard Keynes. Despite the authority of that formidable trio, it is fair to observe that their assertions have not been supported by the evidence required to demonstrate that average rates of profit which European capitalists derived from investment and trade with Africa, Asia, and tropical America rose persistently above the rates of return which they could have earned on feasible investments, at home or indeed elsewhere in the world economy.

What stands out from the meagre range of statistics collated together by Dutch, French, and English historians is the considerable degree of variance from one trade to another and from one year to another. Tropical trades appear to have been risky and the lucrative rewards reaped in the favourable circumstances of one voyage could easily be transformed into losses on another.15 Recent attempts to measure returns come up with average rates of profit over the long run around or below the 10 per cent mark.16 Furthermore, the long-run decline in the prices of sugar, pepper, coffee, tobacco, and tea on the commodity markets of Amsterdam, London, and Paris over the second half of the seventeenth century does not suggest that abnormal profits were sustained in these trades. Whatever may have happened during the long sixteenth century, the vastly increased volume of tropical imports carried into European ports after 1650 forced down prices to fractions of their original levels when sugar and tropical products were the luxuries of the rich. Elastic supplies of fairly homogeneous commodities and competition of the kind conducted between Portuguese, English, Dutch, and French merchants is not normally congruent with the persistence of supernormal profits.

On the contrary, the standard conditions for the maintenance of monopoly profits in international trade appear to have been present only in a diluted form for the majority of trades operating between Europe and other continents over the mercantile era. To survey the economic organization of commerce conducted by European nations with Africa, Asia, and tropical America is beyond the scope of this paper. But if British commerce with its Atlantic and Caribbean colonies is a significant example for the hypothesis of monopoly profits then recent research on the effects of the Navigation Acts and the profitability of the West Indies demonstrates it to be unfounded.17

Similar conclusions have emerged from recent research on the slave trade, the profits from which, according to a well publicized statement by Dr. Eric Williams, "provided one of the main streams of that accumulation of capital in England which financed the Industrial Revolution".18 A priori, rates of

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profit obtained from the exploitation of unfree labour and the sale of luxury produce from tropical America should have been extremely high. Indeed "superexploitative" profits were made in the sixteenth century by early entrants to the business, particularly the Portuguese. But by the second half of the seventeenth century (when the output of sugar, tobacco, coffee, and other tropical produce rose dramatically and the plantations switched from indentured to slave labour) the slave trade appears to have become competitive at every stage of its inhumane chain of operations. 19

Something like 10-11 million Africans were forcibly transported to the New World between its discovery in 1492 and the abolition of the slave trade in 1807. Two groups reaped most of the long-term gains from this cruel trade; African and Arab traders and European consumers of tropical produce. For Africa the slave trade engendered private profits and heavy social losses—a horrifying example of "the development of underdevelopment". 20 And if Europeans had been compelled to pay a "free market price" for their tropical imports (that is to say a price which reflected the real cost of attracting and maintaining "free" labour in the New World) then the prices of sugar, tobacco, spices, cotton, indigo, coffee, and other produce would have been far higher. The terms of trade would have swung massively against them and their real incomes would have diminished. 21 By how much remains to be calculated. But with small ratios of plantation imports to national income and a relatively elastic demand for tropical produce, the fall in real income (which would have followed from a hypothetical British edict abolishing the slave trade, let us say in 1607, rather than two centuries later) could not have made that much difference to the levels of wealth and income achieved in Western Europe by 1807. Though the consumption loss would certainly exceed the production loss.

III

Connexions between trade and growth are not exhausted by a consideration of trade's impact on the accumulation of capital. And the new history of development is also properly concerned with the gains Western Europe derived from the patterns of specialization promoted by trade with other continents. As Wallerstein observed, "the inclusion of Eastern Europe and Hispanic America into European world economy in the sixteenth century not only provided capital (through booty and high profit margins) but also liberated some labour in the core areas for specialization in other tasks. The occupational range of tasks in the core areas was a very complex one. It included a large remnant parallel to those in the periphery (for example, grain production). But the trend in the core was towards variety and specialization while the


trend in the periphery was towards monoculture". But as trade with the periphery formed a small share of total trade and a tiny percentage of gross product, unless that trade generated important externalities, its impact (on specialization, innovation, institutional change, and other factors promoting growth as the core) would have been in proportion to its relationship to total economic activity. But a closer examination of the imports from Asia and the Americas might bring out particular commodities which created new and significant possibilities for production. Although tables of exports and imports broken down into standard groups cannot be drawn up, Mauro’s flow chart reveals that the pressures towards specialization derived from such imports would have been rather limited. It is difficult to see how the purchase of spices, sugar, tea, coffee, rice, tropical fruit, hardwoods, dyestuffs, gold, and silver led to large gains from the reallocation of labour and other resources which increased possibilities for production in core economies. Trade between the continents simply allowed Europeans to escape from a fixed endowment of natural resources and to consume a mix of exotic commodities which could not be grown or mined in Western Europe. These crops did not compete directly with domestic agriculture, except in so far as tea and coffee reduced demand for beer and other beverages made from grain. Gains from trade consisted basically of a preferred pattern of consumption—not for masses of Europeans who lived during the mercantile era, but for those groups who could afford to buy tropical produce. Demand for sugar, tea, and coffee proved to be both income- and price-elastic, and consumption of such “luxuries” spread slowly down the social scale. But long-run gains from specialization, the division of labour, and the forces of competition—all of which flow from international trade—originated overwhelmingly in exchanges between and within European countries and far less from trade with other continents.

Some “dynamic” benefits certainly emanated from exports to the periphery. For example, from the beginning Europeans exchanged manufactured goods for primary produce and precious metals. Their governments regulated trade to promote this tendency by restricting manufacturing in their imperial possessions. Europeans also specialized in the sale of shipping, banking, and insurance services to other continents (partly because they pioneered technical breakthroughs in these spheres of business) but basically to obtain means (other than gold and silver) to pay for the persistently adverse balance of commodity trade with India and China. The efficiency of Chinese and Indian industry pushed the maritime nations towards specialization in commercial services. European ships captured an increasing share of the waterborne carrying trade on the Indian ocean and the China seas from the fleets of the Orient, and by the seventeenth century a sizeable share of European imports from Asia may have been financed from the sale of transport and mercantile services. Such patterns of specialization stimulated shipbuilding. And the development of banks, insurance, and shipping companies to service oceanic

trade are all part of the commercial and institutional development which promoted industry and urban development. The direction of such effects is not in doubt. Nevertheless, the feedbacks to industry and shipbuilding as well as the obvious spinoffs to commercial development are not understated by the small ratios of exports sold to and imports purchased from other continents.

It is also relevant to consider the contribution to European industrialization of the import of "essential" raw materials, foodstuffs, and industrial commodities—which might have reduced constraints on long-run supply or exercised demonstration effects which led to the expansion of production. Long before the discovery of the Americas, Europeans had successfully transplanted rice, sugar, sorghum, cotton, citrus fruits, and silk worms into Italy, Iberia, and Southern France. From the Americas came a whole range of new crops including maize, potatoes, groundnuts, beans, tobacco, cocoa, pineapples, tomatoes, red peppers, and chillies, which added variety to the European diet. But their introduction into European agriculture contributed only marginally to the supplies of calories available before and during the Industrial Revolution. Pineapples, cocoa, and groundnuts grew in botanical gardens, and tobacco and tomatoes spread slowly. Only maize and potatoes raised the capacity of agriculture to support population growth. Maize eventually did increase grain supplies from Southern Europe but its real impact came after the mid-nineteenth century. And although the potato helped to stimulate population growth in Ireland, and to feed the working people of England, Belgium, and Germany, the new vegetable was never a critical element in food supplies in the eighteenth or indeed for most of the nineteenth century.

Sugar refining, tobacco processing, the final transformation of tea, coffee and cocoa into drinkable beverages and, above all, the manufacture of cotton textiles certainly began and prospered in Western Europe through trade with the periphery. The English cotton industry developed by imitating muslins, nankeens, and other "stuffs" imported by the East India Company. It followed the classic pattern of import substitution where foreign (in this case Indian and Chinese) manufactured goods pioneered the market, and domestic substitutes gradually replaced imports—assisted, of course, by protection. Such industries, together with the employment and profits they generated, would have been inconceivable without an assured supply of raw materials from Asia and the Americas. Nevertheless the advantages of other continents in the cultivation of tobacco and sugar were not absolute. Both crops could be grown in Southern Europe, and tobacco cultivation in France and Britain had been restricted in the interests of the colonies. By the 1830s sugar beet had appeared in France and Germany as a viable substitute for cane sugar.

The crux of the matter is really to quantify the importance of industries which depended upon imported raw materials. Here statistics for Britain can again serve as outer-bound estimates for Western Europe as a whole. By 1841—a year well into the First Industrial Revolution—cotton textiles accounted for about 7 per cent of gross national product, and food-processing industries, utilizing raw materials imported from the periphery, added a

further 1 per cent. Since Britain industrialized before the rest of Europe there is no reason to claim that if Western Europe had been forced to manage without imported sugar, coffee, tea, tobacco, and cotton, its industrial output could have fallen by a large percentage. A decline of not more than 3 or 4 per cent in the industrial output of the core would seem to be the likely short-run effect from a total cut-off of imports. Over time that impact could be mitigated by patterns of substitution for tropical foodstuffs and raw materials and by the redeployment of labour and other factors of production from cotton textiles, tobacco processing, beverages, and sugar refining into other types of manufacturing activity. While cotton was certainly among the first industries to be transformed by mechanization and the factory mode of organization, only a simplistic growth model with cotton as a leading sector and with British innovation as the engine of Western European growth could support an argument that the Lancashire cotton industry was vital for the industrialization of the core. That process proceeded on too broad a front to be checked by the defeat of an advanced column whose supply lines stretched across the oceans to Asia and the Americas.

IV

American treasure has been singled out by the new history of development for special emphasis. “The production of these precious metals”, claims Gunder Frank, “was the principal functional contribution of the New World regions to the expansion of trade in the world, the accumulation of capital in the European metropolis and the development of capitalism”. Bullion undoubtedly had an impact which transcended the effects of other imports because silver and gold formed an integral part of Western Europe’s money supply. And money mattered between 1450 and 1750 when the spread of the market and monetary transactions (both within and between states) accompanied economic progress achieved by the core. Thus, while the potential significance of bullion imports is not in doubt, their actual importance has not been estimated, and the new historians simply elucidate mechanisms through which imported silver and gold assisted economic growth. As they describe it, bullion from the Americas:

(a) relieved an actual or potential monetary constraint on exchange and production;
(b) facilitated the expansion of international trade between Western Europe on the one hand and Asia and the Baltic on the other;
(c) exercised an upward pressure on price levels in core economies which redistributed income between workers and capitalists and encouraged trade to respond to differential rates of inflation within and between countries.

To substantiate claims made for the all-pervasive effects of bullion imports requires, however, a more explicit specification of relevant connexions and a

28 Frank, World Accumulation, p. 44.
greater attempt to gauge the importance of money in the growth process than anything found in the new history of development. To begin with the obvious question: how much did the import of some 181 tons of gold and 16,000 tons of silver between 1500 and 1660 add to monetary stocks in Western Europe? Data for money supplies do not exist, but Braudel and Spooner reject the notion that “the American mines poured their precious metals into a deprived Europe and so precipitated a sudden change” because “the accumulated stocks in the Old World since early times represented a considerable monetary mass”. They doubt “if the inflow of precious metals from the New World did not even reach one half—on the most optimistic hypothesis—of the old stock of European money . . .”.29 On their own estimate, as late as 1650 the inflow had added not more than 25 per cent to the existing stock of silver and gold in Europe.

Europe’s own mines expanded production by a factor of five between 1460 and 1530 and had effectively relieved the “silver famine” of the late fifteenth century before any real quantity of American treasure arrived in Spain.30 In addition, paper or fictive money “invaded” the economic life of Europe during the mercantile era, but it remained a small but growing part of total circulation.31 Although core countries were, apparently, not ready for paper money, their rulers utilized debasement frequently enough to obtain the means to pay for their military and other expenditures. Provided debased currency exchanged for commodities at prices above the intrinsic value of the specie contained in the coins, this device added to the supply of cash for transactions within national territories. By the second half of the sixteenth century prospects for the circulation of debased coins closer to face value improved, when Government’s stipulated that royal coins would be accepted at par in payment for taxes. As the royal tax base spread into the economy this proclamation weakened the link between specie and money. Coins of the realm were on the way to becoming legal tender.32 Finally, the diffusion within Europe of credit instruments and the development of financial intermediaries increased the velocity of circulation—alas, by some unknown percentage. “Whether as coin or as bills of exchange money cascaded from person to person and from money market to money market.”33

Western Europe demanded more money for increased trade, the division of labour, population growth, urbanization, the shift from barter transactions, and the growth of public expenditure. But imported specie was only one of several means utilized within the region to cope with a potential monetary restraint on internal trade and production. Europe’s own silver and copper provided some of the money. Merchants and financiers pushed up the velocity of circulation, and by debasement European rulers reduced the weight of specie required for each coin of account. There can be no presumption that the silver and gold of the Americas carried most of the monetary load required

31 Braudel and Spooner, ‘Prices in Europe’, p. 386.
33 Braudel and Spooner, ‘Prices in Europe’, p. 448.
for economic expansion after 1500 or that Europeans would have found it excessively difficult and costly to develop either paper substitutes or a fiat coinage if silver from Mexico and Peru and gold from New Granada and Brazil had remained underground. Money was a lubricant not a source of power—oil but not petroleum.

For international exchanges specie continued to be necessary, particularly for the settlement of adverse balances with the Far East and the Baltic. Western Europe’s adverse balance of trade with the East was occasioned by the relatively low prices of Indian and Chinese manufactures. Trade could only be sustained by the famous “drain” of bullion from Europe.\(^{34}\) Apparently the deficit diminished over time as the Europeans sold services, especially shipping, to the Asians and as the relative costs of goods made in the two continents narrowed. But the precise importance of this trade has already been compared to total trade and economic activity of the core, and was tiny even for maritime countries. Wallerstein recognized “what Asia provided for Europe at this time was luxuries. Now luxuries are not to be sneezed at but they take second place to food . . . also to bullion”.\(^{35}\) True, and he might have continued with the observation that bullion drained from one part of the periphery (America) to another (Asia) in order to provide rich Europeans with luxuries.

Commerce between economies of Western Europe and the Baltic (Russia, Poland, Prussia, Estonia, and Scandinavia) exceeded trade with the East by a large margin. And imports from this region (grain, timber, and other intermediate goods for shipbuilding) were “strategic” for the long-run development of the core. Not one of these “strategic” commodities formed a large percentage of total supply consumed in Western Europe. For example, Wallerstein guessed that imported grain provided not more than 1 per cent to 2 per cent of total consumption but pointed out that this grain could have been critical for certain cities like Lisbon and for Dutch towns.\(^{36}\)

Furthermore, and in the context of a core-periphery framework, the relevant issue is not the economic importance of the Baltic, but how far American treasure permitted core economies to run an import surplus with that region. Roughly 40 per cent of the recorded value of commodity imports from the Baltic were not covered by commodity exports, and part of that deficit was financed from the sale of Dutch and English shipping and mercantile services.\(^{37}\) At a guess, perhaps a third of Baltic imports were paid for in specie. But without the relatively cheap supplies of bullion from the Americas European merchants and entrepreneurs would perhaps have found other commodities to exchange for Polish grain, Russian hemp, and Swedish timber. Demand in the Baltic region was surely not unresponsive to a lowering of export prices? Some degree of shift in the terms of trade might have sustained a constant level of trade without recourse to the export of bullion. Such possibilities for substitution may lead historians to adopt an agnostic position toward inflated claims for the role of American treasure in trade with the Baltic.

Very few historians would be prepared to deny a correlation between the import of specie and movements in the general level of prices throughout Europe from 1450 to 1750. Extensive discussion of this issue has really centred around the importance to be attributed to monetary or real factors, both in initiating and then in sustaining the inflation of the long sixteenth century, the deflation of the seventeenth century, and the upswing in prices from 1734 to 1817 (to use Wallerstein's dates). There is no need to go over that debate which will remain inconclusive until the problem can be specified in ways which will make the connexion between bullion and prices amenable to econometric analysis. The new history of development has not added anything. Frank glosses over the major difficulty by positing a “partial generation” of inflation by American gold and silver. And Wallerstein evades the issue by arguing “it was not bullion alone but bullion in the context of a capitalist world economy that was crucial” and in that context it “was not so much that bullion raised prices but that it prevented their fall”.

Yet Frank posed the question in a straightforward manner: “How specifically did the digging out of silver in the Americas and its transport to Europe contribute to amassing capital in Europe”? One of his answers is “that the resulting inflation led directly and indirectly to the concentration of capital, the divorce from the means of production and in the increase in exploitation of more and less well paid labour”. How this process worked is not clarified. Essentially, what the new history of development offers is a revised version of Hamilton’s famous thesis that wages lagged behind prices and redistributed income from workers to capitalists and landowners, which fostered investment. In several core economies wages did lag behind prices, markedly over the long sixteenth century and perceptibly again in the eighteenth century. That lag was more pronounced in primary production than in industry or urban services because the intersectoral terms of trade shifted in favour of agriculture during the price revolution and again during the eighteenth century. But neither in theory nor in history is it all certain that rather mild inflations of the mercantile era provided optimal conditions for economic growth. If industrial profits were the primary source of accumulation then the more rapid rise in the prices of primary produce operated to reduce investment. If wage earners formed an important segment of the market for manufactured goods the erosion of their real incomes by higher food prices narrowed that market. If (as the classical economist suspected) landowners and farmers consumed a high share of the profits which accrued from inflation, then the overall rate of investment could not increase very much. Surely optimal conditions for industrial advance at the core was a situation in which agriculture delivered a rising volume of food and raw materials to towns at stable or falling prices?

But the resolution of this issue is really a second step in the argument for historians who insist that European development can only be understood within a global framework. If that context is relevant for the comprehension of secular trends in price levels, then logically they should analyze and as far as possible measure the impact of American specie on prices. If that connexion

38 Frank, World Accumulation, p. 51.
40 Frank, World Accumulation, p. 245.
was weak then the counter argument that American specie played a passive and subsidiary role in both price movements and long-run growth gains validity.

V

A new history of development has emerged, stimulated by the contemporary dialogue between North and South. For the most part it falls within a tradition of historical writing where “the impact of Europe on the world seemed a subject of greater interest than the impact of the world on Europe, and is basically concerned to challenge a historiography which regards Europe’s influence on the rest of the world as “transforming and ultimately beneficial”. In the course of that challenge it has, however, grossly overestimated the significance of economic relations with the periphery for the long-run growth of the core. Even if we agree that contact with Western Europe promoted underdevelopment in Asia, Africa, and Southern America, that does not imply that the gains which accrued to Europe did much to push its economies on to paths of sustained industrialization after 1750.

Exaggeration has occurred because the new history expands micro evidence into macro generalizations. Some European capitalists engaged in commerce with the periphery made fortunes and invested their profits in domestic assets. Towns, such as Lisbon, Cadiz, Seville, Venice, Genoa, Nantes, Bordeaux, Amsterdam, Bristol, and Liverpool, certainly flourished as their businessmen, ships, and capital participated in commerce across the oceans. For some cities at some periods of time foreign trade could be described as crucial for their prosperity. But for the economy of Western Europe, what did this commerce between continents really add up to over long cycles between 1450-1750?

My essay has responded by arguing that the claims of the new history of development “founder on the numbers”. Some three centuries after the voyage of discovery, Europe’s trade with the periphery still formed a very small part of total economic activity. Even for maritime powers, like Britain, closely engaged with Asia, Africa, and Latin America, profits from that commerce probably financed less than 15 per cent of gross investment between 1750-1850. And that percentage must be regarded as far too high an indicator; it refers to the 1780s and 1820s. But decades before the late eighteenth century, victories in the struggle for empire had already concentrated a “disproportionate” share of European trade with other continents in the hands of British capitalists. The Industrial Revolution was under way and Britain’s cost advantages over rival producers had already emerged. For earlier periods the British share of a diminished volume of intercontinental trade must have been

43 Bairoch suggests, however, that profits from this commerce did not, in general, flow into sectors “strategic” for growth—Bairoch, ‘Commerce International’, pp. 547-9.
lower and the flow of profits less. Even on the unrealistic premise that European industrialization can be conceived in simplistic terms as originating in the diffusion of British industrial technology to "follower" countries on the mainland, commerce with the periphery still remains a highly restricted part of the explanation for the industrialization of France, Belgium, Germany, Switzerland, and other parts of Western Europe.

Furthermore, the contribution of a sector or input to the overall growth of an economy is normally measured as the difference it makes at the margin. Thus the importance of commerce with the periphery should be defined as the incremental profits earned by the capitalists of Western Europe, compared to what they might, hypothetically, have obtained if they had invested their funds and entrepreneurial skills in alternative lines of trade and production. To generate estimates of that extra contribution, let us imagine a counterfactual world economy with no trade between core and periphery from 1492 to 1789; and let us assume that capital and entrepreneurship invested in commerce with the periphery consistently earned rates of return which were double the rates obtainable in alternative lines of enterprise.

On these two assumptions the marginal returns which accrued to British capitalists from commerce with the periphery could be calculated as in Table 2:

Table 2. Marginal Returns to British Capitalists from Commerce with the Periphery.*

<table>
<thead>
<tr>
<th>Year</th>
<th>1780s</th>
<th>1820s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Actual flows of profits</td>
<td>5.49</td>
<td>15.68</td>
</tr>
<tr>
<td>2. Incremental flow from commerce with the Periphery (50% of row 1)</td>
<td>2.75</td>
<td>7.84</td>
</tr>
<tr>
<td>3. Reinvestment rate of 30%</td>
<td>0.80</td>
<td>2.30</td>
</tr>
<tr>
<td>4. Row 3 as a proportion of gross investment expenditure</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

* Sources: See Table 1.

What this exercise in counterfactual history suggests is that if the British economy had been excluded from trade with the periphery, gross annual investment expenditures would have fallen by not more than 7 per cent. All biases in these calculations (which refer to decades after the onset of the Industrial Revolution) run in favour of the hypothesis that this commerce provided a large share of the reinvestible surplus; and Britain, to reiterate the point, traded with other continents on a far larger scale than other European countries.44

There is, moreover, no evidence in the admittedly poor data now available that "average" rates of profit earned on capital in commerce with the periphery were "supernormal". Over wide areas of tropical trades competition between the merchants of several maritime powers operated to hold prices of commodities and the returns to capital below monopolistic levels. And the significance of the periphery cannot be inflated much beyond its share in national product by reference to externalities or to imports, described as decisive for the growth of the core. Trade in tropical produce gave rise to far greater opportunities for consumption than possibilities for production, and the view that American bullion was indispensable for economic progress in Western Europe is almost certainly untenable.

44 Elliott, The Old World, p. 2, quotes with approval a French essay of 1792 which argued that the social returns on investment in the New World would have been greater if the resources had been invested in Europe.
A correct perspective on international trade is difficult to achieve—not merely because statistics are scarce and shaky but because, unlike other sectors of the economy, oceanic trade has left an abundance of records which have seduced generations of historians eager to reconstruct the fascinating story of exploration, conquest, and rivalry among European states for the spoils of discovery. All that movement of men, ships, and exotic commodities, which attracted the attention of princes and became inseparable from the deployment of military power for political and economic ends, makes for readable history. Yet it is important to place the glamour of long-distance trade against the landscape of economic development. Braudel, who is the founding father of global history does just that in his classic study of the Mediterranean in the sixteenth century. That great book is also full of trade, ships, merchants, bankers, and towns, as well as violence and rivalry between states. But Braudel was careful to begin it all with a long account of the geographical constraints on economic activity and proceeds “to draw up a balance sheet of the Mediterranean... to determine the relative proportions and relationships between the different sectors of its activity”. In his conclusion, Braudel again emphasised how “the Mediterranean in the sixteenth century was overwhelmingly a world of peasants and of the tenant farmers and landowners; crops and harvests were the vital matters of this world and anything else was superstructure, the result of accumulation and of unnatural diversion towards the towns. Peasants and crops, in other words food supplies, and the size of the population silently determined the destiny of the age.”

Such factors, to which I would add improvements to agriculture and technical progress in industry, continued to determine the destiny of Europe throughout the mercantile era. As long as oceanic trade remained as a tiny proportion of total economic activity it could not propel Europe towards an industrial society. Global perspectives are not required to comprehend more than a tiny part of the explanation for the progress achieved for three centuries before the Industrial Revolution.

Links across the oceans were built up in the sixteenth century, but to reify the international commerce of the mercantile era into a “world economy” is to misapply a contemporary concept which really has relevance only for our own times. Throughout the early modern era connexions between economies (even within states) remained weak, tenuous, and liable to interruption. Except for a restricted range of examples, growth, stagnation, and decay everywhere in Western Europe can be explained mainly by reference to endogeneous forces. The “world economy”, such as it was, hardly impinged. If these speculations are correct, then for the economic growth of the core, the periphery was peripheral.

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