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FINANCIAL INSTITUTIONS AND
ECONOMIC DEVELOPMENT:

A Comparison of Great Britain and France in
the Eighteenth and Nineteenth Centuries

by

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It has long been a conventional view that Great Britain had a higher level of income per capita than France in the eighteenth and nineteenth centuries. Gregory King put the difference in 1688 as 10 to 30 percent.¹ Bairoch calculated in 1960 dollars that in 1830 Britain had an income of \$360 per head to France's \$265, an advantage of more than one third, and that by 1860 the lead had widened somewhat with Great Britain's figure at \$584 to France's \$365, or a margin of almost three eighths.²

This conventional numerical evidence was supported by the qualitative testimony of contemporary travellers, notably Adam Smith,³ Arthur Young,⁴ Alex de Tocqueville,⁵ Johan Conrad Fischer,⁶ John Bowring,⁷ Michel Chevalier,⁸ and many others, though not Friedrich Engels.⁹ In his magisterial History of Economic Analysis Schumpeter asserts that description by travellers of the conditions they observed forms an important part of the economic literature in the pre-statistical period and that neglect of this is apt to distort seriously our picture of the economics of those centuries and to hide the full extent of the fact-finding work actually done.¹⁰ The conventional view was presumably reflected in the inability of French industry to compete with exports from Britain, either in the French market after tariffs were reduced in 1786 in the Treaty of Vergennes (until the French revolution three years later)¹¹ or in third markets such as the United States. French exports to the United States consisted of luxuries such as wine, brandy and silk, whereas British goods were for the most part necessities such as textiles, hardware, iron, coal and the like.¹² Further support for the view comes from such simple tests as the proportion of the labor force

engaged in agriculture - 51.4 percent in France in 1856 after a considerable movement off the farm into the city, compared to 29 percent for Britain in 1851.¹³ Even after correction for the amount of food subtracted by exports or furnished through imports by exports of manufactures, these data show through Engel's law that Britain had a considerably higher level of living than France. Still another test was furnished by the anxiety of French entrepreneurs to steal British industrial secrets, to buy its machinery, and to import British workmen and businessmen.¹⁴ The conventional wisdom regarded the Englishman as a big man who ate meat while the smaller Frenchman ate bread and wore clogs.¹⁵

So ingrained was this view in the conventional wisdom that a small army of scholars sought to explain it. France's economic retardation has been variously attributed to lack of coal,¹⁶ the family firm,¹⁷ aristocratic values,¹⁸ the failure of the family farm to release labor in adequate amounts for transfer into industry,¹⁹ to traditional resistance to technical change in agriculture,²⁰ the backwardness of French banking until the establishment of the Crédit Mobilier in 1852. The retardation, in fact, was close to being overexplained, with more equations than there were unknowns.²¹

Like so much other, this conventional wisdom has been attacked by revisionists and stood on its head, in this case by Patrick O'Brien and Caglar Keyder, who have sought to prove in an econometric exercise that France was richer per capita in 1786, and, apart from the years of the Napoleonic wars, grew faster up to about 1870.²² The authors dismiss the contemporary travellers, and the simple tests just noted, relying rather on estimates on the volume and value of

physical product worked out by Marczewski,²³ Markovitch,²⁴ and Toutain.²⁵

They explicitly do not include services in their measurements on the ground that much of services should be included as intermediate product, used up in producing final product.²⁶ It is not completely clear that they are aware of the dangers implicit in ignoring a priori information in econometric testing,²⁷ or in using time series for cross-sectional analysis.²⁸ Another observer, Francois Crouzet, who is sceptical of the more threadbare versions of Franco-British comparisons of real income, is disposed to regard the Marczewski benchmark of 1786 on which most of the econometric comparison rests, as far too high.²⁹

Nor do O'Brien and Keyder seem adequately cognizant of the wide regional differences in levels of development and rates of growth in eighteenth century France. Edward Whiting Fox wrote of two Frances, one of Paris, Lyons and Strasbourg (on the inland trade routes) and the coastal cities, which grew rapidly in the eighteenth century, and the other inland that was relatively stagnant except for the island of farmland around Paris which had been drained of excess labor and forced to adopt improved agricultural methods.³⁰ Braudel speaks of three Frances, one of rich merchants, using gold to settle its balances, another of middle-class producers and traders using silver, and a third in the countryside, heavily dependent on the exchange of goods and services in barter, with only a small part of its economy monetized and that using copper.³¹ An interesting methodological exercise for economic historians would be to compare the aggregative econometric approach of O'Brien and Keyder with the historian's reliance on archival evidence, set out in Eugen Weber's From Peasants into Frenchmen, The Modernization of Rural France, 1870-1914.³² This latter shows in detail

from police, prefect, and other records, the ignorance, hunger and poverty of the French peasant, who was not brought fully into French society on an integrated basis until after 1870. Despite the adoption of the metric system during the French revolution and the franc germinal in 1803, the peasant was still reckoning in pieds and livres 70 years later.³³

The purpose of this exercise, however, is not to attack the O'Brien and Keyder thesis head on, but to post another rough test for it. It should be said in their defense that their conclusions are put forward tentatively and with frequent recognition of the limitations of their statistical method. It seems to me nevertheless that the fact that French financial institutions lagged behind those of Great Britain by about a century should be added to the other qualitative demonstrations - the share of agriculture in the labor force, travellers' opinions, the flow of technological information and a considerable amount of direct measurement - to buttress the conventional view that Britain was richer than France for most of the eighteenth and nineteenth centuries. It is an established position in military intelligence that confidence in an estimate increases as sources using different methods - aerial reconnaissance, prisoner-of-war interrogation, radio intercepts, reports of agents, etc. - all point to the same conclusion. The analogy must leave room for planned deception in which all intelligence channels are fed misinformation. It is considered highly unlikely, however, that history plays such tricks on us.

II

Do financial institutions matter? Institutional economists such as John Commons, Clarence Ayres and today J. Kenneth Galbraith on the whole

believe that economic institutions broadly shape economic outcomes. The position of Ronald Coase is rather than institutions conform to fundamental economic variables such as wants and scarcities or demand and supply.³⁴ It makes no difference, he would assert, whether land is owned by sheepherders or cattle grazers; it will be used for sheep or beef depending upon their relative prices, with the sheepherders renting it from the grazers if it is best used for sheep, but owned by the cattlemen. This does not do away with the need for institutions. At a minimum there must be some law and order to prevent the herders murdering the grazers to get hold of the land.^{34a} This is Adam Smith's public good of magistracy. The Coase theorem has been extended to hold that necessity is the mother of institutions, as well as of physical inventions. This implies that growth creates institutions contrary to such a view as that of Schumpeter, who quotes Smith on his side, that "development of an efficient banking system may make a lot of difference to the development of a country's wealth."³⁵ Even if the causation should run the other way, however, it is not self-evident that there is likely to be a one-to-one correspondence between a given level of growth and a certain set of financial institutions, good for all countries and cultures.

The most careful work in the realm of financial institutions has been done by Raymond W. Goldsmith who notes their development in the following terms:³⁶

Types of Financial Institutions

Characteristics	Historical Samples (Europe only)
1. Only commodity money, no financial institutions, but occasional credit transactions	Early antiquity
2. Metallic money, bills of exchange and indigenous small-scale financial institutions (moneylenders)	Classical antiquity. Most parts of medieval Europe and large parts of Europe through the eighteenth century
3. Central bank the only, or predominant, financial institution	France) Russia) } early 19th century
4. Deposit banks, and no central bank and no paper money	Medieval Italian cities (from 13th century on)
5. Multiplicity of note issuing and deposit banks, beginnings of other financial institutions	Scotland in first half of 19th century; USA to 1913
6. Central bank, modern deposit banks; indigenous small-scale financial operators	
7. Central bank, deposit banks, beginnings of other financial institutions (particularly savings banks, mortgage banks, development banks and insurance companies)	Western Europe from mid-19th century to World War I
8. Full complement of financial institutions and instruments	

This schema is necessarily summary, but it may be noted that the third and fourth categories are alternative paths to financial development. There were lone central banks, for example, in Sweden (established 1668), in Norway (1816) and in Denmark (1818) down almost to 1850,³⁷ while in Holland and Hamburg there were over the same period (as Sweden) deposit banks - the Bank of Amsterdam (1608 -1782) and the Bank of Hamburg (1609 to 1873) - but no central bank.³⁸ Parenthetically it is ironic that Goldsmith writes of a "full complement of financial instruments" in 1969 before the flowering of such

institutions as the Euro-currency market, credit cards, money-market funds, repurchase agreements ("repos"), negotiable orders of withdrawal ("NOW accounts"), bank holding companies, and in Kuwait, trade in securities with post-dated checks.

Institutions of course can be borrowed as well as spring into being to meet a need. Among the twelve conclusions of Goldsmith's study, in addition to the "rough parallelism that can be observed between economic and financial developments in most countries"³⁹ is the "strong influence of example of more advanced countries!"⁴⁰ Edwin Kemmerer,⁴¹ John Parke Young,⁴² H. Parker Willis⁴³ in the first decades of the twentieth century among American economists, and Robert Triffin after World War II,⁴⁴ toured developing countries installing new central banks, and in the case of Kemmerer the gold standard. On one occasion in the 1920s in Peru, Kemmerer arrived with a draft statute for a central bank and the gold standard which was adopted by the legislature on the evening of his arrival and took effect the following day.⁴⁵ Lars Sandberg has argued that Swedish banking institutions in 1850 were substantially in advance of its state of development to such an extent that the country might be called (for this reason and its advanced literacy) "an impoverished sophisticate,"⁴⁶ though there may be some basis for questioning the characterization.⁴⁷ In a personal communication, Irma Adelman wondered whether abundant supplies of rich land might not substitute for financial institutions, as shown by the United States where a high standard of living was reached without a central bank between 1836 and 1913, and with fragmented markets. There is evidence, however, that the functions of a central bank in smoothing seasonal fluctuations and acting as a

lender of last resort were in fact performed by others - either the U.S. Treasury,⁴⁸ the money-market banks,⁴⁹ or in the gold crisis of 1893, J.P. Morgan.⁵⁰

As far as Britain and France are concerned there seems to be no or very little institutional borrowing in advance of need, and in the French case, a considerable lag for many sorts of financial institutions. The hypothesis of this paper, which can be asserted but hardly proven rigorously, is that English and British financial institutions on the whole fairly reflect their states of economic development, and that the lag of France behind Britain by a margin of a generation to an entire century for a considerable number of significant functions is evidence of a major lag in economic development.

III

Unfortunately for our purposes, Goldsmith's study of financial institutions relies on statistical demonstration and is therefore limited, for the period of our interest, to the last quarter or fifth of the nineteenth century and the years to 1913. On the whole, data extracted for France and Great Britain from the rich tables for many countries show that France was well behind Great Britain in financial development from 1860 to 1913, but had been catching up. The central statistic in Goldsmith's analysis is the Financial Interrelations Ratio (FIR) which compares the volume of all financial assets, including those of financial institutions, households and government bodies, with gross national product. On Goldsmith's findings this starts at some low level such as 0.20 and rises with development until about 1 or $1\frac{1}{2}$ when it levels off.⁵¹ In 1913 the French FIR was .79 as compared with 1.04 for Britain on the basis of observed values,

or 1.30 on calculated values.⁵² Within the FIR as a whole, the ratio of the assets of financial institutions to gross national product developed as follows:

Assets/GNP of Financial Institutions ⁵³				
in Per Cent				
	1860	1880	1900	1913
France	19	50	96	104
Great Britain	57	95	93	103

which shows French financial institutions reaching the levelling-off stage at the end of the nineteenth century, but well below those of Britain in 1860. The variety of financial institutions for the same dates is given by the numbers of different kinds:

Varieties of Financial Institutions ⁵⁴				
Number of Types of Financial Institutions in Operation				
	1860	1880	1900	1913
France	9	9	11	11
Great Britain	13	14	16	17

As financial sophistication grows, the weight of central banks among the totality of financial assets diminishes, and that of deposit banks rises for a certain distance. This is illustrated by data for France and Britain again showing the wide gap in the early part of the period covered by comparable data and its narrowing:

Net Issue Ratios of Central Banks ⁵⁵			
in percent of period's gross national product			
	1861-1880	1881-1900	1901-1913
France	0.45	0.30	0.35
Great Britain	0.09	0.06	0.02

Net Issue Ratios of Deposit Banks⁵⁶

in percent of period's gross national product

	1861-1880	1881-1900	1901-1913
France	0.46	0.45	1.42
Great Britain	1.61	1.06	0.97

These data and others presented by Goldsmith show a rapid convergence of financial institutions in most respects by the end of the nineteenth century or 1913, but something of a gap - often a wide one - in 1860. In the main portion of the paper, we start at the other end of the modern era with the early development of particular institutions, and demonstrate that for many institutions the gap in time was close to a century.

IV

The Bank of England was established in 1694, the Bank of France in 1800 - a gap of 106 years. It is significant that both institutions were set up in time of war. Charles Jones has suggested that histories of banking fall into four categories: the "orthodox" in which central banks emerge after a period of more or less wildcat credit creation to stabilize the system; the heroic or "developmental" in which banks are regarded as the vanguard leading the way to economic development, illustrated especially by the views of Hoselitz, Gerschenkron, and Cameron on the role of the Crédit Mobilier in France after the middle of the nineteenth century;⁵⁷ the "Populist" in which banks are regarded as exploitive of the vast bulk of the populace, and especially of the agricultural sector; and the "statist" in which banks are created by governments to serve their own needs.⁵⁸ The classification was developed for a study of central banks in Argentina, Australia and Canada, all three of which were said to conform to the statist model.

So do the Bank of England and the Bank of France, established to help contribute to war finance.

Proposals for the creation of a major bank had been put forward in Britain continuously through the seventeenth century, for the most part patterned after the Bank of Amsterdam, a deposit bank that did not issue notes.⁵⁹ When it came to the event, however, the founders - financed by the liquidation of stocks of wine that could not be replenished because of the Nine Years' War⁶⁰ - loaned the government £1,200,000 in a purchase of debt in exchange for the right to issue banknotes. The earliest issue of banknotes by a central bank in Europe was that of the Swedish Riksbank in 1668, patterned after the copper notes issued by copper mines because the copper money itself was so awkward to handle because of its bulk and weight.⁶¹ In theory, but not in practice, these notes were backed by metallic reserves to the extent of 100 percent. In Britain, government payment orders designating the priority in which certain bills would be paid had circulated late in the seventeenth century as hand to hand currency.⁶² The Bank of England note issue, backed by government credit, however, represented a major innovation.

The long lag in the creation of the Bank of France behind the Bank of England was the result of the unhappy experience of France in the Mississippi bubble when the Banque Royale collapsed in 1720, having issued notes that proved to be worthless;⁶³ in the relative failure of the Caisse d'escompte, formed in 1776, reorganized when it overloaned to Louis XVI;⁶⁴ and in the Assignats which exploded as paper money in 1795.⁶⁵ Napoleonic finances were peculiarly chaotic at the end of the century. Two of the steps designed to restore order were the

establishment of the Bank of France and the issue of a new currency, the franc germinal, in 1803, to replace the livre. French collective memory of the Law period and his Banque générale and Banque royale was so sharp that almost no institutions known as banks were formed until the second half of the nineteenth century, but rather crédits, caisses, comptoirs and sociétés. The Bank of France, the guess may be hazarded, was named a bank after the pattern of the Bank of England which was highly regarded by the French for its century of successful experience.⁶⁶

The earlier development of the Bank of England than the Bank of France was evidently responsible for the earlier development of central banking theory in England, although the Bank of France had an opportunity to catch up by studying the Bank of England's experience. E.V. Morgan and F.W. Fetter have studied the development of central-bank theory in the first half of the nineteenth century, and this period is rich in learning with its controversies, crises and legislation.⁶⁷ But the Bank of England learned intuitively in the eighteenth century how to behave as a lender of last resort,⁶⁸ and Thornton had an excellent understanding of the function in 1802,⁶⁹ even though the better-known rationalization of the process had to wait for Bagehot's Lombard Street in 1873. In France, the Bank of France cut down on lending to the market in the crisis of 1818, although the governor, Jacques Laffitte, offered private assistance to the Bourse.⁷⁰ It did far better in the crisis of 1825, but then forgot the technique of acting as lender of last resort until ultimately it defeated the regional banks in 1848 and secured a monopoly of the note issue.⁷¹

For a time, the Bank of France was readier to emulate the Bank of England's discount policy, developed for the most part in the troubles

of the 1830s and early 1840s after the failure of Palmer's rule.⁷² From 1856 to 1865 the Bank of France departed from its initial policy of holding the discount rate steady at 4 percent, and sought to control the money market by varying the rate. At the end of the period, however, it returned to a rate that was virtually fixed and used a very different technique of varying the proportions of bullion and foreign coin, and of gold and silver, when it wanted to affect external drains.⁷³ The Bank of France's ratio of specie to liabilities was far higher than that of the Bank of England, suggesting a reluctance to expand the ratio of financial claims to national product and hence a lower stage of economic development.

Substitutes for coin before banknotes have been noted in Britain about the 1670's, when treasury orders were used in payments. French rescriptions which served the same purpose have been noted in the second half of the eighteenth century.⁷⁴ Bank notes proper were issued by the Bank of England and the country banks. The former were originally issued in a minimum denomination of £20, reduced to £10 in 1754, and to £5 in 1794 during the crisis caused by the canal mania and the Reign of Terror in Paris. £2 and £1 notes were put out in 1797 after suspension of gold convertibility, withdrawn in 1817 prior to the resumption of 1819, but put back into circulation once more in the crisis of 1825. Bank of England note circulation was assisted by petitions of merchants and investors, asserting their own willingness to receive the notes in payment and urging the public to do the same, the first in 1745 when the Young Pretender marched on Derby invading from Scotland, the second in 1797 when panic broke out as the French landed a small

detachment at Fishguard.⁷⁵

Bank of England notes circulated mainly in London in the eighteenth century. Elsewhere there were various substitutes - domestic bills of exchange in Lancashire,⁷⁶ and notes of country banks more widely. The country banks flourished in several waves, followed by collapse and shrinkage, the first in the 1750s, the next in the canal mania of the early 1790s, and a third major one in the 1820s.⁷⁷ With the establishment of Bank of England branches in 1826, and ultimately the Bank Act of 1844, the Bank of England acquired a monopoly of the note issue, just about the time that the Bank of France did.

In France banknotes had a limited circulation before 1850. The Bank of France was reluctant both to expand itself and to encourage other note-issuing banks outside Paris or its own branches. Efforts were made by Napoleon, by Jacques Laffitte and by the regional banks established over the opposition of the Bank of France in the 1830s to expand note circulation in the provinces, but the Bank persuaded the Conseil d'Etat to limit the regional banks first in setting a high minimum denomination for the notes they could issue, and secondly by refusing them the right to redeem their notes in Paris, which permission would have extended the area in which the notes would have circulated.⁷⁸ Bank of France notes themselves were initially set at a minimum denomination of 250 francs, roughly £10. A proposal to reduce the denomination to 100 francs was resisted by the Bank of France in 1846 and defeated. In the financial crisis of 1848 a more extreme proposal to go to Ff.50 (roughly £2) was accepted, just under a century after the denomination of the British bank notes had been reduced from a minimum of £20 to £10. One rough estimate suggests that the use of banknotes in France rose from

7 percent of all transactions before 1850 to 20 percent in 1856 and 70 percent by 1885.⁷⁹ Other transactions, it should be noted, were carried out almost entirely in coin and bills of exchange, and hardly at all in checks drawn on bank deposits.

Banknotes were thus used to a limited extent as a medium of exchange. For store of value the peasant used the wool sock (bas de lain) and gold coin. Even businessmen continued to keep large amounts of ready cash in coin on their premises. Wicksell quotes a witness to the English Gold and Silver Commission of 1887 who thought it remarkable that a hotel owner in Southern France with a turnover of 1 million francs annually should point to his safe and say "that's my bank." Wicksell compares this with the father of Alexander Pope who was said by Macaulay in his History of England to have retired from business at the end of the seventeenth century with a hoard of £20,000 in gold and silver coins on which he drew for household expenses for the rest of his life.⁸⁰ If the two cases are in any way representative, perhaps of the last remnants of the practice, the time difference, it should be noted, is almost two centuries.

The use of bank deposits as money began slowly in Britain, but picked up speed in the first half of the nineteenth century. It is significant that the London and Westminster Bank stockholders thought it worthwhile to establish a bank in London in 1836 when it could do so only if it renounced the right of note issue and relied entirely on deposits.⁸¹ By the time the Bank Act of 1844 limited the amount of banknotes the Bank of England could issue, the use of deposits was spreading rapidly. The National and Provincial Bank, organized as a joint-stock company in 1833 entirely outside the 65-mile zone

centered on London in order to be able to issue banknotes, moved into London in 1866, giving up the note-issue privilege, at a time when it had 122 branches.⁸²

France was not a century behind in the early use of deposits, as the major deposit banks sprang up at the end of the 1850s and in the early 1860s. It is difficult to find comparable dates for the ratio of bank deposits to notes in circulation which in 1913 was said to be 3:2 in France, 7:1 in Great Britain, and 20:1 in the United States.⁸³

As implied in the last paragraph, the spread of joint-stock banks was less than half a century apart in the two countries. The Bank Act of 1826 permitted joint-stock banks with the right of note issue outside a circle of 65 miles from London, and from 1833 banks were formed as joint-stock corporations within the circle without the note issue but relying on deposits. As early as 1847 Lord Overstone excoriated Colonel Robert Torrens who had said that he was contemplating regarding bank deposits as money, and drew from Torrens an abject surrender: "I throw deposits to the dogs."⁸⁴ But Lord Overstone's intransigence on this and other monetary issues (such as the decimalization of the British money) was notorious. By the 1850s deposits dominated banknotes in Britain at the time when banknotes were just getting going in France.

French deposit banking can perhaps measure its start from 1848 when the Comptoir de Paris that later developed into the Comptoir National d'Escompte was set up in crisis, along with a great many other comptoir in the provinces to provide a third signature for bills of exchange so that they could be discounted at the Bank of France. A more secure starting point, however, is the formation of

the Crédit Industriel et Commercial in 1859, closely followed by the founding of the Crédit Lyonnais in 1863 and the Société Générale pour favoriser le commerce et l'industrie in 1864, on the average perhaps 30 years or a generation behind the major British joint-stock banks such as Barclays, Lloyds, the Midland, the National Provincial and the London and Westminster. In 1855, England and Wales had 409 banks with 1185 banking offices.⁸⁵ In 1863, whether before or after the formation of the Crédit Lyonnais is not clear, it was said that three-quarters of French towns lacked access to banking, access being defined as a bank within 30 kilometers. France had 115 bankable places in 1881. By 1913 the number had risen to 585.⁸⁶ It is not clear to me whether "bankable places" should be equated to banks or to bank office, although presumably the latter is meant. If the expression means banks, there were 42 percent more banks in France in 1913 than Britain had in 1855; if on the other hand it refers to bank offices, France in 1913 had half the number that Britain had almost 60 years earlier.

Summing up his study of French, English and Scottish banking in 1967, Rondo Cameron stated:

"Comparison with English and Scottish data reveals that the complaints of French businessmen were justified: bank facilities were too few, and bank resources pitifully inadequate. At the end of its "take-off" period, the French economy had approximately the same bank density as Scotland had had in the middle of the eighteenth century. France had fewer bank assets per inhabitant in the midnineteenth century than England or Scotland had had in 1770, and in 1870 had not yet reached the position that they held before the beginning of the nineteenth century."⁸⁷

These gaps of 70 years are roughly three-quarters of a century. It should be noted, however, that Cameron has changed his position. In a recent paper with Charles Freedeman he distinctly sides with O'Brien

and Keyder and other revisionists, though he is willing to grant that O'Brien and Keyder exaggerate the position, holding that France vies with England for the title of "First Industrial Nation", and even citing scholarly contributions since 1961 that point to significant contributions to French industrialization by banks in the first half of the nineteenth century.⁸⁸ This finding, however, is not reconciled with those of the 1967 study.

This comparison omits both Crédit mobilier of 1852 and its 1837 predecessor, Jacques Laffitte's Caisse.... which had to be reorganized in 1844 and failed four years later. The Crédit mobilier, as noted earlier, is regarded by a number of distinguished economic historians as a French innovation - although a foreign forerunner can be discerned in the Belgian Société Générale of 1822. The Crédit mobilier was based on the expansionist notions of Saint-Simon, put into effect by Emile and Isaac Pereire, importantly imitated in Germany by the Bank für Handel und Industrie of Darmstadt and thereafter by the German banking system in general. For France and Britain, however, its historic role was brief and fruitless. The Crédit mobilier, and imitating it, the Rothschild banking firm, established a number of subsidiaries in Austria, Holland, Italy and Spain. Those in Spain went into decline and mostly withdrew in the 1860s, those in Italy failed in the 1890s and were superseded by German-sponsored industrial banks. In Austria the Pereire and Rothschild subsidiaries always had had an admixture of German influence.

Such success as the Crédit mobilier had in France, and its extent is debatable, lay in the promotion of public works such as railroads, ports, gas and waterworks rather than in industry for which its

reputation was made. Moreover, it failed in 1868 after a life of 16 years, defeated by the French banking establishment. Its rather pallid British imitations all collapsed in connection with the Overend, Gurney crisis of 1866. France gets credit for a banking innovation, but it proved to be one that took effective root only in German (and Swedish) soil.

The gap can be stretched from a generation back to a century by noting that the London clearing house was established in 1775, the Paris clearing house in 1872.⁸⁹ The comparison is unfair, however, since the London clearing house was created by private banks only for the exchange of notes - the London joint-stock banks were not admitted for the clearing of deposits until the 1850s - whereas the Paris clearing house began with deposits from the beginning.

A similar comparison that is tempting but must be rejected concerns the date for adoption of the gold standard in the two countries. Both countries fixed the price of gold that lasted for almost two hundred years, Britain with Isaac Newton as master of the mint in 1717 that lasted with interruptions for the Napoleonic and World War I until 1931, France in 1736 that lasted with more frequent and longer interruptions de jure until 1928. But Britain in 1717 was on a bimetallic standard and used largely silver. The gold standard was adopted de facto in 1774 when silver was demonetized, France a century later in 1875. It is not self-evident, however, that the gold standard represented a stage in advance of the bimetallism which prevailed in France to 1875; in fact the gold standard with subsidiary silver coinage in England and bimetallism in France co-existed effectively over the period from 1815 to 1865, when the discovery of the

Comstock lode in silver in Nevada, the development of the cyanide process, and later the German switch to the gold standard involving massive sales of silver destroyed silver as a monetary metal. It is true that England ran the gold standard with greater economy of investment in reserves than France, and could on this count be said to have been more highly developed. The dates of adoption of the gold standard cannot be used to measure the gap.

We shift from money and banking to financial integration, or the extent to which the money and capital markets of a country stretch from the financial corner into the far corners of the nation. Here the appropriate criterion is the extent to which the rate of interest on money and the yield on bonds are the same throughout the country, but historical data on a consistent basis are lacking for the period. One could also track the movement of funds in response to changes in demand and supply, whether of rents which move from the countryside England to London in May and October, or the seasonal movements from Paris to the provinces after the harvest, and the reverse in the spring. In France the emphasis on the literature has consistently been how disparate were various localities financially. Marseilles was chronically short of specie because of its trade with the Levant which drained it of silver.⁹⁰ Dijon, lying between rich Lyons with its silk and rich Paris, the financial center, groaned under a 9 percent interest rate in the first half of the nineteenth century when Lyons enjoyed 3 percent and Paris 4.⁹¹ John Law, Napoleon, Jacques Laffitte, Emile Pereire continuously harped on the need to extend the financial institutions of Paris to the countryside, or to build new ones there.⁹² The Bank of France was attacked as the "Bank of Paris"

as late as the formal inquiry into money and banking of 1867,⁹³ though it should be noted that the Bank of England was characterized as the "Bank of London", though by a Frenchman and in 1810.⁹⁴ Some bankers such as LeCoulteux of Rouen and Depont of Nantes maintained residences and counting houses both in the ports and in Paris; but many others like Ouvrard pulled up their local roots completely, or having left the ports during the Revolution, returned to Paris only when things settled down.⁹⁵

In Britain, such a banker as Smith of Nottingham established a London branch in 1758, one year after founding the house, and then branches in Lincoln and Hull in the 1770s and 1780s respectively.⁹⁶ He was prepared to move money about. A bill broker in London testifying before the Bullion Committee in 1810 observed that the savings of the agricultural areas of East Anglia were transmitted to Lancashire by way of London, a remark quoted by Bagehot in Lombard Street at a time (1873) when it was no longer true.⁹⁷ Lloyds Bank tried to keep its deposit rate fixed in Birmingham and variable, following bank rate, in London but after time was unable to do so as Birmingham depositors transferred their accounts to London when the rate there rose significantly above the Birmingham level.⁹⁸ Full equality of rates was not reached, however, until 1920. Adequate historical studies of the process of integration of French and British financial markets have not been produced along the lines of the analysis of McKinnon, who is concerned about the repression of financial markets in developing countries,⁹⁹ or of Shaw whose somewhat different emphasis is on financial deepening,¹⁰⁰ but the impression remains that the English market was financially integrated, or well on its way to financial

integration, well before the French. It is true that the filling out of the national structure of branches by the major deposit banks took place virtually simultaneously, beginning in the 1850s for England and the late 1860s for France, with spurts in the 1890s and just before the war. The process was associated with the development of railroad networks which were at most 20 years apart for the main lines.

It is true that there remained some considerable differentiation between the City and the provincial capital markets in England, and between Paris and the countryside in France. In neither case was integration complete. In both countries, moreover, there was a strong suspicion of the Populist type that the financial center sucked funds to it to pour abroad in search of commissions, at some cost to the capital needs of industry in the provinces, which had to rely primarily on internal funds.¹⁰¹ Since London started to lend abroad on a major scale after 1817 to 1825, and France a few years later, initially to Belgium, and more widely in the 1850s, this possibility, which is not an established fact, might have occurred, if at all, 30 years earlier in England than in France. The peak of the criticism against foreign lending, however, occurs more nearly simultaneously in the 1880s and 1890s.

Finally, on the question of integration, it should be observed that the provincial capital markets that sprang up in England in the 1830s and 1840s were unmatched, as far as I am able to ascertain, by anything as vigorous in the furnishing of equity capital to industry in France.¹⁰²

So much - perhaps not very much - for money and banking. We turn briefly to insurance. Historical accounts are full for Britain, meagre

in easy access, for France. It is an interesting sidelight on the Coase theorem that the Hanseatic league failed altogether to produce financial insurance (or for that matter banking and the bill of exchange) even though they were in position to learn from the Italians. To finance trade they relied on a sort of barter - selling for local money in export markets and spending that money for imports to take with them - and settling imbalances on a bilateral basis in specie. To reduce the risks of trade their merchants owned one-tenth of 10 different ships in short-term partnerships, rather than an entire ship covered by an insurance contract. Cargoes were divided among ships in a similar way.¹⁰³ They relied, in effect, on clumsy and costly real rather than financial insurance. Early forms of insurance lying between the real and the financial were bottomry and respondentia, loans on ships and cargoes, respectively, that were not to be repaid if the item borrowed against was lost.

In 1601 Britain passed a statute permitting insurance on the Italian model, but the first informal writing of insurance policies took place among individuals congregating informally in coffee houses after the London fire of 1666. The group gradually settled on the meeting place of Lloyds' Coffee House in 1688. A few years before that date, in 1680, a joint-stock insurance company, the Sun Assurance, was founded.¹⁰⁴ Two more major insurance companies were formed in 1720 at the time of the South Sea bubble - the Royal Exchange and the London Assurance.¹⁰⁵ Further companies were formed later in the eighteenth century, and a wave of new insurance companies in the boom of 1823-25. These dates run about 100 years before the comparable institutions were established across the Channel.

For France there was informal insurance written by individuals along the lines of Lloyds' coffee house in Rouen in 1727-40,¹⁰⁶ and somewhat later in Nantes and La Rochelle.¹⁰⁷ Armateurs (ship owners and outfitters) in the last two places not only took out policies locally, but also placed insurance in Paris, in London, and in the Netherlands, indicating that the facilities of the ports were inadequate. One account of a London marine underwriter in the eighteenth century stated that British insurers were able to write French policies at one fee in France, and reinsure for 100 percent in London at a must lower rate, to make a certain profit without risk;¹⁰⁸ the amounts cannot have been large or arbitrage would have equalized the rates. A financial corporation entered the insurance field briefly in France in 1780, formed by a Swiss financier named Clavière. This was 100 years after Sun Assurance. The company collapsed in the French revolution.¹⁰⁹ In 1816, after French defeat in the Napoleonic wars, the first successful insurance was formed, Royale d'assurances maritimes. This was virtually a century after the Royal Exchange and London Assurance.

Perhaps the most significant difference in time between the development of British and French financial institutions occurred in the shift of royal and national finances from private enterprise to a bureaucratic system. The difference between the two countries lay not only in timing but also in method. In Britain, it was accomplished after the "Glorious Revolution" of 1688 when the Stuarts, monarchs with the divine right of kings, were replaced by William and Mary whose powers were limited by Parliament.¹¹⁰ In France, the transformation took place in 1794 and required a bloody revolution in which, among others, 28 financiers were guillotined.¹¹¹

Tax farming and the parallel disbursement of royal revenues by individuals who bought the rights made sense at a time when kings had very little staff outside the royal household and when it was difficult in a venal society to trust civil servants, often at a distance from the capital, with the handling of monies that were frequently dealt in in small sums.¹¹² The modern counterpart is the people who collect monies from parking meters, who have recently been guilty of stealing large sums of small coins in the cities of Boston and Stockholm. For the system to work effectively, the monarch should auction off the rights - to farm taxes and customs duties, spend royal monies, operate monopolies in such goods as tobacco and sweet wine - at frequent intervals and for brief periods of time only. In theory such a practice would give the king the revenues he was entitled to, and spend them efficiently, while earning the successful bidders a normal rate of return. In fact, however, the various tax-farmers, receivers-generals, royal agents in France, having acquired their positions by purchase, tended to regard the offices as permanently theirs, private property that could be bequeathed or alienated through sale. Moreover, the several agents often invested or loaned the king's money in their possession for their own account, including lending it to another officier, so that the king was paying interest to lend money to himself. There were calls for reform of the system in the 1640s in England, and in the eighteenth century in France where Law, Turgot, and Necker - the first and last foreigners and outside the inner circle of officiers and financiers - sought vainly to change the system. The circumstances in which each was frustrated in his proposals for reform were complex as they involved,

respectively, the Mississippi bubble,¹¹³ the regulations in commerce in wheat,¹¹⁴ and fundamental errors in war finance.¹¹⁵ Contributing to the defeat in each case, however, was the unremitting opposition of the financial establishment. In Britain the transition took place quietly and smoothly after the Glorious Revolution as the new monarchs and the Parliament converted poachers into gamekeepers. Venality persisted in eighteenth-century Britain in other fields - the buying and selling of military commissions and parliament seats of rotten boroughs.¹¹⁶ A crucial difference in the financial development of France and Britain, however, was that the change from private management of national finances to bureaucratic administration took place 100 years earlier in Britain than in France, and peacefully, without the necessity to destroy the existing apparatus.

As a slight digression, I would point out that the shift of state finances from private to public property furnishes a counter-example to the North and Thomas view that economic growth requires a transition in the other direction, establishing private property rights where common ownership had previously existed.¹¹⁷

The other important aspect of the "financial revolution" in Britain was the development of a capital market for government debt. This is one area in which the French had been far in advance of the British, having worked out a system of rentes of many sorts from lifetime to perpetual that were bought and sold as early as the fifteenth century. Seventeenth-century Britain still had an antiquated system of different sorts of debt for different government branches: treasury orders, tallies (hazel sticks that were notched and split, with foil given to the purveyor and counterfoil kept by the department

to be matched up when payment was made), soldiers' pay bills, seamen's tickets and the like. The exchequer bill was developed as an instrument of general short-term debt in the 1690s, and the system of funding various obligations into long-term debt from the mid-'90s until the development of the perpetual consol in the 1740s. The histories of both the Bank of England and the South Sea Company were intimately bound up with this major reform in financial methods. Through the eighteenth century the four major securities traded on the London stock exchange were government stock and the shares of the Bank of England, the East India Company and the South Sea Company. In 1725 the prices of 14 securities were reported in the London press. By 1740, the number had risen to 40.¹¹⁸ By comparison, the French bourse in 1820 quoted only 6 securities.¹¹⁹

Before summing up it is important to observe that one financial institution came simultaneously to France and Britain: general incorporation. In both countries it arrived in two stages, in England in 1856 and 1863,¹²⁰ in France in 1863 and 1867.¹²¹ General incorporation had existed in Britain up to 1720 when the Bubble Act was passed requiring royal assent for forming a limited-liability company. While the Bubble Act was repealed in 1824, general incorporation waited until Parliament became overwhelmed with petitions for charters in the railway mania of 1845 and 1846. All other business had to use partnership. French financing of private enterprise had had the advantage over British in that early provision was made for companies with silent partners of limited liability - the société en commandite. Generalized incorporation occurred in both countries as a powerful exception to the more usual pattern of a lag in French institutions ranging from a generation

to a century behind the pattern in Britain.

V

One can appeal not only to the facts set forth, but also to the perception, although this runs the risk of subjectivity, the score on which O'Brien and Keyder dismissed the evidence of travellers. French observers consistently thought of Britain as well in advance of their country in terms of financial capacity. Isaac Panchaud,¹²² Jacques Necker,¹²³ the two Swiss to be sure, but intimately concerned with French finance - Francois Mollien,¹²⁴ and the last third of the nineteenth century Baron James de Rothschild¹²⁵ all thought that British credit institutions were more developed and effective than those of France. As early as 1833, Emile Pereire who had strong views on the need for financial reform in France wrote that the British financial system was the "secret of the industrial and political power of Britain."¹²⁶ The conclusion of Dickson's study of the "financial revolution" in England was that British financial capacity enabled that country, with one-third the population, to defeat France in a series of wars in the eighteenth century.¹²⁷ Again at the turn of the century, the British defeated a larger country although the margin had shrunk after the British population explosion of the eighteenth century. British financial capacity enabled the country to subsidize allies and hire mercenaries,¹²⁸ while French armies lived - while they could for a time - off assignats and victories, but ultimately depended on squeezing a defeated enemy after such battles as Jena and Austerlitz for indemnities to keep the Grand Army going.¹²⁹

The lead of British financial institutions over French extending up to a century in many particulars surely does not prove that Britain

had a higher per capita level of living and an equal or faster growth rate over most of the eighteenth and nineteenth centuries. In combination with the other evidence, however - of travellers, of the technological flow, the proportions engaged in agriculture, and competition in trade - it builds a strong case that Britain's economic development started in the eighteenth century ahead of that of France, and remained ahead at least to the end of the nineteenth century.

A final point: the development of financial institutions may be necessary to economic development. It is not sufficient. The proof: the Netherlands in 1750 boasted the most highly developed financial institutions in the world, including such sophisticated features as futures markets, but failed to make the transition from commercial preeminence to industrialization for more than 100 years.

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