equiproportionately, real changes *will* almost always have an impact on the demand for money. As Professor Salerno writes:

> ...since real disturbances are invariably attended by 'distribution effects', i.e. gains and losses of income and wealth by the affected market participants, it is most improbable that initially nonmonetary disturbances would not ultimately entail relative changes in the various national demands for money...[U]nder inconvertible conditions, the relative changes in the demands for the various national currencies, their quantities remaining unchanged, would be reflected in their long-run appreciation or depreciation on the foreign exchange market.[5]

Here we must emphasize a crucial distinction between the proper status of the 'short run' and the 'long run' in economic theory. In price theory proper, the short run should take precedence, because it is the real-world market price, while the long run is the remote, ultimate tendency that never occurs, and could only take place if all the data were frozen for several years. In sum, we could only live in the improbable if not impossible world of long-run general equilibrium – where all profits and losses are zero – if all values, technologies and resources were frozen for years. But in *monetary* theory, the order of precedence should be different. For in monetary theory, the impact of partial 'real' factors on the price level, exchange rates, and on the balance of payments, are all ephemera determined by the general factors: the supply of and demand for money. These monetary influences are not 'long-run' in the sense of far off and remote, but are underlying and dominant every day in the real world. The monetary influence corresponding to the long run of general equilibrium would be a condition where all price levels and all real wage levels in a gold standard world would be identical, or strictly proportionate to the relative currency weights of gold. In a freely fluctuating, fiat money world, this would be the situation where all price levels would be strictly proportionate to the currency ratios at the international market exchange rates. But dominant influences of the supply and demand for money on price levels and exchange rates occur in the real world all the time, and always predominate over the ephemera of 'real' specific price and expenditure changes. Hence real-world analysis, which must always predominate, comprises short-run price analysis and slightly longer-run (but still far from final equilibrium) monetary reasoning.

To put it another way: in the real world, all prices are determined by the interaction of supply and demand. For individual prices, this means consumer valuations and consumer demands for a given stock: supply and demand in the real world. This is 'short-run' micro-analysis. For overall prices or the 'price level', the relevant supply and demand is the supply of and demand for money: the result of individual utility valuations of the given stock of money at any time. And while equally real and dominant in the 'macro-sphere', this is determinant in a slightly longer run than the superficial 'real' factors stressed by anti-bullionists in all ages.

5.4 The storm over Boyd: the anti-bullionist response

The *Letter* by someone of Boyd's renown and stature stung the British banking Establishment to the quick.[6] The Establishment responded with a flurry of pamphlets in opposition to Boyd, some of which were subsidized by the government. The key point was to defend the actions of the Bank of England, and to attribute the undesirable consequences of the inflation and depreciation to a hodge-podge of 'real' rather than monetary factors. The most eminent critic whom Boyd could rebut in the second edition of the *Letter*, published a few months after the original, was Sir Francis Baring (1740–1810), founder of the famous banking house of Baring Brothers and Co.

Baring had been born to a clothing manufacturer in Exeter. After plunging into commerce in London, Baring founded his own mercantile firm and became a multimillionaire, and known as the leading merchant in Europe. In addition to his mercantile and banking prominence, Baring was also a director, and then chairman of the board of the East India Company, as well as a long-time Whig MP. Curiously enough, when the restriction first appeared, Baring, in his first monetary pamphlet, while strongly supporting the suspension as a necessary wartime measure, was worried about the inevitable depreciation that would accompany over-issue of paper and suggested a strict limit on the bank's issue. This pamphlet, *Observations on the Establishment of the Bank of England* (1797) went through two quick editions, followed by a supplementary *Further Observations* later the same year.

Now that the bank was under substantial attack, however, Sir Francis rallied round, his previous qualifications and warnings forgotten. In his *Observations on the Publication of Walter Boyd* (1801), Baring absurdly defended the bank from the charge of causing increases in domestic prices by pointing out that the depreciation of the pound on the foreign exchange market was less than the rise in price. But Boyd had not claimed equiproportional rises in all prices, as he pointed out in his rebuttal. Baring also claimed, conveniently enough, that an increase in the money supply could *only* affect foreign exchange rates and not domestic prices.

Another inveterate defender of the bank and an anti-bullionist who entered the controversy in this period was Henry Boase (1763–1827). Boase joined the fray in 1802, and wrote five anti-bullionist pamphlets between then and 1811. He insisted that, under conditions of inconvertibility, exchange rates had nothing to do with the supply of money, but were only determined by the balance of international payments, which in turn was supposed to be set solely by real rather than monetary factors. As Boase put it dogmatically: 'the rate of exchange is governed by the balance of exchange operations, and (great political convulsions apart) by no other principle whatever...'. In his 1802 tract, *Guineas an Unnecessary and Expensive Incumbrance on Commerce*, Boase, as his title indicates, carried the fallacious Smithian 'highway in the sky' argument to its logical conclusion: the restriction was so beneficial that it should be made permanent, 'a permanent measure of prudence and sound policy'.

Who was this Boase, this point man for inflation and fiat money? Born in Cornwall, he went to live for years in Brittany, and then returned to London, where he became a corresponding clerk in 1788 in the banking firm of Ransom, Morland, and Hammersley. The outbreak of the French Revolution the following year found Boase, with his extensive French connections, in a good spot to obtain considerable funds for support of a number of emigré French clergy and nobility in England. Boase then rose rapidly in the bank, becoming chief clerk and then managing partner in 1799. He was also a distinguished evangelical, being a leading member of the London Missionary Society and founder of the British and Foreign Bible Society. After retiring to Cornwall in 1809, Henry Boase became a partner in the Penzance Union Bank and mayor of Penzance.

5.5 Henry Thornton: anti-bullionist in sheep's clothing

Although the bullionist controversy has been studied at length, historians of economic thought have had great difficulty identifying and analysing the various different doctrines held in the bullionist camp. Generally, they have grouped the bullionists into an 'extreme' or 'rigid' camp, consisting of John Wheatley and David Ricardo (to appear later on), and the others, including Henry Thornton, ranked as more sophisticated 'moderates'. The issue supposedly centres on Wheatley and Ricardo's extreme devotion to long-run factors, leading them to deny any role to real factors in determining prices, exchange rates or balances of payments. On the other hand, all the other bullionists, being 'moderate', are supposed to have believed that real factors can often be dominant, and that it is touch and go which factors will prevail in any given situation.

Professor Joseph T. Salerno has recently made a notable advance by providing a far superior framework of analysis of the various thinkers. He notes that Boyd (as we have seen) and Lord King, another leading bullionist, were really 'extreme' rather than moderate, and that they can be classified as such because they realized that monetary factors were always predominant, even though real factors could exert temporary influence. Thus the 'extreme' bullionist camp now includes (a) Ricardo and Wheatley, who ignore all temporary and real factors, as well as short-term processes, and concentrate exclusively and mechanistically on the long run; and (b) Boyd and later Lord

King, who analyse short-run processes and real factors but realize that long-run monetary factors predominate at all times. Then there are (c) 'moderate' bullionists like Thornton who are agnostic about whether real or monetary factors predominate at any given time; and (d) anti-bullionists who ignore all underlying monetary causes. It is clear that Professor Salerno properly gives the accolade to group (b) as having the correct analysis.[7]

But Salerno, it seems to the present author, does not quite go far enough. While he sees fully and lucidly the crucial differences between groups (a) and (b), it is still confusing to classify these two as dwelling in the same camp. For it would clarify matters further if we totally dropped the 'extreme' *vs* 'moderate' distinction. Let group (b) be termed 'complete' bullionists and group (a) 'rigid' or 'mechanistic' bullionists. As for group (c), men like Henry Thornton do not really deserve the term 'bullionist' at all. They are surely 'moderate', though 'confused' might be a better term. Mired in their *ad hoc* approach they could just as well end up, in any given situation, as 'anti-bullionist' rather than 'bullionist'. And, indeed, Henry Thornton began his career of monetary theorist as a moderate *anti*-bullionist, which was his position in the course of his famous contribution of 1802. Later on, as depreciation and inflation continued, Thornton concluded that the preponderance of forces had moved the other way, and he changed his mind, gaining his undeserved historiographical reputation as a bullionist by signing the famous Bullion Committee Report of 1811, which recommended resumption of the gold standard. But Thornton remained a moderate. Focusing on Thornton's later stance, and conflating it with his theoretical work of a decade earlier, only misled historians into extravagantly overpraising Thornton and into placing him unequivocally in the bullionist camp.

During the twentieth century Thornton revival, it was said that earlier historians were unfair in attributing Henry Thornton's (1760–1815) pro-Bank of England bias to his being a director of the bank. It is true that he himself was not a board member of the bank; but his elder brother, Samuel, was a director and deputy governor of the bank, and his grandfather Robert Thornton, as well as Robert's brother Godfrey, was also a director of the Bank of England.

Henry Thornton was a descendant of a long line of prominent merchants. Great-grandfather John was a merchant in Hull, in what was then Yorkshire, in the late seventeenth and early eighteenth centuries. John's sons moved to London to become important merchants there, particularly engaged in trade with Russia and the Baltic. Henry's father, also named John, continued the line of 'Russia merchant' in London, was a senior partner in the firm of Thornton, Cornwall & Co. and was also a leading member and financial supporter, beginning around 1750, of the first generation of evangelicals, low-church puritan Anglicans under the influence of John Wesley. John gave enormous sums to charity, especially for the distribution of countless Bibles and prayer books abroad. Since the Thornton family and several of the other leaders of the movement resided in the wealthy London suburb of Clapham, they were eventually to become known as the highly influential 'Clapham sect'.

Henry Thornton received only a sparse education; at an early age, he began working in the counting houses of his relatives and then of his father. Soon, in 1784, he left the family firm to become a partner in the banking house of Down, Thornton, and Free, where he remained as an active partner until his death. Thornton was able to build the small banking house into one of the largest in the City of London. In 1788, Thornton joined his father and several other family members as a director of the Russia Company. Meanwhile, in 1782, he had been elected an MP, and was soon joined by his brothers Samuel and Robert. Henry was to remain in Parliament, too, for the rest of his life.

Not only was Henry Thornton a distinguished banker, MP and closely related to Bank of England directors; he was also a dedicated leader and patron of the Clapham sect, and his home at Clapham was to serve as a virtual organizing headquarters for the evangelical movement. One of Henry's closest friends, William Wilberforce III, belonged to a powerful family long friendly to and intermarried with the Thorntons. Wilberforce became an MP at about the same time as Thornton, and it was characteristic of their earnestness, personal austerity and moral fervour that they soon came to form an independent 'party of the saints' in Parliament. There, Wilberforce became the leading force in the eventually successful agitation for the abolition of the slave trade in the British West Indies.

In 1796, Thornton married Marianna Sykes, daughter of another 'Russian merchant' from Hull, and also a lifelong family friend. The couple had nine children. Most of Thornton's intellectual energies were expended on evangelical religion; though considered a distinguished expert on banking and finance, he wrote only his famous work of 1802 on paper credit and participated in writing the Bullion Committee Report. The remainder of his voluminous writings were devoted to family prayers, family commentaries on the Bible, and scores of articles on politics, literature and religion for the Clapham sect journal which he helped to found, the *Christian Observer*.

After Thornton' death in 1815, his place as senior partner in the bank was taken by Sir Peter Pole. The bank prospered greatly for a while, but soon it turned out to be undercapitalized and overexpanded, and in 1825 it, along with lesser country banks, was plunged into crisis. It soon failed, despite a friendly £300 000 emergency loan from the Bank of England. Ironically, in view of Thornton's monetary views, there is some evidence that the two men most responsible for the mismanagement were Sir Peter Pole and Henry

Thornton. In particular, Thornton appears to have led the way in lax practices to induce Yorkshire country banks to keep their deposits in his London bank.

Bank failure was no stranger to Thornton. Indeed, it was the temporary failure of his bank in the crisis of 1793 that turned his thoughts to problems of banking, and led him to conclude that it was necessary for the Bank of England to play a supporting, expansionist role in monetary affairs. As the banking theorist Thomas Joplin was to put it in his *Analysis and History of the Currency Question* (1832), on the financial crises of 1793:

> Mr. Thornton, being a banker – a partner, it is curious to remark, of the house that failed on this occasion – had his attention particularly called to this subject: and a very considerable portion of his work, on public credit, is devoted to show, that, in a period of panic, the Bank ought to lean to the side of enlarging, than contracting its issues.[8]

When the restriction came in early 1797, Henry Thornton was honoured by being the only London banker asked to give testimony before the committees of the Houses of Lords and of Commons investigating the suspension of specie payment. Thornton's influence was magnified by the lifelong friendship of Wilberforce and Prime Minister William Pitt, and Pitt's brother-in-law was the first tenant of one of the houses on Thornton's estate. The results of his pondering are scarcely surprising for someone of Thornton's status and background. Taking an inflationist and Establishment line, Thornton opined that in times of crisis paper money could not be limited or suppressed, since that would constitute a shock to commerce. On the contrary, the Bank of England must suspend specie payment in order to avoid the spectre of monetary contraction and general business failure. Indeed, Thornton undoubtedly gladdened the hearts of the bank by criticizing it for not being expansionist enough!

Thornton's testimony won him the accolade of being the foremost authority on monetary affairs, and he was appointed to several parliamentary committees on money, expenditures and foreign exchange. Thornton, indeed, became one of the leading parliamentary defenders of the restriction and of expanded paper credit.

We can easily imagine Henry Thornton's sentiments towards Walter Boyd's *Letter to Pitt* when that tract hit the world of English opinion like a thunderbolt at the turn of 1800–1. Here was this well-connected fellow banker, but an unsound adventurer, this rogue whom his own brother had brought to ruin by persuading the Bank of England to cut off his credit. And now, only months after this man had met his deserved fate, here was Boyd again, trying to gain revenge by discrediting the noble banking and credit system of England. Thornton was stung to try to refute the dangerous Boyd, and it was in the service of this goal that he published his *An Enquiry into the Nature* *and Effects of the Paper Credit of Great Britain* a year after Boyd's tract, in February or March of 1802.[9]

But first Thornton hit out at Boyd in Parliament, in December 1800. As in his book, his words exerted all the more impact for the eminence of their author combined with their seeming judiciousness and moderation. For there are always a host of people who will hold firmly that the more qualified and tentative the judgement, the more well-balanced and sound it must therefore be. Mushiness of mind, especially in an eminent man, is all too often mistaken for wisdom.

In this early phase of the bullionist debate, Thorntonian mushiness tended inexorably in the wrong direction. The depreciation of the pound in foreign exchange was caused, he opined in his speech in Parliament, not by the increase of paper money, but by the unfavourable balance of trade and specifically by the heavy imports of provisions. Typical of the anti-bullionist view, imports and exports were assumed to have *ad hoc* lives of their own, and not to be determined by relative prices or by the supply and demand for money. But Thornton's anti-bullionism was nothing if not 'moderate', that is, he conceded the theoretical possibility that increased money supply could bring about higher prices:

> as to the assertion that the increased issue of Bank paper was the cause of the dearness of provisions, he [Thornton] would not deny that it might have some foundation; but he would contend that its effect was far from being as great as was being alleged...

Henry Thornton's book on *Paper Credit* was a considerable expansion of his parliamentary speeches, and it was *Paper Credit* that took its place as not only the leading work on behalf of anti-bullionism, but also the most influential on either side of the debate. The timing was right, since the restriction was in particular need of defence in 1802. A peace with France was signed in March, and yet the British government persisted in extending the restriction another year. Soon after that year was up, war with France broke out again, but in the meantime the seeming end of the wartime emergency had taken away the apparent reason for the suspension of specie payments. Other anti-bullionist tracts appearing in 1802 were scarcely rivals for Thornton, ranging from Jasper Atkinson's anonymous pamphlet (*Consideration on the Propriety of the Bank of England Resuming its Payments in Specie...*) denying that inflation had taken place, to another anonymous tract applying Adam Smith's erroneous theory of an automatic limit to excess bank credit to a situation Smith would never have applied it to: fiat money (*The Utility of Country Banks Considered*).

Thornton disarmed many of his critics by conceding the theoretical *possibility* that excess issues of paper money can cause price increases, outflow of gold, higher prices of gold bullion and depreciation of the pound, but maintaining that the situation did not now apply, and that the problems of the day were due to such particular real factors as unusual demand for gold and for the importation of food, and unusual blockages to exports.

Thornton cleverly loaded the dice by spending the bulk of the book on the alleged horrors of monetary deflation and the contraction of bank credit. Deflation would lead to trade depression, unemployment and bankruptcies. Furthermore, he claimed, deflation would not even accomplish an export surplus or an inflow of gold, since it would 'so exceedingly distress trade and discourage manufacturers as to impair...those sources of returning wealth to which we must chiefly trust for the restoration of our balance'. Thornton neglected to realize that if times were really that bad, Englishmen would scarcely earn enough income to sustain a heavy excess of imports. As in all modern agitation against deflation, he also failed to realize that deflation only causes losses and bankruptcies if it is unexpected, revealing an excessive bidding up of wage rates and other business costs. Deflation, in addition to having the healthy impact of purging unsound investments and unsound banks from the economy, would have strictly limited and temporary effect; first, because while inflation is technically unlimited until the value of the currency is totally destroyed, deflation must necessarily be limited to the amount of bank expansion over specie; and second, deflation will cease having a depressionary effect as soon as excessive costs are brought down to pre-inflated levels.

In fact, Thornton acknowledged that the fall in price and the depression brought about by monetary deflation would be 'unusual' and 'temporary'. But he anticipated Keynes in focusing on allegedly sticky wage rates, for

> a fall [of prices] arising from temporary distress will be attended probably with no correspondent fall in the rate of wages; for the fall of price, and the distress, will be understood to be temporary, and the rate of wages, we know, is not so variable as the price of goods. There is reason, therefore, to fear that the unnatural and extraordinarily low price arising from the sort of distress of which we now speak, would occasion much discouragement of the fabrication of manufactures.

There are two problems here. First, while the economic distress, due to faulty forecasting and excess bidding up of wage rates and other costs, will indeed be temporary, there is no reason why the fall in prices should not be permanent. Prices had previously been artificially raised by monetary and credit expansion; their decline simply reflects the contraction of credit down to more realistic levels. The knowledge that the decline is permanent should greatly speed up the adjustment mechanism. Second, if workers persist in keeping their wage demands higher than the market, they have only themselves to blame for their unemployment. Keeping any price, including a wage rate, higher than market equilibrium will always lead to an unsold surplus of the good or service: in the case of labour, unsold labour time, or unemployment. If labourers wish to change their unemployed status, they need only lower their wage demands to clear the market and allow themselves to be hired. We should also recognize that, in this situation, with prices falling and wage rates constant, workers are thereby insisting on higher *real* wage rates than they had enjoyed before. Why should workers holding out for higher real wage rates be able to induce an inflationist policy in the central government?

So worried about deflation was Thornton that he actually urged the bank of England to neutralize outflows of gold so as to obstruct the price-specie-flow mechanism from bringing about equilibrium in the balance of payments. Instead, he would have the bank inflate bank notes to replace gold outflows, and then hope that his vague long-run real principles of 'economy' and 'exertion', of expenditure and income, would eventually work to equilibrate imports and exports. Thus, Thornton writes that

> ...it may be true policy and duty of the bank to permit for a time, and to a certain extent, the continuance of that unfavourable exchange which causes gold to leave the country, and to be drawn out of its own coffers: and it must, in that case, necessarily increase its loans to the same extent to which its gold is diminished.

Thornton's work has been excessively hailed by von Hayek and other historians as being theoretically excellent if unfortunate in its political anti-bullionist conclusions. But his theoretical weakness did not only consist of his excessive horror of deflation and his stress on the alleged empirical dominance of real factors in his analysis of inflation and depreciation. For this stress itself reflected a grave if subtle theoretical flaw in Thornton's entire monetary and balance of payments analysis. His entire analysis lingered disproportionately on the real and short-term factors, to the almost complete neglect of the tendency of the economy towards long-run equilibrium. And even Thornton's perfunctory discussion of long-run equilibrium is divorced from short-run processes and also from its *monetary* nature. It goes without saying that Thornton therefore also neglects the monetary supply and demand nature of the short-run processes leading towards that equilibrium. Thus Professor Salerno, who has given us a notable critique of Thornton, writes:

> Without the conception of international monetary equilibrium at his disposal, he is forced to explain the tendency to balance-of-payments equilibrium by a hazy reference to an alleged disposition amongst people to 'adapt their individual expenditure to their income'. This is in sharp contrast to the extreme bullionists and their eighteenth-century forebears who invariably began their analyses of

> balance-of-payments phenomena with a discussion of the nature and necessity of international monetary equilibrium and *then* explained the tendency to balance-of-payments equilibrium as a logical implication of the necessary tendency to an equilibrium distribution of the world stock of money.[10]

Indeed the entire structure and organization of the book tilted Thornton heavily towards short-term real factors and away from any monetary approach towards analysing inflation or the balance of payments.[11]

To sum up: the correct analysis of complete bullionism (such as presented by Boyd and later by Lord King) stresses monetary factors leading to monetary equilibrium, while showing that real factors can only have temporary effects. The analysis of real factors is integrated with, and at all times subordinated to, the monetary factors, and short-run and long-run monetary processes are integrated as well. In Thornton's moderate anti-bullionist position (often miscalled 'moderate bullionist'), however, both real and monetary causal factors and processes are presented as separate and independent of each other, with real factors presented as empirically more important. Short-run factors are similarly stressed, to the neglect of long-run forces.

Henry Thornton has been extravagantly praised by Schumpeter and other historians for adding velocity of circulation to the quantity of money as a determinant of overall prices. But, in the first place, we have seen that ever since the scholastics, the demand for money – the inverse of the 'velocity' – had always been integrated with the supply of money in analysing the determination of general prices. It is true that Thornton analysed the different influences on, and different variabilities of, velocity in considerable and pioneering detail: e.g. frequency of payments, development of clearing systems, confidence in the money, and variations of the same stock of money over time. But unfortunately, Thornton ruined this contribution by not realizing that velocity of circulation is simply the inverse of the demand for money and by treating the velocity as somehow different, and independent of, demand in helping determine the money relation of supply, demand and price.

Thornton has been lauded by von Hayek and others for including bank deposits as well as bank notes in the supply of money. True enough; but, as we have seen, Walter Boyd preceded him in this insight by a year. But not only that: Boyd also demonstrated that bills of exchange and Treasury bills are decidedly *not* part of the money supply, that they are objects of circulation rather than the 'circulator'. But Thornton restored the older error of lumping bills of exchange in with notes and deposits as part of the supply of money.

Henry Thornton did make some important contributions in the last two chapters of *Paper Credit*, particularly in the long-deferred paper money-as-cause of inflation sections that rested uneasily with the separate and contrary earlier chapters. Most of the anti-bullionist writers applied Adam Smith's dictum that bank credit cannot inflate the currency if confined to short-term, self-liquidating, 'real bills'. The difference is that Smith had applied it only to a specie standard, whereas the anti-bullionists extended it to a fiat money system. Thornton replied that this criterion will not work, since an increased quantity of bank notes will also indefinitely inflate the monetary value of the real bills. So that the Smith–anti-bullionist 'limit' is an indefinitely elastic one that will in practice only provide an open channel for bank credit inflation. Thornton further pointed out that the current usury law in Britain of 5 per cent will aggravate the problem. For the free market interest rate or profit rate will rise higher than that in wartime (or in any boom situation). Consequently, the artificial holding down of the bank loan rate below the profit rate will stimulate an excessive borrowing, artificially high levels of investment, and a continuing monetary and price inflation. Thus, holding the bank rate of interest below the profit rate stimulates an increase in the demand for borrowing, and the continuing increase in the supply of money allows that demand to be fulfilled.

In setting forth the inflationary consequences of artificially lowering the rate of interest on bank loans, Henry Thornton anticipated the later Austrian theory of the business cycle, set forth by Ludwig von Mises and F.A. von Hayek and in turn based on the analysis of the Swedish–Austrian economist Knut Wicksell at the end of the nineteenth century. Thornton also hinted at the Austrian analysis of 'forced saving', pointing out that if excessive issues of paper money raise prices of goods more rapidly than wage rates, there will be some increase of capital investment, but that this increase will be at the expense of the labouring classes, and will therefore 'be attended with a proportionate hardship and injustice'. Unfortunately, Thornton did not press on to the Austrian business cycle point: that since the public's time- and saving-preferences are not sufficient to sustain these 'forced' investments, a recession is bound to liquidate those investments when the artificial credit expansion stops and the true savings-consumption preferences of the public are thereby revealed.

It is very possible that, despite the author's prominence in the world of banking, *Paper Credit* might have sunk quickly into obscurity. It was very long (several hundred pages), badly written and organized, unsystematic, muddled, and what its greatest admirers have called 'prolix'. Even von Hayek, Thornton's biggest modern booster, concedes that his 'exposition lacks system and in places is even obscure'. Even his greatest disciple and popularizer, Francis Horner, admitted that Thornton had 'little management in the disposition of his materials'; that he 'frequently...was much embarrassed in the explanation of arguments', that his 'reasonings are not to be trusted' and are sometimes 'defective', that he was not trained in theorizing, that his style was poor, and that 'the various discussions are so unskillfully arranged, that they throw no light on each other, and we can never seize a full view of the plan'. In short, the 'prolixity' and 'the obscurity' of the work 'oppress the reader'.

And yet, ironically, it was this very Francis Horner who rescued *Paper Credit* from these grave defects, and put the work on the map. The form Horner used was a great stroke of luck for granting Thornton's work its maximum impact. We have noted in an earlier chapter on the influence of the Smithian movement (Chapter 17, Volume 1) that Francis Horner was one of a scintillating group of young Scotsmen who studied under Dugald Stewart at the turn of the nineteenth century, and went on to conquer the British intellectual climate for Smithian doctrine. It was in 1802 that these young pupils of Stewart founded the *Edinburgh Review*, which struck the British intellectual world with enormous impact and quickly vaulted to the status of one of the leading journals. And it was precisely in the first, October 1802 issue of the *Edinburgh Review* that Francis Horner wrote his famous review-essay of Thornton's *Paper Credit*. In this 30-page *tour de force* Horner systematized Thornton's work, made as much sense of it as was possible and, as von Hayek admits, 'gave an exposition of the main argument of the book in a form which was considerably more systematic and coherent than the original version'. Horner beat the drums for *Paper Credit*, trumpeted it as 'the most valuable unquestionably of all the publications which the momentous event of the Bank Restriction had produced'. The great fame and influence of *Paper Credit* was unquestionably Thornton mediated through Francis Horner. It was also important to realize that Horner, though chairman of the later Bullion Committee of 1810–11 which recommended resumption of the gold standard, agreed with Thornton in his anti-bullionist stance of 1802.

While Horner hailed Thornton's work as decisive, he paved the way for his (and Thornton's) later change of mind politically by writing that he was not sure which factors – the monetary or the real – had been more decisive in the inflation and the depreciation of the pound. He expressed his fundamental theoretical confusion (along with Thornton's) by declaring himself agnostic on the causal issue, the matter to be decided later by more empirical data. In short, while Thornton, in his *Paper Credit*, carved out the new moderate anti-bullionist position, his follower Horner was what might be called a moderate moderate, squarely in the middle of the issue.

We might also note that Horner took his stand squarely with Thornton against Boyd on the issue of defining the money supply. Rejecting Boyd's lucid 'circulator' *vs* 'objects of circulation', Horner perpetuated Thornton's unfortunate and fuzzy view that there is no definite boundary between commodities and means of exchange, so that everything is a mish-mash of degrees of convertibility.

5.6 Lord King: the culmination of bullionism

When the British government asked Parliament for a year's extension of the bank restriction in April 1802, it had to justify the renewal of suspension on some ground other than the war with France, since the Treaty of Amiens had been signed the previous month. Prime minister Henry Addington (1757–1844) argued that since the balance of payments remained unfavourable to Britain, the suspension of specie payments should be extended – presumably until the balance of trade reversed itself. When the renewal came up again in February of the following year, Addington again argued for an extension of the fiat system on the same grounds. He was answered trenchantly by the great opposition leader, Charles James Fox, who pointed out that 'perhaps even it might happen that the unfavourable turn of the exchange against this country might be owing to the very restriction on the bank'. Not only that, but Fox saw incisively that the outflow of gold was essentially a Gresham's law situation, where money undervalued by the government flows inexorably out of circulation to be replaced by overvalued (or 'bad') money. He essentially showed that this process applies to paper fully as much as to 'bad gold':

> In 1772 to 1773, when there was a great quantity of bad money in the country, the course of exchange was then also much against us...As long as our currency continued bad, the exchange was against us; so is it now, because paper is not much better than bad gold...May it not therefore be expected that as in the former case, when our currency was ameliorated, the course of exchange turned in our favour, so also if the Bank now resumed its cash payments the same favourable circumstances might attend the change?

During this debate, a new voice entered the bullionist controversy, with Peter Lord King (1776–1833) denouncing the restriction in a speech in the House of Lords on 22 February. Taking the lead of the bullionist forces, Lord King zeroed in on the increase of the quantity of paper money during the restriction as the culprit: 'from the time the restriction was first imposed, the course of exchange began to turn against this country in various proportions to the quantity of paper in circulation.' In May, Lord King repeated these arguments in arguing against a bill to extend bank restriction in Ireland. Later in May of 1803, King elaborated his views in a highly important pamphlet: *Thoughts on the Restriction of Payments in Specie at the Bank of England and Ireland*, and then followed with an enlarged second edition of the pamphlet the following year, under the title, *Thoughts on the Effects of the Bank Restriction*. Lord King's *Thoughts* was widely read and highly influential, and with this pamphlet King took his place as the leader of the bullionist camp, just as Thornton, who continued to support the renewal of restriction, was established as the leader of the moderate anti-bullionists.

Lord King was a young nobleman of distinguished lineage. He was the great-grandson of Peter, the first Lord King, who became Lord Chancellor of the realm. The Whig and classical liberal tradition of the King family was emphasized by the fact that the first Lord King's mother was a cousin of John Locke, and that the first Lord King was a protégé of Locke and a leading Whig and MP. Peter King was educated at Eton and at Trinity College, Cambridge, taking his place as a follower of Charles James Fox and an important Whig in the House of Lords in 1800. In addition to his leadership of the hard-money forces in Britain, Lord King, though a great landlord, was a lifelong militant enemy of the Corn Laws. A critic of the Established Church, King was a principal battler for the unpopular cause of emancipation of the Catholics of England, as well as an opponent of the oppression of the Catholics of Ireland. In 1829, Lord King wrote a *Life of John Locke*, revised and expanded into two volumes in the following year.

Lord King began his *Thoughts* with a chapter on 'Paper Money'. Unfortunately, King accepted Smith's fallacious argument for paper money as providing a highway in the sky, but at least he rejected Smith's idea of an automatic 'reflux' of any excess paper to the banking system. Instead, King applied the quantity theory (or, to put it better, the supply and demand theory) of money to the case of convertible paper. King, in a statement which Nassau Senior later referred to admiringly as 'Lord King's principle', stressed that it was important for paper money not to be issued to any extent greater than its 'exact' replacement of the quantity of gold coin in circulation; and that this equivalence is maintained by the immediate convertibility of paper into gold.

King then moved to rebut, one by one, the pro-restrictionist arguments that the Bank of England notes were not excessive and therefore not depreciated. The idea that the bank had not exceeded some abstract proportion of money to industry, or some arbitrary optimum money supply, was effectively shot down, King demonstrating that 'there is no rule or standard by which the due quantity of circulating medium in any country can be ascertained, except the actual demand of the public'. King then shows trenchantly that the demand for money, like the demand for any product, is variable and uncertain:

> The requisite proportion of currency, like that of every other article of use or consumption, regulates itself entirely by this demand; which differs materially in different countries and states of society, and even in the same country at different times...
>
> It is manifest...that the proportion of circulating medium required in any given state of wealth and industry is not a fixed, but a fluctuating and uncertain quantity; which depends in each case upon a great variety of circumstances, and which is diminished or increased by the greater or less degree of security, or enterprise and of commercial improvement. The causes which influence the demand are evidently too complicated to admit of the quantity being ascertained by previous computation or by any process of theory...

King goes on to conclude that

> If the above reasoning is well founded, it must follow that there is no method of discovering *a priori* the proportion of the circulating medium which the occasions of the community require; that it is a quantity which has no assignable rule or standard; an that its true amount can be ascertained only by the effective demand.

Next, King was the first to see the importance of Thornton's devastating critique of his fellow anti-bullionists' extension of Smithian real-bills doctrine, and he put the critique even more strongly. Putting their discount rates below the free market interest rate can permit unlimited extension of bank credit on real bills. Furthermore, the bank possesses no real means of distinguishing between 'real' and 'fictitious' bills, and merchants can always be induced to borrow far beyond real demands of the public by artificially low interest charged by the banks.

In the case of inconvertible paper money, King concluded, there is no way to discover the real demand for money by the public, or to figure out when paper money is excessive or not. Without convertibility, paper circulation is 'deprived of this natural standard, and is incapable of admitting any other'. Hence, banks or governments entrusted with the task of finding the optimum level of money and credit are doomed to 'committing perpetual mistakes'.

Building on Boyd's pioneering work and the contributions of Thornton, Lord King then set out to develop the culmination of the complete bullionist theory of inconvertible paper money, a theory consisting of a systematic and forceful development of supply and demand analysis. He first notes that inconvertible paper is subject to two distinct but related influences towards depreciation: 'want of confidence on the part of the public, and an undue increase of the quantity of notes'. In every instance of inconvertible currency, he notes, both factors have soon gone to work. How does one know, King went on, when depreciation of inconvertible currency has occurred? Walter Boyd had asserted that one test of depreciation was a rise of the free market bullion price higher than the official mint price. King reinforced Boyd's insight by pointing out that bullion value tends to be stable in the short run, making any deviation of the two the result of a change in the value of the paper. King also provides a rigorous grounding for Boyd's second proffered test: the depreciation of the pound compared to other currencies. For a specie-convertible currency cannot depreciate, since any surplus can be exported. But inconvertible paper cannot be exported, and will there 'remain in that country, and, if multiplied beyond the demand, must be depreciated in the degree of its excess'. Furthermore,

> In the course of commercial dealings this increase of quantity is soon discovered; and prices are increased in proportion. A similar effect takes place in transactions with foreign currencies according to the status of their respective currencies.