III

THE REACTION IN FRANCE

In France at the beginning of the nineteenth century a separation of political economy from politics similar to that which was occurring in Britain was also declared. In a 'preliminary discourse' preceding his *Traité d'économie politique*, first published in 1803 and destined to become the best-known economic treatise in nineteenth-century France, Jean-Baptiste Say asserted that 'political economy' had too long been confused with 'politics'. Questions about how wealth was formed, distributed and consumed were 'essentially independent of political organisation'. 'Under all forms of government', he went on, 'a state can prosper, if it is well administered.' If there was any connection between wealth and political liberty, it was at best indirect. In making this claim, Say appealed to the authority of Adam Smith. Political economy was now described as a 'natural science' which proceeded from 'general facts' valid in every type of society, while the status of Smith was compared with that of Newton.[1]

Say's assertion was also a product of political defeat.

But of a different kind. It was the result not of intimidation by the loyalist supporters of church and king, but of disappointment with the repeated and unsuccessful efforts to secure the future of the new French republic. In 1802, Say had been expelled from the Tribunate for questioning censorship, along with fifty others. Later in the year, Bonaparte was declared First Consul for life and in 1804, he became Emperor of the French. France had fallen back into the corrupt and bellicose politics of monarchy.

Napoleon triumphed, not over the visionary republic of 1792, but over a dispirited and discredited regime already living under the shadow of military dictatorship. In the early years of the Revolution, there had been a sustained effort to think through and bring about the end of poverty, and even to legislate proposed reforms. Set in this context, the social insurance proposals of Paine and Condorcet had been much less outlandish than they were subsequently to appear.

Poverty, 'indigence' or 'mendicity' had been a pressing concern from the beginning of the Revolution. 1788 and 1789 were years of serious crop failure. Law and order had broken down in many areas, and rumours of the invasion of beggars and brigands had spread from village to village, in what the eminent French Revolutionary historian George Lefèbvre described as 'the Great Fear'. As early as 3 August 1789, a proposal was put to the National Assembly that the government take responsibility for the unemployed. In January 1790 the Comité de Mendicité was established

under the energetic chairmanship of the duc de La Rochefoucauld-Liancourt to explore ways to 'destroy mendicity', optimistically regarded as a legacy of the discredited practices of the old regime, and in particular, the church.[2]

During the time of the *ancien régime*, the state had intervened only occasionally, mainly if mendicancy posed a problem of public order, as in the 1760s when a series of so-called *dépôts de mendicité* had been established with the ambition of clearing beggars off the highways and the streets. Locally, intendants might also intervene in the administration of relief. Turgot's time as Intendant of Limoges was remembered particularly for his programme of public works for the unemployed in place of the traditional distribution of alms. Otherwise, as in most Catholic countries, relief of the poor before 1789 fell into the domain of the parish priest – where there was one – and the religious orders. The Catholic attitude, reiterated by luminaries of the Counter-reformation such as Saint Vincent de Paul, had been that the poor were to be accepted as 'the suffering children of Christ'. Just as Christ had washed the feet of the poor, so the constant presence of the poor was an invitation to acts of humility and self-sacrifice on the part of Christians. The poor in this scenario mattered less in themselves as objects of targeted charity; they were rather the means through which the believer might achieve salvation.

After 1715 this Counter-reformation approach came increasingly under attack. While Voltaire and Helvetius publicly questioned the purpose of monks and nuns, Phys-

iocratic theorists attacked the lack of discrimination and inefficiency of charitable relief. In his contributions to the Encyclopaedia, Turgot argued that most charities subsidised laziness and diminished the productive capacity of the country. Others criticised the local *curé*'s control over the distribution of parochial relief, with its opportunities for favouritism and preference for the '*pauvres honteux*' (the shame-faced poor), those of impeccable piety who had fallen from a more genteel status. Such criticism coincided with the beginnings of a more secular understanding of poverty as an effect of social and economic change, but also with increasingly frequent waves of panic about the importunity and the pervasive threat of violence associated with roaming beggars.[3]

The Comité de Mendicité initiated a systematic enquiry into the extent of poverty across France and discovered that beggars amounted to 1,928,064 out of a total population of 16,634,466, or one in eight of the population. La Rochefoucauld-Liancourt and his committee set out a new set of assumptions which were to guide policy through to the summer of 1794. Charity, he argued, was inefficient, condescending and outmoded. Poverty was an inescapable consequence of a society based upon inequality and subject to economic change. The term charity – the discretionary giving on the part of individuals, primarily for religious motives – should be replaced by the national obligation to provide *bienfaisance* (beneficence) as a right. As a report to the Legislative Assembly in 1792 put it, 'Every man has the

right to subsistence through work, if he is able-bodied, and to free assistance if he is unable to work.' Assistance previously regarded 'as a favour rather than a duty' should now be considered 'a national responsibility'. The reasons were as much social as political. Destitution was the cause of the violent crime which terrorised the countryside; it was also detrimental to liberty since it encouraged an inappropriate attitude of submissiveness among the citizenry.[4]

The committee believed that it was not sufficient to relieve poverty: 'It is no doubt an imperative duty to assist poverty, but that of preventing it is no less sacred or necessary.' It would therefore be necessary, the committee argued, to create public savings institutions, based upon 'the calculation of probabilities, of chances and of the accumulation of interest'. Until then, such calculation had scarcely been employed except to assist lotteries which were harmful to the people. 'No establishment, no instruction makes clear to that useful and working class how it could apply these calculations to its advantage or furnishes the means to do it.' The example of private companies in other countries was rejected since the deduction of returns to shareholders and administrative costs were too high, meaning that benefits were too low. Therefore, the organisation of foresight (*prévoyance*) like that of 'benificence' should become the responsibility of the state. In each *département* there would be created a savings bank whose costs were to be as low as possible.[5]

Particular importance, as in Paine's proposals, was

attached to the problems of working families overburdened with the support of 'excess' offspring. Under the *ancien régime*, the problem of abandoned infants had been acute. Whether received in foundling hospitals or put out to nurse, the chances of survival of these children were appallingly low. While suggesting better institutions for foundlings, the report of 1792 argued that abandonment could largely be prevented by the state providing home relief for the children of poor families. It was similarly argued that the elderly and the infirm should be awarded annual cash pensions rather than the weekly distribution of aid in kind.

Later, the far less visible problem of rural poverty was also addressed. In May 1794, Barère, one of the most prominent members of the notorious Committee for Public Safety during the period of terror, introduced legislation to provide pensions to aged farm workers and rural artisans, indigent mothers and widows. Pressed by the need to preserve the morale of a war-torn population, the Jacobins decreed that these neglected groups were to be treated with the same respect as wounded soldiers and war widows. Such pensions were to be disbursed in communes with populations less than 3,000 and provided, not as a gift, but as a recompense for work.[6]

Historians have not found it difficult to demonstrate that the real impact of these policies upon the poor was small. Apart from a decree authorising the expenditure of 15 million livres on emergency public work programmes, La Rochefoucauld-Liancourt's Comité de Mendicité was forced

to wind up its proceedings in September 1791 before it could introduce significant legislation. The successor committee in the Legislative Assembly was also cut short by the fall of the monarchy in August 1792. It was not therefore until the sitting of the Convention in 1793 and the appointment of its Committee on Public Assistance that major legislation pledging pensions to aged and infirm indigents and allowances to poor families was adopted, in the law of 28 June 1793. Furthermore, although an administrative framework for the central funding of *bienfaisance* and a coherent formula for its local distribution were carefully worked out, what was no more than the first instalment of actual funds, 10 million livres, was not authorised by the Convention until February 1794; and no further instalments were forthcoming. Not surprisingly, by 1794, bitterness and cynicism were setting in. A police spy recorded a Parisian munitions worker as stating: 'We're dying of hunger and they mock us with pretty speeches.'[7]

Barère's proposals were implemented, but it was only a matter of months before the value of these pensions had been all but wiped out. Seventeen ninety-five was a terrible disaster both for the Revolution and for the poor. Due to the flight or evasion of the rich, tax receipts were already declining before the fall of Robespierre on 27 July 1794. Hyperinflation in the following year brought about the collapse of the currency. The *assignat* (the new form of paper currency introduced in the French Revolution and originally set against the value of church land), which still traded at one-

third of its value in July 1794, had fallen to 1 per cent of its stated value by the end of 1795.

This in turn meant the virtual bankruptcy of the state. The large scheme for state-financed primary education ground to a halt, since there were no funds from which to pay teachers' salaries. At the same time, the winter of 1794–5 was the worst since 1709. Suicides and deaths from starvation reached unheard-of peaks. Tragically, also, the crisis struck not long after the nursing sisters (usually nuns) who staffed the hospitals had been sacked. Most hospitals and municipal charities, already hit by the abolition of feudal dues, had been stripped of their independent endowments. Following the decree of 11 July 1794, all charitable property was to be sold off and the proceeds transferred to the state.

The revolutionary policy of *bienfaisance* was not as misguided as it was subsequently to appear. As Alan Forrest has written, '[I]n the early years of the Revolution, before the money ran out and other priorities became too insistent to be denied, the cash grants to hospitals and local councils did seem to be providing a standard of care to the old and the sick and a level of pension to the deserving poor that far surpassed the product of the random charities and legacies of the eighteenth century.'[8] Local studies of the implementation of such schemes, particularly in Paris, also suggest that, even in the adverse conditions of 1794–5, the new organisation of relief could be thorough and efficient.[9]

But in the harsh and confused conditions of France after the fall of Robespierre, contemporaries did not make fine

discriminations in deciding what had gone wrong with the policy of *bienfaisance*. In the face of a bankrupt treasury and a population struggling to survive the chaos of grain shortages and hyper-inflation, there was a headlong retreat from the notion of collective political responsibility for the problem of poverty. The supporters of the post-Jacobin Thermidorian regime (1794–1802) rationalised this stance by attributing the failure of *bienfaisance* to Jacobin megalomania and 'a mania for levelling', which they claimed had also been responsible for the drying-up of private charity. In late 1796, the government halted the sale of hospital and charitable property, repealed all the public assistance laws of 1793–4 and cancelled all pension entitlements except those of veterans and war widows. The rural poor were once again largely left to their fate. In Paris and other large towns, in place of direct taxation, relief was once again funded by entertainment and excise taxes – a return to the methods of the *ancien régime*.

But although the Terror had come to an end, revolutionary *bienfaisance* had been phased out and Robespierre's cult of the Supreme Being discontinued, the Revolution was not over. There was to be no return to the Bourbon monarchy, no restitution of church property and no rehabilitation of Christianity itself. The events of the preceding six years had resulted in France becoming a secular republic, now committed to a republican rather than a Christian morality. How, within this unanticipated and unfamiliar framework, was the problem of poverty now to be addressed?

At first, the Thermidorian republic still seemed to be committed to the hopes of 1792. In 1795 it ordered 3,000 copies of Condorcet's *Sketch* be published at its own expense. But Condorcet's vision of the reduction of inequality and the elimination of poverty was well beyond both the capacity and the will of the post-Thermidorian state. More akin to the policies of the ruling Directorate was a strand of Girondin thinking which located the solution to poverty in a reform of manners rather than in the schemes of collective provision associated with Condorcet and Paine. This form of republicanism had also looked to the new American republic for its inspiration, but with quite different results.

The treatment of wealth and poverty in Say's 1803 *Treatise on Political Economy* was a product of this line of thinking. In histories of economic thought, Say's contribution to political economy has conventionally been interpreted as the emergence of a 'Smithian', or anti-Physiocratic, school in France. But although Say's use of Smith was conspicuous and extensive, the fervent and optimistic hopes which Say invested in 'industriousness' (*industrie*) and 'frugality' (*frugalité*) as the answer to want (*misère*) cannot really be attributed to Smith. They can only be understood as the reformulation of an answer to a question Smith had no occasion to ask. How could the vicious and corrupt ethos created by the monarchy and priesthood of the *ancien régime* be supplanted by the formation of a set of manners and beliefs which would ensure the survival of the new French republic? Or, to put the question in the words employed by

Say himself in 1797 in a prize essay written six years before the appearance of his *Treatise*, by what means can one ensure that 'a people grown old in vicious habits and deadly prejudices might follow those rules by whose observation happiness would be the infallible reward'?[10]

Much of the political and economic reasoning underpinning the strand of republicanism from which Say emerged originated in the circle formed in the 1780s around the Genevan financier Étienne Clavière, later to be champion of the *assignat* and Minister of Finance in 1792. Say, also a Genevan from a mercantile background, had joined Clavière's pension insurance firm as a clerk in 1785 and from 1787 to 1792 had worked as his secretary.[11] Clavière had been one of the leaders of the Democratic Party in Geneva until forced into exile in 1782. His Genevan experience led him to associate egoism, luxury and idleness with aristocratic rule. Convinced by England's success in the Seven Years' War that the legal despotism of the Physiocrats would not provide the best means of transforming France, in the 1780s Clavière, together with his close allies (and commissioned writers) Brissot and Mirabeau, came to believe that commerce could provide the solvent to weaken France's rigid hierarchy of ranks and undermine the privileges of the nobility. Turgot had also encouraged radicals to think in terms of the similarities between a reformed France and North America rather than the mixed constitution of Britain. Finally, in a move away from the received doctrine of both Rousseau and Montesquieu, the Clavière

circle also came to believe that a republic was possible in a large and developed state like France. The reason for this shift in position was, of course, the success of the American Revolution and the enthusiasm the new republic generated among reforming circles in Paris.

The reform programme of the future Girondins therefore began to coalesce around commercial development, a popular legislative assembly and legislation to encourage the formation of republican manners. The strong emphasis upon the fundamental importance of manners found among the Clavière circle (perhaps in origin the legacy of another Genevan, Rousseau) was greatly reinforced and powerfully shaped by the reading of Richard Price's 1784 *Observations on the Importance of the American Revolution*, immediately translated by Mirabeau into French. Price considered that the American Revolution was second in importance only to the introduction of Christianity in the progressive course of the 'improvement' of mankind. His depiction of the manners of the Americans became the political and social ideal which the Clavière circle aimed to turn into reality in a renewed republican France.

According to Price,

> the happiest state of man is the middle state between the savage and the refined, or between the wild and the luxurious state. Such is the state of society in Connecticut and some others of the American provinces where the inhabitants consist, if I am rightly informed, of an independent

> and hardy yoemanry, nearly all on a level, trained to arms, instructed in their rights, clothed in homespun, of simple manners, strangers to luxury, drawing plenty from the ground, and that plenty gathered easily by the hand of industry and giving rise to early marriages, a numerous progeny, length of days, and a rapid increase – the rich and the poor, the haughty grandee and the creeping sycophant, equally unknown – protected by laws which (being their own will) cannot oppress, and by an equal government which, wanting lucrative places, cannot create corrupt canvassings and ambitious intrigue.[12]

It was imperative, Price thought, for America to preserve this state of equality. But if it were to do so, it was also necessary to guard against three 'enemies'. These were: firstly, hereditary honours and titles of nobility; secondly, primogeniture; and lastly, foreign trade. Price feared 'an increasing fashion for foreign frippery', bringing back with it 'effeminacy, servility and venality'. He therefore suggested a 'heavy duty on importations'.[13]

In 1789, faced with the debt crisis of the French crown, Clavière, like other speculators who handled government loans, was eager to avoid the demand for a state bankruptcy, found in so many of the *Cahiers de doléances* of 1789. He also opposed the introduction of income tax or a land tax, together with the establishment of a national bank proposed respectively by Condorcet and Dupont de Nemours. Instead, Clavière argued that credit could be stabilised by the exten-

sion of the use of *assignats* as a paper currency guaranteed by the state's appropriation of church lands.

Despite, or perhaps because of, his own involvement in the insurance industry, Clavière did not support the social insurance schemes of Paine and Condorcet. He argued instead that the *assignats* could also form the basis of a social policy designed to promote frugality, industriousness and the growth of republican manners. He defended himself against Condorcet's charge that thrift was being ruined by the falling value of the *assignat* by blaming its decline upon the agents of Pitt. But even Clavière's confidence in the *assignats* waned in the course of 1792, during which the currency fell to 50 per cent of its nominal value. In June of the following year, he was arrested along with other Girondins and only averted death by guillotine by committing suicide on 9 December 1793.

Say escaped this fate because in August 1792 he had volunteered for the army and remained out of the reach of the Jacobins when he returned to Paris in May 1793. From April 1794, he edited *La Décade*, which became the journal in which debates among those who had survived from 'the party of philosophy' found their most congenial home.[14]

Somewhat against expectation, the Revolution had survived the end of the Terror, but the new republic now sailed in uncharted seas and its survival remained in constant doubt. Although Thermidorians emphasised their constitutionality and rejection of the Terror, it was only by tampering with election results and calling in the army

that they managed to cling on to power. The threat came from both the left and the right. Even after the failed Babeuf 'Conspiracy of the Equals' of 1796, Jacobins plotted a return to power. But more formidable was the threat from Catholics and royalists. For following the separation of church and state and the re-opening of the churches in 1795, it became clear that the loyalty of the majority of the population in large parts of France was still to the church rather than to the new republic. Royalists scoffed that France was a republic without republicans, while Thermidorians feared that the return of the monarchy would soon follow that of recalcitrant priests.

How could a republic be established in a nation whose habits and beliefs remained so deeply corrupted by the legacy of monarchy and church? Say's answer to this Thermidorian question was that the long-term survival of the Republic depended upon a drastic transformation of manners. He believed that this could of itself overcome poverty, inequality and egoism. Others argued that what was needed was a new *pouvoir spirituel*, or spiritual power, to replace that of the church. Say denied the need for a new religion, but believed that a purely secular morality could operate in its place. And so it was that the industriousness and frugality, so glowingly described in the Unitarian preacher Richard Price's evocation of the American republic, became for Say the centrepiece of a new republican ethic.

Say had already indicated the basis of his approach by publishing in 1794 a translation of Benjamin Franklin's *Poor*

Richard's Almanack of 1733–58 under the title *La Science du bonhomme Richard*. The kernel of Franklin's message was best summed up in the 1758 address of 'Father Abraham' in response to complaints about 'the Badness of the Times' and the heaviness of taxes. After an initial reluctance and the observation that 'many words won't fill a bushel', he proceeded:

> Friends … and Neighbours, the Taxes are indeed very heavy, and if those laid on by the Government were the only Ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous to some of us. We are taxed twice as much by our *Idleness*, three times as much by our *Pride*, and four times as much by our *Folly*, and from these Taxes the Commissioners cannot ease or deliver us by allowing an Abatement. However let us hearken to good Advice, and something may be done for us; *God helps them that help themselves*.[15]

According to Say, Franklin was 'one of the greatest triumphs of equality … that has opened our eyes, and prepared the establishment of our august Republic'.[16]

The manners required to ensure the survival of the Republic were spelled out in Say's essay *Olbie or an Essay on the Means to Reform the Manners of a Nation*. As in the schemes of Paine, Condorcet and the Comité de Mendicité, the elimination of poverty, as of excessive wealth, was a priority above all because it represented a political danger.

Poverty exposed the people to temptation and bred violence. Deceit, cheating, prostitution and riot were almost always the products of indigence. Great riches bred 'idleness' and 'the train of vices which accompany it'.[17]

In Olbie, however, lived a fictional people not unlike the French but portrayed as they would be fifty years after their revolution, their manners resembling those of Price's Americans. In Olbie, the majority of inhabitants enjoyed an 'honest affluence'(honnête aisance); indigence or excessive opulence were rare. No longer were there to be seen 'taverns full of brutalised drunks singing or swearing'. Instead, the majority of Olbians found pleasure in the society of their family and friends; and parents and children were often to be encountered walking in the countryside which surrounded the town. There were no lotteries in Olbie, no books on magic or necromancy. Olbians loved work, but not primarily for the sake of gain; and they were protected from poverty in sickness or old age by their regular contributions to savings banks. Conspicuous consumption no longer attracted admiration. The heads of the Olbian state had adopted a general style of simplicity, in their clothes, their pleasures and their social relations. Olbians consumed nothing beyond what was truly necessary for their use or enjoyment. As a result, 'luxury' had been attacked at its root by 'opinion', and had given way to a more widely distributed 'affluence'. The extra resources of the wealthy were now deployed in more productive directions.[18]

How had this revolution in manners taken place? Price

and others had already observed that peoples transposed into new environments adopted new habits. The Europeans who had sailed to America had left behind their old patterns of behaviour and even 'the scoundrels' who had been transported to the British penal settlement at Botany Bay had become honest men. In the case of the Olbians, such changes had been accomplished, not by force or terror, but by changes in upbringing and education reinforced by legislation and the establishment of new institutions.[19]

Say did not rule out taxation as a means of promoting equality, but placed most emphasis upon the upbringing of children. He agreed with Rousseau that a people which had learnt good habits needed few laws; as the example of Sparta under Lycurgus showed, 'men are what one makes them'. Most important in this respect was the fact that the Olbians had abandoned Christianity and every other form of religion. Religions had not improved the manners of the human race and Christianity in particular, ostensibly the most peaceful of religions, offered more examples of intolerance and ferocity than all the others. Say believed that fear of disgrace was more powerful in promoting morality than the terrors of hellfire; and as for rewards, in an aside worthy of Fourier, he remarked that he found it difficult to believe that the bliss of encountering God face to face had produced a single good deed. Doing good was not the essential point of religion, but rather adherence to the dogma, the faith, to the sect and its rites. It was not religion but philosophy which had brought about an improvement of manners in

Europe, and it had done so by weakening the power of religious sentiment.[20]

In place of religion the morals of the Olbians were shaped by a book of political economy. 'A good treatise on political economy', wrote Say, 'must be the first book of morality.' 'He who is capable of producing an elementary treatise on political economy, suitable for schools, understood by most subordinate functionaries, by country people and artisans would be a benefactor of his country.'[21]

Knowledge of political economy at all levels of society was reinforced through an education in which the Olbians learnt that self-interest, once enlightened, was identical with virtue, and that the happiness of the self entailed the furthering of the happiness of others. It was also reinforced through the educative effects of monuments, festivals and prizes and the use of various shaming devices to discourage the idle. Prizes for virtue would be awarded at festivals by 'guardians of manners', while any idle person who refused to engage in useful and productive activity would be labelled '*un homme inutile*' ('a useless man'). The sexes would intermingle less in Olbie. Single women would be provided with communal lodgings, perhaps modelled on the Beguinages, where their chastity would be protected. They would no longer be brutalised by coarse work, beings in petticoats with brazen look and raucous voice, who for Say, constituted a 'third sex'.[22]

Lastly, Say repeated Price's warnings about the dangers of foreign commerce and the 'luxury' and corruption which

might accompany it. The love of gain was nearly as dangerous as unproductive idleness. The case of the English showed that where monetary resources become immense and their procurement becomes the first concern, the politics of that nation become narrow, exclusive, barbarous and perfidious. Among certain commercial peoples, all ideas other than self-enrichment were regarded as forms of madness. Such were the Phoenicians and Carthaginians in the ancient world, and the Dutch and Venetians in modern times. Even the Americans were not free from such a temptation. Say warned, '[I]f what is said about you is true, you will become rich, but you will not remain virtuous and you will not for long be independent and free.' Such nations might be able to pay to import men of talent, but they were no longer able to produce them.[23]

The distance between *Olbie* and the *Treatise on Political Economy* which Say published three years later in 1803 was less than it may at first seem. Say was still committed to the diminution of inequality. Even in the advanced states of Europe, he estimated that only one person in a thousand enjoyed the 'honest ease' that should be within the reach of all. He still believed that 'luxury' destroyed values, brought poverty in its train and ought to be cut back through taxation. The focus on 'industriousness' and 'frugality' remained central, even if it was now linked more precisely to productive investment and decked out with more elaborate economic arguments taken from Smith. While no longer specifically republican, Say's political economy

still presupposed the French Revolution. It started from the Abbé Sieyès's premise in *What is the Third Estate?* that the nation was composed of those who worked, with the strong implication that the aristocracy and the priesthood belonged to an idle and useless class. Smith's *Wealth of Nations* was treated as if it shared a similar vision.[24]

Despite all this, however, Say's attempt to separate political economy from politics did mark a significant step in the process through which political economy came to be viewed as an apology for existing property relations.[25] Industriousness and frugality were no longer seen as attributes of citizenship, since Say had already come to agree with many of the leading Thermidorians that the franchise must be restricted on grounds of political safety. The republican preoccupation with education was similarly omitted. Smith's conception of political economy as 'the science of the legislator' was rejected. In a state possessing representative government, political economy was declared to be everyone's business. But although Say lamented the extent of ignorance of such matters across Europe, he no longer suggested any institutional remedy. Philosophers and legislators were no longer entrusted with a distinctive pedagogical role; enlightenment now spread outwards from the middle class.[26] Similarly, the argument for *laisser faire* was no longer explicitly connected with the process of dismantling the warlike, aristocratic or feudal state. The way was now open to the Romantic and socialist denunciation of *laisser faire* as the ultimate expression of the selfish individualism of the bourgeois.

Lastly, and most immediately relevant, the elimination of poverty was no longer treated as a specifically political concern. As in *Olbie*, Say placed a very great emphasis upon the use of savings banks by workers. To save in this fashion should be as essential and habitual as paying the rent, and if this meant the need for somewhat higher wages, then that was to be encouraged. But Say made no reference to the proposals of Condorcet or Paine, nor even to the more modest proposals made by the Comité de Mendicité, for treasury support of local savings banks in order to bring down the high administrative costs charged by private associations. Instead, Say noted the success of certain private associations in England, Holland and Germany, 'especially where the government has been wise enough not to get mixed up in it' … 'for a government is too powerful a book-keeper [*comptable*] to inspire full confidence'.[27]

But simply to focus upon the *Treatise* as a closure or submerging of republican concerns would be to miss its powerful effect in transforming the debate about the modern economy and its international ramifications in the years after the battle of Waterloo and the return of the Bourbon king. By removing the discussion of *industrie* from a specifically republican framework, and by rejecting the conjoining of politics and political economy as an obsolete legacy of the ancients, Say directed attention to the centrality and global emancipatory promise of a modern economy based upon the freedom and independence of labour. In this respect, his work was a direct inspiration of the 'industrialism' of

Saint-Simon and indirectly of the delineation of the essential features of modern industrial capitalism – again, irrespective of the particular political character of particular states – found in Marx.[28] More immediately, by connecting his concept of *industrie* to productive capital in the shape of machinery, he was the first, as will be seen in the next chapter, to arrive at the idea of an 'industrial revolution'. He arrived at this new idea, however, in the middle of a new debate about the global features of the new economy and the emergence of the claim that *industrie*, far from being the answer to poverty, was its most powerful progenitor in a new and more ominous form.

IV

GLOBALISATION: THE 'PROLETARIAT' AND THE 'INDUSTRIAL REVOLUTION'

In the years after the battle of Waterloo, discussion of the extraordinary development of the textile industry in Britain and what became known as 'the machinery question' became commonplace in both France and Britain.[1] In France, liberals celebrated the advent of modern industry as a likely bulwark against the opposed forces of feudalism, corporate regulation and protection. In Britain, on the other hand, interest in the possibilities of machinery was overshadowed by Malthusian anxieties about population increase and Ricardian fears about diminishing returns, dramatised by the growth of pauperism and the prohibitive level of agricultural protection afforded by the 1815 Corn Law. The main concern of the defenders of industry was to ward off attack from a mixed collection of conservatives, romantics and visionaries, ranging from Southey through Malthus to Owen, whose one point of convergence was the belief that modern industry – steam power and the growth

of factory employment in the textile districts – posed special and unprecedented problems. At least until the 1830s, most liberals and radicals considered such preoccupations as unwelcome diversions from the battle against protectionism, aristocratic power and the fiscal iniquities of the Hanoverian state.

In France, discussion of the 'British case' was sharpened by French defeat in the Napoleonic wars. The earliest and most interesting assessment was a first-hand report, once again by Say, who was commissioned by the government of Louis XVIII to make a fact-finding visit to England in 1814. Say had become famous both as a political economist and as an opponent of Bonaparte. His *Traité d'économie politique* (*Treatise on Political Economy*) of 1803 established him as the foremost European champion of Adam Smith's system of commercial liberty against the agriculturally oriented economics of Physiocracy.

The debate about Physiocracy in France was as much political as economic, and for this reason Say's rejection of Physiocratic theory was more pointed and less equivocal than anything found in Smith. While Smith still conceded a special productiveness to agriculture, in contrast to manufacture where 'nature does nothing for man',[2] Say merged agriculture, manufacture and commerce within a composite notion of '*industrie*'. Nothing distinguished capital invested in agriculture from 'capital employed in utilising any of the productive forces of nature'. Furthermore, from the viewpoint of political economy, what mattered about produc-

tion was not the creation or transformation of matter, but the creation of utility.

These were not simply technical improvements in economic analysis. Say's argument contained a new political vision of society.[3] *Industrie* was the sole legitimate activity in modern society, and the '*industrieux*' – the '*savants*', '*entrepreneurs*' and '*ouvriers*' associated with the process of production – were its sole legitimate members. Say's *industrieux* were an economic specification of Sieyès' revolutionary conception of the nation, the 'Third Estate', those who worked.[4] They were counterpoised against the '*oisifs*', the idle non-working landowners and *rentiers* whose property was the residue of conquest or occupation.

It was partly to widen the moral and economic breach between those who worked and those who did not that Say introduced his notion of the 'entrepreneur'. Mobilising investment and initiating production were sharply to be distinguished from the mere ownership of stock, even though all these components had been included without discrimination in Smith's conception of capital.[5] But *industrie* was also an extension of what eighteenth-century writers had understood by '*doux commerce*'.[6] Peaceful productive activity linked together the interdependent parts of society, just as *doux commerce* underpinned an emerging world of peaceful commercial exchange. War and exploitation, poverty and unemployment were the residues of a traditional aristocratic global order based upon conquest, violence, corporate privilege and protective tariffs. 'Say's

law' – the denial of the possibility of general gluts – presupposed the harmony and complementarity of the international market once institutional barriers were removed.

It is not surprising that Say's vision of peaceful and untrammelled commercial exchange displacing conquest and force did not please Napoleon. When changes were demanded for a second edition of the 1803 *Traité*, Say refused to comply. Under the First Empire, he published nothing more, devoting himself instead to the establishment of a cotton spinning factory in Normandy. Soon after Napoleon's fall in 1814, however, a second, substantially revised edition of the *Traité* appeared. It set the terms not only of the liberal opposition to Buonapartism, but also of the liberal economic case against the protectionist and paternalist proclivities of the returning Bourbons.

To reinforce this position, Say added a new chapter to the 1814 edition of the *Traité*, 'Of the Independence Born out of the Progress of Industry among the Moderns'. This brief distinction between the ancient and modern economies can be compared with Constant's comparison between ancient and modern liberty a few years later.[7] In ancient Rome, Say argued, there was little capital invested in commerce and manufacture, not only because of a shortage of capital, but also because the free citizens, who cultivated land either by themselves or using slaves, held these occupations in low esteem. A large part of the Roman population, the plebs, were thus left without land, capital or wages ('*revenus industriels*'), 'hence the unrest and turbulence of the non-

proprietors', the debts which were never redeemed and the trafficking in votes. 'What a poor figure, these masters of the world cut, when they were not in the army or in revolt. They fell into poverty the moment they had no one more to pillage. It was from such people that the clientelage of a Marius, a Sulla, a Pompey, a Caesar, an Anthony or an Augustus were formed.' In the end, the whole Roman people had formed 'the court' of Caligula, Heliogabalus or other monsters who both opposed it and yet were forced to feed it.

Among the moderns all this had changed. Whatever the form of government, every man who possessed an 'industrial talent' was independent. The great were not as rich and powerful as they had been among the ancients. Wars no longer meant plunder of the land and possessions of a defeated people. Such a people was not destroyed, only its government was changed. A conquered nation might be forced to pay a tribute, but this would barely cover the costs of its administration and defence. Similarly, in a modern nation, there was little profit in serving the great, much more in serving the public. The time of clientelage was past. 'The poorest citizen can do without a patron. He begins to entrust himself to the protection of his talent to make a living … Thus modern nations, able to exist wholly by themselves, remain in virtually the same condition when their governments are overthrown.'[8]

Say's notion of *industrie* was concerned with the unimpeded progress of industriousness, peaceful activity, liberal

institutions and the march of the mind, not with the level or character of technology. There is therefore no immediate overlap between the *industrie* of French liberals or the St Simonians and 'the industrial revolution' of modern economic historians. Nevertheless, the politics of *industrie* could not but engender a positive stance towards the phenomenon of industrialisation.[9] For industrialism was virtually defined by the belief that problems of inequality and ignorance, poverty and unemployment, were legacies of a feudal, military and aristocratic past. These social ills were the residues of force and fraud or of evil government, not the novel and unanticipated consequences of the progress of invention within the world of industry itself.

Say's pamphlet, translated into English in 1816 as *England and the English People*, is interesting not only for its picture of industrial progress in Britain since 1789, but also for its attempts to explain British economic success.[10] What is striking about Say's picture is that industrialisation was not presented as the result of the excellence of Anglo-Saxon liberal institutions (the jury system, freedom of the press, etc.), but as a by-product of the attempt by its unhappy people to escape the harshness of its taxes and the corruption of its financial management. Say began by noting that England's pre-eminence was not the result of military power, but of wealth and credit, a product of the strength of the 'whole economy'. During the war, while Bonaparte's conquests had turned the whole of Europe into an enemy of

France, English control of the seaways and its ability to subsidise continental allies had ensured a prodigious increase in its commerce and industry. The population of the towns had greatly increased and this had in turn benefited farmers and landholders. According to Say, however, these gains had been of little profit to the English people:

> But while war animated English industry to … extraordinary exertions, they produced but little profit to the people themselves. Taxes and loans ravished from them all its fruits. The taxes bore at once on the productions of all classes and took from them the most visible and certain proportion of their profits; and the loans absorbed the savings of those great dealers and speculators, whose situations enabled them to make the best advantage of circumstances.[11]

Say went on to detail the huge defence budget and the amount paid out in sinecures and pensions. It was this pattern of expenditure which had resulted in the alarming increase in the national debt from around £1 million in 1689 to £780 million in 1815. Adding interest payment to current expenses, Say estimated that 'government consumes one half of the income produced by the soil, the capital, and the industry of the English people'.[12]

These charges in turn made English goods expensive. They increased the cost of living for those on fixed incomes and were 'the cause of the distress of the class of manual

labourers'. It meant that the English nation was 'compelled to perpetual labour'. There were 'no coffee houses, no billiard rooms filled with idlers from morning to night … There everybody runs, absorbed in his own affairs. Those who allow themselves the smallest relaxation from their labours, are promptly overtaken by ruin.' Furthermore, consumption was curtailed, quality was adulterated, advertising was pushed to extremes and serious reading was in decline. Finally, crime – more widespread and frequent in Britain than anywhere else in Europe – increased from year to year in line with taxes and the national debt. Its main cause was 'the economical state of a people' whose 'wants' were 'great in comparison with the means of satisfying them'.[13] But Say went on to concede that 'the necessity of saving on all charges of production' had also produced 'some good effects among many bad ones'. It had led to a perfecting of 'the art of producing', with striking economies of scale to be found, whether in the provision of cheap milk or in the invention of the Lancaster system for the mass education of the poor. In particular, it had resulted in 'the introduction of machinery in the arts' which had 'rendered the production of wealth more economical'.[14] Say noted the widespread use of threshing machines on large farms, but especially of the steam engine, 'the most advantageous substitute for human labour, which the dearness of articles of consumption has made so expensive'. He continued:

> There is no kind of work which these machines have not

> been made to perform. They spin and weave cotton and wool; they brew beer, and they cut glass. I have seen some which embroider muslin, and churn butter. At Newcastle and at Leeds, walking steam engines draw after them waggons of coal; and nothing more surprises a traveller at first sight, than to meet in the country these long convoys, which proceed by themselves, and without the assistance of any living creature.[15]

Say marvelled at the increase that had occurred in the use of steam during the war. Thirty years before, there had only been two or three steam engines in London; now there were 'thousands' and 'hundreds' in the great manufacturing towns. They were even to be seen 'in the fields', while 'works of industry can no longer be carried on advantageously without them'. Given a plentiful supply of coal 'which nature appears to have placed in reserve to supply the waste of forests … the inevitable result of civilisation', it was possible to foresee the future pattern of industry: 'By the aid of a simple mineralogical chart, a chart of British industry may be formed. There is industry wherever there is coal.'[16]

The problems Britain faced were not caused by industry, but by the ruinous level of its taxes and tariff barriers. The recent introduction of the Corn Law in order to maintain the high price of grain reached during the years of the war was likely to have adverse effects upon export prices. 'The alternative is terrible. Either agriculture and the landholders

are ruined if corn does not rise in price, or, if it does, then commerce and manufactures will be destroyed.'[17] Moreover, an even worse problem loomed if the British state continued to maintain its present level of expenditure:

> What would be said of a great landholder, possessing great activity and industry, who, by means of his land and the buildings with which he had enriched it, enjoyed an income of 170,000 francs, but who had had the misfortune of marrying an extravagant wife, who spent for him 260,000 a year; so that this poor husband, notwithstanding his genius and his incessant labour, is obliged to borrow 90,000 francs *per annum* to support his expenses? This is the state of England: I have only taken off four zeros.[18]

The only immediate alternatives were either to continue to borrow and experience increasing difficulty in meeting interest payments or to declare a national bankruptcy, at which point the whole political system would fall. But the only real remedy would be to lessen expenditure 'by ceasing to embroil and agitate Europe, Asia and America'. Britain's military expenditure, greater than that of any other nation, had only been sustained by an 'industry prodigiously active'. But much of that expenditure was pointless. America as an independent country had proved much more profitable to England than it had as a colony. Conversely, the expenses of conquering India outweighed the profits to be derived from it.[19] The lessons to be drawn internation-

ally were the same as those which applied locally. In both cases force and fraud were no substitute for industry. In the course of the nineteenth century, Say prophesied, 'the old colonial system will fall to the ground', since 'sovereignty does not compel a people to buy what they cannot pay for, or what is not suited to their customs; and when they are offered what is agreeable to them, they buy it without being conquered'.[20]

Say's account set out clearly the basic components of a radical or republican diagnosis of Britain's post-war problems. Other French commentators were less programmatic and even more hostile – not surprisingly in the immediate aftermath of the defeat at Waterloo, the loss of much of France's commercial and maritime empire and the dumping of British goods in European markets.[21] An empire based on territory had been defeated by an empire based on trade. Analysis therefore tended to latch on to any sign that 'Carthage' was heading for collapse. The aspects of Britain which most captured the attention of the French were the national debt, the growth of population, the rise of pauperism and the dangers attendant upon British commercial and manufacturing superiority.

It was in this context that increasing attention was drawn to the connection between machinery and unemployment in the manufacturing districts. In one compendious survey of the situation of England 'on January 1st 1816', the economic journalist and statistician Montvéran noted that the adoption of machinery had been of great assistance

to manufacturers during the period between 1802 and 1808, but thereafter increasingly harmful:

> First of all, the machines left a multitude of hands without work; then, through the help of its steam-powered machinery or water power or other natural forces, a reduced number of workers produced much more, far beyond the needs of general consumption; objects manufactured in too large a quantity fell in price and tended constantly to cheapen in the markets of the world; they had to be sold at great loss and although this loss was divided between several classes of producers and merchants, it was no less real or substantial for the mass of English commerce.[22]

But despite these dangers France had no alternative but to follow England's lead in the development of cotton textiles. According to Napoleon's ex-Director of Commerce, Agriculture and Industry, Baron Chaptal, in his comprehensive survey *De l'Industrie française* of 1819:

> Machines, which replace the human hand in nearly every operation of manufacturing industry, have worked a great revolution in the arts: since their application, it is no longer possible to calculate products by the number of hands employed since they increase the labour performed ten-fold; and the size of the industry of a country today is measured not by population but by the number of machines.[23]

His argument was that in the face of the English lead in textile manufacture even a prohibitive tariff would be of little use. 'It was therefore either necessary to give up manufacture or imitate their methods.' Chaptal noted that if machine-based manufacture was less extensive in France than in England, this was in part because labour was cheaper in France, but also because the low cost of English fuel made it everywhere advantageous to employ steam engines.[24]

Chaptal also initiated another influential line of interpretation by arguing that the advance of mechanical invention in England was matched by chemical innovation in France.[25] This suggestion was never to be popular among those wishing to link the uniqueness of British industrialisation with the diffusion of practical scientific knowledge across the social structure. Nor was it well received in Britain at the time. According to the *Edinburgh Review*, reviewing Chaptal, the characteristic French invention was the hot air balloon: 'showy, enterprising, holding out to unstaid imaginations, a hope of utility, of which philosophy could easily demonstrate the folly', and, despite its occasional military use, 'now handed over to the Vauxhalls and Ranelaghs, the Tivolis and Folies Beaujours of the day'.[26]

In Say's pamphlet, the machine and the steam engine were treated as partial remedies for an otherwise crushing fiscal burden placed upon British trade by the state. The idea that the new technology might itself constitute a problem was not even considered.

By 1819, however, the problem of unsold goods in the

depressed markets of Europe and North America and of unemployed operatives in the manufacturing districts of Britain had dragged on with greater or lesser intensity for over four years. It was in this situation that the new industrial system itself began to come under direct and sustained attack in Sismondi's *Nouveaux principes d'économie politique ou de la richesse dans ses rapports avec la population*.[27]

Like Say, though on a more modest scale, Sismondi had first made his name as an economist with an exposition of Adam Smith's theory, *De la richesse commerciale, ou principes d'économie politique appliqués à la legislation du commerce*, which had appeared in 1803. But although he protested that Smith's principles continued to serve as a guide, the *Nouveaux principes* could be read as a prolonged account of how the advent of the machine had destroyed Smith's benign picture of the relationship between competition, the division of labour and the extension of the market.[28] Sismondi presented a very different picture of Britain's problems from that provided by Say. Indeed, the denial of what became known as 'Say's Law' – the claim that there could be no general overproduction except as a passing problem resulting from institutional obstacles or imperfect information relating to particular commodities – was one of the central arguments of the book. But Sismondi's intended target was not Say, with whom he had been in friendly correspondence since 1807. Say never became an apologist for the existing state of affairs, in which, he argued, seven-eighths of the population remained without

the most rudimentary 'things which the English call "comfortables"'. In the first edition of his *Traité*, Say had himself criticised the domination of unskilled workers by employers and had conceded the need for more state intervention. If Sismondi's attack was directed against any particular 'school' of political economy, it was that of Ricardo, which was attacked for 'making an abstraction of time and space'. Sismondi's expressed aim was to protest against 'the modern organisation of society'. The Ricardian school, it was implied, were its apologists.[29]

Sismondi's critique started out from the commercial crisis which had afflicted Europe since the peace.

> We have seen merchandise of every description, but especially that of England, the great manufacturing power, abounding in all the markets of Italy, in quantities so much in excess of demand, that merchants, in order to save a part of their funds, have been obliged to dispose of them at a quarter or third's loss. The torrent of merchandise pushed out of Italy, has been thrown upon Germany, upon Russia, upon Brazil and has soon encountered the same obstacles there.

And even more extraordinary:

> For the first time the strange phenomenon has been seen of England sending cotton fabrics to India and consequently succeeding at working more cheaply than the half-naked

> inhabitants of Hindustan and reducing its workers to an existence yet more miserable.[30]

All this proved that the impossibility of the glutting of markets proclaimed in principle by Say and Ricardo was untrue.[31] Sismondi considered that overproduction had become a property of the economic system once the extent of the market had overreached national boundaries, and that this had been the result of mechanisation. 'Europe has reached the point of possessing in all its parts an industry and a manufacture superior to its needs.'[32] The competition on the world market had intensified because in each country production now surpassed consumption. 'The manufacturers of English stockings before the invention of the framework knitting machine only supplied English consumers; from the time of that invention until it was imitated abroad, its consumers comprised the whole continent.'[33] Each of these industrial inventions, therefore, had killed off other producers 'at great distances', which meant that their suffering went unrecorded while the inventor and the new producers, unaware of their victims, were saluted as benefactors of humanity.[34] Glutted markets and the ruin of rival producers on a world scale were the products of the internationalisation of competition brought about by the machine.

Sismondi deserves recognition, among other things, as a forgotten progenitor of the modern explanation of the population rise from the middle of the eighteenth century.

He had been an early opponent of Malthus's theory of population and, in a book-length entry on 'Political Economy' for Brewster's *Edinburgh Encyclopedia* in 1815, had written a sharp attack. Malthus's principle that 'the population of every country is limited by the quantity of subsistence which that country can furnish' would come true 'only when applied to the whole terrestrial globe, or to a country which has no possibility of trade … Population has never reached the limit of subsistence, and probably it never will. Long before the population can be arrested by the inability of the country to produce more food, it is arrested by the inability of the population to purchase that food, or to labour in producing it.'

Malthus's contrast between geometrical and arithmetical ratios was 'completely sophistical'. 'Abstractly, the multiplication of food follows a geometrical progression, no less than the multiplication of men.' There was a real and serious problem, but Malthus had misdiagnosed it:

> The demand for labour which the capital of a country can pay, and not the quantity of food which that country can produce, regulates the population … Very few men will think of marrying and burdening their hands with the subsistence of individuals unable to procure it themselves, till they have first acquired an establishment. But whenever a new demand for labour raises their wages, and thus increases their revenue, they hasten to satisfy one of the first laws of nature and seek in marriage a

> new source of happiness. If the rise of wages was but momentary; if, for example, the favours granted by government suddenly gave a great development to a species of manufacture, which after its commencement, cannot be maintained, the workmen whose remuneration was double during some time will all have married to profit by their opulence; and then, at the moment when their trade declines, families disproportionate to the actual demand of labour, will be plunged into the most dreadful wretchedness.[35]

As Sismondi elaborated his approach in the *Nouveaux principes*, the increase in population was associated with a fall in the age of marriage consequent upon the displacement of peasants and artisans by a swelling class of day-labourers. 'Thus the more the poor man is deprived of all property, the more he is in danger of misjudging his income and of contributing to the growth of a population, which, since it no longer corresponds in any way to demand for labour, will not find subsistence.'[36] In the days when competition had been limited by the guilds, journeymen only married when they became masters and mendicity was contained, a matter only of individual misfortune. Now in England, where a population of day-labourers – condemned never to possess anything – had almost wholly replaced peasants and artisans, begging and pauperism were reaching epidemic proportions, and the shame that formerly accompanied it had disappeared. Furthermore, there was no longer a par-

ticular time in a labourer's life at which the choice between marriage and celibacy was best made:

> And as he is accustomed to this uncertainty and as he regards it as the natural situation of the whole of his class, instead of renouncing all pleasures and domestic consolations, he marries as soon as the first good year comes along and wages rise.[37]

The destiny of this class was the same as that whom the Romans called 'proletarians' – 'those who had no property, as if more than all others, were called to have children: *ad prolem generandum*'.[38] In the light of Say's celebration of the independence of the moderns, Sismondi's choice of words was pointed, as were the terms in which he evoked these people. They were a 'miserable and suffering population' which would always be 'restless and a threat to public order'. This was a group of workers 'condemned never to possess anything', 'never to be masters of their fate'. Their masters might dismiss them from one day to the next, because of a bankruptcy or the introduction of a new machine, and this made them dependent on public charity.[39] In England now 10 per cent of the population lived in terrible poverty on public charity. Far from being advantageous, it was contrary to the prosperity of the state to encourage a form of work whose remuneration did not suffice to meet the workers' diverse needs.[40] This unfortunate and dangerous class was a danger to itself and to others:

> It is a misfortune to have called into existence a man whom one has at the same time deprived of all pleasures which give savour to life, to the country a citizen who has no affection for it and no attachment to the established order.[41]

The criteria by which Sismondi judged this degrading condition were not simply humanitarian. They were formed in particular by two sources: his sense of the prosperity and gentle social gradations of the Tuscan countryside – the subject of his first book; and secondly, and more profoundly, his conception of the tradition of the city republic. Sismondi came from a Protestant Genevan family whose fortune was mainly lost in investing its funds in Necker's plan to save the finances of the French state. Forced to leave Geneva in the revolutionary upheavals, the Sismondi family settled for five years in the territory of Pescia, near Lucca in Tuscany. In his book on the agriculture of Tuscany of 1801 he extolled 'the modest *podere*, which is cultivated on a rent of half the produce by a *mezzaiuolo* [partner] who enjoys without possessing and does not feel he is poor'. Sismondi 'already asked himself "if an active, numerous, and poor population was not worth more than a small number of idle and rich inhabitants?"'.[42] In the years after his early exposition of political economy in 1803 through to 1818, he devoted himself to the work that made him famous, his *History of the Medieval Italian Republics*,[43] 'of that labyrinth of equal and independent states, where he saw displayed more great

characters, more ardent passions, more rare talents, more virtue, courage and true greatness, than in a number of indolent monarchies'.[44]

It is clear that Sismondi's conception of the freedom of the commune, in tune with a larger republican tradition, laid particular weight upon the economic regulation employed by the guilds of the medieval Italian communes to prevent extremes of fortune. The defects of these medieval burghers were that they were jealous of their privileges and unwilling to extend them. Nevertheless, 'they did not compete one with another, they did not undersell, they never lowered wages by competition; and as they had no poor, except the small number which had been made incapable of work by an accident, they supported them themselves … It was never perceived till the Revolution, that charitable relief created poverty.'[45]

In the *Nouveaux principes*, these themes of a 'happy mediocrity of fortune' and of the alarming disappearance of peasants and artisans who had enjoyed 'an honest ease' recurred again. Sismondi conceded that the guilds could not be restored and their restoration was only demanded by the reactionary defenders of former privileges. Nevertheless, he insistently emphasised the communal republican origins of the guilds,[46] and demanded that a comparable means of limiting competition be discovered.

The cause of the creation of the proletarians was above all the machine, which had concentrated production in the hands of a small group of rich merchants while ruining the

smaller merchants and manufacturers.[47] As a result of these developments, the interests of manufacturers and that of society no longer coincided.[48] Competition benefited the employer, but he did not have to count its costs:

> Today, a manufacturer, having summoned to himself numerous families, abandons them suddenly without employment, because he has discovered that a steam engine can perform all their work; but he would learn that the steam engine produced no saving, if all the men who were working, found no further means of employment, and if he were obliged to maintain them in the poor house while he heated up his boilers.[49]

As it was, society was left to deal, through public charity or the parish relief, with sickness, old age or unemployment of this dependent workforce.

For Sismondi, the problems of England were not those of a corrupt militarist state relying on colonialism and protection, but of a state guided by economists constantly repeating, '*Laissez faire et laissez passer*.'[50] The example of England had seduced the statesmen of Europe. But in reality it was a terrible warning of the danger of 'resting the whole of political economy upon the principle of competition without limits'. It was the place where the interest of humanity had been sacrificed to the sum of individual cupidities and as a result was 'the only nation' which 'sees constantly contrasted its apparent wealth with the terrifying poverty of

a tenth of its population reduced to dependence on public relief'.[51] Sismondi hoped that if his warnings were too late to change the direction taken by England, it might at least be of use to humanity and his compatriots in avoiding the path of unlimited competition elsewhere.

Sismondi's work was barely noticed in England, where his critical writings on political economy were not even translated in fragmentary form until 1847.[52] But they made considerable impact in France and the rest of western Europe, where his critique was selectively appropriated in socialist, legitimist and even liberal economic criticism.[53] More specifically, it was in response to Sismondi that the notion of an 'industrial revolution' surfaced in France in the 1820s in the writings of Say.

The disagreements which the post-war commercial depression provoked among political economists surfaced not only in the *Nouveaux principes*, but also in Malthus's *Principles of Political Economy Considered with a View to Their Practical Application*, which appeared in 1820 and raised similar doubts about the impossibility of overproduction. In his response to Malthus in 1821, *Letters to T. R. Malthus on Political Economy and Stagnation of Commerce*, Say also took the opportunity to respond more cursorily to Sismondi. 'There are too many English goods offered in Italy and elsewhere, because there are not a sufficient quantity of Italian goods suited to England.'[54] His political conception of England's problems remained the same: 'I know that certain corrupt and corrupting governments stand in need

of monopolies, and customs duties, to pay for the vote of the honourable majorities who pretend to be the representatives of nations.'[55] It was this need which was responsible for the institutional obstacles to the international exchange of goods.

> The English government rejects, on its part, by means of its Customs Houses and importation Duties, the production which the English might bring from abroad, in exchange for their goods, and even the NECESSARY *provisions*, of which their manufactures stand so much in need; and this is because it is necessary that the English farmers should sell their wheat at above eighty shillings per quarter in order to enable them to pay the enormous taxes.[56]

Say did not bother to respond to Sismondi's idea that Europe possessed an industry superior to its wants. He may have considered such arguments had been adequately refuted in the English periodical press. But Sismondi's arguments received more attention in the annual course of lectures which he delivered at the Conservatoire des Arts et Métiers; and the appearance of a second, expanded edition of Sismondi's *Nouveaux principes* in 1827 was answered by an extensive examination of the relationship between employment and the use of machinery in his *Cours complet d'économie politique pratique*, finally published in six volumes in 1828.[57]

Like Sismondi, Say followed Smith in considering changes in the art of manufacture as the result of an exten-

sion of the market and consequent sophistication of the division of labour. Hence the importance of improvements in transport. The industry and population of Manchester had tripled since that town had been linked to the port of Liverpool by the Bridgewater canal.[58] Later on, he attacked Sismondi's idea that machines were only a benefit to society when developed to meet an existing need. This, in Say's view, was to assume that needs constituted a fixed quantity, but in reality they were continually redefined as production advanced.[59] Similarly, Say attacked Sismondi's rhetorical declaration for a population of citizens above that of steam engines. Steam engines neither diminished the quantity of products nor the numbers of citizens; they simply encouraged citizens to provide themselves with things which the most civilised peoples generally consumed by means of their capital and industry.[60] It was true that these changing needs might mean that people would be obliged to change their occupations – and this of course was a source of inconvenience – but should these passing but necessary inconveniences arrest the progress by means of which nations had progressed from a state of barbarism to prosperity, civilisation and abundance? Suppose a means had been found to prevent the introduction of cotton-spinning machinery into France, the only result would have been an enormous disparity between domestic and international prices which would have resulted in smuggling and a poverty-stricken, underemployed domestic workforce.

> It is therefore not in order to decide between the use or prohibition of machines that it is useful to clarify these questions: if one is reasonable, one does not decide whether or not to push back a river to its source; but it is indeed necessary to foresee the ravages of this river, to direct its meanderings, but especially to derive benefits from its water.[61]

In fact, Say considered, several factors were likely to lessen the temporary misfortunes experienced by the working class as a result of the introduction of machinery. Firstly, investment in steam engines was expensive. It could only be undertaken by those possessing considerable capital and was therefore only likely to be introduced gradually and after much deliberation. Secondly, while the least skilled operations might easily be taken over by machines, the process of mechanisation was likely to become more difficult when it became a question of replacing more complex activities.[62]

Say then went on to deny that machines were responsible for the aggregation in manufacturing towns of a working population which at times either lacked work or was too poorly paid to subsist. Machinery was not the cause of this problem. 'There were scarcely any machines in England at the time of Queen Elizabeth and yet it was then that it was felt necessary to bring in that law for the support of the poor, which has only served to multiply them.'[63] In places where manufacturing industry was most developed, oscillations in employment did not derive from machines but

from the nature of the articles manufactured, which were in general exposed to large vicissitudes in demand. If anything, more mechanised industries were likely to experience more regular employment because of their higher overheads.[64] It was in countries like Poland, where no machinery had been introduced, that the working classes had most reason to complain; or China, where all work was done by hand and people died of starvation.

Say reserved what he considered his strongest point to last: not only does mechanisation reduce costs of production and therefore brings the product within reach of a greater number of consumers, but history has shown that the increase in the number of consumers far exceeds the decrease in price. A memorable historical example of this process was the replacement of the manuscript by the printed book. Not only had the printing press not abridged employment, it had created a vast industry where none had existed before.[65] But, Say continued, 'perhaps the most striking experience, offered by the annals of industry, is provided by the impact made by the machine used in the manufacture of cotton'.[66] Say proposed to devote a whole chapter of the *Cours* to this topic. It would do more than provide an example, it would suggest additional reflections 'on the revolutions of industry and the economy of nations' ['*sur les revolutions de l'industrie et l'économie des nations*'].[67]

In the following chapter, 'on the revolution that has occurred in commerce occasioned by cotton-spinning

machinery' ('*De la revolution survenue dans le commerce à l'occasion des machines à filer le coton*'), after surveying the ancient and early modern trade in cotton and after briefly referring to the innovations of Hargreaves and Crompton, Say went on to detail the invention of Arkwright. As a result of Arkwright's discovery and subsequent improvements, a commercial revolution had occurred:

> At the end of the eighteenth century there was not consumed in Europe a single piece of calico which did not reach us from Hindustan; only twenty-five years have passed and not a single piece of calico is consumed, which comes from the country from where they all used to come. Furthermore, English merchants begin successfully to export it to the Indies. It is truly a river which flows back to its source.[68]

Say went on to point out that this revolution, which had been as important as the opening of the trade route to Asia around the Cape of Good Hope, had enormously increased the numbers of workers employed in the industry and raised their wages. So far as there was evidence of recent wage cuts in England, Say attributed it to a wave of Irish immigration.[69] Even in the case of India, Say claimed that there was no evidence to suggest that the condition of Indian manufacturers had become worse than before. This was because calico production in India could still count on an enormous domestic market.[70] Furthermore, while the

export of calicos had diminished, this had been more than compensated by a much greater rise in the export of indigo, sugar and cotton wool. Indeed, as a result of the invention of machinery, there had been a substantial increase in the production of cotton all over the world. Finally, the impact made by cotton-spinning machinery was not confined to the textile industry. The great increase in the production of cotton goods stimulated the production of other goods, with which cotton goods could be exchanged. 'It is in this way that a single industry can extend its influence over the whole economy of nations.'[71]

In Say's work dating back to the beginning of the French Revolution, *industrie* – aboriginally the quality associated by Franklin and Price with a virtuous life in the simple commonwealths of North America – had been presented as the answer to poverty. Poverty had been linked with dependence, either with the feudal and clerical residues of force and fraud or with the militarism and clientelism of the ancients revived in the wars of Napoleon. In Say's *Cours complet*, which appeared at the end of the 1820s, the association between *industrie* and the 'independence' of the moderns had been extended to include the astonishing '*revolutions d'industrie*' which were now transforming the poverty and backwardness of Europe and the wider world. *Industrie* and its revolutions were not, therefore, as Donald Coleman argued, a child of romanticism, but the unanticipated enlargement of what had originally been designed as the binding ethos of a modern republic.[72] But from the 1830s

even liberals and republicans became uncomfortably aware that industriousness and frugality – homespun and useful enough formulae in eighteenth-century small town Pennsylvania – connected only remotely with the commercial volatility of modern industry. Furthermore, the exclusion or disfranchisement of the majority of the wage-earning classes – henceforth 'the working classes' or 'working class' – transformed advice on industry and thrift, as part of the ethos of an all-inclusive republic, into the hypocritical sermonising of a triumphant and self-satisfied 'bourgeoisie'.

V

THE WEALTH OF MIDAS

Say's '*revolutions d'industrie*' were the principal source of the account of the English 'industrial revolution' given by Jérome Adolphe Blanqui (the brother of the famous French revolutionary Auguste Blanqui) in his *Histoire de l'économie politique* of 1837.[1] Blanqui was a protégé of Say who had gained him the chair of history and industrial economy at the École Spéciale du Commerce.[2] Blanqui also gave courses at the Athenée and at the Conservatoire des Arts et Métiers, where in 1833 he succeeded Say as professor. Following Say, Blanqui wrote of the impact of the Bridgewater canal and emphasised how cotton-spinning machinery and the steam engine had overturned the old system of commerce. He repeated Say's point about the reversal of the movement of cotton goods between Europe and Hindustan, which he similarly compared to a river flowing backwards to its source.[3]

But Blanqui was not an uncritical follower of Say. He considered Say too close to 'the English school' which paid undue attention to production at the expense of producers.[4]

He admired the fact that Say related economics to practice in contrast to 'the abstractions' of Ricardo, but thought him too harsh towards the state and too indulgent towards capital.[5] 'He was seduced by the wonders of English industry, modern manufacturing industry, and did not have the time to appreciate all the afflictions that followed in its wake … He attributed the wound of pauperism in that country to purely political causes. The glutting of markets seemed to him to be solely the consequence of commercial restrictions.' What was lacking in Say was a viewpoint that was more 'social' and more 'elevated' on questions of pauperism and wages.[6]

In contrast to the 'English school', which only regarded the production of wealth as 'an element of national power', France's privilege was 'to defend the rights of humanity'.[7] Thus while English industry advanced with giant steps, French writers recalled the 'sacred principles' of the equitable division of the profits of labour. Blanqui considered himself to belong to 'the social era' of political economy.[8]

What this meant, above all, was taking seriously the contrast between conspicuous opulence and extreme poverty in England, as highlighted by Sismondi. But Blanqui's stance in relation to Sismondi's critique was ultimately not so dissimilar from that of Say. If the progress of manufactures, the improvement of machines or the multiplication of the means of production by the banks had really been the scourges that Sismondi claimed, how could one explain a growth of national prosperity which had affected

even the humblest workers?[9] This surely proved that all economies in the cost of production were gains made by the whole of society, even if in a very uneven manner. Like Malthus, Sismondi had been diverted by his obsession with one simple idea, and he had confused the functioning of the system with its abuses. Nevertheless, as Blanqui willingly conceded:

> The opinions of M. de Sismondi have exerted a great influence in Europe. It is he who has been the first to reveal the secret of these social misfortunes, mainly concentrated in manufacturing countries, and who has sounded the alarm about the danger of the banks, well before the recent catastrophes which have so sadly confirmed his predictions. Thanks to him, the condition of the worker has become something sacred and precious; he has had his place at the banquet of life, from which the theories of Malthus wished to exclude him; and henceforth the progress of wealth will not be considered as truly useful, except to the extent that its benefits will spread out to include all those who will take part. The principle has been posed, it is for systems of legislation to draw out the consequences.[10]

According to Blanqui, the evils of industrial society included the universality of competition, the continued abuse of political privileges, the struggle of large and small capitals and the unequal distribution of taxation. His account of the English 'industrial revolution' therefore contained a

social dimension largely absent from Say. Blanqui claimed that the invention of machinery had not only transformed commerce, but had also produced the conditions in which small producers were becoming the tributaries of large capitalists. The emancipation of labour had not occurred either in France or Britain. In France, the promise of emancipation which followed the suppression of the guilds had been contradicted by continued commercial protection which preserved the privileges of certain groups and resulted in 'a true commercial feudalism'. In England, 'patriarchal labour' had been transformed into 'industrial feudalism' in which the worker became anew 'the serf' of the workshop tied to 'the glebe of wages'.[11]

England had sacrificed all social considerations to the creation of wealth and thus, while the English had developed the productive powers of the nation beyond measure, they had not devoted proportionate care to the well-being of the workers. This was not a socialist argument, but a radical–liberal criticism in line with Say. 'The all-powerful aristocracy in England finds it simple to impose upon labour all the burdens of taxation',[12] and it was taxation, as Say had argued in his pamphlet on the English, which had pushed England on to its singular industrial path. Blanqui repeated the theme. 'The continual increase of taxes, mainly on articles of consumption, has condemned the inhabitants of this country to a continual fever of improvement. England has become an immense factory, a universal emporium.'[13]

Blanqui wrote after the 1830 revolution in France during

the period of the July Monarchy. These years, in which government once more identified itself with the moderate gains of the original Revolution, witnessed the return – though in milder form – of some of the tensions of Thermidor. The regime was opposed by republicans, Jacobins and communists on the left, and by legitimists and Catholics on the right. Louis Philippe was 'the citizen king', in many ways the embodiment of what the Abbé Sieyès had hoped from a republican monarchy in the 1790s; and the franchise was restricted, much as it had been in 1795. Similarly, an Académie des Sciences Morales et Politiques was founded in order to resume the work of the Institut, which had been so abruptly closed down by Napoleon. Backed by government support and confident that scientific investigation would find a means of resolving what contemporaries had begun to call 'the social problem', the academy encouraged leading academicians like Blanqui and the social statistician Villermé to examine the phenomenon of pauperism.

Villermé's enquiry into the condition of workers in the textile industry became famous when its results were published in a two-volume study in 1840, *Tableau de l'état physique et moral des ouvriers employés dans les manufactures de coton, de laine et de soie*. His general conclusions were optimistic in the tradition of Say. He argued that 'industry' had improved the condition of the worker. The people were better dressed and better fed. The bread eaten by the poor was better than it had formerly been, white bread had ceased to be a luxury and in the towns the same bread was eaten by rich and poor.

But what caught the attention of contemporaries were not the bland conclusions of the report but its detailed descriptions, which were unexpected and disturbing. As one of his strongest critics, the Catholic social observer Eugène Buret pointed out, Villermé's account of the condition of the textile workers themselves did not correspond at all comfortably with these generalisations. Villermé revealed that only with great difficulty did wages cover the basic needs of households and that employment, like health, remained chronically uncertain. The working day in the textile factories was also inhumanly long, varying from fifteen to seventeen hours, with only one and a half hours allowed for meals. Most shocking especially to those who had placed so much emphasis upon a change of manners of the people, were the revelations about morals in the towns. Particularly striking was the observation that in large towns the choice for workers was not between marriage and celibacy, but between marriage and 'concubinage', since the practice of cohabitation was pervasive.

Villermé, for all his general belief in improvement, offered a sober corrective to Say's emphasis upon 'frugality'. He noted that while the number of savings banks had increased, they remained virtually unknown in the countryside, and that in the towns they were mainly used by domestic servants and other single persons, rather than by manual workers. Workers, especially those with families, tended to join friendly societies as a form of insurance against sickness. But the rate of failure of these societies

was high, since they were generally run by people without knowledge of the actuarial principles necessary to keep them afloat. Villermé believed that while 'industriousness' and 'frugality' described the habits of only a minority of workers, change would depend upon 'the education and moralisation of workers'.[14] But others pointed to a more concrete and immediate difficulty: uncertainty and volatility of employment. As Buret put it, 'a caprice, a rumour on the stock exchange, some distant event happening at the other end of the world can put machines out of action and with them thousands of hands'.[15]

The difficulty was no longer simply economic or moral, it had become political. The government no longer confronted the poor, but the 'working classes', or as Sismondi had described them, 'the proletariat'. According to Adolphe Blanqui, two battles were yet to be won. The first was the continuing addiction of governments to protection, the second the emancipation of the workers:

> [T]he battlefield is no longer on the plains, but in the workshops … This is a true war, where the combatants employ ingenious and powerful machines which on the terrain of pauperism leave millions of workers gasping for breath, men and women, without concern for old age or infancy. It is a serious conflict between different classes of workers … France appears to oppose England, but capital struggles far more deeply against the worker.[16]

The causes of the weakness of Louis Philippe's 'July Monarchy', which lasted from 1830 until its downfall in the revolution of 1848, and the reasons why it gave birth to the struggle between the 'bourgeois' and 'the proletarians' were clearly perceived by a Prussian observer, Lorenz von Stein. Writing in 1842, Stein argued that the preconditions for the appearance of a proletariat had been laid by the French Revolution, for there could be no proletariat so long as birth rather than property was the precondition of participation within the state. In 1814, despite the restoration of the monarchy, a property qualification remained a condition for political participation, thus allying monarchy to property and alienating the people.

But the contradiction became more glaring in July 1830, when all prerogatives of birth were abolished. This left property as the only qualification for participation in political life, just at a time when the extension of the division of labour described by Adam Smith made it increasingly difficult for a person to acquire independence and property by means of his labour. The result was a swelling, propertyless class whose social struggles could not but challenge the existence of the state.

> The class of the property-less has become a single whole; it has acquired a consciousness of its condition; it recognises that this condition is based upon laws which go beyond individuals; it feels itself to be governed by a power with which it has struggled uselessly; it is excluded from real

> participation in the power of the state; it understands the impossibility of the great mass of its members being able to climb out of it into a higher class; it has thus become an estate, and this estate – at the same time the embodiment of all the demands which the principle of equality has raised without being able to satisfy – is the French proletariat.[17]

Henceforth, as all appeared to agree, an end to poverty had become inseparable from the emancipation of labour.

Blanqui's 'industrial revolution' took place in Britain. He confidently ascribed its beginnings to the inventions of Watt and Arkwright.[18] But any question about the effect of industrialisation upon ideas about the end of poverty ran up against an intriguing prior puzzle: that, despite ubiquitous contact between the two countries, in Britain the notion of an 'industrial revolution' was not employed. When the political economist J. R. McCulloch discussed the large changes which had occurred in Britain in the decades before 1850, he reflected that

> extraordinary changes occasioned by the late war in every department of the public economy deeply affected the interests of all classes, and created the most anxious and universal attention. The experience of centuries was crowded into the short space of thirty years; and while

> novel combinations of circumstances served as tests by which to try existing theories, they enabled even inferior writers to extend the boundaries of the science and to become the discoverers of new truths.[19]

The changes that McCulloch went on to specify were the suspension of cash payments by the Bank of England, the battle over the Corn Laws and the emergence of new general theories of rent and distribution. But they did not include the 'industrial revolution'. Similarly, neither Harriet Martineau in her *History of England during the Thirty Years' Peace*, published in 1849, nor G. R. Porter in his *Progress of the Nation* of 1847, employed the notion of an 'industrial revolution' as either a phrase or as a concept. Since it is likely that these writers were conversant with French debate, this omission suggests that important political issues were at stake in the choice of language in discussing economic change in Britain. For, quite clearly, they were aware of the magnitude of the industrial change taking place around them.

McCulloch, describing the development of cotton manufacture in the *Edinburgh Review* in 1827, wrote: '[T]he rapid growth and prodigious magnitude of the cotton manufacture of Great Britain, are beyond all question the most extraordinary phenomena in the history of industry.'[20] Just like Say, he wondered that 'neither the extreme cheapness of labour in Hindustan, nor the perfection to which the natives had previously attained, has enabled them to

withstand the competition of those who buy their cotton, and who after carrying it five thousand miles to be manufactured, carry back the goods to them. This is the greatest triumph of mechanical genius.'[21]

In Martineau's case, it was rather as if by mid-century she had become weary of reiterating once more an oft-repeated point:

> Of steam and railways enough has been said. Everybody knows more than could be told here of what they do in superseding toil, in setting human hands free for skilled labour, in bringing men face to face with each other and with nature and novelty.[22]

Porter similarly wrote of the rise of cotton manufacture in Britain as 'perhaps the most extraordinary page in the annals of human industry'.[23] Thus, by the 1840s, although the term 'industrial revolution' was not employed, the belief that what had occurred in industry belonged to the realms of the extraordinary had become a commonplace.

Unsurprisingly, political economists were monitoring changes in the economy quite closely and their changing preoccupations from the 1810s to the 1840s were broadly in accord with the chronology of the 'industrial revolution' now offered by economic historians. Before the 1830s, dramatic increases in productivity were associated with a few exceptional industries.[24] Citations from Baines, Ure, Gaskell, Porter and others, often used as the basis of later

general statements about the 'industrial revolution', were in fact mainly depictions of the new technology of the textile industry.[25] These technological advances were not generally considered in macroeconomic terms, but treated as part of a quite extraordinary transformation of production which had occurred in one or two sectors or regions. The overall analytical framework within which assumptions about economic development were made was, until the 1830s, based on Smith's model of the division of labour. But thereafter Nassau Senior began to argue that there was no reason why 'the improvements of the next sixty years should not equal those of the preceding', that 'the cotton machinery … receives daily improvements', and that 'the steam engine is in its infancy'.[26]

Similarly, on the question of machinery, the original Smithian view that every increase in capital set in motion an additional quantity of labour was already questioned in 1817, when John Barton pointed out that this held true only in the case of circulating capital, not of fixed capital. The acceptance of this criticism by England's greatest economist at the time, David Ricardo, in the third edition of his *Principles* caused some consternation among his followers, but by and large remained marginal to the debates and assumptions of political economists in the 1820s.[27] By the 1830s, however, it appears that economists were beginning to distance themselves from the Malthusian theory of population, the Ricardian theory of rent and the Smithian picture of labour.[28] They began more serious and exten-

sive investigations into the economic role of machinery, fixed capital and inanimate power. At the same time, what might be thought of as the first generation of management consultants began to publish detailed examinations of the labour process in the factory. The most famous of these new experts was Andrew Ure, who referred to the change which had occurred as a 'revolution':

> When the first water-frames for spinning cotton were erected at Cromford, in the romantic valley of the Derwent, about sixty years ago, mankind were little aware of the mighty revolution which the new system of labour was destined to achieve, not only in the structure of British society, but in the fortunes of the world at large. Arkwright alone had the sagacity to discern, and the boldness to predict in glowing language, how vastly productive human industry would become, when no longer proportioned in its results to muscular effort, which is by its nature fitful and capricious, but when made to consist in the task of guiding the work of mechanical fingers and arms, regularly impelled with great velocity by some indefatigable physical power.[29]

Indeed, Ure went further and highlighted the fundamental change, which he thought had occurred in the principle of the division of labour since the time of Adam Smith and, in so doing, provided the basis of Marx's depiction of modern industry in *Capital*:

> When Adam Smith wrote his immortal elements of economics, automatic machinery being hardly known, he was properly led to regard the division of labour as the grand principle of manufacturing improvement; and he showed in the example of pin-making, how each handicraftsman, being thereby enabled to perfect himself by practice in one point, became a quicker and cheaper workman … But what was in Dr Smith's time a topic of useful illustration, cannot now be used without risk of misleading the public mind as to the right principle of manufacturing industry. In fact, the division, or rather adaptation of labour to the different talents of men, is little thought of in factory employment. On the contrary, wherever a process requires peculiar dexterity and steadiness of hand, it is withdrawn as soon as possible from the *cunning* workman, who is prone to irregularities of many kinds, and it is placed in the hands of a peculiar mechanism, so self-regulating that a child may superintend it.[30]

It was still later – towards the end of the 1840s when, according to Von Tunzelmann's and Wrigley's chronology, steam had become a major source of energy across the economy as a whole – that the implications of a regular and manageable source of inanimate power was distinguished from the gains associated with machinery.[31] In Senior's lectures of 1847, the attributes of both machinery and labour were now derived from the domination of a moving power.[32] Economists were not remote from the development

of industrial Britain. In the 1830s and 1840s they attempted to consider the significance of the factory, mechanised production and steam power, just as in the 1810s and 1820s they had debated the problems of rising population and differential rent.

In the case of the predominant language of government from the 1810s to the 1840s, that of 'liberal Toryism', the reasons for resisting notions of an industrial revolution, as with the associated ideas on the emancipation of labour found in the works of Say and Blanqui, were clearly political and religious rather than economic. According to Boyd Hilton, there were 'two discrete, if sometime overlapping models of Free Trade' in the first half of the nineteenth century.

The first, and more familiar, of these was that of professional economists like Ricardo: 'expansionist, industrialist, competitive, and cosmopolitan'. But there was a second, 'more widespread and probably more influential', especially upon liberal Tory administrations between Liverpool and Peel: that of the Evangelicals, voiced by Malthus disciple Thomas Chalmers. This alternative version of free trade was 'static (or cyclical), nationalist, retributive, and purgative, employing competition as a means to education rather than to growth'.[33] Its followers' preoccupation was not the elimination of poverty, but the economy as a system of natural justice. They believed that the health of the economy and polity was dependent upon the observance of a moral code. The punitive implications of Malthus's theodicy were

developed in emphatically Christian terms. The market was sanctified as an impersonal agent of moral law. It not only allocated resources, but rewarded virtue and punished vice. The task of the legislator was therefore to remove 'artificial' constraints on the operation of the market in order that morality should prevail.

Evangelical understandings of the economy in the pre-1850 period were in no sense incompatible with a vivid appreciation of the changes brought about by scientific and industrial innovation. On the contrary, the magnitude of these changes was fully acknowledged. What distinguished evangelical liberal Toryism from other, more secular forms of discourse was the meaning it attached to such changes – national and religious, providential or apocalyptic, the saving of England in the darkest hour of its battle against atheist France. A striking example is provided by the address given by the then-president of the Board of Trade William Huskisson in 1824, in the presence of Lord Liverpool, to a public meeting called to erect a monument to James Watt. He began by talking about the moral and Christian benefits conferred by steam:

> In my view of the subject, there is no portion of the globe, however remote where the name and flag of England are known, where commerce has carried her sails and begun to introduce the arts of civilisation which does not derive some advantage from Mr Watt's discoveries. The economy and abridgement of labour, the perfection and rapidity of

> manufacture, the cheap and almost indefinite multiplication of every article which suits the luxury, the convenience, or the wants of mankind are all so many means of creating, in men even but little advanced from the savage state, a taste for improvement … If the steam engine be the most powerful instrument in the hands of man, to alter the face of the physical world, it operates, at the same time, as a powerful moral lever in forwarding the great cause of civilisation.[34]

Within Huskisson's evangelical cosmology there was no dissonance between these universal Christian benefits bestowed by steam and the salvation of the nation by steam in its hour of peril.

> Looking back … to the demands which were made upon the resources of this country during the late war, perhaps it is not too much to say, at least it is my opinion, that those resources might have failed us, before that war was brought to a safe and glorious conclusion, but for the creations of Mr Watt, and of others moving in the same career, by whose discoveries those resources were so greatly multiplied and increased. It is perhaps not too much to say, that, but for the vast accession thus imperceptibly made to the general wealth of this empire, we might have been driven to sue for peace, before, the march and progress of events, Nelson had put forth the last energies of his naval genius at Trafalgar, or, at any rate

> before Wellington had put the final seal to the security of Europe at Waterloo.[35]

Steam as an engine of war which secured British victory in the Napoleonic wars became something of a commonplace. According to Porter, writing over twenty years later, 'but for the invention of the spinning jenny and the improvements in the steam engine, which have produced such almost magical effects upon the productive energies of this kingdom, it would have been impossible to have withstood the combination with which, single-handed, we were called upon to contend'.[36] It led French commentators like Blanqui to believe that lack of reference to an 'industrial revolution' and to its social dimension was to be attributed to an exclusive preoccupation of 'the English school' with national power or production rather than producers.[37]

Such a belief, often reiterated by continental socialists, dated back to the generally hostile French reaction to Ricardo, whom Sismondi accused of being abstract and deductive, and others considered lacking in human concern.[38] The fact that Ricardo changed his position on machinery appears to have gone unnoticed, and nor do such accusations apply at all accurately to other members of the Ricardian school. J. R. McCulloch, one of the most prolific writers on political economy in the period, was often regarded as a dogmatic populariser of Ricardo. He was accused by Blanqui of having adopted 'the inflexible absolutism of the manufacturing system which consists in advancing produc-

tion without consideration for the producer, if not through indifference for humanity, at least by abuse of principles'.[39] Yet McCulloch remained firmly in favour of the regulation of child labour and his view of the factory system can hardly be described as panglossian. Writing about the manufacturing system in 1845, he stated:

> It is impossible at this moment to cast the horoscope of this system, to foresee its revolutions, or to estimate its future influence over society. We confess, however, that our anticipations are not of the most agreeable kind. It appears to be, of its essence, that most sorts of employments should be conducted on a large and continually increasing scale, in great establishments, with the assistance of highly improved and expensive machinery; providing, in this way, for the exaltation of a few individuals by the irremediable helotism of the great majority. And this conclusion would seem to be consistent not only with the nature of manufacturing industry, but with the fact that, though there has been a vast increase of production, and of wealth and comforts among the upper classes engaged in business during the last twenty or thirty years, and a considerable diminution of taxation, the condition of the workpeople during that period has rather, we incline to think, been sensibly deteriorated.[40]

Harriet Martineau, another famous populariser and author of the fictional series *Illustrations of Political*

Economy, was also tentative. In her monumental *History of England During the Thirty Years' Peace*, which appeared in 1849–50, after endeavouring to sum up all the progressive changes which had occurred during the period, she asked what remained to be done. Her conclusion was not unlike that of the French:

> The tremendous Labour Question remains absolutely untouched – the question whether the toil of life is not to provide a sufficiency of bread. No thoughtful man can for a moment suppose that this question can be put aside. No man with a head and a heart can suppose that any considerable class of a nation will submit for ever to toil incessantly for bare necessaries – without comfort, ease, or luxury, now – without a prospect for their children, and without a hope for their own old age. A social idea or system which compels such a state of things as this must be, is in so far, worn out.[41]

The real reason why liberal and radical political economists in the first half of the nineteenth century were reluctant to adopt the language of *industrie* and of the 'industrial revolution' was because, in the context of British politics, this language was suspected of providing a wilful and sometimes sinister distraction from the real cause of poverty, misery and corruption: the warlike, protectionist and debt-ridden aristocratic state. This was clear, to begin with, in the liberal and radical reaction to Robert Owen's proposals

to cure post-war distress. It was Owen who, around 1819, more than any other writer in Britain, spoke of industrial and social change in terms nearest to an idea of 'industrial revolution'. In the years after the battle of Waterloo, he was the first to refer in apocalyptic terms to the changes which had occurred in manufacture and trade as a result of the introduction of cotton-spinning machinery and the steam engine during the wars. He talked about the arrival of 'a crisis, new in the history of mankind'.[42] 'The immediate effects of this manufacturing phenomenon were a rapid increase of the wealth, industry, population, and political influence of the British Empire.' But, he went on, 'the general diffusion of manufactures throughout a country generates a new character in its inhabitants; and as this character is formed upon a principle quite unfavourable to individual or general happiness, it will produce the most lamentable and permanent evils unless its tendency be counteracted by legislative interference and direction'.[43]

Owen proclaimed his dislike of 'class, sect and party' and his distance from politics. Radicals and liberals understandably distrusted his proposals for the relief of post-war unemployment and his 'villages of industry'. 'Must the whole world be converted into a cotton factory?' Hazlitt complained. 'Our statesmen are not afraid of the perfect system of reform he talks of, and, in the meantime, his cant against reform in Parliament, and about Bonaparte, serves as a practical diversion in their favour.'[44] His admirers included members of the royal house, like Queen

Victoria's father, the Duke of Kent, and high Tories like Sidmouth.

It was not, therefore, simply Owen's incompetence as a political economist that explained the savage review given to his proposals by Robert Torrens in the *Edinburgh Review* in October 1819.[45] Torrens' diagnosis of the economic problems of post-war Britain was expressed in Ricardian terms. He conceded that the transition from war to peace might for a time have disturbed due proportion in the quantities of the different articles brought to market. But the more serious and lasting causes of depression were agricultural protection which resulted in the enforced cultivation of inferior lands, other 'barbarous restrictions on commerce' which by preventing exchanges hampered the export of manufactures, and taxation which appropriated a large proportion of the surplus of industry. Should 'fettered trade' and 'oppressive taxes' continue, Torrens considered, 'England, like Holland, must gradually cease to be a manufacturing and commercial, and consequently a rich and powerful country'.[46] In these circumstances, far from being a source of problems, by cutting production costs the steam engine made possible a continuing export trade which protectionist Britain would otherwise have lost. 'The steam engine has fought our battles and pays the interest of our debt. If our improved machinery did not tend to reduce the expenses of producing manufactured goods, we could neither sell our fabrics in the foreign market, nor keep our inferior lands under cultivation.'[47]

According to Torrens, Owen was 'profoundly ignorant of all the laws which regulate the production and distribution of wealth'. He 'tells us that the distress to which the people of this country are exposed arises from scientific and mechanical power producing more than the existing regulation of society permit to be consumed. This is tantamount to saying that wealth is poverty, and that the necessaries of life are unobtainable, because they exist in excess.'[48] Furthermore, Owen's proposals were ambiguous. They had not specified whether these 'villages of cooperation', which combined industry with 'spade husbandry', were to be autarkic or whether they were to engage in exchange. For Torrens, this meant one of two possibilities:

> If Mr Owen retain the division of labour in his establishments, the changes in the state of external markets, and the consequent impossibility of obtaining an uniformly profitable sale for their productions will occasionally deprive his villagers of the means of paying their rent and taxes, and reduce them to the condition of bankrupts and paupers; and, if, to avoid such evils, he discard the divisions of labour, and cause each establishment to consume within itself whatever it supplies, then the great principle which multiplies the effective powers of industry will be thrown out of operation, all the sources of prosperity will be dried up, and universal poverty overspread the land.[49]

It was no doubt the fact that Sismondi's *Nouveaux*

principes was associated in the minds of political economists with Owen's proposal, which explains why his work made such little impact in Britain. Sismondi had met Owen in Paris in the years after Waterloo. Later, in the second edition of *Nouveaux principes*, he stated that, although he disagreed with Owen's cooperative remedies, he shared Owen's claim that production with the aid of steam and machinery created overproduction.[50] It was, therefore, not surprising that Torrens should have appended to his attack upon Owen an additional refutation of Sismondi in defence of the principle that 'the power of consuming necessarily increases with every increase in the power of producing'. The point was made even more trenchantly in 1821 by a reviewer of 'The Opinions of Messrs. Say, Sismondi and Malthus on the Effects of Machinery and Accumulation, Stated and Examined':

> [L]et us not, therefore, attempt to excuse the drivelling incapacity of our statesmen, by ascribing the difficulties which are the necessary consequences of their blind and perverse policy, to the admirable innovations of our engineers, and the skill and industry of our artisans. But let us acknowledge, that, had it not been for these innovations, all the difficulties in which we are at present involved, would have been aggravated in a tenfold proportion.[51]

In France, after the July revolution of 1830, an Orleanist 'social' liberal like Blanqui could accept that the questions

raised by Sismondi about the condition of the industrial worker deserved serious attention. Now that aristocracy and church no longer ruled, it was possible to make a reality of the emancipation of labour promised by the French Revolution. Rational enquiry, such as that conducted by Villermé, culminating in judiciously formulated legislation would produce a solution to the labour question. In this respect, Blanqui was only expressing the early hopes of the July Monarchy which, as Maurice Agulhon has pointed out, was exceptional in its encouragement of serious and disinterested social research.[52] Britain, by contrast, remained a state dominated and to a large extent governed by a powerful aristocracy, both before and after 1832. The criticisms voiced by Owen, Sismondi or Southey remained unacceptable to the majority of liberals and radicals because that would mean an abandonment of their starting point, the attack on a state based on force and fraud with its attendant evils of clientelism, misgovernment, militarism, unequal taxation, colonialism and commercial protection.

In the period after Waterloo there had been considerable overlap in the opinions of the heirs to 'the party of philosophy' in France and in Britain the grouping who became known as the 'philosophical radicals' – the young intellectuals, journalists and would-be politicians who clustered around Jeremy Bentham and James Mill. For this group in the 1820s, political economy and the view that human character was formed by 'circumstances', i.e. environment, were as important as the particular opinions of

Bentham. According to the recollections of John Stuart Mill, 'So complete was my father's reliance on the influence of reason over the minds of mankind, wherever it is allowed to reach them that he felt as if all would be gained if the whole population were taught to read.' He believed that 'when the legislature no longer represented a class interest, it would aim at the general interest, honestly and with adequate wisdom'. Furthermore, 'next to the aristocracy, an established church, or corporation of priests, as being by position the great depravers of mankind, and interested in opposing the progress of the human mind, was the object of his greatest detestation'. The most formative book of John Stuart Mill's boyhood was Condorcet's *Life of Turgot*. 'The heroic virtue of these glorious representatives of the opinions with which I sympathized, deeply affected me, and I perpetually recurred to them as others do to a favourite poet.' He similarly attributed his 'strong and permanent interest in Continental Liberalism' to a year's stay as a 14-year-old in France, and in particular to time spent in the house of his father's friend Jean Baptiste Say, 'a man of the later period of the French Revolution' and 'a fine specimen of the best kind of French republican … who had never bent the knee to Bonaparte … a truly upright, brave and enlightened man'.

As a result of the Reform Bill of 1832, several of the 'philosophical radicals' entered Parliament and seemed in 'a more advantageous position … for shewing what was in them'. But their achievements were disappointing. Not only

did they do 'very little to promote any opinions', but they had to operate in 'ten years of inevitable reaction, when the Reform excitement being over and the few legislative improvements which the public really called for having been rapidly effected, power gravitated back in its natural direction, to those who were for keeping things as they were'.[53] Worse still, the predominant form of popular radicalism, what became known as Chartism and, as in France, now a movement of 'the working classes', moved decisively against them.

The relations between parliamentary radicals and the Chartist leader, Fergus O' Connor, denounced by them as 'a weak and cowardly demagogue', deteriorated to the point where in 1842 all effective collaboration ground to a halt. To denunciations of ancient radical enemies were added polemics against free trade and the middle classes; and in 1847 O'Connor actually stood for Parliament as a Tory. As the despairing leader of the Anti-Corn Law League, Richard Cobden, wrote to Joseph Sturge:

> The Chartists don't seem to understand their real position. They direct all their attacks against capital, machinery, manufactures and trade, which are the only materials of democracy, but they never assail the feudal aristocracy and the State Church which are the materials of the oligarchical despotism under which they are suffering. Fergus and his demoniacal followers seem bent on destroying manufacturers in order to restore the age of gothic feudalism.[54]

It was not entirely surprising that the ideas advanced by Mill and his allies commanded little popular support. Mill's radicalism was not simply aimed at aristocracy and church, it also linked the possibility of improvement with a change in the manners of the poor. Quite as important as anything put forward by Bentham was 'Malthus's population principle', 'a banner and point of union among us'. In Mill's view, 'this great doctrine', originally an argument against 'indefinite improveability of human affairs', was 'the sole means of realising that improveability by securing full employment at high wages to the whole labouring population through a voluntary restriction of the increase of their numbers'.[55]

It is true that, unlike Malthus, he was willing to advocate the use of contraception, which political debate had been inhibited from addressing by 'scrupulosity of speech'. But the moralism underpinning this preoccupation, which Mill retained throughout his life, was quite as intense as in the case of the 'industriousness' and 'frugality' enjoined by Say. 'Poverty,' Mill argued, 'like most social evils, exists because men follow their brute instincts without due consideration.' 'Civilisation' was a 'struggle against these animal instincts', though hampered yet again by the machinations of force and fraud. Mill thought that thoughtless parenthood should be treated like drunkenness. 'Little improvement can be expected in morality until the producing of large families is regarded with the same feelings as drunkenness or any other physical excess. But while the aristocracy and clergy

are foremost to set the example of incontinence, what can be expected from the poor?'[56]

What was inadequate about the diagnoses of Mill, and before him Say, was the remoteness of their prescriptions from the specific, and to some extent novel, conditions of the nineteenth-century economy. Say's paen to industriousness went back to Father Abraham and mid-eighteenth century rural New England; Malthus's principle of population arguably explained the past better than the future and increasingly mistook symptom for cause (it is poverty that produces large families, rather than large families that produce poverty). In the 1790s, rising Poor Rates, rising grain prices, virtual famine conditions in 1795 and 1800 and the findings of the 1801 census all appeared to underline the urgency of Malthus's warnings. But thereafter, aside from an exceptional scarcity in western Europe in 1817, Malthus's doctrine appeared increasingly wide of the mark. The 1790s were the last years in which England (though not Ireland) was remotely threatened by famine conditions.

In this sense, the position which became identified with a liberal political economy, committed to the struggle of enlightenment against ignorance, aristocracy and church, appeared increasingly closed off from the newness and unfamiliarity of nineteenth-century economic crises. New perceptions and insights were more the province of mavericks, socialists or conservatives; and none more so than Thomas Carlyle, who, as Mill admitted, was 'a man of intuition' who 'saw many things long before me'. Like Owen and

Sismondi, and Charles Fourier in France, Carlyle discerned something new and strange in the nineteenth-century polarity between wealth and poverty, epitomised by the phenomenon of *over*production.

His most eloquent invocation of this phenomenon occurred at the beginning of *Past and Present*, in which he described the depression of 1842:

> The condition of England … is justly regarded as one of the most ominous, and withal one of the strangest, ever seen in this world. England is full of wealth, of multifarious produce, supply for human want in every kind; yet England is dying of inanition. With unabated bounty the land of England blooms and grows; waving with yellow harvests; thick-studded with workshops, industrial implements, with fifteen millions of workers, understood to be the strongest, the cunningest and the willingest our Earth ever had … This successful industry of England, with its plethoric wealth, has as yet made nobody rich; it is an enchanted wealth, and belongs yet to nobody … In the midst of plethoric plenty, the people perish; with gold walls and full barns, no man feels himself safe or satisfied … Midas longed for gold, and insulted the Olympians. He got gold, so that whatsoever he touched became gold – and he with his long ears, was little the better for it.[57]

But even apart from the newness of the poverty associated with machinery, cyclical depression, declining indus-

tries and the mass migration of laid-off agricultural workers or pauperised Irish peasants into the towns, the arguments of Say and Mill barely connected with the difficulties experienced daily by the new poor. The proposals of Condorcet and Paine had either been wholly forgotten or dismissed as wildly impractical. Blanqui consigned Condorcet namelessly to the wilder shores of the French Revolution:

> Did evil come from nature or society? Was it impossible to remedy or could it with the help of time be cured? Struck by what could be achieved by laws concerning the manners and conditions of peoples, eminent writers had thought that the miseries of man were of his own doing, and that it depended upon him to bring them to an end, much less by changing his passions than by changing political institutions. It was 1798. In France, a memorable experiment had been attempted, in just a few years, there had been witnessed the boldest reforms, applied in turn by reason or force, leave the human species at the mercy of the same uncertainties and the same inequalities as in the past. The division of properties had replaced the former system of concentration, power had been put into the hands of the poorest of the masses, who had denied themselves neither *the maximum*, nor the forced loans, nor bankruptcy, nor the suppression of indirect taxation; and yet the poor were still there, men dressed in rags, old people without bread, women without assistance, foundlings, malefactors and prostitutes. What remained to do after all that had been

> done? What monarchy would attempt what could not be achieved by the audacities of 1793?[58]

As for Paine, his *Age of Reason* remained famous among freethinkers and his case against the exploitative role of taxation, put forward in *The Rights of Man*, remained part of the standard repertoire of popular radicalism. However, his social insurance proposals attracted little attention and no sustained commitment. A heroic biography published in 1821 by one of his most prominent freethinking admirers, Richard Carlile, was distinctly non-committal about his schemes for welfare. He did not mention the proposals in *The Rights of Man*, while on the plan for death duties in *Agrarian Justice*, he remarked, '[T]he idea was evidently the offspring of humanity and benevolence; of its practicability I cannot speak here, as nothing but experience could prove it.' Like Cobbett, he warmed far more to the more traditional attack on debt and paper money in *The Decline and Fall of the English System of Finance*.[59]

However impractical the social insurance proposals of Condorcet or Paine were sometimes claimed to be, in the face of the fluctuating and uncertain movements of the nineteenth-century economy it is difficult to argue that their expectations were less realistic than the contrasting hopes invested in 'industriousness', 'frugality' or reproductive foresight. These were qualities which presupposed regularity and predictability of earnings together with knowledge. Emphasis upon the manners of the people did

not take sufficient account of the accompanying doctrine of 'the formation of all human character by circumstances'. In their reaction against the simple-minded and authoritarian legislative fantasies of the Jacobins, these radicals placed too little faith in the limited but real benefits attainable through institutional change.

Not enough attention was paid either not only to the obstacles created by lack of education, but also to the difficulties posed by the extent of underemployment and of seasonal and casual labour, both in the cities and in the countryside. This meant that savings banks were beyond the horizons of the poor, while birth control was shrouded in a fog of ignorance. Henry Mayhew estimated that 'in the generality of trades the calculation is that one third of the hands are fully employed, one third partially, and one third unemployed throughout the year'. 'All casual labour', he wrote, 'is necessarily uncertain labour; and wherever uncertainty exists, there can be no foresight or providence.' Or, as he observed in the course of his enquiry into London dock labourers: 'Where the means of subsistence occasionally rise to 15*s*. per week and occasionally sink to nothing, it's absurd to look for prudence, economy or moderation. Regularity of habits are incompatible with irregularity of income.'[60]

Membership of friendly societies was widespread and the growth of such societies in eighteenth- and nineteenth-century England was more pronounced than in France. Frederick Eden had estimated that membership of friendly societies already amounted to around 648,000 in 1801.

By 1872, the number had risen to around 4,000,000. J. M. Baernreither, an Austrian observer in the 1880s, praised the friendly societies for 'having propagated the conviction of the necessity of insurance among the working classes': 'Contributions to sick and burial societies form at the present day in England standing items even in the scanty budget of the working-men; the interest taken in Friendly Societies by working-men of all descriptions is universal … The English workman regards with pride the Friendly Societies as his own work.'[61]

But it is important not to take too roseate a view of these institutions. For even where workers were in a position to save, the chances that their savings would remain safe were small. Before the 1870s, small local friendly societies were the only institutions available to most wage-earners, and the rate of failure of these societies was high. Until the mid-century expansion of nationwide affiliated orders, most societies were created in and often by public houses, contained less than 200 members, and met in pub rooms, for which members paid rent in the form of the purchase of a prearranged quantity of 'lodge liquor'. Members held office in rotation, irrespective of talent, and so, not surprisingly, there was little or no knowledge of the actuarial basis of premiums. The fixing of benefits and contributions was largely established by local custom, but was also affected by the competition between rival pub-promoted local schemes. New societies offered extra inducements: larger contributions in drink on club nights or indefinite sick pay

at full benefit instead of graduated reductions. The most frequently cited reason for failure was simply the offering of too much benefit in return for too little contribution. In addition, little account was taken of the age structure of the membership, which often meant that men who had joined in clusters in their twenties found themselves cast adrift from a failing club after twenty years as demands for sickness benefit began to increase. Henceforward, however, they would be unprotected against sickness and old age, since forty was generally taken as the upper age limit for new members.

In 1819, the government attempted to make these societies more secure by requiring Justices of the Peace to refuse to register a society unless it had submitted tables and rules approved by 'two persons at the least known to be professional actuaries or persons skilled in calculation'. But, as a select committee of the Commons of 1825 discovered, local expertise of this kind was not widespread. Approval was, therefore, entrusted to 'petty schoolmasters and accountants whose opinion about the probability of sickness, and the duration of life is not to be depended upon'.[62]

Yet even if the most diligent enquiries had been made, no reliable estimates of rates of sickness were available until after the middle of the century. Furthermore, given the small numbers in such societies, actuarial knowledge would not have been especially valuable. Average rates of sickness varied widely from trade to trade and from region to region, and an epidemic could wipe out or disable a

large proportion of the local membership. By the 1870s, the situation had significantly improved. The majority of local societies had been incorporated into the large and stable affiliated orders which by then were in possession of considerable financial and actuarial expertise. But this process had been very slow. Even in 1872, not much more than half the registered societies provided details of their membership. One of the assistant commissioners to the Royal Commission on Friendly Societies, reporting on Oldham, found 230 societies, nearly all of whom had spent funds on convivial purposes, lacked sound management and were now nearly all 'insolvent in the more obvious and painful sense … of now failing to pay the benefits they have promised'.[63] There could scarcely be a better advertisement for 'the law of large numbers' or for Condorcet's 'calculus of probabilities'.