by the consumers. In addition to being subjective, these degrees of valuation are relative, since the value of one good or service is always being compared against another. These values, or utilities, depend on all manner of wants, desires and knowledge on the part of individuals: 'upon the moral and physical nature of man, the climate he lives in, and on the manner and legislation of his country. He has wants of the body, wants of the mind, and of the soul; wants for himself, others for his family, others still as a member of society'. Political economy, Say sagely pointed out, must take these values and preferences of people as givens, 'as one of the *data* of its reasonings; leaving to the moralist and the practical man, the several duties of enlightening and of guiding their fellow-creatures, as well in this, as in other particulars of human conduct'.

At some points, Say went up to the edge of discovering the marginal utility concept, without ever quite doing so. Thus he saw that relative valuations of goods depends on 'degrees of estimation in the mind of the valuer'. But since he did not discover the marginal concept, he could not fully solve the value paradox. In fact, he did far less well at solving it than his continental predecessors. And so Say simply dismissed use-value and the value paradox altogether, and decided to concentrate on exchange-value. As a result, however, he could no more than Smith and his British successors, devote much energy to analysing consumption or consumer behaviour.

But whereas Say simply discarded use-value, Ricardo made the value paradox and the unfortunate split between use- and exchange-value the key to his value theory. For Ricardo, iron was worth less than gold because the labour cost of digging and producing gold was greater than the labour cost of producing iron. Ricardo admitted that utility 'is certainly the foundation of value', but this was apparently of only remote interest, since the 'degree of utility' can never be the measure by which to estimate its value. All too true, but Ricardo failed to see the absurdity of looking for such a measure in the first place. His second absurdity, as we shall see further below, was in thinking that labour cost provided such a 'true' and invariable measure of value. As Say wrote in his annotations on the French translation of Ricardo's *Principles*, 'an invariable measure of value is a pure chimera'.

Smith, and still more Ricardo, were pushed into their labour cost theory by concentrating on the long-run 'natural' price of products. Say's analysis was aided greatly by his realistic concentration on the explanation of real market price.

Costs, of course, are intimately related to the pricing of factors of production. One question that cost-value theorists have difficulty answering is if, indeed, costs are determining, where do *they* come from? Are they mandated by divine revelation?

One of the anomalies of Say's discussion is that, even though a subjective value and utility theorist, he uncomprehendingly rejected the insight of

Genovesi and of his own ideologue forbear Condillac, that people exchange one thing for another because they value the thing they acquire more than what they give up – so that exchange always benefits both parties. And in denying this mutual gain, Say is inconsistent with much of his own position on utility.

In spurning Condillac, Say is being not only ungenerous but almost wilfully obtuse. First he notes that Condillac 'maintains that commodities, which are worth less to the seller than to the buyer, increase in value from the mere act of transfer from one hand to another'. But Condillac insists, for example, that 'equal value is really given for equal value', so that when Spanish wine is bought in Paris, 'the money paid by the buyer and the wine he receives are worth one another' – to which we might ask, to *whom*? He then admits that the selfsame wine is worth more in Paris than it had been when grown in Spain, but he insists that the increase in the value of the wine took place not 'at the moment of handing over the wine to the consumer, but comes from the transport'.

But St Clair trenchantly takes Say to task: 'In reality, the transfer to the consumer is the essence of the transaction; the long transport is subsidiary to this purpose; the change of locality is merely a means to this end, and would not have been necessary if consumers willing to buy the same quantity and pay the same price could have been found on the spot'.

Say continues obstinately to assault Condillac's insight: 'The seller is not a professional cheat, nor the buyer a dupe, and Condillac is not justified in saying that if the values exchanged were always equal neither party would gain anything by exchange'. But in reality, of course, Condillac was perfectly right; why *should* anyone bother exchanging *X* for *Y* of equal value?

St Clair reacts brilliantly in exasperation:

> Lord, how these economists do misunderstand one another! Condillac does not suggest that the wine merchant is a rogue and the customer a fool; he does not suggest that the merchant robs either the consumer or the producer; his doctrine is that products increase in utility and value by being transferred from the producer to the consumer, and that both parties benefit by the intervention of the merchant who brings about the exchange. To the producer the merchant is a consumer-finder; to the consumer he is a commodity-finder; with the merchant as medium of exchange, the producer gets a better price for his produce and the buyer better value for his money.[12]

One of Say's great contributions was to apply utility theory to the theory of distribution, in brief by discovering the productivity theory of the pricing, and hence the income, accruing to factors of production. In the first place, Say pointed out that, in contrast to Smith, *all* labour, not just labour embodied in material objects, is 'productive'. Indeed, Say brilliantly pointed out that *all* the services of factors of production, whether they be land, labour, or capital, are *immaterial*, even though they might result in a material product. Factors, in short, provide immaterial services in the process of production. That process, as Say pointed out clearly for the first time, was not the 'creation' of material products. Man cannot create matter; he can only *transform* it into different shapes and moulds, in order to satisfy his wants more fully. Production is this very transformation process. In the sense of such transformation, all labour is productive 'because it concurs in the creation of a product', or, metaphorically, in the creation of 'utilities'. If, as can happen, labour has been expended to no ultimate benefit, then the result is error: 'folly or waste in the person bestowing' the labour. One example of unproductive labour is crime, not only a non- but an anti-market activity: there 'trouble [effort] is directed to the stripping another person of the goods in his possession by means of fraud or violence...[it] degenerates to absolute criminality and there results no production, but only a forcible transfer of wealth from one individual to another'.

J.B. Say also put clearly for the first time the insight that wants are unlimited. Wrote Say: 'there is no object of pleasure or utility, whereof the mere desire may not be unlimited, since every body is always ready to receive whatever can contribute to his benefit or gratification'. Say denounced the proto-Galbraithian position of the British mercantilist Sir James Steuart, in extolling an ascetic reduction of wants as a solution to desires outpacing production. Say heaps proper scorn on this doctrine: 'Upon this principle, it would be the very acme of perfection to produce nothing and to have no wants, that is to say, to annihilate human existence.'

Unfortunately, Say proceeds to fall prey to this very Galbraithian trap by attacking luxury and ostentation, and by maintaining that 'real wants' are more important to the community than 'artificial wants'. Say hastens to add, however, that government intervention is not the proper road to achieving proper affluence.

On the valuing or pricing of the services of the factors (or as Say would put it, 'agents') of production, Say adopted the proto-Austrian in direct contrast to the Smith–Ricardo tradition. For since subjective human desire for any object creates its value, and reflects its utility, productive factors receive value because of their 'ability to create the utility wherein originates that desire'. Ricardo, writes Say, believes 'that the value of products is founded upon that of productive agency', i.e. that the value of products is determined by the value of their productive factors, or their cost of production. In contrast, Say declares, 'the current value of productive exertion is founded upon the value of an infinity of products compared one with another ... which value is proportionate to the importance of its cooperation in the business of production ...'. In contrast to consumer goods, Say points out, the demand for productive factors does not originate in immediate enjoyment, but rather in the 'value of the product they are capable of raising, which itself originates in the utility of that product, or the satisfaction it may be capable of affording'. In short, the value of factors is determined by the value of their products, which in turn is conferred by consumer valuations and demands. The causal chain, for Say as for the later Austrians, is *from* consumer valuations *to* consumer goods prices *to* the pricing of productive factors (i.e. to costs of production). In contrast, the Smithian, and especially the Ricardian, causal chain is *from* cost of production, and especially labour cost, *to* consumer goods prices. By speaking of the 'proportionate' value of each factor, Say once again comes to the edge of a marginal productivity theory of imputation of consumer to factor valuations, and to the edge of a variable proportions analysis. But he does not reach it.

Say did not rest content with a general, even if pioneering, analysis of the pricing of productive factors. He goes on to virtually create the famous 'triad' of classical economics: land (or 'natural agents'), labour (or 'industry' for Say), and capital. Labour works on, or employs 'natural agents' to create capital, which is then used to multiply productivity in collaboration with land and labour. Although capital is the previous creation of labour, once in existence it is used by labour to increase production. If there are classes of factors of production, what easier trap to fall into than to maintain that each class receives the kind of income attributed to it in common parlance: i.e. labour receives wages; land receives rent; and capital receives interest? Surely a common-sense approach! And so Say adopted it. While useful as a first attempt (excepting the forgotten Turgot) to clarify production theory out of Adam Smith's muddle, this superficial clarity comes at the expense of deep fallacy, that would not be uncovered until the Austrians. In the first place, these three rigidly separated categories already begin to break down in Say's interesting insight that labourers 'lend' their services to owners of capital and land and earn wages thereby; that landowners 'lend' their land to capital and labour and earn rent; and that capitalists 'lend' their capital to earn interest. For how exactly do these payments differ? How does rent as a 'loan' price compare with interest as a loan? And how do wages differ from interest or rent? In fact, the muddle is even worse, for workers and landowners don't 'lend' their services; they are not creditors. On the contrary, in a deep sense, capitalists lend *them* money by giving them money in advance of selling the product to the consumers; and so workers and landowners are 'debtors' to the capitalists, and pay *them* a natural rate of interest. And finally, this classical triad rests on a basic equivocation, as Böhm-Bawerk would eventually point out, between 'capital' and 'capital goods'. Capital as a fund of savings or lending may earn interest; but capital *goods* – which are the real physical factors of production rather than money funds – do *not* earn interest. Like all other factors, capital goods earn a price, a price per unit of time for their services. If you will, capital goods, land, and labourers *all* earn such prices, in the sense of 'rents', defining a rental price as a price of any good per unit of time. This price is determined by the productivity of each factor. But then where does interest on capital funds come from?

Thus, in grappling with the problem of interest, Say criticizes Smith and the Smithians for focusing on labour as the sole factor of production, and neglecting the cooperating role of capital. Tackling the Smith–Ricardian (and what would later be the Marxian) riposte: that capital is simply accumulated labour, Say replies yes, but the services of capital, once built, are there and continue anew and must be paid for. While satisfactory enough on one level, the answer does not solve the problem of where the net return on capital funds comes from, a return which Turgot and then the Austrians explained as the price of time-preference, of the fact, in short, that capital is not only accumulated labour but also 'accumulated time'.

Despite the lack of resolution of the problem of interest, Say set forth an excellent analysis of capital, in the sense of capital goods, and its crucial role in production and in increasing economic wealth. Man, he pointed out, transforms natural agents into capital, to work further with nature to arrive at consumer goods. The more he has built capital goods – the more tools and machinery – the more can man harness nature to make labour increasingly productive. More machinery means an increase in productivity of labour and a fall in the cost of production. Such increase in capital is particularly beneficial to the mass of consumers, for competition lowers the price of product as well as the cost of production. Furthermore, increased machinery permits a superior quality of product, and allows the creation of new products which would not have been available under handicraft production. The enormous increase in production and rise in the standard of living releases human energies from the scramble for subsistence to permit cultivation of the arts, even of frivolity, and most importantly for 'the cultivation of the intellectual faculties'.

Say follows Smith in his discussion of the division of labour, and in pointing out that the degree of that division is limited by the extent of the market. But Say's discussion is far sounder. He shows, first, that expanding the division of labour needs a great deal of capital, so that investment of capital becomes the crucial point rather than its division *per se*. He also points out that, in contrast to Smith, the crucial specialization of labour is not simply *within* a factory (as in Smith's famous pin factory) but ranges over the entire economy, and forms the basis for all exchange between producers.

Say also saw that the essence of investing capital is *advancing* money payments to factors of production, an advance that is repaid later by the consumer. Thus 'the capital employed on a productive operation is always a mere advance made for payment of a productive service, and reimbursed by the value of their resulting product'. Here he captured the essence of the Austrian insight into capital as a process over time and one that involves payment in advance for production. Say also anticipated the Austrian concept of 'stages of production'. He pointed out that, instead of waiting a long time for reimbursement by the consumer, the capitalist at each stage of production purchases the product of the previous stage and thereby reimburses the previous set of capitalists. As Say lucidly puts it:

> The miner extracts the ore from the bowels of the earth; the iron-founder pays him for it. Here ends the miner's production, which is paid for by an advance out of the capital of the iron-founder. This latter next smelts the ore, refines and makes it into steel, which he sells to the cutler; thus is the production of the founder paid, and his advance reimbursed by a second advance on the part of the cutler, made in the price of the steel. This again the cutler works up into razor-blades, the price for which replaces his advance of capital, and at the same time pays for his productive agency.

Generalizing:

> Each successive producer makes the advance to his precursor of the then value of the product, including the labour already expended upon it. His successor in the order of production, reimburses him in turn, with the addition of such value as the product may have received in passing through his hands. Finally, the last producer, who is generally the retail dealer, is compensated by the consumer for the aggregate of all these advances, *plus* the concluding operation performed by himself upon the product.

In the end, the money paid by the consumers for the final product, say razor blades, repays capitalists for their previous advances for the various services of the factors of production.

Turning to wages and the labour market, Say pointed out that wages will be highest relative to the price of capital and land, where labour is scarcest relative to the other two factors. This will be either whenever land is virtually unlimited in supply; and/or when an abundance of capital creates a great demand for labour. Furthermore, wage rates will be proportionate to the danger, trouble, or obnoxiousness of the work, to the irregularity of the employment, to the length of training, and to the degree of skill or talent. As Say puts it: 'Every one of these causes tends to diminish the quantity of labour in circulation in each department, and consequently to vary its' wage rate. In recognizing the differences of natural talent, Say advanced far beyond the egalitarianism of Adam Smith and of neoclassical economics since Smith's day.

In the long run, capital will earn the same return in all firms and industries; but this is only true in the long run, since for one thing there are inevitable immobilities of land, labour and capital. To Say, the 'profits' or interest, on capital stems from its productive services – again, a fundamental confusion between capital as a fund, which earns interest, and capital goods, which are productive factors and earn prices and incomes for their productivity. But despite this basic error, Say had many shrewd things to say about interest. He was possibly the first economist, for example, to show that risk premiums are added to the basic interest rate, so that riskier debtors will pay higher interest. Risk, he pointed out, depends on expected safety of the investment, the personal credit and character of the borrower, the past record of the borrower, and the ability or willingness of the government of the debtor's country to enforce the payment of debt. Furthermore, Say introduced an innovation theory of profit by stating that since new methods of employing capital are more uncertain they are especially risky, and hence they will tend to be more profitable. Thus, innovation profits are subsumed under risk.

Say was also insistent that interest on the loan market is determined by the demand for capital (to which it is directly proportional) and the supply of capital (inversely proportional). A champion of freedom of the loan market – 'usury' is no worse morally than rent or wages – he also demonstrated that it was a fallacy that the quantity of money either lowers or raises the rate of interest. Say perceptively pointed out that it is 'an abuse of words to talk of the interest of money'; it is really interest on savings, not money, and loans can and do occur in kind as well as in money. Wrote Say: the 'abundance or scarcity of money or of its substitutes ... no more affects the rate of interest, than the abundance or scarcity of cinnamon, or wheat, or of silk'.

1.6 The entrepreneur

If Adam Smith purged economic thought of the very existence of the entrepreneur, J.B. Say, to his everlasting credit, brought him back. Not quite as far back to be sure as in the days of Cantillon and Turgot, but enough to continue fitfully and 'underground' in continental economic thought even though absent from the dominant mainstream of British classicism.

Emphasis on the real world rather than on long-run equilibrium almost forced a return to the study of the entrepreneur. For Say, the entrepreneur, the linchpin of the economy, takes on himself the responsibility, the conduct, and the risk of running his firm. He almost always owns some of the firm's capital, Say being familiar with the fact that the dominant entrepreneur and risk-taker in the economy is the one who is also a capitalist, an owner of capital. The owner of capital or land or personal service hires these services out to the 'renter' or entrepreneur. In return for fixed payments to these factors, the entrepreneur takes upon himself the speculative risk of gaining profit or suffering loss. 'It is a sort of speculative bargain, wherein the renter takes the risk of profit and loss, according to the revenue he may realize, or the product obtained by the agency transferred, shall exceed or fall short of the rent or hire he is to pay'.

The entrepreneur, Say adds, acts as a broker between sellers and buyers, applying productive factors proportionate to the demand for the products. The demand for the products, in turn, is proportionate to their utilities and to the quantity of other products exchanging for them. The entrepreneur constantly compares the selling prices of products with their costs of production; if he decides to produce more, his demand for productive factors will rise.

Part of the profits accruing to the capitalist–entrepreneur will be the standard return on capital. But apart from that, Say declared, there will be a return to the 'peculiar character' of the entrepreneur. The entrepreneur is a manager of the business, but his role is also broader in Say's view: the entrepreneur must have judgement, perseverance, and 'a knowledge of the world as well as of business', as he applies knowledge to the process of creating consumer goods. He must employ labourers, purchase raw material, attempt to keep costs low, and find consumers for his product. Above all, he must *estimate* the importance of the product, the probable demand for it, and the availability of the means of production. And, finally, he 'must have a ready knack of calculation to compare the charges of production with the probable value of the product when completed and brought to market'. Those who lack these qualities will be unsuccessful as entrepreneurs and suffer losses and bankruptcies; those who remain will be the skilful and successful ones earning profits.

Say was critical of Smith and the Smithians for failing to distinguish the category of entrepreneurial profit from the profit of capital, both of which are mixed together in the profits of real world enterprises.

Say also appreciated entrepreneurship as the driving force of the allocations and adjustments of the market economy. He summed up those workings of the market by stating that the wants of consumers determine what will be produced: 'The product most wanted is most in demand; and that which is most in demand yields the largest profit to industry, capital, and land, which are therefore employed in raising this particular product in preference; and, *vice versa*, when a product becomes less in demand, there is a less profit to be got by its production; it is, therefore, no longer produced'.

Such astute analysts as Schumpeter and Hébert are critical of Say as having a view of the entrepreneur as a static manager and organizer rather than as a dynamic bearer of risk and uncertainty. We cannot share that view. It seems to us that Say is instead foursquare in the Cantillon–Turgot tradition of the entrepreneur as forecaster and risk-bearer.

From his analysis of capital, entrepreneurship, and the market, J.B. Say concluded for *laissez-faire*: 'The producers themselves are the only competent judges of the transformation, export, and import of these various matters and commodities; and every government which interferes, every system calculated to influence production, can only do mischief.'

1.7 Say's law of markets

While J.B. Say has been almost totally ignored by mainstream economists and historians of economic thought, this is not true for one relatively minor facet of his thought that became known as 'Say's law of markets'. The one point of his doctrine that the active and aggressive British Ricardians got out of Say was this law. James Mill, the 'Lenin' of the Ricardian movement (see below), appropriated the law in his *Commerce Defended* (1808), and Ricardo adopted it from his discoverer and mentor.[13]

Say's law is simple and almost truistic and self-evident, and it is hard to escape the conviction that it has stirred up a series of storms only because of its obvious political implications and consequences. Essentially Say's law is a stern and proper response to the various economic ignoramuses as well as self-seekers who, in every economic recession or crisis, begin to complain loudly about the terrible problem of general 'overproduction' or, in the common language of Say's day, a 'general glut' of goods on the market. 'Overproduction' means production in excess of consumption: that is, production is too great in general compared to consumption, and hence products cannot be sold in the market. If production is too large in relation to consumption, then obviously this is a problem of what is now called 'market failure', a failure which must be compensated by the intervention of government. Intervention would have to take one or both of the following forms: reduce production, or artificially stimulate consumption. The American New Deal in the 1930s did both, with no success in relieving the alleged problem. Production can be reduced, as in the case of the New Deal, by the government's organizing compulsory cartels of business to force a cut in their output.

Stimulating consumer demand has long been the particularly favoured programme of interventionists. Generally, this is done by the government and its central bank inflating the money supply and/or by the government incurring heavy deficits, its spending passing for a surrogate consumption. Indeed, government deficits would seem to be ideal for the overproduction/underconsumptionists. For if the problem is too much production and/or too little consumer spending, then the solution is to stimulate a lot of unproductive consumption, and who is better at that than government, which by its very nature is unproductive and even counter productive?

Say understandably reacted in horror to this analysis and to the prescription.[14] In the first place, he pointed out, the wants of man are unlimited, and will continue to be until we achieve genuine general superabundance – a world marked by the prices of all goods and services falling to zero. But at that point there would be no problem of finding consumer demand, or, indeed, any economic problem at all. There would be no need to produce, to work, or to worry about accumulating capital, and we would all be in the Garden of Eden.

Thus Say postulates a situation where all costs of production are at last reduced to zero: 'in which case, it is evident there can no longer be rent for land, interest upon capital, or wages on labour, and consequently, no longer any revenue to the productive classes'. What will happen then?

> What then, I say, these classes would no longer exist. Every object of human want would stand in the same predicament as the air or the water, which are consumed without the necessity of being either produced or purchased. In like manner as every one is rich enough to provide himself with air, so would he be to provide himself with every other imaginable product. This would be the very acme of wealth. Political economy would no longer be a science; we should have no occasion to learn the mode of acquiring wealth; for we should find it ready made to our hands.

Since, apart from the Garden of Eden, production always falls short of man's wants, this means that there is no need to worry about any lack of consumption. The problem that limits wealth and living standards is a deficiency of production. On the market, Say points out, producers exchange their products for money and they use the money to buy the products of others. That is the essence of the exchange, or market, economy. Therefore the supply of one good constitutes, at bottom, the demand for other goods. Consumption demand is simply the embodiment of the supply of other products, whose owners are seeking to purchase the products in question. Far better to have demand emerging from the supply of other products, as on the free market, than for the government to stimulate consumer demand without any corresponding production.

For the government to stimulate consumption by itself 'is no benefit to commerce; for the difficulty lies in supplying the means, not in stimulating the desire for consumption; and we have seen that production alone, furnishes the means'. Since genuine demand only comes from the supply of products, and since the government is not productive, it follows that government spending cannot truly increase demand:

> a value once created is not augmented ... by being seized and expended by the government, instead of by an individual. The man, that lives upon the productions of other people, originates no demand for those productions; he merely puts himself in the place of the producer, to the great injury of production ...

But if there can be no general overproduction short of the Garden of Eden, then why do businessmen and observers so often complain about a general glut? In one sense, a surplus of one or more commodities simply means that *too little* has been produced of *other* commodities for which they might exchange. Looked at in another way, since we know that an increased supply of any product lowers its price, then if any unsold surplus of one or more goods exists, this price should fall, thereby stimulating demand so that the full amount will be purchased. There can never be any problem of 'overproduction' or 'underconsumption' on the free market because prices can always fall until the markets are cleared. While Say did not always put the matter in these precise terms, he saw it clearly enough, particularly in his *Letters to Malthus*, in his controversy with the Rev. Thomas Robert Malthus over Say's law. Those who complain about overproduction or underconsumption rarely talk in terms of price, yet these concepts are virtually meaningless if the price system is not always held in mind. The question should always be: production or sales *at what price*? Demand or consumption *at what price*? There is never any genuine unsold surplus, or 'glut', whether specific or general over the whole economy, if prices are free to fall to clear the market and eliminate the surplus.

Moreover, Say wrote in his *Letters to Malthus*, 'if the quantity sent in the slightest degree exceeds the want, it is sufficient to alter the price considerably'. It is this notion of what we would now call 'elasticity', and resulting sharp changes in price, that for Say leads many people to mistake a 'slight excess' of supply 'for an excessive abundance'.

The policy implications of attending to the price system are crucial. It means that to cure a glut, whether specific or pervasive, the remedy is not for the government to spend or create money; it is to allow prices to fall so that the market will be cleared.

In his *Letters to Malthus*, Say offers the following example. One hundred sacks of wheat are produced and exchanged for 100 pieces of cloth (or rather, each is exchanged for money and then for the other commodity). Suppose that productivity and output of each is doubled, and now 200 sacks of wheat are exchanged for 200 pieces of cloth. How is superabundance or overproduction going to affect either or both commodities? And if by producing 100 units of each product, the producer made 30 francs' profit, why couldn't the resulting increase of production and fall in the price of each product *still* reap 30 francs' profit for each seller? And how can general glut arise? Yet Malthus would have to maintain that part of the new production of cloth would find no buyers.

Say then notes that Malthus in a sense conceded the point about prices falling due to increased production, and then fell back on a second line of defence: that 'productions will fall to too low a price to pay for the labour necessary to their production'. Here we come to the nub of the overproductionist/underconsumptionist complaints – if we can get past their foggy aggregative concepts and their real or seeming neglect of the fact that a lower price of any product can always clear the market.

In reply, Say noted that Malthus, having unfortunately adopted the labour theory of value, neglected to add the productive services of land and capital to labour in the costs of production. So that the assertion is that selling prices will fall below the costs of production.

But where do 'costs' come from? And why are they somehow fixed, exogenous to the market system itself? How are they determined? Although Ricardo joined with Say on the question of overproduction, it was easy for a British follower of Smith and Ricardo (such as Malthus) on cost theories of value to fall into this trap and to assume that costs are somehow fixed and invariant. Say, believing as we have seen that costs are determined by selling price rather than the other way round, was impelled to a far clearer and more correct picture of the entire matter. Returning to his example, Say points out that if the wheat and cloth producers double the quantity produced with the same productive services, this means not only that the prices of wheat and cloth will fall, but also that factor productivity has risen in both industries. A rise of factor productivity means a lowering of cost. But this means that an increase in output will not only lower selling price; it will *also* lower costs, so there is no reason to assume grievous losses or even a lessening of profit if prices fall.

Apparently, Say continued, Malthus is worried about the prices of productive services remaining high and therefore keeping costs too high as production increases. But here Say brings in a brilliantly perceptive point: prices of productive factors must be high *for a reason*; they are not preordained to be high. But this high wage or rent in itself precisely 'denotes that what we seek for exists, that is to say, that there is a mode of employing them so as to make the produce sufficient to repay what they cost'. In short, factor prices being high means that they have been bid up to that height by alternative uses for them. If the costs of these factors seriously impinge upon or erase the profits of a firm or industry, this is because these factors are more productive elsewhere and have been bid up to reflect that vital fact. Say's reasoning is strikingly similar to the modern free trade reply to the 'cheap labour' argument for protective tariffs. The reason why labour is *more* expensive, say, in the United States or other industrialized country, is that *other* American industries have bid up these labour costs. These industries are therefore more efficient than the industry suffering from competition, and hence the latter should cut back or shut down and allow resources to shift to more efficient and productive fields.

In more peripheral but still relevant areas, J.B. Say engaged in some lovely and powerful examples of *reductio ad absurdum* argument. Thus, on the importance of demand *vis-à-vis* supply, and on the question of gluts, he asked what would have happened if a merchant shipped a current cargo to the site of New York City in the early seventeenth century. Clearly, he wouldn't have been able to sell his cargo. Why not? Why this glut? Because no one in the New York area was producing enough *other goods* to exchange for this cargo. And why would this merchant be sure to sell his cargo nowadays in New York City? Because there are now enough producers in the New York area to make and import products, 'by the means of which they acquire that which is offered to them by others'.

It would have been absurd to state that the problem about the seventeenth century cargo was there was *too many* producers and *not enough* consumers. Say adds that 'the only real consumers are those who produce on their part, because they alone can buy the produce of others, [while] ... barren consumers can buy nothing except by the means of value created by producers'. He concludes eloquently that 'it is the capability of production which makes the difference between a country and a desert'.

The other potent *reductio*, also in his *Letters to Malthus*, is part of his defence of innovation and machinery against charges of overproduction. Malthus, Say notes, concedes that machinery is beneficial when the production of the product is so increased that employment in that field increases also. But, Say adds, new machinery is advantageous even in the seeming worst case, when production of the particular good is not increased and labourers are discharged. For, first, in the latter case as well as the former, productivity increases, selling prices fall, and standards of living rise. Besides, writes Say, bringing in the *reductio*, tools are vital to mankind. To propose, as Malthus does, to limit and restrain the introduction of new machinery is to argue implicitly that 'we ought (retrograding rather than advancing the career of civilization) successively to renounce all the discoveries we have already made, and to render our arts more imperfect in order to multiply our labour by diminishing our enjoyments'.

As to labourers disemployed by the introduction of new machinery, Say writes that they can and will move elsewhere. After all, he adds caustically, the employer who brings in new machinery 'does not compel them [the labourers] to remain unemployed, but only to seek another occupation'. And many employment opportunities will open up for these labourers, since income in society has increased due to the new machinery and product.

Echoing Turgot, Say also counters the Malthus–Sismondi worry about the leaking out of savings from vital spendings, pointing out that savings do not remain unspent; they are simply spent on other productive (or *re*productive) factors rather than consumption. Rather than injuring consumption, saving is invested and thereby increases future consumer spending. Historically, savings and consumption thereby grow together. And just as there is no necessary limit to production, so there is no limit to investment and the accumulation of capital. 'A produce created was a vent opened for another produce, and this is true whether the value of it is spent' on consumption or added to savings.

Conceding that sometimes the savings might be hoarded, Say was for once less than satisfactory. He pointed out correctly that eventually the hoard will be spent, either on consumption or investment, since after all that is what money is for. Yet he admitted that he too deplored hoarding. And yet, as Turgot had hinted, hoarded cash balances that reduce spending will have the same effect as 'overproduction' at too high a price: the lower demand will reduce prices all round, real cash balances will rise, and all markets will again be cleared. Unfortunately, Say did not grasp this point.[15]

Say, however, was again powerful and hard-hitting in his critique of Malthus's belief in the importance of maintaining unproductive consumption by government: income and consumption by government officials, soldiers, and state pensioners. Say argued that these people live off production, whereas productive consumers add to the supply of goods and services. Say continued sardonically: 'I cannot think that those who pay taxes would be at a loss what to do with their money if the collector did not come to their assistance; either their wants would be more amply satisfied, or they would employ the same money in a reproductive manner'.

In contrast to his opponents, who wished the government to stimulate consumer demand, Say believed that problems of glut, as well as poverty in general, could be solved by increasing production. And so he inveighed in many passages against excessive taxation, which raised the costs and prices of goods, and crippled production and economic growth. In essence, J.B. Say countered the statist proposals of the underconsumptionists Malthus and Sismondi by an activist programme of his own: the libertarian one of slashing taxation.

Say combined his anti-tax insights with his critique of Malthus's fondness for government spending via a trenchant attack on Malthus and the public debt. Say noted that Malthus, 'still convinced that there are classes who render service to society simply by consuming without producing, would consider it a misfortune if the whole or a great part of the English national debt were paid off'. On the contrary, rebutted Say, this would be a highly beneficial event for England. For the result would be

> that the stock-holders [government bond-holders], being paid off, would obtain some income from their capital. That those who pay taxes would themselves spend the 40 millions sterling which they now pay to the creditors of the State. That the 40 millions of taxes being taken off, all productions would be cheaper, and the consumption would considerably increase; that it would give work to the labourer, in place of sabre cuts, which are now dealt out to them; and I confess that these consequences do not appear to me of a nature to terrify the friends of public welfare.

1.8 Recession and the storm over Say's law

We come now to a final, critical question about Say's law. Why did the storm over the law appear only in two massive clusters? For the timing of the swirling controversy over the law is no accident. J.B. Say coined the law in 1803, and James Mill brought it to Britain in 1808, converting Ricardo and his disciples. But why was there no particular controversy over the law until much later? Specifically, the storm erupted in 1819, when the French–Swiss economist Jean Charles Leonard Simonde de Sismondi (1773–1842) published his *Nouveaux principes d'économie politique* (*New Principles of Political Economy*). Sismondi's book was followed the next year by the Rev. Thomas Robert Malthus's (1766–1834) *Principles of Political Economy* (1820). The odd point is that both these men had been ardent Smithians for two decades; why publish these heretical underconsumptionist views at virtually the same moment?

Sismondi's aristocratic Florentine family had settled in France, only as Huguenots to be driven by persecution to settle in Geneva, the Calvinist heartland. Sismondi was born in Geneva, the son of a Calvinist clergyman. When the radical influence of the French Revolution reached Geneva, the Sismondis moved to London, where young Sismondi had a chance to study and participate in English business affairs.

Sismondi settled down as a farmer in Tuscany in the late 1790s, publishing a physiocratic tract on Tuscan agriculture in 1801. Soon after, he became an ardent follower of Adam Smith, and published his two-volume Smithian work, *De la richesse commerciale* (*On Commercial Wealth*) in Geneva in the same year – 1803 – that Say published his famous *Traité*. While Say skyrocketed to influence and fame, Sismondi's work was ignored, and remained totally unknown outside France. Perhaps resentment at this fate played a role is Sismondi's radical conversion, embodied in his *Nouveaux Principes*. But the timing, the prompting for this conversion, was critical, namely: the end, in 1815, of a generation of massive war and inflation in Europe led quickly and inevitably to a post war deflation and depression. Recessions, especially on such a grand scale, were new phenomena in Europe; there was therefore no body of theoretical explanation, and hence the typical business cry of 'glut' or 'overproduction' struck a chord among many observers. In the case of Sismondi, it led him straightaway and permanently into a thoroughgoing and lifelong statism, including the advocacy of a comprehensive welfare state, a deep hostility to capitalism and the factory system, and a call for return to a simple agrarian economy. In the second edition of his *Nouveaux Principes* in 1827, Sismondi, in his preface, proclaims the 'new economics' or 'new liberalism' which 'invokes government intervention' instead of *laissez-faire*.

Sismondi was offered a professorship of political economy at the University of Vilna on the strength of his first book; the *Nouveaux Principes* brought him an offer from the Sorbonne. But Sismondi preferred to remain in Geneva, churning out a remarkably prolific series of historical works (including a 16-volume history of the Italian republics in the Middle Ages, and a 31-volume history of the French), and tending to the life of a gentleman farmer. On his farm he fought against overproduction in his own dotty way: making sure that production would be as low as possible by choosing the feeblest workers for employment on the farm, and deliberately having his house repaired by an incompetent worker. One wonders why he did not go all the way in his living the exemplary life of underproduction, and stop working or producing altogether. Thoroughly embittered at the lack of recognition of his socialistic views, Sismondi write shortly before his death in 1842: 'I leave this world without having made the slightest impression, and nothing will be done'. Would that he had been right.

Far more of an impact at the time was made by the simultaneous conversion to underconsumptionism by the Rev. Malthus. Malthus, son of an aristocratic country gentleman, graduated from Cambridge with honours in mathematics, and was ordained in the Anglican clergy. After serving as a fellow of a college in Cambridge, Malthus became a country curate, writing his famous *Essay on Population* in 1798. Malthus was more than the gloomy population theorist that made his name: he was also an ardent Smithian economist. In 1804, Malthus became the first academic economist in England, taking up a chair of history and political economy at the new small East India College of Haileybury, established by the East India Company to train future employees. Not only was he the first, Malthus was to remain the only academic political economist in England for the next two decades.

Malthus was a firm friend of Ricardo, and his break with the Smith–Ricardo tradition on underconsumption did not mar their close friendship. The controversy gave rise to a famous correspondence between them, and when Ricardo died in 1823 he left Malthus a small legacy as a token of their *camaraderie*. More important is the fact that Malthus lost interest in his underconsumptionist heresy after 1824, and quickly reverted to being a leader of Smithian classical economics. Clearly the reason for Malthus's loss of interest was the fact that Britain recovered from the post-Napoleonic depression after 1823, and the first storm over Say's law was over.

Despite the fact that Malthus's interest in his underconsumption theory was generated and maintained solely by the postwar recession, his doctrine was, oddly enough, not a cyclical theory at all but an alleged tendency of free markets to a permanent depression. It should also be noted that Malthus was not worried about savings leaking out into hoarding and remaining unspent. He was an overproductionist as well as an underconsumptionist, so that invested savings only made matters worse by increasing production: 'If … commodities are already so plentiful that an adequate portion of them is not