

fancies of men and on their consumption'. Thus the value of products is imparted by consumer valuation: a crucial proto-Austrian insight derived from medieval and late Spanish scholastics. For centuries, in fact, the scholastic and post-scholastic position had been that the value of goods is determined by 'utility' and 'scarcity', by subjective valuation of a given supply. The more utility the higher the value, and the more abundant the supply the lower the value and price of any good on the market. Cantillon's is a sophisticated and elaborated development of the scholastic approach.

While Cantillon considers the 'intrinsic value of a thing' 'the measure of the Land and Labour which enter into its Production', he concedes immediately that subjective valuation by consumers rather than 'intrinsic value' determines price.⁶

Going into detail on intrinsic value, Cantillon refers to the hypothetical case of an American who travels to Europe to sell beaver skins for hats, but is then 'rightly astonished to learn that woollen hats are as serviceable as those made of beaver, and that all the difference, which causes so long a sea journey, is in the fancy of those who think beaver hats lighter and more agreeable to the eye and the touch'. In short: the entire cost of production, all the labour and effort that went into the production and transport of beaver skins, means nothing unless the product satisfies the consumer enough to pay for the costs, and to enable the product to compete with another commodity made more cheaply at home. It is consumer demand that determines sales as well as price.

O'Mahony goes on to point out that Cantillon's monopoly estate model clearly shows that demand (in this case that of the world monopoly land-owner) and not cost of production determines price. Cantillon, then, did not foreshadow the classical equilibrium theory that cost of production constituted the long-run, and presumably therefore the most important, determinant of market price. On the contrary, for Cantillon, cost of production had a very different function: deciding whether a business could make profits or else have to suffer losses and go out of business. If consumer value and therefore the selling price of a product is high enough to more than cover costs, the firm makes a profit; if not high enough, it suffers losses and eventually has to go out of business. This is an important part of the Austrian view of the role of costs. Thus Cantillon discusses costs and prices in the manufacture of Brussels lace:

If the price which the Ladies pay for the Lace does not cover all the costs and profits there will be no encouragement for this Manufacture, and the undertaker will cease to carry it on or become bankrupt; but as we have supposed this Manufacture is continued, it is necessary that all costs be covered by the prices paid by the Ladies of Paris....

Hence the movement toward long-run equilibrium is *not* a process of adjusting market prices to intrinsic long-run costs of production, but one of labourers and entrepreneurs moving in and out of various lines of production until costs of production and selling prices are equal. As O'Mahony well puts it:

For Cantillon then it is not so much that intrinsic values exist automatically and spontaneously and that market prices are drawn towards them, as that the prices offered in the market determine whether or not it is worth producing things. In other words, it is the prices offered that determine what production costs can be incurred not that production costs determine what the prices must be.

Of course, there is a big gap, both in Cantillon's approach and that of the later Smith–Ricardo classicists, as well as of the modern Ricardian neoclassicists: Where do the 'costs of production' come from? In contrast to the Cantillon and classical approach, they are neither intrinsic nor mandated from some mysterious force outside the economic system. Costs of production, as it took the Austrians to finally point out, are themselves determined by the expected consumer demand for goods and services.

12.4 Uncertainty and the entrepreneur

One of Cantillon's remarkable contributions to economic thought is that he was the first to stress and analyse the entrepreneur.⁷ To this real-world merchant, banker and speculator, it would have been inconceivable to fall into the Ricardian, Walrasian and neoclassical trap of assuming that the market is characterized by perfect knowledge and a static world of certainty. The real-world marketplace is permeated by uncertainty, and it is the function of the businessman, the 'undertaker', the entrepreneur, to meet and bear that uncertainty by investing, paying expenses and then hoping for a profitable return. Profits, then, are a reward for successful forecasting, for successful uncertainty-bearing, in the process of production. The crucial Smithian–Ricardian and Walrasian (classical and neoclassical) assumption that the economy is perpetually in a state of long-run equilibrium fatally rules out the real world of uncertainty. Instead, it focuses on a never-never land of no change, and hence of perfect certainty and perfect knowledge of present and future.

Thus Cantillon divides producers in the market economy into two classes: 'hired people' who receive fixed wages, or fixed land rents, and entrepreneurs with non-fixed, uncertain returns. The farmer–entrepreneur bears the risk of fixed costs of production and of uncertain selling prices, while the merchant or manufacturer pays similar fixed costs and relies on an uncertain return. Except for those who only sell 'their own labour', business entrepreneurs must lay out monies which, after they have done so, are 'fixed' or given from their point of view. Since sales and selling prices are uncertain and not fixed, their business income becomes an uncertain residual.

Cantillon also sees that the pervasive uncertainty borne by the entrepreneurs is partly the consequence of a decentralized market. In a world of one monopoly owner, the owner himself decides upon prices and production, and there is little entrepreneurial uncertainty. But in the real world, the decentralized entrepreneurs face a great deal of uncertainty and must bear its risks. For Cantillon, competition and entrepreneurship go hand in hand.

As in the case of Frank Knight and the modern Austrians, Cantillon's theory of entrepreneurship focuses on his function, his role as uncertainty-bearer in the market, rather than, as in the case of Joseph Schumpeter, on facets of his personality.

Cantillon's concept also anticipates von Mises and the modern Austrians in another respect: his entrepreneur performs not a disruptive (as in Schumpeter) but an *equilibrating* function, that is, by successfully forecasting and investing resources in the future, the entrepreneur helps adjust and balance supply and demand in the various markets.

Professor Tarascio points out that Cantillon's pioneering insight into the pervasive uncertainty of the market was largely forgotten, and before long dropped out of economic thought until independently resurrected in the twentieth century by Knight and by such modern Austrians as Ludwig von Mises and F.A. Hayek. But, as Professor O'Mahony wryly comments: 'To acknowledge his [Cantillon's] recognition of uncertainty when we look at him as Professor Tarascio does from a current perspective is thus more of a reflection on many modern economists whose capacity to ignore uncertainty is nothing short of bizarre than a tribute to Cantillon's prescience'.

Bizarre it may well be, but there is a method to the madness. For, as Professor O'Mahony himself understands full well, modern economics is a set of formal models and equations purporting to fully determine human behaviour, at least in the economic realm. And there is no way that uncertainty can be compressed into determinate mathematical models. As O'Mahony puts it, one might 'ask if entrepreneurial activity can in the nature of things be made the subject of formal representations or models at all. If they could, would there be any room for uncertainty, in the true sense of the term, and, therefore, any room for entrepreneurship itself?' Economic theory, in short, must choose between formally elegant but false and distorting mathematical models, and the 'literary' analysis of real human life itself.

12.5 Population theory

Richard Cantillon's theory of wages is dependent on population in a way that was copied almost word for word by Adam Smith in the *Wealth of Nations*, which in turn inspired Malthus's famous anti-populationist hysteria. Cantillon's long-run wage theory depends on the supply of labour, which in turn depends on levels and growth of population. In contrast to the later Malthus, however,

Cantillon engaged in a sophisticated analysis of the determinants of population growth. Natural resources, cultural factors, and the state of technology he diagnosed as particularly important. He saw prophetically that the colonization of North America would not be a simple displacement of one people by another, but that new agricultural technology would support a far larger population per acre of land. Hence the extent to which existing resources, land and labour, can be utilized depends on the existing state of technology. Thus pre-colonial North America was not 'overpopulated' by Indians, as some had believed; instead, the Indian population level had adjusted to the given resources and technology available. In short, Cantillon foreshadowed the modern theory of 'optimum' population, in which the size of population tends to adjust to the most productive level given the resources and technology available.

While Cantillon described a pre-Malthusian alleged tendency of human beings to multiply like 'rats in a barn', without limit, he also recognized that religious and cultural values can modify such tendencies. An increase in the demand for agricultural products that are land-intensive would tend to reduce the demand for agricultural labour and eventually cause a fall in the supply of such labour and hence of the population as a whole. (Cantillon, it must be remembered, was writing in an age when the overwhelming bulk of the population was engaged in agriculture.) An increase in the demand for labour-intensive farm products, on the other hand, would bring about an increase in the demand for labour and hence of the population. Living, once again, in a country and an era of large feudal landed estates, Cantillon observed that it was the tastes of the proprietary classes that determined the consumer tastes and values of society, and hence the demand for products.

It should be noted that in an unusually sophisticated way, Cantillon pointed out that it was outside the scope of economic analysis to decide whether it is better to have a large population of poorer people or a smaller population of people who enjoy a higher standard of living: that must be for the values of the citizenry to decide.

Professor Tarascio points out that Cantillon's population analysis was far more subtle and modern than that of Smith, Ricardo, or Malthus. Rather than worry about a future unchecked population explosion, Cantillon's theoretical framework accounted for the current cultural change to smaller families in industrialized countries, as well as the likelihood that population will adjust itself downward to any future depletion of resources. Cantillon pointed out, for example, that as ancient civilizations declined, their population size declined along with them. The number of inhabitants of the Roman state in Italy, for example, declined from 25 million to about 6 million over a period of 17 centuries.

12.6 Spatial economics

Richard Cantillon was also the founder of spatial economies, of the analysis of economic activity in relation to geographic space. In a sense, of course, mercantilists, by advocating a favourable balance of geographical trade, analysed (even if badly) economic activities to the extent that they crossed national borders. Spatial analysis, as Professor Hebert has pointed out, deals with *distance* (transportation cost, and its relation to prices as well as to the location of economic activities), and *area* (the geographical development and boundaries of markets). Cantillon not only developed location theory but integrated it into his general microeconomic analysis. In particular, he saw that the prices of produce, even when money and monetary prices were in equilibrium, would always be higher in the cities than in their place of production by an amount needed to cover the costs and risks of transport. In consequence, products that are bulky and/or perishable would be too costly or impossible to transport to the cities, and hence would be far cheaper at their places of production. Such products, then, would generally be grown in border areas around the cities, where the transport costs to the urban markets are not prohibitive. In manufacturing, furthermore, Cantillon saw that in cases where plants have to use bulky, low value-per-unit-weight raw materials, they would tend to locate near the output of such materials. For in that case it would be less costly to transport the less bulky, more valuable finished products to urban markets than to ship the raw materials.

On the location of areas of urban markets, Cantillon was highly suggestive, pointing out that it is far less costly for buyers and sellers to gather at one spot than to travel around the periphery seeking each other out and finding out the various prices that buyers were willing to pay or sellers were willing to accept. In modern terms, Cantillon might say that central markets develop naturally because they enormously lower the transaction, transport, information and other costs of trade.

While Cantillon, therefore, saw how markets and the location of economic activity were able to regulate themselves harmoniously, he was not a consistent free trader internally just as he was not in the foreign trade area. Internally, he held inconsistently that manufacturers needed ‘much encouragement and capital’ to find and invest in the optimum locations.

12.7 Money and process analysis

A highlight of Cantillon’s theory of money is his treatment of the value of money as a special case of the value of market commodities in general. As in the case of any product, the alleged ‘intrinsic value’ of gold is the cost of its production. The value of gold and silver, like other commodities, is set by the values and hence the demands of users in the market – by the ‘consent of mankind’. As in the case of other commodities, too, Cantillon has no cost of

production theory of the value of gold and silver; he simply holds, as elsewhere, that these products can only be produced if costs can be covered by the value of the product.

The process of aligning costs and values in gold, however, takes a relatively long time since its annual output is a small proportion of the total stock in existence. If the nominal value of gold falls below its cost of production, it will cease being mined; and if costs fall sharply, production of gold will be stepped up, thus tending to align costs and normal values. Cantillon recognized that government paper and bank money virtually *have no* costs of production, and therefore no 'intrinsic value' in his terminology, but he pointed out that market forces keep the value of such fiduciary money at par with the value of the gold or silver in which that paper can be redeemed. As a consequence, an increase in the supply 'of fictitious or imaginary money has the same effect as increase in the circulation of real money'. But, Cantillon noted, let confidence in the money be damaged, and monetary disorder ensues and the fictitious money collapses. He pointed out, too, that government is particularly subject to the temptation to print fictitious money – a lesson he had undoubtedly learned from or at least seen embodied in, the John Law experiment. Cantillon also provided a sound analysis of how the market determines the ratio of the values of gold and silver.

One of the superb features of Cantillon's *Essai* is that he was the first, in a pre-Austrian analysis, to understand that money enters the economy as a step-by-step process and hence does not simply increase or raise prices in a homogeneous aggregate.⁸ Hence he criticized John Locke's naive quantity theory of money – a theory still basically followed by monetarist and neoclassical economists alike – which holds that a change in the total supply of money causes only a uniform proportionate change in all prices. In short, an increased money supply is not supposed to cause changes in the relative prices of the various goods.

Thus Cantillon, asking 'in what way and in what proportion the increase of money raises prices?', answers in an excellent process analysis:

in general an increase of actual money causes in a State a corresponding increase of consumption which gradually brings about increased prices. If the increase of actual money comes from Mines of gold and silver in the State the Owner of these Mines, the Adventurers, the Smelters, the Refiners, and all the other workers will increase their expenses in proportion to their gains. They will consume...more... commodities. They will consequently give employment to several Mechanicks who had not so much to do before and who for the same reason will increase their expenses. All this increase of expense in Meat, Wine, Wool, etc. diminishes the share of the other inhabitants of the State who do not participate at first in the wealth of the Mines in question. The alteration of the Market, or the demand for Meat, Wine, Wool, etc., being more intense than usual, will not fail to raise their prices. These high prices will determine the Farmers to employ more land to

produce them in another year; these same Farmers will profit by this rise of prices and will increase the expenditure of their Families like the others. Those then who will suffer from this dearness and increased consumption will be first of all the Landowners, during the term of their Leases, then their Domestic Servants and all the Workmen or fixed Wage-earners who support the families on their wages. All these must diminish their expenditure in proportion to the new consumption...it is thus, approximately, that a considerable increase of Money from the Mines increases consumption....

In short, the early receivers of the new money will increase spending according to their preferences, raising prices in these goods, at the expense of a lower standard of living among the late receivers of the new money, or among those on fixed incomes who don't receive the new money at all. Furthermore, relative prices will be changed in the course of the general price rise, since the increased spending is 'directed more or less to certain kinds of products or merchandise according to the idea of those who acquire the money, [and] market prices will rise more for certain things than for others...'. Moreover, the overall price rise will not necessarily be proportionate to the increase in the supply of money. Specifically, since those who receive new money will scarcely do so in the same proportion as their previous cash balances, their demands, and hence prices, will not all rise to the same degree. Thus, 'in England the price of Meat might be tripled while the price of Corn rises no more than a fourth'. Cantillon summed up his insight splendidly, while hinting at the important truth that economic laws are qualitative but not quantitative:

An increase of money circulating in a State always causes there an increase of consumption and a higher standard of expenses. But the dearness caused by this money does not affect equally all the kinds of products and merchandise proportionably to the quantity of money, unless what is added continues in the same circulation as the money before, that is to say unless those who offered in the Market one ounce of silver be the same and only ones who now offer two ounces when the amount of money in circulation is doubled in quantity, and that is hardly ever the case. I conceive that when a large surplus of money is brought into a State the new money gives a new turn to consumption and even a new speed to circulation. But it is not possible to say exactly to what extent.⁹

Not only that, but as Professor Hebert has pointed out, Cantillon also provided a remarkable proto-Austrian analysis of the different effects of the money going into consumption or investment. If the new funds are spent on consumer goods, then goods will be purchased 'according to the inclination of those who acquire the money', so that the prices of those goods will be driven up and relative prices necessarily changed. If, in contrast, the increased money comes first into the hands of lenders, they will increase the supply of credit and temporarily lower the rate of interest, thereby increasing

investment. Repudiating the common superficial view, brought back to economics in the twentieth century by John Maynard Keynes, that interest is purely a monetary phenomenon, Cantillon held that the rate of interest is determined by the number and interactions of lenders and borrowers, just as the prices of particular goods are determined by the interaction of buyers and sellers. Thus, Cantillon pointed out that

If the abundance of money in a State comes into the hands of money-lenders it will doubtless bring down the current rate of interest by increasing the number of money-lenders: but if it comes into the hands of those who spend it will have quite the opposite effect and will raise the rate of interest by increasing the number of entrepreneurs who will find activity by this increased spending and who will need to borrow in order to extend their enterprise to every class of customers.

An increased supply of money, therefore, can either lower or raise interest rates temporarily, depending on who receives the new money – lenders, or people who will be inspired by their new-found wealth to borrow for new enterprises. In his analysis of expanding credit lowering the rate of interest, furthermore, Cantillon provides the first hints of the later Austrian theory of the business cycle.

In addition, Cantillon presented the first sophisticated analysis of how the demand for money, or rather its inverse, the speed or velocity of circulation, affects the impact of money and hence the movement of prices. As he put it, ‘an acceleration or greater rapidity in circulation of money in exchange, is equivalent to an increase of actual money up to a point’. One of the reasons why prices do not change in exact proportion to a change in the quantity of money is alterations in velocity: ‘A river which runs and winds about in its bed will not flow with double the speed when the amount of water is doubled’. Cantillon also saw that the demand for cash balances will depend on the frequency of payments made in the society. As Monroe sums up Cantillon’s position: ‘the longer the interval between payments, the larger are the sums which have to accumulate in the payers’ hands, and the more money is required in the country’.¹⁰ If people save large sums, furthermore, they may have to ‘keep money locked up for considerable periods’. On the other hand, the development of more efficient clearing systems for debts, as well as of paper money, will economize on cash: ‘The rapidity of circulation is increased by the practice of offsetting accounts between merchants, and by the use of bankers’ and goldsmiths’ notes, for these men do not keep an equivalent amount of money on hand’. Cantillon summed up his analysis of the interaction of quantity and velocity: ‘According to the principles we have established the quantity of money circulating in exchange fixes and determines the price of everything in a State taking into account the rapidity or sluggishness of circulation’.

Cantillon also provided a masterful discussion of the relations between gold and silver, and advocated freely fluctuating exchange rates between gold and silver, attacking any attempts, certainly any long-lived attempts, to fix the exchange rate between them. For such a rate is soon bound to vary from the market rate. Thus Cantillon saw the problem in trying to maintain a bimetallic standard with fixed parities between two precious metals.

All in all we can understand Hayek's enthusiasm when he concludes that Cantillon's monetary theory 'constitutes, without doubt, the supreme achievement of a man who was the greatest pre-classical figure in at least this field and whom the classical writers themselves in many instances not only failed to surpass but even failed to equal'.¹¹

12.8 International monetary relations

One of the most notable features – and certainly the one drawing the most attention from historians – of Cantillon's extensive monetary theory was his pioneering analysis of the tendency towards international monetary equilibrium, or the specie-flow-price mechanism that has been generally attributed to the later writings of David Hume.

Cantillon applied his 'micro-analysis' of changes of the money supply *within* a country to changes in the distribution of money between countries. For over two centuries, mercantilist writers and statesmen in Europe had advocated an increased supply of specie in a country as a means of building up state power, and they were increasingly clear that, short of having gold or silver mines a nation could only increase its stock of money by having a favourable balance of trade. It was clear to the mercantilists that this was not a policy every nation could successfully pursue, for the 'favourable' balances of trade of some nations would necessarily have to be offset by the 'unfavourable' balances of others. In this disequilibrium situation, it was every nation for itself, as each attempted to benefit at the expense of other nations by restrictionist and warlike policies. But there was a further problem in the background; since most writers were at least roughly familiar with the 'quantity theory', or supply–demand analysis of the value of money, an inner contradiction loomed. For if nation A managed to acquire a favourable balance of trade and to accumulate specie, the increase of specie would raise prices in nation A, make the country's products uncompetitive in the world markets, and bring the favourable balance to an end.

No one was more lucid about the problem of money and international payments than Cantillon. He pointed out that specie can either be acquired within a country by mining ore, or through subsidies, warfare, 'invisible' payments, borrowing, or a favourable balance of trade with other countries. But then, in the Cantillon process analysis, either the mine owners or the exporters would spend or lend the money. Part of the expenditure of the new

money would surely be spent abroad, and furthermore the increased stock of money would raise prices at home, making domestic goods less competitive. Exports would fall and imports of cheaper foreign products would increase, and gold would flow out of the country, reversing the favourable balance of trade.

In this way, Cantillon worked out an international monetary theory integrated with his domestic analysis, and was one of the first to work out a theory of international monetary equilibrium. For the world market managed to frustrate, at least in the long run, governmental attempts to intervene and secure favourable balances of trade. It should be noted, further, that Cantillon's analysis contained the basis of both major parts of the equilibrating specie-flow-price mechanism: the expenditure of new monetary cash balances increasing imports; and the increase of domestic prices caused by a higher money supply, the price effect lowering exports and adding to imports.

Richard Cantillon understood the grave inner contradiction of mercantilism: increased specie raising prices and thereby destroying the favourable balance of payments that brought the specie. His unsatisfactory way out was to advise the king to hoard much of the increased stock so as not to drive up prices; unsatisfactory because money is meant to be spent eventually, and once spent the dreaded price increase would willy-nilly take place.

Professor Salerno, however, has introduced a cautionary note in the encomiums to Cantillon, pointing out that he has been called only a 'semi-equilibrium' theorist because he did not portray a satisfactory picture of what the equilibrium state would be like, and he did not think of the world economy as tending firmly towards equilibrium. As a result, Cantillon did not present a theory of the international distribution of gold and silver in equilibrium.¹² He thought of the economy instead as engaging in endless cycles of disequilibrium rather than as tending towards equilibrium.

12.9 The self-regulation of the market

There is no point wasting time in fruitless speculation on whether or not Richard Cantillon was a 'mercantilist'. Eighteenth century writers did not group themselves into such categories. While he inconsistently suggested, in accordance with state-building notions of the age, that the king should amass treasure from a favourable balance of trade, the entire thrust of Cantillon's work was in a free trade, *laissez-faire* direction. For it was clear that mercantilist measures would ultimately be self-defeating. More important, Cantillon was the first to show in detail that all parts of the market economy fit together in a 'natural', self-regulative, equilibrating pattern, with existing supply and demand determining prices and wages, and ultimately the pattern of production. Consumer values, furthermore, determined demand, with population adjusting to cultural and economic factors. The equilibrators of the economy

were the entrepreneurs, who adjust to and cope with the all-pervasive uncertainty of the market. And if the market economy, despite the ‘chaos’ it might seem to superficial observers, is really harmoniously self-regulating, then government intervention as such is either counterproductive or unnecessary.

Particularly instructive is Cantillon’s attitude towards usury laws, that vexed question which had at last brought unwarranted discredit on the entire economic analysis of the medieval renaissance Catholic scholastics. This shrewd merchant and banker saw that particular interest rates, on the market, are proportionate to the risks of default faced by the creditor. High interest is the result of high risk, not of exploitation or oppression. As Cantillon wrote: ‘All the Merchants in a State are in the habit of lending merchandise or produce for a time to Retailers, and proportion the rate of their profit or interest to that of their risk’. High rates of interest bring about only a small profit, because of the high proportion of default on risky loans. Cantillon observed too that the later Catholic scholastics had eventually if reluctantly agreed to allow high rates of interest for risky loans. Furthermore, there should be no imposed maximum on interest, since only the lenders and borrowers can determine their own fears and needs: ‘for they would be hard put to find any certain limit since the business depends in reality on the fears of the Lenders and the needs of the Borrowers’.

Finally, Cantillon saw that usury laws could only restrict credit and thereby drive up interest rates even further on the inevitable black markets. Hence, usury laws would not lower interest rates but rather raise them: ‘because the Contracting parties, obedient to the force of competition or the current price settled by the proportion of Lender or Borrowers, will make secret bargains, and this legal constraint will only embarrass trade and raise the rate of interest instead of settling it’.

12.10 Influence

Richard Cantillon’s pioneering *Essai* was widely read and highly influential throughout the eighteenth century. It was widely read as was the custom of the day, in ‘underground’ manuscript form, by literary, scientific and intellectual people interested in the advance of thought and in the practical problems of the day. The wide reliance on such manuscripts resulted from the severe French censorship of that period.

The *Essai*, then, was widely read from its writing in the early 1730s, and still more so after its publication in 1755. It was read eagerly and thoroughly by the first school of economists, the physiocrats, and by their great associate, or fellow-traveller, A.R.J. Turgot. In that cosmopolitan eighteenth century society where British and French intellectuals intermingled, the *Essai* was certainly read and echoed by the eminent Scottish philosopher, David Hume. And it has the honour of being one of the very few books cited by

Hume's close friend Adam Smith – a man whose hyperdeveloped sense of his own originality prevented him from citing or recognizing many predecessors. Cantillon was thus highly influential among Continental and British economists until the publication of the *Wealth of Nations* in 1776. After the publication of that work, however, the knowledge and influence of Cantillon fell prey to the general post-Smithian custom of ignoring any and every economist preceding Adam Smith. The general nineteenth century habit of obliterating knowledge of economists before Adam Smith committed grave injustice against earlier economists and gave rise to the erroneous – and still widely held – illusion that economic science sprang full-blown out of the head of one Great Man, much as Athena was supposed to have sprung, fully grown and fully armed, from the brow of Zeus. But the most malignant aspect of this Smith-worship is that the lost economists were in many respects far sounder than Adam Smith, and in forgetting them, much of sound economics was lost for at least a century. In many ways, as we shall see, Adam Smith deflected economics, the economics of the Continental tradition beginning with the medieval and later scholastics and continuing through French and Italian writers of the eighteenth century, from a correct path, and on to a very different and fallacious one. Smithian 'classical economics', as we have come to call it, was mired in aggregative analysis, cost-of-production theory of value, static equilibrium states, artificial division into 'micro' and 'macro', and an entire baggage of holistic and static analysis.

The unfortunate erasure of pre-Smithian economics enabled Smithian classical economics to take hold and dominate economic thought for 100 years. The 'marginal revolution' of the 1870s, especially the Austrian theory beginning in that decade, in many ways returned economics to the proper individualistic, micro and subjective value pre-Smithian path on the European continent. It is no accident that Cantillon himself was rediscovered in 1881 by the quasi-'Austrian' English marginal revolutionist W. Stanley Jevons, who was commendably eager to rediscover lost economists buried by the dominant Smith–Ricardo orthodoxy.

But economics has unfortunately far from rid itself of the Smith–Ricardo baggage. The current revival of Austrian theory, and the increasing search for a way out of contemporary orthodoxy by many mainstream economists, is an attempt to complete the promise of the badly named 'marginal revolution' (really an individualist–subjectivist revolution), and to complete the casting out of the classical British paradigm.

12.11 Notes

1. Considerable confusion has been sown in Cantillon studies by the fact that Richard's cousin, father, great-grandfather, and great-great-grandfather were all named Richard.
2. To add to the genealogical confusion, Richard's mother, Bridget, was also a Cantillon, from County Limerick. Richard's father and his bride Bridget were distant cousins in the

- Cantillon family. Richard's grandfather and Bridget's great-grandfather were both sons of Sir Richard Cantillon I.
3. At the height of the bubble, the duchess of Orleans wrote, in wonder: 'It is inconceivable what wealth there is in France now. Everybody speaks in millions. I don't understand it at all, but I see clearly that the god Mammon reigns an absolute monarch in Paris'. Quoted in John Carswell, *The South Sea Bubble* (Stanford: Stanford University Press, 1960), p. 101.
 4. The Egmont quote is in Antoin E. Murphy, 'Richard Cantillon—Banker and Economist', *Journal of Libertarian Studies* 7 (Autumn 1985), p. 185.
 5. F.A. von Hayek, 'Introduction to a German translation of Cantillon's *Essai*' (Jena: Gustav Fischer, 1931); from translation of Hayek's Introduction by Michéal Ó'Súilleabháin, *Journal of Libertarian Studies*, 7 (Autumn 1985), p. 227.
 6. In an Aristotelian flourish, Cantillon declared that land 'is the source or matter from which Wealth is extracted', while 'human labour is the form which produces it', while wealth, however, is not intrinsic in the goods but is 'in itself no other than the sustenance, the conveniences, and the comforts of life'.
 7. In the *Essai*, a work of only 165 pages, Cantillon makes no less than 110 separate references to the entrepreneur.
 8. Vickers aptly writes that 'In Cantillon, as opposed to other writers of the first half of the [eighteenth] century, the move in theory and in explanation toward a dynamic as opposed to a definitional and static description of monetary affairs took on a microscopic, micro-economic form. His economic analysis always started from individual economic magnitude and quantities'. And again: 'Market prices, money prices, and levels of activity and employment were not to be regarded as homogeneous variables. The *Essai* is interested in the structure of market prices, the structure of market supply conditions, and the structure of activity in the economy'. Douglas Vickers, *Studies in the Theory of Money 1690–1776* (Philadelphia: Chilton Co., 1959), pp. 187–8.
 9. See the citations and discussion in Chi-Yuen Wu, *An Outline of International Price Theories* (London: George Routledge & Sons, 1939), pp. 66–7.
 10. Arthur Eli Monroe, *Monetary Theory before Adam Smith* (1923, repr. Gloucester, Mass.: Peter Smith, 1965), pp. 255–6.
 11. von Hayek, op. cit., note 5, p. 226.
 12. Salerno points out that at least in this respect Cantillon's treatment was inferior to the neglected pamphlet by an unknown English author, Isaac Gervaise, *The System or Theory of the Trade of the World* (1720). Gervaise worked out the process of equilibration and, believing as he did in a firm trend toward an equilibrium position, he was the first to point out that in such equilibrium, the precious metals would be distributed in accordance with the international demand for them. That demand would be embodied in the productive activities of each particular nation. Gervaise's pamphlet remained unread until resurrected by Professor Jacob Viner in the mid-twentieth century. Isaac Gervaise, *The System or Theory of the Trade of the World*, ed. J.M. Letiche (Baltimore: Johns Hopkins University Press, 1954).
- Gervaise, however, was inferior to Cantillon, presenting an aggregative, macroeconomic approach instead of the latter's pioneering microeconomic process analysis.

13 Physiocracy in mid-eighteenth century France

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13.1 The sect

The first self-conscious school of economic thought developed in France shortly after the publication of Cantillon's *Essai*. They called themselves 'the economists', but later came to be called the 'physiocrats', after their prime politico-economical principle: *physio-cracy* (the rule of nature). The physiocrats had an authentic leader – the creator of the physiocratic paradigm – a leading propagandist, and several highly placed disciples and editors of journals. The physiocrats promoted each other, reviewed each others' prolific works in glowing terms, met frequently and periodically in *salons* to deliver papers and discuss each other's essays, and generally behaved as a self-conscious movement. They had a cadre of hard-core physiocrats, and a penumbra of influential fellow-travellers and sympathizers. Unfortunately, the physiocrats soon took on the dimensions of a cult as well as a school, heaping lavish and uncritical praise upon their leader, who thus became a guru as well as the creator of an important paradigm in economic thought.

The founder, leader, and guru of physiocracy was Dr François Quesnay (1694–1774), a restless, charismatic and intellectually curious soul who was typical of Enlightenment intellectuals of the eighteenth century. Smitten with the physical sciences, as so many intellectuals were in the shadow of the great Isaac Newton, Quesnay, son of a well-to-do farmer, read widely in his chosen profession of medicine. Gaining fame as a surgeon and physician, Quesnay wrote medical works and also became expert in agricultural science, writing on its technology. In 1749, at the age of 55, Quesnay became personal physician to King Louis XV's mistress, Madame de Pompadour, and a few years later also became personal physician to the king himself.

It was in the late 1750s, when in his mid-60s, that Dr Quesnay began to dabble in economic topics. The founding of the physiocratic movement may be dated precisely at the moment in July 1757 when the guru met his chief adept and propagandist. For it was then that Dr Quesnay met the restless, flighty, enthusiastic, and slightly crackpot Victor Riqueti, the Marquis de Mirabeau (1715–89). Mirabeau, a disgruntled aristocrat with plenty of leisure time on his hands, had just published the first several parts of a multi-part work, a grandiloquently entitled best-seller *L'Ami des hommes* (*The Friend of Man*). This work had charmed many Frenchmen through its very flamboyance and lack of system, as well as its curious use of an archaic seventeenth-century style. While writing *L'Ami des hommes*, Mirabeau was a quasi-disciple of the later Cantillon, glossing and publishing the *Essai*, but contact with Quesnay soon converted him into the doctor's leading fugleman and propagandist. The ruminations of one seemingly harmless eccentric physician had now become a School of Thought, a force to be reckoned with.

The high placement of the two founding physiocrats served their cause well. Quesnay's crucial place at court, as well as Mirabeau's fame and aristo-

cratic position, gave the movement power and influence. Still, political economy was dangerous in that age of absolutism and censorship, and Quesnay prudently published his work under pseudonyms or through his disciples. Indeed, Mirabeau was imprisoned for a couple of weeks in 1760 for his book, *Théorie de l'impôt (Theory of Taxes)* specifically for his blistering attack on oppressive taxation and on the financial system of 'tax farming', in which the king sold the rights to tax to private firms or 'farmers'. He was released, however, by the good offices of Madame de Pompadour.

The physiocrats conducted their operations through a succession of journals, and through periodic salons, some conducted at the home of Dr Quesnay, the most prominent in regular Tuesday evening seminars at the home of the Marquis de Mirabeau. The chief physiocratic figures were: Pierre François Mercier de la Rivière (1720–93), whose *L'Ordre naturel et essentiel des sociétés politiques (The Natural and Essential Order of Political Societies)* (1767) was the major work on political philosophy of the school; the Abbé Nicolas Baudeau (1730–92), the editor and journalist of the physiocrats; Guillaume François Le Trosne (1728–80), jurist and economist; and the youngest member of the group, the secretary, editor, and government official Pierre Samuel Du Pont de Nemours (1739–1817), who would later emigrate to the United States to found the famous gunpowder manufacturing family.

In no way did the cult aspect of the physiocratic group show itself more starkly than in the adjectives used about their master. His followers claimed that Quesnay looked like Socrates, and they habitually referred to him as the 'Confucius of Europe'. Indeed, despite the fact that Adam Smith and others spoke of his great 'modesty', Dr Quesnay identified himself with the alleged wisdom and glory of the Chinese sage. Mirabeau went so far as to proclaim that the three greatest inventions in the history of mankind were writing, money, and Quesnay's famous diagram, the *Tableau économique*.

The sect lasted for less than two decades, going rapidly downhill after the mid-1770s. Several factors accounted for the precipitate decline. One was the death of Quesnay in 1774, and the fact that in his later years the physician had lost much interest in his cult and had shifted to work on mathematics, where he claimed to have solved the age-old problem of squaring the circle. Furthermore, the fall from grace as finance minister of their fellow-traveller, A.R.J. Turgot, two years later, and the disgrace heaped upon Mirabeau by a public smear campaign launched by his wife and children at about the same time, caused physiocracy to fall from influence. And the advent of Smith's *Wealth of Nations* in the same year soon led to the unfortunate habit of ignoring all pre-Smithian thought, as if the new science of 'political economy' had been created single-handed and *ex nihilo* by Adam Smith.