
MEANS AND ENDS
The Idea of Capital in the West, 1500–1970
Francesco Boldizzoni

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# Preface

Capital dominated the imagination of Western society during the strongest phase of economic development, from the Industrial Revolution to the energy crisis, and in our own time it is present in many aspects of everyday life, fuelling debates and forming prejudices. One only needs to switch on the TV, open any newspaper or surf the Internet to realize this. Yet, there is a lack of an overall history of this concept. There are several works on the history of capitalism, reflecting the widest range of views, but an infinitely smaller number of investigations into the history of capital. It is as if the subject being studied was deliberately trying to escape the attention of the investigator. When I became aware of this curious phenomenon some time ago, it was impossible for me to resist the temptation of taking up the challenge.

The work of an author undoubtedly reflects his view of the world, but it is rarely accomplished in a state of withdrawal from the world. Therefore I wish to thank all those who contributed to the final result in various ways.

My first thought goes to Franco Amatori, whose unfailing support gave me the necessary peace of mind for carrying out the research, and who closely followed this book during the different phases of its making. Many people read all or part of the manuscript and discussed related topics with me. At Cambridge: Peter Burke, Martin Daunton, Elizabeth and Peter Garnsey, Geoffrey Harcourt, Roberto Scazzieri and Gareth Stedman Jones. In Italy and elsewhere: Maurice Aymard, Marco Bianchini, Piero Bini, Pietro Corsi, Antonio Di Vittorio, Pier Luigi Porta, Marzio Romani and Stefano Zamagni.

I would also like to thank the students and colleagues who took part in the seminar that was held at Bocconi University on 6 February 2007, one of the first occasions when I lay bare the general outline of the work. Finally, the exchange of ideas I had on different occasions with Terenguto Aitoru, Eugenio Biagini, Stefan Collini, Eric Hobsbawm, Harold James, Douglas Moggach, Michael Nedo and Amartya Sen on a varied range of topics (from the British intellectuals of the nineteenth and twentieth centuries to global warming, from Wittgenstein and Sraffa to the future of capitalism) has been hugely beneficial.

The preliminary research would have been very difficult, if not impossible, without repeated visits to a number of libraries and access to their

huge stocks: in the first place the rare books collections of the University of Pavia and the Cambridge University Library, as well as the periodicals collection of Bocconi University. At Cambridge, the archives of King's College, Trinity College and the Marshall Library at the Faculty of Economics were no less important. I am grateful to the respective governing bodies for permission to quote from the Dobb and Marshall papers. I am also indebted to the archivists Ros Moad, Jonathan Smith, Rowland Thomas and to the assistant librarian Boyd Spradbury for the help they gave me during my research. Quotations from the correspondence of F.A. Hayek appear by courtesy of the Estate of F.A. Hayek. I would like to thank its literary executor, Bruce Caldwell of the University of North Carolina at Greensboro, for his great kindness. Every effort has been made to trace rights holders, but if any have been inadvertently overlooked the publishers would be pleased to make the necessary arrangements at the first opportunity.

Neither can I forget Max Beber, who rescued me from British bureaucracy when I first arrived in Cambridge in August 2005, nor John Hatcher, who went out of his way to make the facilities of the Faculty of History available to me during 2006 and 2007. Katharine Hunt has been extraordinarily helpful in translating the Italian manuscript into English, and we have had generous financial support from the Bocconi University Research Committee for our efforts. My publisher Michael Strang, together with Ruth Ireland and the staff of Palgrave Macmillan, have been undaunted in pursuing this project, attending to every detail with great competence. My family patiently put up with me while I was carrying out the first draft, and the company of my colleagues at Clare Hall, especially Tomoko Fujita and Sir Brian Pippard, provided a touch of humour on the days I was revising these pages.

Apart from all these many acknowledgements there is one other person to whom I owe a debt of gratitude, which cannot be paid back due to its nature. It is towards Marco Cattini, from whom I learnt the historian's craft. This book is dedicated to him.

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# Introduction

This book hinges on three main themes: the dichotomy between means and ends in the acquisition of wealth; the transformation of an economic concept with regard to the profound changes that at times broke the continuity of social processes; and the eternal rivalry between cultures and visions, as nations rose and declined. Such different planes, having continually interwoven with each other throughout history, must be included in our narrative account.

As any etymological dictionary will tell us, the term 'capital' derives from Latin *caput*, which has given various meanings. One in particular indicates the 'stock', or 'principal part', the outcome of which, by antithesis, is its 'yield'. At first, capital had been, therefore, a purely monetary and financial phenomenon. It originated as a commodity (or an *end in itself*) and not as a factor of production, at a time – the early modern period – when the only factors of production, land and labour were not commodities. Land was subject to the paramount rights of sovereigns and aristocracies, and the process of the enclosures was still only beginning. Labour, which in Europe west of the Elbe had recently been freed from serfdom, was under the control of the guilds and far removed from any form of market bargaining. The two factors combined just about produced what was sufficient to guarantee subsistence, and sometimes not even that. The frequent crises of under-production indicate how vulnerable populations were to natural calamities, disease and the lack of sound technical knowledge; the result was a continual fluctuation in prices due to unpredictable supplies, and it was impossible to produce any profit. About 80–90 per cent of the social product came from agriculture. In a subsistence economy manufacturing could not take off, and it was thus restricted to the transformation of wealth. Moreover, the trend towards self-sufficiency, and the self-production of primary goods that prevailed in the country areas, greatly limited outlets for it.

The one source of wealth remained confined to a small number of economic occupations that were carried out in the cities and involved money. Whether they were the great transactions of mercantile trade or speculation on money exchanges at the fairs or, last but not least, usury, these activities inevitably roused conflicting feelings. People wondered how it was possible for money to be made out of money, and even after many centuries the Aristotelian condemnation still resonated. How could a yield be produced by something that is sterile by nature? It did not escape men of the time that speculation did not add value to the economic system, but, by increasing the prosperity of some to the detriment of others, it simply changed the distribution pattern of wealth. However, *from the Renaissance on* there was a growing awareness that these activities were central to the system that was developing. The economy was now experiencing, for the first time, a separation of the natural and artificial spheres, and witnessing the *relative* spread of monetary exchanges. The collective imagination was struck by the paradox of 'generation'. The manual of a noted Genoese merchant, Peri, in some of its seventeenth-century editions, bore the title *I frutti d'albaro* ('Fruits of the tree'). They were fruits that had long been causing discord.

Hence new solutions were now being sought to make it acceptable to gain profit from money, and it was the intelligentsia of the Franciscan, Dominican, and later Jesuit religious orders who were engaged in this search in the first place. The Franciscans (from Pietro di Giovanni Olivi to Bernardino of Siena) in particular made a very early contribution,[1] but our interest here is not to give credit for being first – ideas acquire historical importance only when they reach critical mass, and when this happened in the fifteenth and sixteenth centuries, there were no great differences from the Dominican tradition. After all, were not Antoninus of Florence, Tomaso de Vio and the founders of the School of Salamanca Dominicans?

However fascinating the curious phenomenon described by Keynes on the subject of the ingenuousness of rulers, unwitting 'slaves' of some late 'academic scribbler',[2] one should never overestimate the influence of archetypes on practical realities. It is often the reverse; and when answers need to be found to the pressing questions put by economic and social transformations, the finest intellectual subtleties fade away under their reciprocal effect.

In the late seventeenth century, when the centre of political and economic power shifted from the Mediterranean to the North Sea, there was a definite change in the overall picture. In this context,

improved techniques and agricultural yields led to a loss of interest in money capital, and for the first time, common sense, as well as economic thought, realized that there were possibilities for gain in the real economy. In the dynamic reality of England, where the spirit of the Reformation had been inwardly absorbed, the emphasis was almost completely on labour; during the eighteenth century the laws of agricultural productivity were studied with almost scientific precision, and farming became a business, as had already been the case in Holland. In eighteenth-century France, on the other hand, land was seen to be of decisive importance, and considered as the principle whereby value was generated. France created its alternative system – Physiocracy – and was dismissive of the way the Dutch and English were pursuing productivity, convinced as she was of her own conception that wealth lay in the abundance of natural resources and people. Capital again entered the debate midway through the century, but surprisingly this word now stood for something new: not money any longer, but seeds and above all wages enabling workers to farm the land. With the Industrial Revolution, which was a result of the outstanding progress achieved in the agricultural sector, Britain demonstrated to France the supremacy of the principle of productivity. But because investments played a negligible role in the start-up of this process, the 'circulating' capital theorized by the Physiocrats was still the only significant form of capital for British economists in their analysis until the 1830s. At this point, the steadily increasing role of machines drew the attention of the Classics to the importance of fixed capital. Capital thus began to be identified with the *physical means* of production, which, it was thought, would continually multiply, precisely because of their use.

It is often said that with the Industrial Revolution the West renounced the moral economy[3] and instead set out on a path separating the public, impersonal sphere of the market, from the private intimate sphere of the family. Max Weber himself was led to believe that capitalism, on reaching maturity, had cast off the genuine ethical and religious purpose that had accompanied its early stages in order to proceed *motu proprio*.[4] This is undoubtedly true; yet over the long term, general malaise, and even open doubt as to the legitimacy of the direction taken, overcame our civilization, over and beyond that invisible fault line. It resulted in continual debate regarding the justice and morality of production and distribution. These underlying authentic moral preoccupations are reflected in the writings of economists throughout the nineteenth century, and for a good part of the twentieth, and are often decisive for an understanding of their thought.

Reactions to the transformations that had taken place were not long in coming and left a lasting impression on this train of thought.

Marx refused to accept capital either as an end or as a means. In his view, both formed stages of the same process of deception. He protested that capital was being presented as if it was just a 'thing', so that its true nature of social relation could be covered up; this relation was an unfair one since it was founded on the logic of exploitation that had gained ground in Western history. 'Primitive accumulation', or the undue appropriation of what had once been common by means of prevarication, had resulted in uneven conditions between people, making some richer and others poorer. This interpretation arose to explain the evolution of European society. It would prove to have a power, for good or evil, that few other ideas would equal, and soon becoming an ideology and religion. With the spread of the international division of labour it would be invoked to explain the dynamics of the world's North and South. On the other hand, it would also become the subject of ferocious attacks.

The West, under accusation, responded to Marx. Great Britain, at the height of its industrial power, reacted; the United States reacted; and different voices were raised from the various corners of Continental Europe. The tenor of these reactions reflected the long-held views that had developed out of each country's inalienable past. Marshall's apologia for capital differs in form and content from J.B. Clark's, while both gained inspiration from a *milieu* that was a long way from the context in which Böhm-Bawerk's views matured; the positions of Schmoller and Sombart, of Gide and of Loria, who did not rise up to defend any particular pre-constituted order, were quite different again. In Victorian Britain, sacrifice and abstinence from earthly pleasures were what legitimized the accumulation of capital. In the United States the puritan background was combined with an almost integral faith in social Darwinism, on the basis of which the ones most adapted for continuing the species were those who managed to gain the means of production and achieve economic success, at the same time being guaranteed predestination. On the other hand, the historical currents of Continental Europe stripped capital accumulation of its myth, and laid stress on the importance of the immaterial factors of economic development such as intelligence, education and good institutions. Germany in particular, which experienced rapid industrialization bringing social imbalances with it, felt the increasing weight of modernity. It even got to the point of rebelling against it; when defeated in the Great War, it was convinced

it was the prisoner of international financial capital and took flight in a neo-romantic dream that was the prelude to National Socialism.

The dichotomy between means and ends returned to the scene with all its force with the Keynesian revolution, and the disarray that followed, until the 1960s. In 1934 a colossal statue of Prometheus had been raised in the Rockefeller Center, the temple of American capitalism; it was surmounted by the epigraph of Aeschylus: 'Prometheus, teacher in every art, brought the fire that hath proved to mortals a means to mighty ends.' The words that Keynes had written some years previously counterbalance them perfectly: 'Regarded as a means [the business man] is tolerable; regarded as an end he is not so satisfactory.'[5] Western economies had by then experienced the shock of the Depression of 1929, which, by dragging the whole apparatus of credit and the real economy into the spiral of the stock market collapse, had demonstrated the fragility of an unregulated financial system.

Continental Europe's ambitions of power were finally consumed in the Second World War, but it also saw Great Britain's irreversible loss of supremacy. The United States gained hegemony far and wide, and imposed its economic theories. The capital controversies that divided the two Cambridges between the 1950s and the 1970s – a series of long-harboured resentments that had never been openly expressed before – only highlighted the breach that now existed between the economic cultures on either side of the Atlantic. On the other hand, once the emergency of the inter-war period was over, British economic thought was searching for a long-term view, and it was natural it should look to the values of its own past.

In 1973, Daniel Bell immortalized the eclipse of Fordism in his *The Coming of Post-Industrial Society*,[6] and it represents a good point to arrive at. This is not so much because of the need to create a break so that the present and past can be placed in their right perspective. But the decline of the world of the factory and manual labour, the diminishing contraposition between wages and profits, and the fact that the very concept of 'social class' continues, still today, to lose its connotations have brought the period that began with Ricardo and Marx to an end, at least in the developed world. This, however, does not mean that the history of capital is finished. Such a conjecture would not be realistic for a category that manifestly proves to have such a capacity for transformation and adaptation. Hence, for some time the talk has been of human capital, social capital, institutional capital and so on. Perhaps the irresistible rise of ecology, which is going hand in hand with what

remains of industrialism, will tomorrow bring the idea of 'environmental capital' to the forefront.

Nor can it be said that final solutions have been found for the great problems that have typified the relationship of man with wealth for many centuries, and which can be summed up in the triangle of production, distribution and money. One change that has taken place, however, which started in the 1970s, has been in investigative attitudes. Making of economics an 'imperial science', allowing a mainstream in the service of an ultraliberal ideology to prevail, removing the ethical basis of economic discourse and replacing it with operational concepts or facile epistemologies which have arisen out of the degeneracy of pragmatism have resulted in constructive debate being stifled, and the way opened to a desolate state of rudeness. Economic thought, in its turn, is a reflection of the more general state of politics and society. As Carlo M. Cipolla had feared,[7] the extraordinary development of technical knowledge and techniques has not gone hand in hand with corresponding progress in the cultural and civil spheres. Nowadays anyone can read and write; the tragedy is that the average level does not go much further than this. Never has the mirage of a new Humanism seemed so far.

This is not a retrospective work on economic analysis, but a study on the intellectual and cultural history of economics. In other words, it has no interest in establishing the innovative scope of a theory, an always questionable exercise in any case. It rather aims to understand how a model of thought emerged at a certain time and in a certain place, why men asked themselves some questions and not others, and finally how they provided certain solutions to contemporary problems and not others. This entails an endeavour to put economic ideas into the context of the history of facts;[8] but since such facts are embedded in the collective mentality,[9] they have to be understood as processes taking place over the *longue durée*. There is no lack of fine examples of intellectual history, especially in recent British historiography (and among others the works of Donald Winch, Gareth Stedman Jones, Julian Hoppit, Frank Trentmann and Richard Whatmore come to mind).[10] But to this day, there has been no systematic effort to recast economic thought in its cultural mould, like the approach followed by cultural history.[11] Perhaps in this respect we can also learn something from historians of political ideas, not unlike the recommendations of Daunton and Trentmann in an insightful essay.[12] We have the masterly example of Peter Laslett, whose study of the genesis of Locke's thought is a counterpart to his enquiry into pre-industrial social structure, both being carried out

with equal sensitivity. This was even before Quentin Skinner's appeal for 'ideas in context', and is both a stimulus and a consolation at the same time.

I have chosen the evolution of the idea of capital as my theme, and its proper study needs to cover a period of five centuries and adopt a particular interpretative slant. As John Hicks writes in the preface to the final volume of his – unintentional – trilogy,

> Capital (I am not the first to discover) is a very large subject, with many aspects; wherever one starts, it is hard to bring more than a few of them into view. It is just as if one were making pictures of a building; though it is the same building, it looks quite different from different angles. As I now realize, I have been walking round my subject, taking different views of it. Though that which is presented here is just another view, it turns out to be quite useful in fitting the others together.[13]

This task has been made even more difficult by limitations of space, as well as by the self-imposed brevity that I hope is to the benefit of incisiveness. Likewise, it has meant ruthlessly selecting authors and material, and indeed the type of sources themselves (with, for example, academic rather than literary ones being chosen). Therefore it should come as no surprise if authors – who from a strictly analytical point of view have brought important developments, but who have not added anything essential to the proposed debate – are either missing or have been condensed.

In recent years, circumstances have led me to deal with questions relating to the facts and economic thought of periods that are very distant from each other. While, on the one hand, this has enabled me to acquire familiarity with a great diversity of sources, on the other, it is still no guarantee of success in the enterprise.

# 1
# Capital as Money: The Emergence of Modernity

In the same way that the concept of social mobility was unknown to classical antiquity so too was the concept of capital unknown, whatever one means by it (but in any case goods or money invested in order to advance personal or collective wealth). Plato, Aristotle, Cato the Censor, Cicero, Seneca and Plutarch all reviled 'usury' (which, like the word *foenus*, signified interest in a general sense). The Greeks and Romans were certainly acquainted with money, but they did not conceive of the idea of systematically making it bear fruit, and they mistrusted anyone who acquired a fortune suddenly or unexpectedly. In the town squares, forms of consumer credit were practised but the need to finance production was not felt in any way. Such activities did not involve free citizens (*cives*) but freedmen, and were generally stigmatized. Trade was considered a necessary evil rather than an activity to be encouraged, and the intellectuals held various attitudes ranging from disgust to resignation. By contrast, the autarchic ménage of the farm founded on slave labour was extolled above all else and, once basic needs had been provided for, *otium* was considered preferable to *negotium*.[1]

Looking at the concrete aspects, and bearing in mind the large numbers of demography, the material life of the Middle Ages and the early modern period could not have been very dissimilar from the past. Changes took place in the political circumstances and in the form of states, as well as in juridical affairs; after the break-up of the Roman Empire, slavery was followed by serfdom, followed in its turn by free labour in guilds. There were changes in the models of authority; the Church remained the one source of universal power and controlled the transition from late antiquity. Art, culture and literature declined and had to wait until the new millennium before resuming their former importance, and only with Humanism would the past once again be

equalled.[2] The modest life expectancy of the population was still related to precarious conditions in food, hygiene and health; neither did official medicine go very far, based as it still was on the authority of Galen and his theory of the humours. There were certainly no improvements in the state of technical skills, in which the Romans had been unequalled masters; the greatest change was perhaps in their more intensive use, with basic machines, such as the water mill, being adopted. With time there was also a growing tendency to gain knowledge from the East.[3] But it was still agriculture, as in all pre-industrial societies, that provided Europeans with no less than 80 per cent of the product of their economy.[4] It was a subsistence agriculture requiring slow rotation systems, and which made use of rudimentary tools and methods; at times it was not even able to guarantee subsequent harvests and thus triggered off subsistence crises.[5] Those engaged in this sector also consumed the goods deriving from it that they produced for themselves. Thus for the most part exchanges did not take place through the market and did not make use of money; the relationship that the peasants had with money was often reduced to paying tributes, and even these could at times be paid in kind.[6] Besides, the market somewhat differed from how we know it today, regulated as it was by public authorities that fixed maximum and minimum prices and made sure of the correct profit.[7]

But during the late Middle Ages signs of something dynamic, which deviated from the usual scheme of things, were beginning to stir the sluggishness of traditional economic organization. First the cities of central and northern Italy[8] and then Flanders – the relatively more urbanized areas of the continent – played an active role in the birth of commercial capitalism,[9] credit and finance.[10] Only a very small minority of the population was involved in such activities: 'they were . . . ''marginal'' people mainly acting on the fringe, and beyond the fringe, of the moral norms concerning wealth and the use of money; men who had become prodigiously wealthy and who shunned the ethical and social commitment to munificence observed by the aristocracy'.[11] Be that as it may, in the second half of the thirteenth century, Mediterranean trade gained vitality and flourished between the fourteenth and the sixteenth centuries[12] and with it developed the systematic use of money in specific situations.

Between the late Middle Ages and the Renaissance the idea that wealth could be gained from money began to make headway. This could hardly be otherwise in an economy which was prey to the vagaries of nature and whose participants were glad to merely survive. And as K. Pribram writes, 'pursuit of gain was rationalized when Italian merchants of the

second half of the fourteenth century learned . . . the art of systematic bookkeeping in double-entry form'.[13] Thus the association of gain with money first started with the trade of commodities, and went by the name of profit. But were there other more direct ways of making gains out of money?

In the Middle Ages, interest was banned by the Church. On the one hand, there was the biblical dictum *Mutuum date nihil inde sperantes* (Luke 6: 35), and on the other, Albertus Magnus's maxim *Pecunia pecuniam non parit* encapsulating the Aristotelian doctrine of the sterility of money, whereby it was unnatural for it to bear fruit, since being inorganic it took no part in organic life. Aristotle considered money as a means and that it should never be made the end of economic activity (*Politics* I, 1257b, 1258b). Thomas Aquinas also took a very negative stance and held the view, perhaps more laboriously, that loans on interest were a violation of the principle of justice underlying the contract of exchange and thus a way of defrauding one of the contracting parties (*Summa Theologiae* IIa-IIae, q. 78).[14]

This prohibition remained officially in force during most of the early modern period. However, in the sixteenth century it was gradually undermined by papal rulings, as well as by the theoretical elucidations of theologians and jurists that sought to get round it. Thus by the seventeenth century it could be said to have lost its influence. Yet no norm, whether religious or civil, could prevent anyone from making a profit from the exchange transactions that fed the system of fairs that flourished during the fifteenth and sixteenth centuries,[15] and which in the seventeenth century still had a certain importance. It is no accident that even usurious practices were often camouflaged behind such activities.

All these transformations collectively developed in Mediterranean Europe and in Flanders more rapidly. They started to affect England only at the eve of the modern era in the sixteenth century.[16] At any rate, until the mid-seventeenth century the most important and sophisticated economic treatise-writing was still associated with Mediterranean Europe.

## Before capitalism: The prehistory of a word

The term 'capital' appears in the Romance languages around the twelfth century. In the laws of William the Conqueror, *chetel* indicates 'goods, property'. *Chetens* is used in a similar sense by Chrétien de Troyes in about 1165. Around 1260, *chetiex* certainly referred to 'cattle'.[17]

Hence the variations of the vernacular word *chatel* in Old French could indicate assets, movable goods and especially cattle.[18] It was a popularization of the Medieval Latin *capitale*, a word which had been transformed into a noun out of the classical Latin adjective *capitalis* ('important', 'principal' and so on)[19] and meant the 'principal substances', that is a person's belongings.[20] Similarly, the word *capitale* appears in documents in the early period of the Italian language: '*Ma con più struggo, più son avviato/di voler far di nuovo capitale*', writes Cecco Angiolieri (1260–1313), and Iacopone da Todi (1230–1306) uses it figuratively in his verse '*C'aio granne capetale*'.[21]

The use of the word 'capital' on the other hand entered early modern English later. It was probably introduced into the British Isles with the growing influence of Renaissance taste. In Randle Cotgrave's *Dictionarie* of 1611 it is still clearly identified as a Gallicism and paraphrased as 'wealth, worth; a stocke, a man's principall, or chiefe, substance'.[22] In the late 1630s we do find it in the *Reliquiae* of Sir Henry Wotton, and in 1647 in Edward Hyde's *History of the Rebellion and Civil Wars in England*.[23] In fifteenth- and sixteenth-century English the noun most used was the word 'stock', of Saxon origin. In a 1463 fragment of the Bury St Edmunds *Wills and Inventories* and in the *Somerset Chantries* of around 1547–1548 this term generally indicated a sum of money, or a sum of money to be used for specific expenses. A parallel development was the use of the word 'stock' in the sense of ownership of cattle. Thus John Fitzherbert in his *Boke of Husbandry* (1523) writes, 'It is conuenient, that he rere two oxe calues, and two cowe calues at the least, to vpholde his stocke.'[24] This meaning remained unchanged during the seventeenth century: 'This poore man had a cow twas all his stocke', writes Samuel Rowlands in 1608.[25] It was not until the late eighteenth century that the word 'stock' acquired the sense of something productive (real assets capable of generating real profits and not simply a reserve of goods to be taken care of) and so a distinction could be made between 'live stock' (animals bred for profit)[26] and 'dead stock' (tools and seeds). This would confirm that the hope of gain, before then, was to be found in other means.

## Middle Ages and Renaissance

Besides the two meanings given above, a further meaning connected with trade and credit made headway in central and northern Italy between the thirteenth and the fourteenth centuries. It referred to capital (again from *caput*) as 'the main part of a property in terms of money,

in relation to the interest'[27] or profit, which was its yield. The expression '*prode* [interest] *e kapitale*', associated with a promise to pay, recurs in thirteenth-century mercantile documents.[28] A Tuscan text of 1211 reads, 'if he does not pay, then Orlandino the leatherdresser promised to pay us *prode* and capital, as much as they shall amount to';[29] and again, a note in the collection *Nuovi testi fiorentini* (1255–1312) states: 'He has to give us £. 4 and s. 8 in capital and *merito*.'[30] Similarly, Giovanni Villani (1280–1348) records, 'The Bardi were to receive more than nine hundred thousand gold florins from the King of England in capital and the supplementary gifts he promised.' The *Cronica* (1367–1370) of Donato Velluti gives a good example of the clear distinction between capital and yield: 'In the space of a short time they lost the capital and what they had gained from it and returned home with far fewer possessions.' Lombard Matteo Bandello (1485–1561) is even more explicit: 'At the fixed term around fifteen thousand ducats were recovered. And if Frescobaldo had wanted the interest that had matured over such a long time he would have had all of it right down to the last penny; but he was happy with the capital and did not want any interest.' Similarly, Benvenuto Cellini (1500–1571), in referring to an income, says, 'return my capital with the yield from it, or in other words . . . continue to let me have my commission'. Yet again, Torquato Tasso (1544–1595) and his exclamation: 'But what are four hundred scudos, wanting to enjoy the yield and not consume the capital?' Finally, Galileo Galilei (1564–1642), who resorted to a mercantile metaphor to describe the concept of infinity, questions, 'And who is so inexperienced as to not understand that if we call a gain of a thousand out of a hundred big, . . . then the gain of a thousand out of nought has to be called infinite rather than nil?'

The new meaning spread from Italy to France due to the fairs and the movement of bankers. In 1567, *capital* appears in the *Nomenclator* of Junius as '*principal d'une dette*, *d'une rente*';[31] in 1606, it is to be found in Jean Nicot's *Thresor* as monetary goods collectively for mercantile use.[32] The first edition of the *Dictionnaire de l'Académie Française* at the end of the century (1694) states, '*Il signifie . . . le sort principal d'une dette*', and gives the following example: '*Il a payé les interests, mais il doit encore le capital*.'[33] It is worth noting that this definition (including the example) remains the same until the fifth edition of the *Dictionnaire*, in 1798.[34]

This meaning of the term, the first authentically 'capitalist' one, also spread to England in the sixteenth century. However, the English preferred to continue to use the word 'stock' to describe the same case in point. The term 'stock', just like *caput*, indicates the origin or principal part ('stock' is also the 'trunk of a plant' as opposed to its branches and

foliage).[35] In the *Pilgrimage of Perfection* of 1526 an evocative metaphor of the fruitful power of money capital is given: 'That rychesse he hath gyuen to vs as a stocke to occupy in our dayly exercyse, for the profyte of our owne soules.'[36] There is a mercantile image in the *Fraternitye of Vacabondes* of John Awdelay (1561): 'Some yong Marchant man or other kynde of Occupier, whose friendes hath geuen them a stock of mony to occupy withall.' In the *New Custom* of 1573 there is a clear distinction between the concepts of stock and flow: 'The heyre Had substanciall reuenewes, his stocke also was faire.' In the *Register of the Privy Council of Scotland* we find the following instruction (dated 1581), which associates capital with the profit from a mint: 'To . . . redeliver the same [gold and silver] cunyeit to the said maister Thomas in prentit money, stok and proffite.' In Sir Walter Raleigh's *History of the World* (1614) the idea of income as a constituent part of a money capital emerges: 'He thinkes that all this is too little for a stock, though it were indeede a good yearlie Income.'

It is important to underline that in the deeds for establishing companies (not only commercial ones) drawn up in different parts of Europe between the sixteenth and the eighteenth centuries, the term 'capital' never indicates tools or machinery, but money. Even in cases where equipment of a certain complexity is mentioned the word 'capital' appears separately to indicate a certain amount of liquid money. It is the case, for example, in one of the agreements of 1588 between the Duke of Mantua Vincenzo Gonzaga and Master David Gaugher for setting up a mint that envisaged the installation of a hydraulic press and other equipment such as minting dies and punches.[37]

## A modern disenchantment

Before venturing into the world of theoretical thinking, it is worth pausing for a moment on the mentality of that tiny fraction of the population within a traditional society given to capitalistic gain. It should first be said that no matter how rich a person was, he could not afford the luxury of living in a state of general disapproval. In 1638, at a time when many of the religious prohibitions had been dropped, including the one against loaning on interest, it seems indicative that the Genoese Giovanni Domenico Peri still felt it necessary to point out that his handbook on trade, *Il Negotiante*, was addressed to the 'Christian merchant'.[38] Almost four hundred years had gone by since the words '*In nomine Domini*, *amen*' appeared as the *incipit* to the *quaderno dei kapitali* of the company owned by the Pistoia merchants Boni[39] (one of the first trading

companies we know about), but the need to gain legitimacy by stating that one's activities conformed to the principles of divine justice still remained. Thus the money loan was confirmed officially as being free of charge, the gratitude of the beneficiary being duly acknowledged.[40] Interest was restricted to cases of payment in arrears (*dies interpellat pro homine*) or protest, and was part of the copious casuistry of the *damnum emergens*.[41]

Peri grouped the systems of gain into two categories: trading in goods and trading in money by means of exchange.[42] He considered the former as being more noble (thus defending the prerogatives of his colleagues) but granted the full legitimacy of the latter.[43] The merchant he praised in the *Negotiante* moved goods over long distances. This form of mediation between two parties (demand and supply) that were unseen and unknown to each other permitted wide margins for gain. In order to limit the risks and compensate for possible losses the capitalist diversified his activity by operating in several sectors; his centre of business varied, changing with each significant deviation in the rate of profit. Commercial capitalism lived a conjunctural existence, as Braudel fittingly argues.[44]

Trading in money took place at the exchange fairs, which were the centre of the international payment system in the early modern period. Merchants and bankers gathered at these fairs four times a year to balance debits and credits, and it was only in the sixteenth century that such institutions became completely separate from the goods fairs (which in Champagne had been active since the twelfth century) and focused on financial operations. Thus in 1534, at the behest of Charles V, the 'Besançon' fairs were founded; they would replace the Lyons markets that had thrived in the second half of the fifteenth century. The bill-of-exchange transactions were the most common source of gain. It should not be thought that it was a simple exchange, which provided only limited opportunities for gain if carried out in the open. The most perfected and controversial method was the *ricorsa* exchange,[45] involving a series of correlated exchange and re-exchange transactions that were secure against loss. A procedure known as the *continuatione* ('protraction'), which postponed the deadline for settling obligations from one term to another when the next fair took place on another market, could be integrated into it with the aim of optimizing the result. The calculation was based on the potential monetary prospects arising out of the actual or expected situation of the demand and supply of money. If there was no 'protraction' and thus no real need to transfer capital from one place to another the same effect could be obtained by a series

of simulated *ricorse* that made use of invented drawees: the transaction was then known as a 'dry exchange' but was considered contrary to all professional etiquette.[46]

Peri devotes pages of surprising modernity to these themes, especially in Chapter 8 of Part II, entitled *Se il Danaro può fruttar Danaro* ('If money can make money'), and in Chapter 35 of Part IV, *Danaro come produca frutto* ('How money produces a yield'). In his view money could not be compared to plants in order to conclude that it did not bear fruit. They were two ontologically different things: plants do not require human intervention for them to bear fruit but they require nourishment from the soil and the light of the sun; money, on the other hand, is totally indifferent to nature but depends on someone to '[transport it] from one place to another'.[47] The same argument (money as a social convention or institution) that Aristotle had put forward to prove the sterility of this instrument, by emphasizing its role as a measure of value, was now used against him. Peri and his contemporaries clearly realized the need for a theory of money that separated its intrinsic properties from its extrinsic worth. They found their standard-bearer in Cardinal Tomaso de Vio, known as 'Cajetan' (1468–1534). He had got round the strict doctrinal rulings of early Scholasticism by maintaining the principle of the 'double potency' of money. The latter had an intrinsic content (of gold and silver), belonging indisputably to the natural world. Precious metals can be exchanged in the same way as goods; like any other mineral, however, they will not bear fruit. But money also contains a second 'potency':

> Which money does not have in itself, but inasmuch as it is subject to the industriousness of the merchant .... This potency of money is said to be 'artificial', because it derives from human artifice, and 'proximate', because it approximates gain to money.[48]

Gold and silver, in short, may well be products of nature, but money as such is a thing of man. Having paid his due homage to the Aristotelian–Thomistic tradition, the Dominican theologian mentioned by Peri held a position that rather winked at the line of thought outlined by the Florentine Neoplatonists in the fifteenth and sixteenth centuries. It is worth noting here that the followers of Marsilio Ficino (1433–1499) were early witnesses to a logic whereby, in the name of the market, growing levels of urban economies were moving away from self-consumption and exchanges mediated by personal relationships. They explained this by arguing that 'alongside a natural world whose

function is to foster organic life, man, because of his . . . weakness, has had to build another for himself – a second nature – so that he can live appropriately'.[49]

Thus the productive power of money did not lie in its mineral substance but in its second nature as a human thing. It had to depend on a number of external conditions, such as the abundance or scarcity of money in relation to time and space, and the ability of the merchant or exchange broker who used it in his dealings. According to Peri this was why the gain was greater for one person than for another, in one circumstance rather than another, on one market rather than on another, and so on.[50] This dichotomy was fostered spontaneously by the early modern monetary system. It envisaged the existence of 'imaginary money', an ideal money of account, alongside the real currencies; thus it was never directly possible to establish how many grams of gold or silver a pound was worth at any given moment.[51]

A lucid, non-religious and detached reflection on the financial capitalism of the period is given by Bernardo Davanzati in his *Notizia de' Cambi* (1582). In principle – writes the Florentine scholar – exchange 'is nothing other than giving so much money to someone here, so he can give you the same amount elsewhere or get his agent to give it to yours'. But what was at first done 'out of pure convenience to make trading smoother' with time became an opportunity to make money for its own sake. Merchants began to 'open their eyes and see that during the period between one payment and another, they could benefit from the money they were holding that belonged to someone else, and it seemed honest to give interest, or *quanti interfuit*'. Thus

> the greed for this gain has converted exchange into an art; money is given in exchange not out of any need to have it elsewhere, but to get it back with gain; and vice versa money is taken in an exchange, not out of any need to transfer money from somewhere else, but to use money belonging to another person for a certain period against payment of interest; and St Antoninus, Cajetan, and the other theologians allow this practice for reasons of common convenience, among others.[52]

Davanzati seems to mean that if people did not treat money as a commodity itself, the mercantile system would be seriously compromised. Indeed without the incentive of a revenue, exchanges would dwindle, capital would be withdrawn from the market and trading would become difficult. He viewed the advancement of a trading society positively, and

recognized the opportunities for the mutual enrichment of citizens and splendour of the republic that lay in the interaction of exchanges. He thus correctly anticipated the thesis of Bernard de Mandeville[53] regarding the 'private vices and publick benefits' that were to back up Adam Smith's doctrine of the heterogenesis of goals:

> In this way, even if the intention of individual exchange brokers is not so good, the resulting universal effect is good: and nature is ready to allow many small evils for a great good.[54]

However, outside the context of the Renaissance the idea of invoking a higher end to justify the means, the equivalent ideal in Niccolò Machiavelli's political science,[55] was not readily accepted. In 1532, for example, 15 scholars of the University of Paris, called on to legitimize them, pronounced against the methods used by Spanish merchants at the bourse in Antwerp: 'public usury', they asserted, 'may be necessary but does not thereby become lawful. No one is obliged to supply the community with more than he rightly may, and if a man trades beyond his means he is not absolved from sin when he takes money in exchange for the purpose, any more than the lender is absolved from usury, since both serve the community. It is never lawful to do evil, even though good may follow.'[56]

## Economics and theology: The long sixteenth century

This brings us to the theoretical debate of the period. Many problems that were to become fundamental in the sixteenth century were first confronted in the fifteenth in the new spirit. St Antoninus of Florence (1389–1459), Cajetan's predecessor and another Dominican, deserves a special place; he took up the theses of his Franciscan contemporary St Bernardino of Siena (1380–1444), perfected them and spread them more forcefully.

According to St Antoninus interest could be permitted when a loan was given so that some business could be undertaken; this particular case in point was developed within the traditional framework of *lucrum cessans* and *damnum emergens*, which, along with *poena conventionalis*, formed the Scholastic loopholes against the ban on usury. Even so, in this circumstance money ceased to be sterile. But St Bernardino also held the belief that the chance to use money to invest it in some way increased its value, and that this potential could be sold.

In the second place, gaining from an exchange could be considered legitimate in that it was payment for the 'work' of the exchange broker. Maintaining a thesis of this sort certainly involved some impossibly awkward explanations, and only the use of Latin could allow it to be done elegantly:

> Illud ergo plus quod recipit campsor non recipit ratione mutui, quia ibi non est mutuum . . . sed ratione laboris quem subiit in numerando pecuniam . . . . Unde de se tale cambium est licitum.[57]

On the other hand, it was not possible to condemn business as it is in the nature of man to best express himself through industriousness. In affirming this St Antoninus felt safe in an Aristotelian stronghold: '*frustra est potentia quae non reducitur ad actum*'.[58] Thus exercising one's skills, as long as they were linked to temperance and good faith ('*bona conscientia*'),[59] was translated into honest gain ('*moderatum & iustum lucrum*').[60]

Let us return to the theory of Cardinal Cajetan, this time on the theme of exchange. He set out to provide a rational justification for the difference in value between money loaned and received, which for the *campsores* was a source of gain. If money from market A was advanced so that money on market B could be drawn in a bill-of-exchange transaction it was, in his view, legitimate to pay a smaller sum on A for a greater sum on B, since 'absent money is always worth less than present money'. Another valid argument could lie in the principle of purchasing power parity that flourished with the later authors: a specific sum acquired where money was in short supply could be considered equivalent to a larger sum if the contract called for its return to a market where money was in abundance.[61] It is not without significance to note, as M. Grice Hutchinson has done, that profit originating in this way was not attributed to the time differential (*differentia temporis*) separating the two operations, but to variations in conditions in the money market that had taken place during the intervening period.[62] This view, which gave greater emphasis to the *differentia loci* (a real physical distance between markets) to explain the evaluation of money, was shared by another famous Dominican, Silvestro Mazzolini da Prierio (1456–1527), professor at Padua and Master of the Sacred Palace under Leo X, and perhaps better known for his anti-Lutheran drive.[63] Such an approach was more prudent than to bring time into the equation. If time was to become a sufficient condition for interest then the risk of legitimizing fictitious exchange and its deceitful artifices would not be too far away. For this reason Prierio pinpointed a simple criterion to justify whether the profit

was legitimate or not: verify whether there had been actual variations in the exogenous conditions (of demand and supply) on the credit market in the period between the beginning and the end of the transactions; if not, then it was a case of dry exchange and to be condemned without hesitation.[64]

The first generation of theologian economists who brought the School of Salamanca into being were also Dominican, and the greatest exponents of the Spanish 'Second Scholasticism' gathered there. Its founder, Francisco de Vitoria (c. 1486–1546), had long meditated and commented on the work of St Antoninus of Florence.[65] Domingo de Soto (1494–1560) explicitly took up the ideas of Cajetan in maintaining that it was appropriate to consider the relative abundance or shortage of money on markets when fixing exchange rates.[66] Soto was also one of the first to give his unreserved approval for banking: the very fact of putting money at the disposal of the banker to allow him to carry out his business made it legitimate to expect adequate interest from doing so.[67] But Martín de Azpilcueta, known as Navarrus (1493–1586), was perhaps the most brilliant theorist. He roundly criticized the thesis of Aristotle regarding gain from money and, without forgetting to pay the required reverence, made it clear he did not follow the same line as Thomas Aquinas.

In a well-known passage from the *Comentario resolutorio de usuras*, he writes,

> It is [not] true that using money to gain profit from an exchange is contrary to nature. Even if this is not the primary and main function for which it was invented, it is nonetheless an important secondary function. Trading in shoes for profit is not the purpose for which shoes were invented . . . , but that is certainly not the same as saying that trading in shoes is contrary to nature.[68]

Navarrus was convinced that financial activity benefited the commonwealth and thus invoked the primacy of the common good. In order to legitimize it from the individual point of view as well, which mattered as far as the salvation of souls was concerned, he hinged on a very liberal interpretation of the loophole left open by Aquinas, which generally envisaged the acceptability of gaining profit from economic activity solely for the upkeep of the family.[69] The same controversial attitude towards the *auctoritates* is found in Tomás de Mercado (1530–1576), perhaps a less-refined author, but who is undoubtedly the School's best popularizer. He had lived in Mexico for a long time before coming to Salamanca and had gained direct knowledge of mercantile reality.

He had come round to viewing it with non-condescending and sincere admiration.[70]

But many obscure areas in the practice of consumer credit still persisted. This was a matter that embarrassed theologians and was not always adequately controlled by juridical doctrine. Among the most common expedients were the notorious double contract known as the *mohatra*. This was introduced into Spain before the expulsion of the Jews and the *moriscos* and camouflaged usury behind a fictitious sale with extension of payment.[71] Another was Eck's *contractus trinus* (endorsed by Navarrus), which concealed it by means of a mutual insurance agreement.[72] Other common subterfuges in Western Europe included the consignative *census* (setting up an income from the land or buildings of the debtor in the creditor's favour), sales with the right of redemption or loans in kind. These forms were even spreading in the country areas and gaining legitimacy in varying degrees in the sixteenth and seventeenth centuries.[73]

A separate sector in which there were many opportunities for making profit from money was insurance. In this sector the *damnum emergens* had a purely hypothetical basis, not a real one. Certainly the element of risk played a plausible role in the case of transport by sea: a subject that was particularly dear to the Ancona jurist Benvenuto Stracca, author of one of the first treatises on trade law[74] and editor of a large collection of writings on mercantile doctrine and jurisprudence.[75] In particular, the collection contains the treatise on insurance by the Portuguese Pedro de Santarém (Santerna), written in 1488 but published only in 1552. Part of the complex casuistry worth mentioning is the interpretation of the combined insurance and loan contract; in that it referred to the first component, and was thus motivated by the *periculus* ('danger'), and not the second, it legitimized interest.[76]

In summarizing the significance of the changed theoretical position regarding yield from capital during the course of the sixteenth century, the following observations might be made. A closer look shows that the Church's traditional ban on loan with interest lay in an assumption that was never completely made explicit: the fact that it was consumer credit and that it was the needy who resorted to it. Thus besides violating the principle of reciprocity,[77] applying interest on a loan meant exploiting a person's state of need and broke with the underlying arrangement of contractual parity. By definition, the relationship between rich and poor is in fact asymmetrical, as are all power relationships, and in such a circumstance it is not possible to conclude a contract that is not invalidated by abuse of power. At the height of the

eighteenth century the Neapolitan abbot Antonio Genovesi, the first man to hold a university chair of economics, wrote significantly: 'You have the right to give to your brothers on usury . . . *as long as they are not poor*.'[78]

The attitude against these practices changed with the transformation of the economic environment. This process took place over the sixteenth century, when there was growing recourse to credit in order to foster commercial enterprise and the financial activities themselves. In the thirteenth century what allowed Thomas Aquinas in his *Secunda Secundae* to declare the unlawfulness of interest due to the non-existence of the thing sold, money – it must not be forgotten – is that the sum loaned was not to be kept but immediately 'consumed' by the borrower. This basic condition no longer applied the moment investment came into play. Taking this reasoning to its extreme, the interest (of the creditor) was justified by the expected profit (of the debtor). Not to grant it would have meant giving the latter an advantage over the former for no reason. Only in the seventeenth century, however, would this awareness emerge in all its analytical detail, with the Jesuit phase of the School of Salamanca.

## The years of high theory

In her early study on the School of Salamanca of 1952, M. Grice Hutchinson held a view regarding the decline of this traditional line of thought that she never abandoned. She maintained that the later sixteenth century marked the 'St. Martin's summer of scholasticism',[79] and for this reason the trend that continued in the next century could add nothing substantially new to the doctrinal results that had been acquired. The posthumous publication of the *History of Economic Analysis* by J.A. Schumpeter, two years later, traced a rather different picture.[80] Schumpeter had only a limited knowledge of the direct sources and obviously could not see *The School of Salamanca*, but he based his interpretation, which enhanced the seventeenth-century phase of Scholastic thought, on the painstaking work of his student B.W. Dempsey.[81] The figures of three Jesuit thinkers – Luís de Molina (1535–1600); Leonard de Leys, also known as Lessius (1554–1623); and Juan de Lugo (1583–1660) – emerged as being important in an age when the order of Loyola had asserted themselves over the Dominican order as the upholders of the theological orthodoxy of the Church of the Counter-Reformation. Unlike their predecessors, these authors had spent a great part of their lives outside the four walls of the Salamanca *studium* (Molina taught

there only for a few years; Lessius was originally from Antwerp, on the fringes of the Empire, and studied in Rome, which is where Lugo, not yet a cardinal, moved after leaving Spain). Yet their common intellectual filiation is undeniable.

Another misunderstanding that needs to be clarified regards the supposed lack of attention of the later Scholastics towards economic matters *stricto sensu*, which has emerged from a rather hasty reading as a sign of involution. The truth is that the ambition of these scholars was to devote themselves to the chief systems: their main daily occupation was to reconcile the doctrine of grace with the principle of free will and they confronted problems of political philosophy such as the bases of natural law, the prerogatives of sovereignty and so on with equal nonchalance. Authors, like Suárez, Mariana and Arriaga, who dealt mainly with these subjects anticipated not a few of the cardinal principles of the Enlightenment and created the premises for the success of Montesquieu in Spain, for example.[82] In the search for total knowledge there was naturally also room for economics: a secondary place perhaps, but after all economics has emerged only recently (in the last two centuries) as a gauge of social behaviour.

We now come more directly to capital theory to see which underlying traits can be explained. Molina, Lugo and Lessius held a common conception of money leading to gain at the same time as it 'worked'. This happens when it is invested. The Salamanca scholars called investment capital *instrumentum persistens lucri*, or capital that creates profit. In this case the interest was meant as the participation in the borrower's profit (*pars lucri*).[83] In order to make this principle more general they followed a simple logical scheme. If one accepts that (a) a merchant, who possesses money through his business, can legitimately claim (or, in the converse case, has to pay) interest calculated according to the expected gain, then proposition (b) follows: once it has been proved that the possibility of gain from handling of money is general – that is, something resembling a credit market exists – then anyone, even if he is not a merchant, will be subject to the rate of interest that is fixed by the market.

We shall begin with Molina's *De justitia et jure* (1593–1614). On the subject of exchange,[84] Molina confirmed the principle of the purchasing power parity, but did away with the constraints of *differentia loci* and *differentia temporis*. Exogenous conditions, he noted, can cause the purchasing power to fluctuate not only from one place to another, and from one moment to another, but even in the same place and in a very short space of time ('between the beginning, the middle and the end of a fair', he writes, 'there is a variation in the number of those who require

money and want to exchange it for foreign money, and a similar variation in the supply').[85] In this way legitimacy was given to instantaneous speculation, without any further need to resort to 'protraction'.

On the question of usury,[86] Molina took up the ideas of Juan de Medina (1490–1546), who had defended interest as the reward for the risk borne by the lender. He greatly increased the casuistry regarding potential *damnum emergens*, and also that of *lucrum cessans*, which was applicable to the context of a mercantile economy.[87] The only restriction should be the subjective psychological attitude: interest was not considered legitimate where a lender otherwise had no intention of investing the money.[88] But by now it was clearly only a case of conscience.

In 1605 Lessius also put forward further arguments for *lucrum cessans*.[89] He argued that since everyone's possessions were naturally all mixed up in the portfolio together, it was impossible to distinguish the part that was to be profitably invested from the part that was to remain dormant. All the more so as opportunities for investment could always arise, and to lend a portion of one's assets could involve the need to subtract another portion from being invested. Capital as a whole should thus be considered subject to *lucrum cessans*: 'since all collectively are the cause, the burden of compensation for this [lost] profit can be distributed to single loans, according to the proportion of each'.[90] Therefore, while the ban on usury was officially repeated, and now reduced to what M. Rothbard has significantly defined as a 'hollow shell', in practice the activity of any class of lender was endorsed.[91]

Similarly, a very liberal interpretation of *damnum emergens* was given.[92] If in this case the legitimacy of claiming interest derived from the fear of losing money, it only reflected a subjective belief, regardless of whether it was well founded or reasonable. Moreover, the argument regarding risk[93] that Medina and Molina had put forward was encapsulated within a practically all-inclusive casuistry: all loans involved the risk of insolvency. No transaction could be considered immune, especially impersonal ones between agents who were not bound by relationships outside the market (an increasingly frequent circumstance in the Flemish system of credit).[94]

Yet another form of loss was the hypothesis of *carentia pecuniae*,[95] an argument considered by some historians, not without reason, as being an early formulation of the principle of the liquidity preference.[96] Depriving oneself temporarily of one's own money was a loss in itself as it became impossible to adequately confront unexpected situations whose extent is by definition unknowable. For the same reason the interest rate needed to be commensurate with the duration of the loan, being higher for long-term loans.[97] The existence of a (regulated) credit market, according to

Lessius, also avoided the need to estimate the interest rate of each loan in relation to its opportunity cost: the rate should be fixed in good faith for everyone in the same way, as the just price of money.[98]

In his treatise of 1642 Juan de Lugo did not follow Lessius along the daring path of *carentia pecuniae*, guessing its destabilizing potential. On the other hand, he went even further in broadening the range of exceptions to an unlikely extent.[99] The loss of gain should also include the loss of compensation, not only for the likely profit but also for the remote profit. By analogy, the *damnum emergens* was inherent in every loan: indeed where could one find a less risky place for money than in the pockets of its rightful owner?[100]

These theoretical results also had considerable impact beyond the confines of Catholic Europe. There is proof that the Dutch Hugo Grotius (1583–1645) and the German Samuel von Pufendorf (1632–1694) took up the Salamanca School's doctrine of contracts.[101] Moreover, it is thought that in seventeenth-century Italy, much of which was under the political domination of Spain,[102] the literature on exchanges, usury, just price and contracts inspired by the Iberian model accounted for over a third of all the writings on economics (with the common use of Latin facilitating the widespread availability of original texts).[103] Particularly interesting examples as regards the analogy of content are the 1618 *Tractatus* of the Genoese jurisconsult Sigismondo Scaccia,[104] and the 1623 *Digressio resolutoria* of Giacomo Ferrario (which finished by justifying all loans with interest as long as their aims were legitimate).[105]

A further means of spreading the Jesuit economic casuistry were the handbooks for the use of confessors, a famous one of which was the one by Father Escobar. These handbooks must have had a profound impact on French public opinion if Blaise Pascal went to the extent of directly attacking them in his *Lettres Provinciales*, where the '*horrible renversement*' of the traditional ethics of the Church was criticized by the near-Jansenist intellectual.[106]

# 2
# Land and Labour, 1650–1800

Around the middle of the seventeenth century in Northwestern Europe economic thought was gradually becoming less concerned with monetary issues; even in the field of art money was being represented less frequently. The nightmares of the Flemish painters and the torment of their subjects, poised in a never-ending tension between the spiritual and the worldly, gave way to the geometry of rural landscapes and the reassuring routine of scenes depicting themes like work and trade.

This change in the collective imagination, which had begun to associate the production of wealth with the cultivation of the land, took place at a time when signs of the agricultural revolution were starting to appear, first in Flanders and then in England, and would continue during the period when the splendour of the French monarchy was at its height. The agricultural revolution (see Chapter 3) was mainly the process of exploiting the soil in a more rational way by superseding the fallow system, introducing new crops and breeding animals in stables, which led to a steady increase in yields. Eighteenth-century France, for its part, achieved harvests that were unequalled in Western Europe,[1] thanks to the broad extent of its cereal crops and despite the relatively backward nature of its agriculture, as the Englishman Arthur Young noted at the end of the century, not without a touch of patriotic pride.[2]

The take-off of English agriculture in its turn was to play a fundamental role in the growth of the industrial revolution until the second decade of the nineteenth century, when links between the primary and the secondary sectors (traditionally reflected in the multiple activities of the rural population) were finally broken. This would be followed by urbanization on a massive scale and the pre-eminence of industry, which would occupy first place in the British national product (in 1821, 32 per cent, as against 26 per cent of agriculture).[3]

While all this explains the importance of land as a factor of production in contemporary opinion, labour came to be the other contender in the economic literature. Some of the most frequently recurring questions concerned its role in land product and improvement, and later to what extent it lost in efficiency with the intensification or expansion of cultivation, and finally how it could be developed and promoted. In this perspective the role of capital as a source of wealth would appear to sink into obscurity, but such an eclipse is only apparent. In the next chapter we will witness the return of capital to the scene after it has undergone the first of its metamorphoses, which led to its reinterpretation in the light of its auxiliary role to agricultural labour and which conferred a new importance on it in Western thought. Now it had a productive importance, no longer a financial one.

## 'Money is the fat of the body-politick'

In a reply to his former mentor Thomas Hobbes – who, following the Italian Renaissance tradition, had compared money to the blood of a state, extolling its importance for the workings of the economic and political system[4] – William Petty, in 1664 (13 years after *Leviathan* was published), used a far less poetic metaphor:

> Money is but the Fat of the Body-politick, whereof too much doth as often hinder its Agility, as too little makes it sick. 'Tis true, that as Fat lubricates the motion of the Muscles, feeds in want of Victuals, fills up uneven Cavities, and beautifies the Body, so doth Money in the State quicken its Action, feeds from abroad in the time of Dearth at Home; even accounts by reason of it's divisibility, and beautifies the whole, altho more especially the particular persons that have it in plenty.[5]

It was the end not only of a metaphorical model, but also of an era – the early modern period – during which money had marked the separation of the sphere of the market from the overriding one of self-consumption.[6] At the same time it had been central to the activities of commercial capitalism and had thus almost completely occupied the reflections of the early economists. Petty intended to trim down that symbol, relegating it to an accessory role in the new science, which was to be concerned not so much with exchange as with the production of wealth. In the passage quoted 'fat' is not, in any case, meant in a derogative sense. It should

be remembered that in pre-industrial societies it was a sign of abundance, and Petty's description significantly associates the rotundities of the body with beauty, in the typical fashion of the figurative arts of the period. Yet the fact remains that the life and death of the body politic do not depend on 'the fat' (money), only its relative level of well-being.

Elsewhere, though without denying the importance of the *numéraire* as a measure of value, Petty wrote that the best way to measure wealth is in real terms; in the final analysis, wealth should be associated with a given quantity of land and labour:

> Our Silver and Gold we call by severall names, as in *England* by pounds, shillings, and pence, all which may be called and understood by either of the three. But that which I would say upon this matter is, that all things ought to be valued by two natural Denominations, which is Land and Labour.[7]

This is because each good is the product of natural resources and human toil:

> Forasmuch as both Ships and Garments were the creatures of Lands and mens Labours thereupon . . . we ought to say, a Ship or garment is worth such a measure of Land, with such another measure of Labour.[8]

Thus the real blood and nourishment of the body politic coincides with the 'product of Husbandry and Manufacture'.[9] As a consequence, a 'natural Par' needs to be found,[10] the '*Equation* between Lands and Labour'[11] inscribed in the order of nature, so that the value of one factor can be readily expressed in terms of the other and vice versa, just as easily as the reciprocal conversion between pence and pounds.[12] According to Petty this is 'the most important Consideration in Political Oeconomies';[13] this is a *Leitmotiv* that would link English and French thought during the next century, even if it was articulated differently.

## The maieutics of production

Another evocative biological metaphor – in which land was seen as the mother and labour as the father of wealth – was becoming increasingly popular at the same time.[14] In 1651 Hobbes had hinted at it,[15] and by 1662 it seems to have fully emerged in Petty's *Treatise of Taxes and Contributions*. ('Labour is the Father and active principle of Wealth, as Lands are the Mother.')[16] In 1674, in John Graunt's *Natural and Political*

*Observations*, one of the first works on demography, the image reappears in a slight variation as 'Hands [are] the Father, as Lands are the Mother and Womb of Wealth.'[17] Before long there even appears an attempt to set up a hierarchy between the two principles.

Whereas the Physiocrats later praised the natural virtues of the land, the emphasis, in the English tradition, was on labour right from the start. In his *Apology for the Builder* (1685) Nicholas Barbon writes, 'the earth by the arts of Husbandry produceth ten times more food than it can naturally'[18] and his more famous contemporary John Locke shared the same idea. For example, in the *Second Treatise of Government* (1690), we read, 'the extent of *Ground* is of so little value, *without labour* . . . ';[19] and again, 'the provisions . . . produced by one acre of inclosed and cultivated land, are . . . ten times more, than those, which are yielded by an acre of Land, of an equal richnesse, lyeing wast in common'.[20] Land 'that is left wholly to Nature', without the improvements due to 'Pasturage', 'Tillage' or 'Planting', is simply '*wast*', or wasted.[21] This is why, in Locke's political philosophy, labour is considered the basis of the right to property, and indeed property only subsists in relation to man's efforts to render such a potential resource productive:[22]

> *As much Land* as a Man Tills, Plants, Improves, Cultivates, and can use the Product of, so much is his *Property*. He by his Labour does, as it were, inclose it from the Common.[23]

The assumption whereby appropriation of the common need not be based on privilege, together with the knowledge that, because of human nature, no one can perform unlimited drudgery, guarantees each individual equal opportunity of access to land.[24]

In the seventeenth and eighteenth centuries, even the repercussions of population growth on the economy were being seen in an increasingly positive light. The upshot of this view was that princes and states not only found themselves more powerful but also wealthier depending on the number of inhabitants.[25] This might seem paradoxical to anyone accustomed to associating Malthusian fears with the pre-industrial economic context, but this view is not appropriate. Malthus formulated his theory of the divergence between population and resources during the demographic transition, a period of unprecedented and prolonged population growth. In early modern Europe, on the other hand, the norm was for the population to shrink periodically because of natural calamities or persistent fatigue caused by hunger and under-nourishment (the 'positive checks'), which is why the over-population hypothesis was

totally inconceivable[26] and associated in the utopian imagination with the mirage of a society of plenty.

As previously mentioned, the emphasis on labour and its effect on the national product declined in eighteenth-century France. The Marquis of Mirabeau, who was the most sensitive of the Physiocrats to the role of population, represents one partial exception. In his *Ami des hommes* of 1756, land and labour are presented as being perfectly complementary, though the emphasis is slightly different:

> The nourishment of man can only be wrought from the land; but the land produces little or nothing that is useful without man's labour. Population and agriculture are thus intimately and necessarily connected, and together form the object of primary utility from which all others derive.[27]

Mirabeau goes on to quote the popular saying that since only God knew how to mould a man out of the soil a piece of land is worth as much as the men who cultivate it, and promptly comes to the conclusion:

> It follows that the first of all goods is the availability of men and the second the availability of land.[28]

Furthermore, he underlines that no lands are bad in themselves and no land exists that cannot be made fertile by man's industriousness: 'a thousand examples show that even the most arid rocks can be made fertile by labour',[29] an image that also appears in Young, albeit in modified form.[30] There is still one fundamental difference between Mirabeau and the English authors, which we will be able to examine later in greater depth: in *Ami des hommes*, population is even seen as part of the organic whole, that is Nature; for the English, on the other hand, labour has a value in itself, of 'skilfulness'. In the first case, it is the means for realising a preordained design that one is part of; in the second, it is rather the chance for emancipation and Promethean deliverance.

## Agriculture as principle of wealth

Richard Cantillon, at the start of his *Essai sur la nature du commerce en général* (c. 1732), offered the first complete systematization of the new concept of wealth, defined from the conditions for obtaining it, and he anticipated by at least a quarter of a century Mirabeau, F. Quesnay, Mercier de La Rivière, G.-F. Le Trosne, N. Baudeau, P.-S. Dupont de

Nemours and C.-F. d'Albon (who all consecrated agriculture as the '*premier des Arts*').[31]

He wrote,

> The Land is the Source or Matter from whence all Wealth is produced. The Labour of Man is the Form which produces it: and Wealth in itself is nothing but the Maintenance, Conveniencies, and Superfluities of Life.[32]

Thus, as in Petty, we again find wealth being expressed in real terms: what is required for man's sustenance, as well as non-essential goods. But as we have already seen the emphasis is firmly laid on its prerequisites, which are land and labour. Land produces grass, roots, grains, flax, cotton, hemp and many species of trees, which in their turn produce various types of fruit, bark and foliage, such as those of the mulberry that are so useful in the raising of silkworms. From deep within it the land provides (*produit*) mines and minerals; the seas and rivers produce fish and much else besides. However, without human intervention, these would pertain only to nature. Cantillon points out that it is 'the Labour of man [that] gives the form of Wealth . . . to all this'.[33] There is here, as indeed with the Physiocrats, an almost sacred respect for the fecundity of the land, with man limiting himself to giving shape to its gifts. This attitude is totally foreign to English culture, which did, however, recognize the divine nature of the land, as we will see when we return to Locke.

Even money becomes inconceivable as a plain sign or reflection of wealth and has meaning only in that it incorporates land and labour:

> Money or the common measure of Value must correspond in fact and reality in terms of Land and Labour to the articles exchanged for it. Otherwise it would have only an imaginary Value.[34]

Cantillon, disagreeing with Locke and his conventionalist theory of the value of money, argues that it is not imaginary, but necessarily corresponds to its cost of production (which is the cost of manufacturing gold and silver coin). If that were not so the whole price system would collapse since the rate of exchange between goods, regulated by the quantity of resources and effort expended in producing them, would be distorted. '*Il faut que tout le monde vive*',[35] he concludes.

More generally – as he explains in Part I, Chapter 10 – all goods are endowed with an intrinsic value (reflecting the effort and land required to produce them) and an extrinsic value (given by the ratio between

utility and scarcity). Cantillon is not so naive as not to acknowledge the importance of the latter, but he is equally convinced that in more evolved economies, and for reproducible goods subject to steady consumption, the market price will naturally tend towards the cost of production.[36]

Only disparities between supply and demand lead to a discrepancy between the two values, and this is conceived as a defect in the market mechanism:

> There is never a variation in intrinsic values, but the impossibility of proportioning the production of merchandise and produce in a State to their consumption causes a daily variation, and a perpetual ebb and flow in Market Prices.[37]

If in a particular year a nation's tenant-farmers deliberately sow more or less grain than the amount experience has shown to be necessary for the system to be reproduced, there is the risk of an excess supply (or shortage) with a significant shift in price below (or above) the cost of production; in all other cases,

> When there are no years of too scanty or too abundant production the Magistrates of the City are able to fix the Market Prices of many things, like bread and meat, without any one having cause to complain.[38]

We deduce that the truly evolved economies (*Sociétés bien réglées*)[39] are systems in which there is an awareness of the principles of production (in contrast to subsistence economies that are regularly dominated by the forces of nature and chance), yet equally they avoid taking risks and speculating. Thus, with Cantillon, as with Quesnay, the bases of what we could call the 'French way to modernity' are laid down; it envisages the consolidation of wealth, certainly, but not development or accelerated growth. Furthermore, though there is an evident transition from the old to the new regime, there is also continuity in the perpetuation of a system of rules and institutions inherited from traditional society.

## The primacy of nature in France

Jacques Turgot, in his *Réflexions sur la formation et la distribution des richesses* (1766),[40] links the analysis of production with an analysis of society. Natural resources, provided by the land, still form its material basis.

In the first place, if lands were divided equally among men, trade would be impossible, indeed pointless, and no economic problem would exist (note that Turgot adopts a qualitative concept of equality, not quantitative in the sense of modern socialism). In any case, the hypothetical situation has never existed[41] and differences in types of land and human needs lead to the exchange of products ('*toute terre ne produi[t] pas tout*',[42] he recalls, echoing Virgil's *Eclogues*). Disparity, due to biological variety and different soil types, is thus a fact of nature and not some kind of defect that started with the advent of society:

> The man whose land was fit only for grain, and would produce neither cotton nor hemp, would lack cloth to clothe himself. Another would have a piece of land suitable for cotton, which would not produce grain. A third would be without wood to keep himself warm, while a fourth would lack grain to feed himself.

Experience very soon teaches what type of production is most suited to the soil on a property and its proprietor obtains the other things that are required through exchange with his neighbours. But one further element makes exchange inevitable[43] – the products of the land cannot generally be consumed directly by man, but need to undergo long and difficult processes (*préparations*) and transformations before they can serve his needs:

> Wheat must be converted into flour, then into bread; hides must be tanned or dressed; wool and cotton must be spun; silk must be drawn from the cocoon; hemp and flax must be soaked, peeled, spun, and next, different fabrics must be woven from them, and then they must be cut and sewn into garments, footwear, etc.

It is inconceivable that the person who works the land will deal with these derived activities as well; the gradual specialization of roles leads to the rise of a class of artisans alongside the class of cultivators. In the final analysis, since artisans do not increase product but only transform it using their own arms (the only wealth they have) exchange between the two classes will take the form of an exchange of product with labour.[44] Turgot shows that his conception of the production process is a physical one and not based on value, refusing to reason in terms of added value, nor could this be otherwise in a pre-industrial context.

Section V clearly endorses this idea; it sanctions the pre-eminence of the husbandman ('who produces') over the artisan ('who works up materials'). It also states that the husbandman is 'the prime mover in the circulation of labour', since 'it is he who causes the soil to produce the wages of every Artisan'. The argument that was only roughly outlined earlier is here analytically proved. The wages of the workman/artisan are subject to the dynamics of the artificial world (that is, the society), and remain at subsistence level due to the effect of competition among workmen/artisans. Thus he only earns enough to survive (*sa vie*). On the other hand, the husbandman[45] is the only one whose labour produces more than wages. This is because the land rewards him in accordance with its own laws and not in accordance with human conventions:

> The soil, independent of any other man, or of any agreement, pays him directly the price of his toil. Nature does not bargain with him to compel him to content himself with what is absolutely necessary.

What the land gives back is not proportional to his needs nor to a conventional assessment of the price of his work days: it is the physical result of the soil's fertility and the appropriate means he has used to make it fertile, rather than any expenditure of effort. In this way the cultivator, by producing beyond his own needs, can purchase the labour of other members of society. In other words, while the latter only earn enough for their own subsistence by selling their labour (in the form of transformed products), the cultivator, over and beyond his subsistence, amasses 'an independent and disposable wealth, which he has not purchased and which he sells':

> He is, therefore, the unique source of the wealth which, by its circulation, animates all the industry of society, because he is the only one whose labour produces more than the wages of his labour.

At this stage society is still divided into only two classes: the producers (cultivators) and the waged class (workmen/artisans). Later the distinction between owner and cultivator arises, land is divided into unequal parts through inheritance, the system of enclosures develops and agricultural labourers emerge.[46] Then Turgot wonders if the peasant who is left landless can be considered on a par with a workman/artisan[47] and the answer is that he cannot.[48] Although the surplus product (the difference between what the land yields, thanks to his labour, and the wage he receives) is no longer his, he has contributed to producing it. Thus he

can continue to boast this moral supremacy over the workman/artisan in society. It is precisely this difference that warrants the distinction between a productive class that embraces all who in various capacities perform activities connected with the land, and the remaining sterile class.[49]

It will be noticed how, in this framework, it is not relevant that the artisan could be an independent worker and perhaps receive some profit. Although from the juridical and formal point of view (of human convention) he is not salaried, from Turgot's substantialist viewpoint he is still *stipendié*, taking part in the division of labour that characterizes the system from a position of weakness.

Historically, with the distinction between land ownership and tenancy, five alternative ways of farming the land took hold: (1) cultivation by workers paid a fixed wage; (2) slavery and serfdom; (3) perpetual lease (*emphyteusis*); (4) share-cropping (*métayage*); and (5) leasing to *fermiers*. The last three cases are worth special attention. In the first place is the emphyteusis, a potentially perpetual real right to land possession asserted by means of the regular payment of a real and/or monetary rent to the owner who still kept the so-called 'paramount rights'. Turgot – by way of underlining the extent of the dissociation of *dominium utile* ('useful ownership', the dominion of use of the tenant) from *dominium directum* (the lord's ultimate 'direct' legal ownership of the land), which he sees as a trend from late vassalage – notes, 'Thus things have come to pass in the greater part of Europe.'[50]

On the other hand, in Turgot's view, the distribution of share-cropping and leasing out, which are both linked to a growing concept of fuller ownership, depends on the level of wealth that has been achieved. For the owner, renting out is certainly the more advantageous method[51] since it guarantees steady revenue. It is also the most productive method; yet, the irony of it is that its application is suitable only in situations where prosperity has already been achieved.[52] Tenants need to be in a position to make considerable advance payments (*avances*) immediately to enable them to set to work and improve the fertility of the soil. This is Turgot's explanation for why the leasing-out system traditionally characterized the agrarian landscape of the rich provinces of northern France (Picardy, Normandy and the Parisian area), while share tenancy dominated the depressed Midi. On the other hand, his analysis does not envisage the case of the small peasant property, which is not surprising in view of the nature of the French agrarian situation.[53]

## 'Art' and 'industry': The incubation of the English spirit

In his *England's Treasure by Forraign Trade* (1664), Thomas Mun introduced an important distinction between *natural* and *artificial wealth*.[54] In his opinion, natural wealth is 'most noble and advantagious' as it is always available and a dependable and safe source of well-being; but if it is not combined with the second form of wealth, which is related to awareness, knowledge and technical development, it inevitably brings with it negligence, arrogance and dissipation.[55] Mun argued that England had abundant natural resources and could devote revenue from exports to saving if she did not indulge in immoderate consumption.[56] Thus, all things being equal, labour and its productivity were what should make the difference in determining the power of a nation:

> Our wealth might be a rare discourse for all *Christendome* to admire and fear, if we would but add *Art* to *Nature*, our *labour* to our *natural means*; the neglect whereof hath given a notable advantage to other *nations*, & especially to the *Hollanders*.[57]

Mun was writing at a time of increasing rivalry with 'industrious' Holland.[58] In exhorting his English compatriots to react he bitterly criticized them; seen from a clearly puritan viewpoint they appeared to be feeble and addicted to tobacco, alcohol, drugs and life's pleasures:

> The summ of all is this, that the general leprosie of our Piping, Potting, Feasting, Fashions, and mis-spending of our time in Idleness and Pleasure (contrary to the Law of God, and the use of other Nations) hath made us effeminate in our bodies, weak in our knowledg, poor in our Treasure, declined in our Valour, unfortunate in our Enterprises, and contemned by our Enemies.[59]

Last of the mercantilists, he appeared to question the supremacy of agriculture in contributing to the country's wealth (which must have sounded like heresy to his contemporaries) and saw a more profitable source of revenue in the export of manufactured products:

> Forasmuch as the people which live by the Arts are far more in number than they who are masters of the fruits, we ought the more carefully to maintain those endeavours of the multitude, in whom doth consist the greatest strength and riches both of King and Kingdom: for where

> the people are many, and the arts good, there the traffique must be great, and the Countrey rich.[60]

At the end of the seventeenth century, that supremacy was endorsed by Locke, who naturally wasted no opportunity to stress the role of labour. The value of a product should thus be considered to a large extent as a reflection of human effort.[61] In his personal reappraisal of the Biblical story of the creation, after God had given the land to man His first deed was to order him to work. ('God, when he gave the World in common to all Mankind, commanded Man also to labour.')[62] Working is not a natural activity but is the outcome of reason, which enables man alone to subdue the earth. ('God and his Reason commanded him to subdue the Earth.') In fulfilling this command the earth could be shared out, and it goes without saying that idlers would be excluded from the sharing out. ('He [God] gave it to the use of the Industrious and Rational, (and *Labour* was to be *his Title* to it;) not to the Fancy or Covetousness of the Quarrelsom and Contentious.')[63]

The verb *subdue* summarizes the immense difference between the English and the French ways of viewing the man/earth relationship. In the French tradition the relationship is one of *collaboration*, since, as we have already seen, man and the earth form an organic whole. But in the English tradition it is one of *submission*: man does not recognize himself as being part of nature, and places himself over and above the earth, dominating it through his divine right in order to exploit it. Whereas the land is represented by the French authors as a benign mother who bestows her gifts, it is more often interpreted by the English as an object to exploit.[64]

The contraposition of natural and artificial that emerges from human transformation processes returns in Barbon. He argues that the unlimited resources obtainable through the 'art of husbandry', which form the 'artificial stock', in point of fact closely depend on the endless cycle of the seasons, and thus on the cyclical renewal of the 'natural stock'.[65] Furthermore, it is appropriate to point out that in such a circumstance the unlimited nature of resources cannot be separated from the element of time. This means that not even the most enthusiastic supporter of 'artifice' can envisage accumulative and self-sustained product growth but only its continual reproduction.

In conclusion, Barbon's *Apology for the Builder* is an impassioned defence of man's capacity to intervene in nature in order to change it. Whereas the increasing gigantism of London was a cause for general concern, Barbon argued that urban development brought with it a

multiplying effect of wealth.[66] The decline in land revenue was not a scourge linked to the traditional bugbears of urbanization and depopulation, but a sign of English modernization, which started from the countryside:

> [It] probably may be from the great improvements that are made upon the Land in the Country, either by draining of Fens; improving of Land by *Zanfoin*; or other profitable Seeds; inclosing of grounds, or disparking and plowing of Parks, by which means the Markets are over stock'd and furnished at a cheaper rate than those Lands can afford, who have had no advantage from improvements.[67]

## The science of productivity

In his *Political Arithmetic* (1774), Arthur Young,[68] who made no mystery – even in the work's title – of his ambition to reap Petty's legacy, describes the large agricultural enterprise as the most rational way of farming the land,[69] despite the prejudice and distrust that were difficult to overcome.[70] The order in which crops follow one another on the same piece of land brings about different levels of productivity. The declared objective of the new 'science' of agriculture[71] is to maximize it; this can be achieved by following specific rotation protocols depending on the nature of the soil (heavy, light, chalky, clay). The optimal rotations are often summarized in schemes[72] whereby the traditional cereals are combined and alternated with nitrogen-fixing legumes and with the more innovative artificial meadow crops.[73]

In Lombardy, where (even before the Low Countries) the cultivation of alfalfa and clover[74] had been introduced from the Mediterranean, writers like Agostino Gallo and Camillo Tarello as far back as the Renaissance had distinguished themselves for their innovatory ideas;[75] nor was there any lack of agronomists in eighteenth-century France.[76] However, their inspiration did not lie so much in the principle of returns (in his book Gallo shows he is just as interested in the 'pleasures of the country house' as in growing crops) but rather in their admiration of an agrarian civilization. In the eyes of the English of two centuries later they suffered from what would appear to be an incurable disease – humanist reasoning:

> Whoever peruses the antient authors *De Re Rustica* with the least attention, will be convinced, that they had no just idea of experimental agriculture. They eternally lay down their instructions, by

> whole chapters, in the directive stile; teaching their readers how to act, before they convince them by experiments that they understood it themselves.[77]

According to Young – whose success as a popularizer was far greater than his success as an agricultural entrepreneur – what was needed was the 'genius' of Francis Bacon in order to get rid of the 'superstitions' of Cato, Varro, Columella and their modern disciples.[78]

Stone rightly places Young in the tradition of British empiricism in the social sciences[79] on account of the intense efforts he made to gain technical knowledge based on pragmatism and experiment, as well as the widespread popularization of his results helped by his country's high literacy rate and its tradition of the written word. An example of this approach includes the *Course of Experimental Agriculture* (1770), which gives an account of five years of experiments carried out on 300 acres of land in Essex. Another example is the *Farmer's Guide*[80] of the same period and especially written for gentlemen wanting to take up innovative agriculture; it provides explanations on how to obtain the infrastructure required, recognize the nature of the soil, regulate the right amount of farming land in relation to one's means or invest a specific sum of money to the best advantage. The *Annals of Agriculture* (1784–1809), also directed by Young, are remarkable for their scale and were an efficient means for keeping up to date on practical and scientific developments in agronomy. They contained articles such as the one by Richard Kirwan in volume XXIII that examined alternative hypotheses for fertilization on the basis of soil quality, which was classified according to its chemical and physical features (solubility in water and nitric acid, precipitability, effervescence to acids, hardness and specific gravity),[81] as well as ideas on the subject of molecular bonds.[82]

Young was by no means an isolated case, nor particularly pioneering, but he undoubtedly had outstanding powers of observation;[83] the same could be said about Jethro Tull, Lord Townshend, Robert Bakewell and Coke of Holkham.[84] But it is precisely Young's work as a popularizer that makes him interesting and the success of his works on agronomy among a huge readership bears witness to the extraordinary receptiveness that pervaded English society at the time. The circulation of information and ideas led to the rapid spread of advances and small additional improvements to farming techniques made day by day in this or that county, and so played a fundamental role in the long process of the agricultural revolution.


*Figure 2.1* English authors and treatises on agronomy, 1500–1700
*Note*: Only the first editions of the most important works have been taken into account.
*Source*: The graph is based on Lord Ernle's inventory, in *English Farming Past and Present*, App. I, pp. 474–479.

As Figure 2.1 shows, since the end of the sixteenth century there had been a steady increase in the number of specialist manuals and treatises on the market. The period around 1650 marks a qualitative change in publishing; this is when Samuel Hartlib brought out Sir Richard Weston's work on agriculture in Flanders and Brabant.[85] From that time the expression 'improvement' – suggesting the new drive to intervene in nature so as to change it, as much as the eagerness to dispel a sense of inferiority to the Low Countries – could be considered as the categorical imperative of English agronomy, and the key word that recurs in every book devoted to this subject.

# 3
# Reproduction and Transition

In the last chapter we saw how the idea of wealth changed during the seventeenth and eighteenth centuries in Northwestern Europe; also how two factors of production – land and labour – subsequently gained importance. This chapter sets out to reconstruct the parallel developments in capital theory. We will need to understand how it came about that capital, previously not a factor of production but a commodity suited to reproducing itself (that is, to say money), could take on a productive value and totally subject to a physical process of the interaction between natural resources and labour. We will also need to clarify how, during this phase, it was essentially conceived as circulating capital in the form of wages.

This conception, which developed out of the ideas of Cantillon, Quesnay and Turgot during the eighteenth century was readily accepted in Britain through the work of Cantillon himself and later of Adam Smith, who established fruitful contacts with the *Economistes* during his stay in France in the 1760s. The following pages will follow the evolution of the new idea of capital until the 1830s, which marked a critical turning point. Special attention will be paid to the ideas of Turgot (in whom French thought reached its culmination), Smith and the Ricardians. But first of all the historical and economic context in which this thought took shape requires close consideration.

## One rich economy but with no drive, another constantly on the move: France and Britain in the eighteenth century

With regard to the prevailing economic mentality, and thus to economic structuring, we have already seen how France and Britain showed significant differences. However, it should be said at once that, until the 1820s,

intellectuals in both countries shared a largely homogeneous view of capital. The break that marked the British way of thinking took place due to the effects of the Industrial Revolution. This leads us to speculate about how the same theory could apply, for so long, to one country that was to become the 'first industrial nation', and to the other that, normally, is seen as emblemizing permanence.[1] The answer may be unexpectedly simple: whereas in the eighteenth century the economic destinies of the two nations, probably, had already been decided,[2] the final outcome was by no means evident.

Discounting cliometric revisionism, which has gone as far as even to deny the static nature of the French economy of the ancien régime,[3] the majority of historians agree on the fact that France set out on the path of economic development very slowly, but that this took place relatively early.[4] There is disagreement about actual growth rates, but the underlying trends appear to be confirmed. Using A. Maddison's 1982 estimates as his basis, C. Heywood has calculated that throughout the eighteenth century the growth of output remained at similar levels on both sides of the Channel. Between 1700 and 1820, France showed an average annual per capita increment of 0.3 per cent, and Britain of 0.4 per cent; in terms of total product, the rates were 0.6 per cent and 1.1 per cent respectively.[5] Maddison has recently revised his estimates and according to his 2001 report, French per capita income rose to 125 in 1820 (taking 100 as the per capita income for 1700), while in the same period the British income rose from 127 to 173. Using an analogous rule the index for total income would give the following levels: France 100 and Britain 51 for 1700; France 181 and Britain 171 for 1820.[6]

In any case it seems feasible to conclude with some certainty that while, in absolute terms, during the eighteenth century French per capita income was lower and even increased more slowly than the British, total income, though growing at a lower rate, in 1700 was certainly higher, and in 1820 was no lower. In this period there is even a comparable degree of openness between the two economies (as measured by the share of exports over national product), although the typically pre-industrial structure of French exports appeared to show no signs of change.[7] In short, on the one hand, we have a system that was strong in natural assets and marked by considerable potential for expansion and, on the other, an economy that was perhaps smaller but was far more productive,[8] and thus more successful in the long run.[9]

Agriculture, whose development, according to P. Bairoch, is an indispensable prerequisite for any industrialization process,[10] played a leading role in both France and England alike. One can argue about whether this

principle has universal value (hence in its application to 'spontaneous' as well as 'induced' industrialization), but it can hardly be denied that in the 20–50 years that preceded take-off it had a major part in both contexts.[11] As Chapter 2 hinted, the two forms of agriculture were profoundly different: one was set on achieving high yields on large quantities of output, while the other was perennially intent on increasing productivity of the process. This aspect stands out particularly when the data for labour productivity are considered, being more significant than those for yields per hectare.[12] This divergence is an important factor in determining the destinies of the two countries whose institutional and cultural differences have roots lying far back in time, as P. O'Brien points out in a stimulating article.[13]

F. Caron has provided a good outline of French agriculture in the eighteenth and nineteenth centuries and speaks of an unaccomplished agricultural revolution: 'Agriculture was clearly directed toward producing as much human food as possible, thus sacrificing animal fodder at a time when the technical advance of agriculture depended largely on an increase in fodder crops and livestock.'[14] Nevertheless the French considered large scale as a decisive advantage for their agricultural economy. In the mid-eighteenth century Mirabeau thought that the primary sector was 'still in its infancy'[15] and called on state intervention to support further expansion.[16] He saw France as the natural cradle of agriculture, and was somewhat dismissive towards the Dutch (*'Quand un Etat n'a point de territoire, il est inutile de lui enseigner à le cultiver'*).[17] However, he did admit their capabilities: 'do you perhaps doubt that if we donated the most rugged of our mountains, or the most arid of our lands, to the Dutch, they would not know how to soon make it productive?'[18] Many other observers of the period also similarly laid the stress on size.[19]

It would be too easy to dismiss the French faith in the nature of domestic agriculture as a result of inadequacy or naivety. In a well-documented study J. Thirsk has shown how England owed a debt not only to the Low Countries, but also to France, due to the introduction of many crops that were to mark the agricultural revolution, at a time when she was 'absorbing many lessons from the European Continent',[20] between the sixteenth and the seventeenth centuries. Crops that were being imported included hop, brassica, buckwheat, millet, tobacco, dyer's weed, madder, saffron, liquorice, clover, sainfoin, alfalfa, flax, hemp and different types of vegetables such as carrots, turnips and cabbages that boosted market gardening;[21] also *fruits rouges* and fruit trees, hazels and walnut trees. The English also learnt from the French how to produce many varieties of meat, techniques for breeding birds for fattening, as well as how to raise

freshwater fish.[22] But these techniques were generally better exploited in Britain, and it is emblematic that, in the second half of the seventeenth century, conditions there were more favourable in the medium term for growing industrial crops of flax and hemp, brought by the French Protestant communities escaping from the mother country.[23]

France has never had an industrial vocation. It has had a manufacturing one (from Colbert onwards), but not industrial. In his history of French industry, D. Woronoff, aware of the paradox, notes how, at the close of the twentieth century, the French economy prepared to enter the post-industrial period, without ever having actually entered the industrial period.[24] He gives an adept explanation for the cultural reasons for this love–hate relationship: 'The agrarian civilization, that has for so long fostered employment, shaped the landscape, determined values, has kept manufacturing labour *lato sensu* in a subordinate role. Besides, the culture of the elites has never viewed industry favourably, although it recognized it as a necessary activity. It has long denied it full legitimacy, except occasionally to show its admiration for its works.'[25] However, once the gap in development between the French and the British had been realized, the French wasted no time in setting out on a rapid process of emulating the first comer, first in textiles (at the end of the eighteenth century) and later in the iron industry (in the 1840s). T. Harris underlines the perspicacity of French administrators and technicians who, at a time when industrial planning methods and the application of science to industry were still unknown, 'were trying artificially to catch-up on an organic growth of technical change in the rival state'. The British, meanwhile, were not asking many questions about the reasons for their technological superiority, often simply taking it for granted.[26]

Finally, historians have reappraised aspects that are not easily explained, such as the natural characteristics of the population, which travellers at the time were so struck by as to create stereotypes (in Britain people are more industrious, while in France they have more *savoir vivre*).[27] They have defined France's gentle path to development as being 'admirably humane', since in the mid-nineteenth century it enabled her to achieve the features of a modern economy, at the same time avoiding its social costs and maintaining a balance between agriculture and industry, between income growth and social stability.[28]

On the other hand, the birth of British industrialization[29] goes back to the mid-eighteenth century, when a long cultural gestation that would ultimately have profound effects on the economic mentality and structures led to the development and spread of the institutions of the self-regulated market.[30] The central driving force for change was in the

English countryside, where a class of enterprising and well-educated farmers gradually emerged, ready to invest money and energy in production orientated towards sales.[31] Their efforts were soon repaid with the stabilization of harvest levels, and a reduction in price fluctuation margins, that acted as useful signals vis-à-vis supply. Improvements in agronomical techniques included longer rotation cycles; a preference for fodder crops and artificial meadows over the fallow system (which gave added impetus to using stables for cattle and led to greater direct productivity, as well a wider availability and better use of organic fertilizers); the introduction of new equipment; the improvement of traditional equipment; the selection of seeds and animals for breeding; the extension of cultivated areas by means of land reclamation; the greater use of horses as a source of power.[32]

Until now, take-off of the secondary sector had been held back everywhere because a quota of the product from the land, the relative size of which varied from year to year but was always considerable, was taken up for subsistence and ensuring reproduction of the system.[33] This situation continued to exist for a good part of the nineteenth century in the rest of Europe: only in Great Britain did the embryo, which on the Continent remained at the 'manufacturing' stage, become 'industry'. The country's decisive advantage in this process lay in a combination of factors: profound cultural affinity to the regions (Flanders, Brabant) that had been the cradle of the above-mentioned innovations;[34] sufficient territorial extension; the considerable size of estates; and different soil qualities. This firstly permitted an increase not only in terms of yield but also in terms of productivity per worker (roughly estimated at 100 per cent throughout the eighteenth century)[35], and secondly it assured ready availability of raw materials. In the first half of the century, population growth was entirely due to agricultural growth, leading to a decrease in mortality and an increase in fertility; in its turn an increased population was to play a significant role in fostering strong demand for consumer goods.

In the early stages, especially in the textile sector, industrialization could take advantage from the know-how accumulated in the activity of cottage production that had historically developed in the less prosperous areas of the country. But this did not generally happen on the initiative of the mercantile class, which was more inclined to invest its profits in land ownership and improvements.[36] Entrepreneurial activity was almost always the result of the enterprise of rural dwellers – in Paul Mantoux's famous phrase that 'half agricultural, half artisanal class' – who made up the majority of the population. The industrious

(and careful) application of the skills they had acquired often led to opportunities for self-aggrandizement, and even social attainment, with its typically ostentatious consumption of clothing, furniture, crockery, Hogarthian prints, books and the like.[37]

In the eighteenth century, the British and French approaches to political economy thus shared one concept of capital. This was based on the supremacy, even exclusiveness, of circulating capital in an economic system depicted by images of the *circuit* or self-repeating cycle. It stressed behaviour models leading to the reproduction of what experience had taught was sufficient to guarantee an adequate (above subsistence level to varying degrees) return on the factors of production that had been used. These models were the more rational answer of the collective mentality to the instability and unpredictability of pre-industrial markets, and were reflected in the tendency of the economists, in their search for order and a margin of certainty within the fluctuations, to arrange everything in schemes.[38] This overall view of the economic process would receive its first battering with Smith and his idea of the progress of wealth, but the concept of capital that was linked to it – mainly considered in terms of wage amounts – would predominate until the decade 1820–1830. This is due to the prevalence of low capital-intensity sectors (such as textiles) and close integration between town and country, which was still of some significance for cottage industry, even in the early phase of industrialization.

## Money and the Physiocrats

With regard to Cantillon, mention was made of the different meaning that money took on in eighteenth-century France, that is as a commodity that incorporated a certain quantity of land and labour. This new conception was further developed by Turgot in the second part of his *Réflexions*. They are interesting pages, in that they fully reflect the cultural climate of the period: money is freed of metaphysical considerations and is instead made the object of material exchange relations, subjecting in turn the rules of exchange to those of production.

Let us consider, in line with Turgot, a simple economy based on corn, wine and sheep, in order to determine its relations of exchange:[39]

1 bushel of corn → 6 pints of wine
1 sheep → 3 bushels of corn
1 sheep → 18 pints of wine.

Once the relative prices of all the goods have been fixed, the value of one unit of product *x* can be equally expressed in terms of *y*, *z* and so on. However, the differing quality of the goods complicates the picture.[40] If 18 pints of Anjou wine are in effect the equivalent of a sheep, the same quantity of the more prized Cape wine will buy 18 sheep. Thus a more common good will need to be selected as a yardstick – or standard – with a stable value.

In a country where only one breed of sheep is the rule,[41] a sheep of average age and strength can easily be adopted as a common measure of value. At this point, however, in the collective psychology something mysterious takes place, and it is worth leaving it to Turgot to express:

> In this way, the expression of values in terms of sheep becomes an agreed form of expression, and this word 'one sheep', in the language of commerce, simply signifies a certain value which, in the minds of those who hear it, carries not merely the idea of one sheep, but of a certain quantity of the more common types of commodities which are regarded as the equivalent of this value, and *this expression will end by being so entirely applied to a fictitious and abstract value*, rather than to a real sheep, and that to purchase one of them, it becomes necessary to give double the quantity of corn or wine that was formerly given, people will rather say that *one sheep is worth two sheep* than change the expression they have been accustomed to for all the other values [emphases added].

Sooner or later, one reaches the paradox where 'one sheep is worth two sheep', and this is the birth of money. Society now has its standard commodity: an ideal one, yet the antithesis of a pure sign. In theory, all commodities have the two essential properties of money – a measure of value, and a medium of exchange – and hence 'all merchandise is money'.[42] The first property is present in varying degrees depending on the nature of the good in question,[43] the second is tied to its intrinsic worth. Thus it can be inversely stated that 'all money is essentially merchandise':[44]

> We can take only what itself has a value as a common measure of value, that which is received in Commerce in exchange for other values; and there is no universal, representative pledge of value, except something of equal value. Purely conventional money is therefore an impossibility.

Turgot's position is a strong one, as anybody who is aware of the features of pre-industrial monetary regimes will immediately appreciate. Because they contain the above-mentioned properties to a greater extent, gold and silver are better than other goods as universal money 'and that without any arbitrary agreement among men, without the intervention of any law, but only by the nature of things'.[45] These metals do not represent a value, as is popularly thought, but 'they have a value themselves'.[46]

## A system based on *avances*

We now come to the definition of capital (*capital*) given in the *Réflexions*. It consists in a surplus of income after consumption, the level of which is determined by need. As well as activities connected to the land, others can also lead to savings.[47] But in what form? Turgot elaborates, 'Possessions of this kind, resulting from the accumulation of annual produce not consumed, are [also] known by the name of moveable wealth.'[48]

The concept of circulating capital that he has in mind is wider than we would expect, since furniture, crockery, stored goods, equipment, cattle, but also buildings (*maisons*) are included under *moveable* wealth. At first this choice seems paradoxical, but it brings the modern reader up against its basic underlying principle: the only immovable wealth is land; it represents the only form of fixed capital (as we would say today); however, precisely because of its 'fixity', it is not considered capital: it is land. *Capital is such only if it circulates*.

Quesnay and the Physiocrats traditionally subdivided *avances* into *annuelles*, (which were to ensure the reproduction of crops and included the cost of labour, cattle feed and seed renewal), and *primitives* (which were aimed at establishing them and included equipment and work animals, cattle stock and seeds). They estimated that the value of the latter corresponded to five cycles of the former,[49] which is a somewhat limited amount. A third category, the *avances foncières*, was sometimes added for exceptional circumstances, such as the work of reclamation, preparation and fencing of the land as well as the construction of agricultural buildings.[50] The term *avances*, which Quesnay appears to prefer to *capital*, unambiguously underlines its real, rather than monetary nature: '*Tout cela vaut de l'argent sans doute, mais rien de cela n'est de l'argent*',[51] he tells his interlocutor in the dialogue *Du commerce*.[52] There is no point in accumulating fortunes in order to produce new wealth; what is needed is an attitude on a day-to-day basis, a *forma mentis* on the part of land owners and *fermiers* who favour reinvestment over consumption.[53]

Circulating capital was always, and almost obsessively, placed in dialectic relationship with the land. A good three sections of Turgot's *Réflexions* (LVI, LVII and LVIII) explain how to express the value of land in terms of circulating capital:

> It is evident that if a piece of land which produces a revenue equivalent to six sheep, can be sold for a certain value which may always be expressed by a number of sheep equivalent to that value, this number will bear a definite proportion with that of six, and will contain it a certain number of times. Thus the price of an estate will be simply so many times its revenue; twenty times if the price is one hundred and twenty sheep; thirty times, if it is one hundred and eighty sheep.[54]

The '*denier du prix des terres*'[55] expresses precisely the relationship between the value of a piece of land and the annual income it brings.

In this respect, since they are the main form of agricultural capital, it is hardly a coincidence that corn and sheep (seed and cattle) should again be part of an economy that (re)produces commodities by means of commodities. *Avances* are required in order to farm, or exploit the land to advantage, but also to set up a manufacturing plant; nothing can be done without advances. Turgot explains how, when man worked the land with the use of his own hands alone, before harvesting it was necessary to sow, and until the harvest had been brought in he had to survive. The more farming became perfected, the greater the advance payments needed to be. Cattle, ploughing equipment, stables for the animals, greenhouses and barns were required; a number of people in relation to the size of the estate needed to be paid and sustained. The amount of product, and therefore of income, was directly related to the amount of advances.[56]

At this point a question arises: where did the necessary *avances* come from when the first cycle of labour started, when farming still did not exist? From the land itself, which produces something, even when it is not cultivated:

> It is the land which is always the first and unique source of all wealth; it is the land . . . which provided the first fund of advances, prior to cultivation. The first Cultivator took the seed which he sowed from the plants which the earth had of itself produced.[57]

The first cultivator, Turgot continues, lived by hunting, fishing and gathering wild fruits as he awaited the harvest; from the forests he

obtained branches and sharpened them using stones, which in turn were sharpened by other stones; he captured wild animals with a view to domesticating them, initially using them for food and later to help in his labour.

If an occupation requires wages, work implements and raw materials to be supplied *on an annual basis*,[58] this is even more so for 'derived' occupations such as manufacturing. Before the advent of the social division of labour (*séparation des professions*), when man lived in a state of self-sufficiency, and satisfied each need through his own labour, no other advances were required except those relating to the land. But when a growing section of society was left with only its hands available, those who depended on wages needed to start saving and put aside enough to procure the raw materials with which to work, or on which to survive before receiving any wages.[59]

Enterprises committed to manufacturing and *a fortiori* to commerce, which produce in order to sell, could only have had minor opportunities for development if gold and silver had not been introduced, since it would have been impossible for them to finance their activities in the time and ways that movements of trade entail. Agriculture is an exception to this rule, since the main advance required is cattle.[60]

Thus, in the final analysis, the circulation of capital is the circulation of money.[61] It gives rise to a double annual movement of advances and returns, with steady profits. At the end of each phase, after deducting what the entrepreneur had consumed, the cycle could start again and lead to reinvestment:

> It is this advance and this continual return which constitutes *what ought to be called the circulation of money*; this useful and fruitful circulation, which gives life to all the labour of society, which maintains all the movement and life of the body politic, and which is correctly compared to the circulation of the blood in the animal body.

It should come as no surprise if a metaphor recurs that had been as dear to the writers of the Renaissance as it was disliked by Petty and Quesnay,[62] to whom Turgot would have been closer. As has already been seen, money interested the Physiocrats insofar as it was connected to *avances*, and the preference for the term *argent* rather than *monnaie* is indicative. In short, money is not a reflection of wealth, but *incorporates* wealth; above all, it is capital, as it is being used productively. Thus the blood of the body politic is capital, and not money, as it is the medium of exchange to which Davanzati had referred in *Lezione delle monete* two

centuries previously,[63] more influenced by the phenomena of monetary illusion, inflation and purchasing power.

According to Turgot, just as circulatory failure can cause the collapse of an organism, a depression of the economic system can be caused by an imbalance in relations between consumption and savings among the various classes into which society is divided. If there is a decrease in the return on advances this will lead to disinvestment and a reduction in enterprise bringing with it a reduction in employment, consumption, production and income; there will be poverty instead of prosperity; day labourers, being the weak link in the chain, will be left without employment and will become destitute.

## The job of the capitalist

In eighteenth-century France, the idea that a person could make a profit from simply providing the capital for production, and supervising labour, was not so obvious. Turgot argues that it should not be considered outrageous, but that in a certain sense it is an outcome of economic evolution.[64] In early times – he writes – the owner or tenant of an agricultural estate provided the materials for derived manufactures himself and also paid the worker his wages day by day. He took the hemp that he had harvested to the spinner and kept her for the duration of her labour; later he supplied the weaver with the yarn and, each day, paid him the wages that had been fixed. But these advances on a modest scale were sufficient only for simple jobs. With many arts, which among other things provide work for the poorer social classes, the same raw material has to undergo a long production cycle, pass through different hands and go through complex and diverse transformation processes.

Leather processing for making shoes is a typical example of how this situation arose in the more complex manufactures of the pre-industrial period. A poor dyer could not possibly have access to the means of obtaining supplies of leather, lime, tanning materials and tools, or for constructing the buildings he required to accommodate the dyeing works, and at the same time provide for himself and for those working with him, over several months until the goods had been sold. Apprenticeships also had to be taken into account; they were indeed an investment for the future, but in the meantime involved costs of maintenance and training that were a heavy burden on the advances. Finally there was infrastructure: navigable canals and further building operations were needed so that the activities could be carried out. Who

would provide for all these needs until the production process yielded any returns?

The capitalist was the only answer possible.

> It will be one of those Owners of *capitals*, or moveable accumulated values, who will employ them partly in advance for the construction of the establishment and the purchase of materials, partly for the daily wages of the Workmen who labour in the preparation of them.

He would make certain that the sale of leather would bring in enough revenue to pay back the opportunity cost of not investing the money in a piece of agricultural land, and provide him with his due wage for his trouble, labour, risk-taking and even his skills ('for surely, if the profits were the same, he would have preferred living without any exertion on the revenue of the land which he could have purchased with the same capital').

Once the advance capital gave him a return from the sale of the finished products, the capitalist used it to make new purchases to foster and sustain the manufacture (*fabrique*) through this continual circulation. He lived on his profits and saved what he could in order to increase the capital and invest it in the enterprise (*entreprise*), increasing the amount of the advances so as to add profit to profit. This passage is particularly interesting since it shows how, with Turgot, a theory of the growth of the firm became delineated on an annual basis, that is in the absence of fixed capital implying the sharing of costs over several cycles (through depreciation allowances). This is an identical conception to that which we will find in Smith.

Once the capitalist enters the scene of the productive system, those employed in the secondary sector, though inferior to agricultural workers, do not appear as an undifferentiated bunch of *artisans* any longer. They are subdivided into two categories (*ordres*): capitalist entrepreneurs (*entrepreneurs/capitalistes*) or master craftsmen (*maîtres fabricants*), 'all owners of large capitals, which they invest profitably as advances for setting men at work', and simple workmen (*simples ouvriers*), 'who have no other property than their arms, who advance only their daily labour, and receive no profit but their wages'.[65]

For Turgot, in contrast to what they would be for Smith, the entrepreneur (the capitalist) and the merchant (who buys in order to sell again) in their turn are two completely different subjects. The role of the merchant, in any case, is as indispensable for the producer as for the consumer, and therefore, though he is not in himself a producer of

wealth, has to be conceived in close connection with these functions.[66] More than any other his activity is the one that requires advances. He buys goods where they are in abundance and resells them where they are scarce, either independently or through agents. His first purchases act as the *avances*, which, if the speculation is to be successful, he will need to gain back within a short space of time.[67]

## A eulogy of finance

Even a justification of interest is linked to the productive uses of financial resources in some way, although, as is typical of the age of the Enlightenment, it is based on an abstract principle of right. As a preamble to the theory of money, Turgot explains that there is a way of being rich without working and without owning lands which he has not yet spoken about. This method consists in living on what he calls the revenue (*revenu*) from one's own money, namely the active interest on the money that has been lent. He sets out to explain its origin, and to relate it to the system of the distribution of wealth in society.[68]

Loans on interest are seen as a trade whereby the creditor is the person who sells the *use* of his money, while the debtor buys it, just as the owner of a piece of land and his tenant respectively 'sell' and 'buy' the use of the land being leased. This was the actual meaning of the Latin expression *usura pecuniae*, before it lent itself to the 'false moralizing' of the moderns.[69] In reality, the image is later attenuated, and it is considered more correct to compare the loan to a lease contract.[70] In any case, it is quite legitimate to make money out of leasing: this is because, not only does the lender lose the income that he could have otherwise gained for the duration of the loan, but he even risks his own capital. Furthermore, the borrower can use the money he has received to make profitable purchases or use it in enterprises which will bring him good profits. The owner of the money can, even in the absence of the above-mentioned circumstances, legitimately claim interest by virtue of a more general and definite principle: the fact that the money is his. Therefore he is under no obligation to cede it to others, and if he does, he can offer the conditions that best suit him.[71]

Interest, in as much as it is *prix du prêt* – the price of the particular merchandise, that is money – need not be based on the profit expected by the entrepreneur on the capital he has obtained. It actually originates out of the relationship between demand and supply. Money can be borrowed for any reason:[72] to set up an enterprise, to purchase land, but also to pay off a gambling debt or to make up for a loss in funds. The lender,

in any case, is not interested in these motives, and is unconcerned as to the use that the debtor makes of his money, in the same way that a merchant has no interest in the use a buyer makes of his goods. 'He who buys bread does it for his support, but the right the Baker has to ask a price is quite independent of the use of the bread; it is the same right he would have to sell him stones.'[73] The only concerns the lender has are the interest he receives and the guarantee of regaining his capital.[74]

## Earnings on capital

In brief, it is possible to distinguish five ways in which capital can be used:[75] (1) to purchase some land as a source of rent; (2) to invest in a farm, provided that yields from the land repay the *fermier* for the risk of his activity, apart from repaying him the cost of the lease and the advances at the current interest rate; (3) to invest in a manufacturing enterprise; (4) to invest in a commercial enterprise; and (5) to 'let out' one's own money.

The above-mentioned options are all linked to each other by the level of the interest rate.[76] Let us consider them in order of their profitability.

Someone who buys land in order to lease it to an honest tenant-farmer acquires a revenue that will free him from the worries concerning its management, and which he will be able to spend in the best way to suit him. A further advantage lies in the fact that of all goods, land is the one whose possession is a sure guarantee against all kinds of eventualities.[77] The person who loans money has fewer problems, as he can enjoy his leisure while making money, but on the other hand it opens him up to the serious risk of losing his capital if the debtor is insolvent. This explains why the annual rate of interest on money is higher than the revenue from the land: otherwise there would be no reason to prefer this alternative.[78] In its turn, the capital invested in an enterprise, whether agricultural, manufacturing or commercial, needs to provide greater profit than the interest on an equivalent sum of money that has been loaned. The effort, risk and continual advances that need to be borne do not make these activities attractive unless considerable gain is expected.[79]

The different uses of capital give varying yields; nevertheless, they have a constant mutual effect. If the supply of land increases, its price will go down and a higher rent will be obtained from a lower investment. But this cannot happen without the rate of interest increasing: otherwise there would be no reason to prefer money to land. However, an increase

in the rate of interest, in its turn, will make it disadvantageous to invest capital in enterprises of any sort, unless they earn high rates of profit:

> In short, as soon as the profits resulting from an employment of money, whatever it may be, increase or diminish, capitals turn in that direction or withdraw from other employments, or withdraw and turn towards other employments; and this necessarily alters in each of these employments, the relation between the capital and the annual product.[80]

It might come as a surprise that Turgot once again uses a hydraulic metaphor typical of Galilean economics[81] (and thus generally disliked by the Physiocrats) to illustrate this principle and give it rhetorical force. Between capital yields – he argues – there comes about

> a kind of equilibrium . . . , like that between two liquids of unequal gravity, which come into contact with each other at the base of an inverted siphon, of which they fill the two branches; they will not be on a level, but the height of the one cannot increase without the other also rising in the opposite branch.[82]

It confirms, however, even from the epistemological point of view, that here is a strongly independent thinker.[83]

## Progress and poverty: British thought at the start of the Industrial Revolution

Adam Smith's *Wealth of Nations* opens with a raw description of the precariousness of primitive societies of hunters and gatherers:

> Such nations . . . are so miserably poor, that, from mere want, they are frequently reduced . . . to the necessity sometimes of directly destroying, and sometimes of abandoning their infants, their old people, and those afflicted with lingering diseases, to perish with hunger.[84]

This is not one of the frequent exaggerations to which the Glaswegian philosopher is inclined, when claiming to provide an image of the 'state of nature' drawn on a negative calque of contemporary European civilization, but is a documented statement still endorsed by anthropological research.[85] A little further on he states that the impulse to investigate the origin of wealth comes from the need to understand why in the 'civilised

and thriving nations', even if part of the population does not take part in the division of labour, product can guarantee the majority of people a subsistence.[86] Thus, it happens that in Great Britain, a certain degree of prosperity even extends to the lower classes:

> The great improvements in the coarser manufactures of both linen and woollen cloth furnish the labourers with cheaper and better cloathing; and those in the manufactures of the coarser metals, with cheaper and better instruments of trade, as well as with many agreeable and convenient pieces of houshold furniture.[87]

Yet in Smith the spectre of a relapse into poverty is always there. The struggle to break free from the past is by no means won wherever the evils of traditional society re-emerge, at times more than just a pale memory:

> It is not uncommon, I have been frequently told, in the Highlands of Scotland for a mother who has borne twenty children not to have two alive .... A greater number of fine children, however, is seldom seen anywhere than about a barrack of soldiers. Very few of them, it seems, arrive at the age of thirteen or fourteen. In some places one half the children born die before they are four years of age; in many places before they are seven; and in almost all places before they are nine or ten. This great mortality, however, will every where be found chiefly among the children of the common people, who cannot afford to tend them with the same care as those of better station .... Every species of animals naturally multiplies in proportion to the means of their subsistence, and no species can ever multiply beyond it.[88]

It is obvious, therefore, that 'the goal any given society needs to reach is not an indefinite income growth, but a stationary state. This is desirable in order for each individual to live with dignity ... and does not require a completely egalitarian income distribution but one that excludes indigence':[89]

> No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable.[90]

To eliminate precariousness from the face of the country is what Smith expected from the great economic changes that were underway. His successors, up to John Stuart Mill, witnessed the metamorphosis that had been forecast. As with all radical transformations, it did not distribute

its effects harmoniously, but produced imbalances as it took place, and since by definition there can be no overall vision of a phenomenon a priori, contemporaries found it difficult to predict its evolution.

Malthus, Ricardo and their followers in the second decade of the nineteenth century were struck by this or that aspect of the revolution that broke with the merely reproductive mechanism of the pre-industrial economy, but they could not envisage how the system would eventually settle itself. They feared that the tension generated by the new state of affairs, which had upset the established order, would provoke nature's vengeance. After all, they were witnessing a situation of transition, similar to the one described by E.A. Wrigley in his model of the 'advanced organic economy'.[91]

## A (limited) vision of development

We shall now consider Ricardo's one-commodity model, using the classical analytical formulation put forward by L.L. Pasinetti as a reference.[92] In this system corn is produced by means of labour, a factor which in its turn is paid in corn. The amount of wages is thus obtained by multiplying the wage rate (levelled at subsistence value in the long run, due to the Malthusian principle) by the number of workers.

Aside from any superficial analogies or obvious dissimilarities to the 'production functions' currently used by economists (Ricardo's function has a positive slope and has decreasing marginal returns; on the other hand, it has a positive intercept, with regard to the 'natural generosity' of land, and does not imply any specific assumptions on the returns to scale), it is important to note the absence of capital as input: capital is set equal to the wages fund and has no *direct* effect on output.

The total amount of rents is given by the difference between the revenues of owners of more fertile land and those of marginal land (which naturally does not yield a rent). Profits, unlike this variable, are defined as only a residual quantity, not related to the production function.

Despite his concern for his lot, the entrepreneur, in Ricardo's view, is far from being a maximizer. Subject to constraints both structural (the power of the rentiers) and natural (the decreasing fertility of the land cultivated under population pressure), he is unable to determine the outcome of the production process. The system appears to be conditioned by a limited capacity for expansion and therefore condemned, sooner or later, to reach a stationary state (with zeroing of profits).

Here also lies the emblem of Carlyle's 'dismal science'. But why, after Smith, does political economy seem to change course? Is it not perhaps paradoxical that such a lack of confidence in the potential of the economic system emerges during a more mature phase of industrialization? This apparent contradiction has hitherto been explained by most historians with the emergence of two conflicts at the time of the Napoleonic wars, namely between wages and profit and, above all, between profit and rent.[93]

The Luddites and the Corn Laws were indeed two historical situations, but one cannot make use of contingencies to explain a theory of structural scope; one only shifts the problem. If the possibilities of the system tended towards being unlimited (if, in other words, Ricardo's were an open system and not closed to change and/or marked by a different law of productivity), the rate of profit could indeed fall cyclically, or periodically, but would then be regenerated, without ever being entirely exhausted. In short, conflict between the classes would not end in paralysis, in the inexorable rarefaction of capital saving. The crux of the matter is that, in moving from the era of Smith, who observed a world not dissimilar from that of Turgot or Cantillon (didn't perhaps the *Wealth of Nations* put its seal on that type of 'normal science' and that particular 'classical situation'?), to the turbulent period of transition reflected in the more problematic and, in some respects, more rigorous approach of Ricardo and Malthus, different styles, methods and vision necessarily led to varying outcomes.

What surprises modern man, the heir of the so-called 'modern economic growth', is the lack of a clear logical distinction between production sectors within these analyses: one sector (the agricultural) is often taken as being representative of the others. The problem is effectively formulated by Malthus, in a section of Chapter 5 of the *Principles*, significantly entitled *Of Profits as affected by the increasing Difficulty of procuring the Means of Subsistence*:

> In the mean time, it will be asked, what becomes of the profits of capital employed in manufactures and commerce, a species of industry not like that employed upon the land, [but] where the productive powers of labour . . . not only do not necessarily diminish, but very often greatly increase?[94]

The reply lies in the progressive decrease of the exchange value of the product. Once agricultural profits drop, capital will indeed move elsewhere, to be used

> till a fall has taken place in manufactures and commercial products from their comparative abundance.[95]

But the levelling of the rates of profit among the different sectors, which does take place, does *not* go wherever the crisis leads it, as would happen in the interlocking system embodied in the neoclassical model of perfect competition. The primary sector is the one that dictates the rhythms of development of the economic system. 'If the productivity of agricultural labour increases, the profit rate of the entire system increases . . . ; while if the productivity of labour increases in any non-agricultural sector, nothing happens to the general rate of profit':[96] since only in agriculture is the rate fixed independently of the price system. This might seem to be an expedient of the construction, and indeed it is. Nothing would have prevented Ricardo from also determining the rate of profit of the manufacturing sector in material terms: he could have just specified its production function. The fact that he did not cannot obviously be attributed to idleness or accident: the role of relative passivity that such a choice implicitly ascribed to the secondary sector evidently reflected impressions he had deduced from the situation of the time.

## Agriculture and manufacturing

If one fails to grasp the fact that the Industrial Revolution was, in the first place, an agricultural revolution,[97] it will be difficult to appreciate a great part of the legacy of the Classics, starting with their emphasis on land. It seems quite clear that the potential of the secondary sector did not escape the founder of their school. The *Wealth of Nations* gives an image of manufacturing as a world in constant ferment, and it is the sector to which Smith naturally turned, attracted as he was by the germs of change, and whose most significant developments he predicted. He openly criticized the *Economistes*[98] for having defined workers other than husbandmen as a 'sterile class', and dedicated an entire chapter (chapter 9 of Book IV) to dispute this suggestion. Nevertheless, if it was true that manufacturing, like agriculture, produced a surplus, the propelling activity of the primary sector remained in some ways stronger, forming the basis of the economic system:

> Of all the ways in which a capital can be employed, [agriculture] is by far the most advantageous to the society.[99]

The motives behind this faith in the capacity of the land to generate wealth seem rather old-fashioned. As Quesnay had thought, and as Malthus would later endorse, 'the fertility of the soil, being a gift of nature, exists whether it is wanted or not':[100]

> In agriculture . . . nature labours along with man; and though her labour costs no expence, its produce has its value, as well as that of the most expensive workmen . . . . In [manufactures] nature does nothing; man does all; and the *reproduction* must always be in proportion to the strength of the agents that occasion it.[101]

The term 'reproduction', moreover, embodies all the ambiguity of the early political economists when they approach economic dynamics. It is something more than the analogous physiocratic concept, including a profit margin, so to speak, which is incremental with respect to the current potential of the system, generally identified with future capital ('Accumulation [is] [t]he employment of a portion of revenue as capital');[102] vice versa, it is something less than a 'growth' in the modern sense.

But a closer look reveals the embarrassment of Smith, caught between the easy task of praising an agricultural sector that was fulfilling its potential, and the temptation (as stimulating as it was insidious) of gambling on industry in its infancy; a source of wealth that was still, virtually, at an experimental stage. The appeal of intellectual adventure was such that the subject of the division of labour – the pillar on which Smith's theory of development rests – was indeed addressed within the context of manufacturing; agriculture would have objective limitations to the progressive extension of the rationalizing principle.

For the same reason, a good half of the work is taken up with examples relating to the secondary sector. The famous pin factory that Smith uses to introduce his principle is 'a small manufactory . . . where ten men only were employed':[103]

> But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day.[104]

This is exactly the type of enterprise that was growing in eighteenth-century Britain as part of the productive fabric.[105] The quotation

expresses better than any other Smith's wonder at a 'law' that, like the invisible hand, seemed able to assure prosperity for future generations.

Elsewhere, the demise of the putting-out system is described; it is considered almost – and not without a touch of caricature – as a persisting anachronism and as a mere receptacle for those who were still trapped in the meshes of tradition, unable to take flight:

> There still subsists in many parts of Scotland a set of people called Cotters or Cottagers, though they were more frequent some years ago than they are now.... Stockings in many parts of Scotland are knit much cheaper than they can any-where be wrought upon the loom. They are the work of servants and labourers, who derive the principal part of their subsistence from some other employment.... The spinning of linen yarn is carried on in Scotland nearly in the same way as the knitting of stockings, by servants who are chiefly hired for other purposes. They earn but a very scanty subsistence, who endeavour to get their whole livelihood by either of those trades.[106]

This is followed by a powerful theoretical intuition even though, once again, in its stylized treatment it does not accurately reflect contemporary reality:

> In opulent countries the market is generally so extensive, that any one trade is sufficient to employ the whole labour and stock of those who occupy it. Instances of people's living by one employment, and at the same time deriving some little advantage from another, occur chiefly in poor countries.[107]

Several passages correspondingly highlight the virtues of individual enterprise, and consecrate the emancipation of the small entrepreneur:

> An independent manufacturer, who has stock enough both to purchase materials, and to maintain himself till he can carry his work to market, should gain both the wages of a journeyman who works under a master, and the profit which that master makes by the sale of the journeyman's work.[108]

David Ricardo, who observed the Great Britain of 40 years later, bitterly contested the primacy Smith ascribed to agriculture;[109] but his whole theory of production and distribution – which certainly lacks no references to the secondary sector (see, for example, the discussion of profits

in the cotton industry, in Chapter 6 of the *Principles*) – is made to hinge on land. Even Richard Jones (1790–1855)[110] – a writer whose conception of the economic system was undoubtedly more articulated and, in some respects, more advanced than that of the Ricardians – chose to devote the first volume of his unfinished trilogy[111] to analysing the economic consequences of the agrarian regimes established across the world: from the 'labour/serf rents', typical of Eastern Europe, to the innumerable variations of the 'metayer rents' (Valtellina, Provence, Greece and Afghanistan are among the cases considered), to the 'ryot rents' of the Orient and the 'farmers' rents' of the Anglo-Saxon model. Jones's work certainly conveys a precocious and rare taste for comparison, but also proves that food availability long continued to be adopted as the parameter for measuring real wealth.

## Circulating capital in Smith and Ricardo

Until the 1820s the classical reproduction scheme, or the Cantillon–Quesnay circular flow model, as Schumpeter called it,[112] had a decisive influence on the way British thought conceived the production process, its requisites and its potential.

According to the physiocratic vision, as we have seen, the capitalist, at the start of each working period, keeps back a small fraction $a$ of his available resources for personal consumption and uses the remainder $b$ for 'advances' to sustain his workforce. At the end of the cycle, the product will provide him with a total of $a + b$ (quantity $a$ is evidently the surplus), which will go towards starting the cycle over again. Naturally, at the start (or during another phase) of his activity, the capitalist can immobilize the money to buy a plough or a building, for example. But such a form of investment is assumed to be a one-off occurrence, and is therefore not taken into account in the circular flow analysis. The Physiocrats held the conviction that surplus was a prerogative of the primary sector, and thus these considerations were related to land; but the production method thus described operated in domestic manufacture in identical fashion (the validity of the model remains, the only difference being that the supply of raw materials is included in category $b$).

The second book of the *Wealth of Nations* introduces the distinction between *stock*, the overall funds belonging to an individual or group of individuals, and *capital stock*, which is the part that provides some income[113] or, in equivalent terms, what is not used for immediate or personal consumption. In its turn, capital stock is subdivided into (1)

'circulating capital' (money, the wages fund, raw and semi-finished materials, and finished products in stock) and (2) 'fixed capital' (tools and machines, including working animals; rentable and work buildings; land improvements; know-how, and so on).[114]

It is often said that if according to Smith the division of labour was the motor for development, then the accumulation of capital was the fuel.[115] But what sort of 'capital'? Our familiarity with the neoclassical notion[116] leads us, if only from a cognitive point of view, to attribute an unconscious pre-eminence to the second type. Nothing could be more misleading, since for Smith the exact opposite applies. We will try to show how circulating capital – basically the 'wages fund' – is none other than the heir to the 'advances' on which the putting-out system was based.

'As the accumulation of stock must, in the nature of things, be previous to the division of labour, so labour can be more and more subdivided in proportion only as stock is previously more and more accumulated': this is the general rule outlined by Smith.[117] Now, merely the fact that a weaver cannot begin work unless *beforehand* (why not during?) the amount needed to sustain and re-equip him up until the delivery of the product has been put aside seems like a bizarre or irrational recommendation (and as such has been interpreted!), *unless* it is placed in the context of the historical experience referred to earlier. Furthermore, as the division of labour progresses, instead of a decrease, there is an increase in the amount of capital required. Even the apparent absurdity of this second principle falls short if one is really prepared to take account of the relative weight that Smith attributes to outlay on labour and supplies of raw materials in the composition of total capital. Machinery comes into play only during a second phase, through a sort of evolutionary automatism, which is established at a certain stage of the division of labour. It takes on what might be called an 'accessory' function – one which Lauderdale would attack – to 'facilitate and abridge labour'.[118]

Expressions like the following, detailing the requisites of a production process that has already reached an advanced stage, must therefore not be misinterpreted:

> An equal stock of provisions, and a greater stock of materials and tools than what would have been necessary in a ruder state of things.[119]

They do not underlie any proto-theory of 'primitive accumulation'. All Smith's considerations on the subject of production are formulated on an annual basis, a limited space of time that does not go beyond the

duration of the single work cycle. The word 'depreciation' is missing from his vocabulary, confirming the fact that he was dealing with structures using insignificant equipment. As Edwin Cannan points out,[120] even when it is a question of calculating 'the common annual profits of manufacturing stock' fixed capital 'is left out of accounting altogether', and the calculation is made only on the annual expenses.

Actually, Smith went even further, by identifying the entire capital with wages: 'Whatever a person saves from his revenue he adds to his capital, and either employs it himself in maintaining an additional number of productive hands.'[121]

> It is the circulating capital which furnishes the materials and wages of labour, and puts industry into motion.[122]

Circulating capital also performs the indirect function of creating fixed capital, thanks to its logical precedence over the latter. Fixed capital is entirely dependent on circulating capital,[123] which provides the materials the machines are made of and enables 'the maintenance of the workmen who make them' (which suggests the diffusion of the practice of auto-production of machinery). It is circulating capital again that provides for keeping them in repair.[124]

Smith's successors continued to see in capital the fraction of annual income that was subtracted from consumption. The idea that it could increase over the years by immobilizing amounts remained foreign to them:

> In consequence of their habit of regarding the 'funds for the maintenance of labour' as the most important component of the capital, the early nineteenth-century economists attached themselves with fervour to Adam Smith's idea that the maintenance of productive labour is the principal function of the capital of a country. Adam Smith seems to have had in his mind the picture of a 'capitalist' arriving in a village with his capital, and turning 'idle' menials and beggars into 'industrious' labourers.[125]

Thus, when fixed capital was redefined, Ricardo (also concerned about safeguarding his labour theory of value) would express it as the result of the 'sedimentation' of previous amounts of labour. Only in the third edition of the *Principles*, in which the chapter *On Machinery* appears, would he admit that its importance could vary from sector to sector:

> In one trade very little capital may be employed as circulating capital, that is to say in the support of labour – it may be principally invested in machinery, implements, buildings, etc. capital of a comparatively fixed and durable character – in another trade the same amount of capital may be used, but it may be chiefly employed in the support of labour, and very little may be invested in implements, machines, and buildings.[126]

He was certainly influenced to some degree by John Barton's pamphlet (1817):

> As arts are cultivated, and civilization is extended, fixed capital bears a larger and larger proportion to circulating capital.[127]

Meanwhile, Malthus continued to calculate profits as a percentage of annual expenses.[128] Establishing an equation between population and workers, wages and capital, he breathed new life into Smith's theory.[129] James Mill provided a rather general and hardly operational definition[130], while McCulloch showed that he identified the majority of capital with 'the food and clothes destined for the support of the labourers' and considered machines as a useful accessory:

> The produce of the labour of a nation cannot be increased otherwise than by an increase in the number of its labourers or in their productive powers. But without an increase of capital it is in most cases impossible to employ another workman with advantage.[131]

John Stuart Mill would follow the same line:

> There can be no more industry than is supplied with materials to work up and food to eat. . . . Now, of what has been produced, a part only is allotted to the support of productive labour; and there will not and cannot be more of that labour than the portion so allotted (*which is the capital* of the country) can feed, and provide with the materials and instruments of production.[132]

But he arrived too late to defend a view which, as we will see in the next chapter, had already been discredited 15 years previously.

# 4
# Industrial Maturity

With the 1830s a more optimistic conception of the future emerged. The divergence between population and resources seemed to settle into a new equilibrium; the advent of the factory system, which brought great upheavals in social patterns, began to open up unexpected scenarios relating to production, which the rapid changes in models of consumption helped to foster. In this new climate, some observers went so far as to demonstrate their trust in the 'unlimited' self-expanding capacity of the capitalist economy.

So now, for the first time, the concept of *capital good* made its appearance on the scene of theory. It designated a physical object, or a combination of objects (materials, immovables and especially machinery) that could be used to produce further goods. Once land and natural resources had also been classified as being a particular case of this category, the transition to the modern economic mentality was complete.

In J.S. Mill's age, everything led to a belief that the industrial process was close to its full 'maturity'. Satisfied with what the nation had attained, he did not nurture any expectation of a permanent revolution that would continue indefinitely perhaps with changing features. In other words, he interpreted it as an extraordinary event in history that, once its propulsive drive had been exhausted, would break up, leaving an adequate level of well-being for future generations:

> Toward the end of his life (around 1870) he . . . believ[ed] that the private-enterprise economy had pretty much done what it was able to do and that a stationary state of the economic process was near at hand . . . . He did not, as A. Smith and Ricardo had done, view the stationary state with misgivings . . . , because he had

> eliminated the bogey of overpopulation. But neither did he share the modern stagnationist's misgivings, because he did not fear the bogey of underconsumption. To him the stationary state looked rather comfortable – like a world without 'bustle' . . . in which a philosopher like himself would not mind living and in which there would be moderate prosperity (or better) all round.[1]

At that point, it would be possible to afford the luxury of steering the system towards the single goal of pursuing civil progress. Thus the principle of income redistribution was embodied within Mill's theory; it would be carried out following the criteria based on a refined political philosophy and making use of fiscal means. All this against a background of British social history, with the labour movement and progressive liberal tradition in their early stage.

## A new idea of capital

Around 1835, economic theory was violently shaken to its core. The contributions of John Rae and Nassau Senior, in particular, will be dealt with here; those of Charles Babbage will be examined in greater detail later (pp. 75–80). The *Statement* of John Rae (1796–1872)[2] was written in open disagreement with Adam Smith. If 'Rae had not more than a saving knowledge of economics [and] he owed such training as he had mainly to the work he attacked',[3] it did not prevent him from formulating the first theory based on the modern idea of capital. The second book of his treatise[4] forms an enquiry *On the nature of stock, and of the laws governing its increase and diminution*. There is no trace of 'advances' or wages-fund doctrines; the whole argument revolves around the concept of 'instrument', which apart from machines refers to capital goods in the true sense. On the basis of this definition, flour, for example, can be considered at the same time a product (in relation to corn) and an instrument (in relation to bread): the independent variable is the particular 'want' towards which production is directed.

Rae's reasoning went as far as to incorporate natural resources into the category of capital itself, and thus anticipated one of the central tenets of neoclassical analysis:

> In this sense a field is an instrument. The changes effected in the matters of which it is composed, for the purpose of rendering it an instrument, are the levelling and if necessary making the surface dry by means of ditches and drains, the removing stones from it, the

> mixing and pulverizing the soil by the plough, the harrow, and the roller, and the incorporating with it various matters termed manures, which render it more fit for the support of vegetable life. The future wants, towards the supply of which it is an instrument, are food and clothing. The power which has made it an instrument, is the agriculturist's labor.[5]

A country's availability of instruments is determined by four elements: the quantity and quality of its raw materials; its inclination towards accumulation; wage levels; its aptitude for technological innovation and how often it is displayed;[6] the remaining part of Book II is devoted to an examination of these aspects. The search for determinants follows a backward procedure, which includes cultural attitudes, the institutional framework and the historical conditioning of the societies that are being compared, and reflects Rae's wide experiences as reader and traveller. He reveals a good knowledge of the machines used in Great Britain, both agricultural ones such as the threshing machine or Sharp's winnowing machine, in use from the end of the eighteenth century as a replacement for the traditional 'flail',[7] as well as 'more complicated machines or instruments, such as the steam engine or the cotton mill', introduced more recently in industry, which Rae considered to be even more relevant to his conclusions.[8]

Senior was the one to show he had really reaped what had been sown on the other side of the ocean. There is no doubt that in his *Outline* the image of growth based on the reproduction of capital goods makes headway,[9] despite ambiguities generated by his failure to refute classical theory:

> The Powers of Labour and of the other Instruments which produce wealth may be *indefinitely* increased by using their Products as the means of further Production.[10]

As for the concept of 'abstinence' closely correlated to this 'Third Proposition', Senior himself would explain: 'We have substituted the term Abstinence for that of Capital on different grounds' in order not to risk being trapped in the Babel that had been created by his illustrious predecessors.[11]

Elsewhere, referring to the cotton industry, he noted,

> I find the usual computation to be that the fixed capital is in the proportion of four to one to the circulating.[12]

Fixed capital is also clearly given pre-eminence in Mountifort Longfield's view of the production process.[13] As for circulating capital,

> It is evident that the profits of this must be regulated by the profits of fixed capital.[14]

But we will need to wait until Marx – an author obsessed with machinery to the point of basing his prophecy regarding the future of capitalism on the frenetic increase in the 'organic composition of capital' – before any significant theoretical repercussions came out of overturning the traditional proportions between circulating and fixed capital. A certain ideological element undoubtedly plays a role in Marx's analysis, which is not easily separated from the presence of arguments based on actual empirical observation; but as long as he limits himself to underlining the changed strategy of investments Marx is still a reliable witness. The growth of fixed capital, as we shall see, must have been an increasingly marked phenomenon from the post-Ricardian period onwards and its culmination sealed the end of classical political economy.

## Technology and accumulation

Edward West in a famous pamphlet, for the first time, brought up the question as to whether applying successive amounts of capital (especially fixed) to farming could resolve the problem of the system's tendency to drift into crisis.[15] The conclusion was negative. His argument, which contradicted Smith, was that reduced workforce efficiency in the primary sector compared to manufacturing was not a consequence of the impracticability of the complete division of labour: since, even if a remedy were found for it, once less fertile lands began to be cultivated the cruel natural law would have served to dramatically decrease productivity. Only in 1831 would this way of seeing things, in accordance with Ricardian orthodoxy, be openly criticized, in the already cited work of R. Jones[16] and later in the *Lectures* of Longfield.[17]

Not even in technical progress did Ricardo see a way out of the stationary state, or a way of compensating for decreasing returns, thanks to the continual outward shift of the marginal productivity of labour curve. He was ready to concede that innovation only had a role in slowing down, but it would be more correct to say 'patching up', the inexorable fall in the rate of profit:

> This tendency, this gravitation as it were of profits, is happily checked at repeated intervals by the improvements in machinery, connected with the production *of necessaries*, as well as by discoveries in the science of agriculture which enable us to relinquish a portion of labour before required, and therefore to lower the price of the prime necessary of the labourer.[18]

The difference is not a small one for the prognosis. While it is clear that below a certain level subsistence wages cannot be further reduced (if for no other reason than because market prices cannot become null or negative), the chances of the frontier of marginal productivity *f'* shifting to the right would theoretically be unlimited (Figure 4.1). Ricardo, however, did not seem to conceive them.

Some progress in this direction was made by Malthus, but 20 years after the publication of his *Essay*.[19] The author of the *Principles* was certainly a more mature scholar, and not just in the biographical sense. The experience of Malthus is paradigmatic of the amount of time needed for a man living during a period marked by gradual but continual changes to assimilate the elements inherent in the changes themselves, starting with technical progress.

In 1798 and, to a greater extent, in 1803, when the second version of the *Essay on the Principle of Population* was published, less deductive in method and more concerned with arguments based on statistical

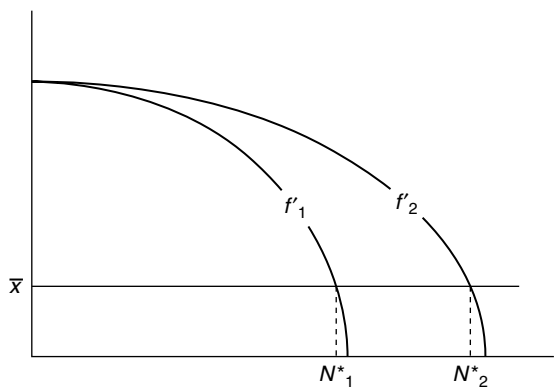


*Figure 4.1* Frontier of marginal productivity in the Ricardian economy
*Note*: From a mathematical point of view, the frontier is obtained from the derivative of the production function; $N$ represents the population ($N^*$ is the steady state value) and $\bar{x}$ the subsistence wages.

evidence, Great Britain was not yet an industrial power, but neither was it still in the state of being a traditional society. However, at first sight, the book appears to be an exposition of a theory of subsistence economy, better suited to describe the mechanisms typical of the pre-industrial world, or the underdeveloped regions of today, than the reality of the first country to set out on the path to modernization. The Reverend Malthus's man is at the complete mercy of nature, nor has he any chance of taking action by transforming it. The only option given to him is to spontaneously adapt to nature's law or be forced to follow it against his will.

On the other hand, several times in the *Principles of Political Economy*, one has the sensation of being before a new man. The whole of Chapter 7, *On the immediate Causes of the Progress of Wealth* (whose features are those of a separate book), makes original points. Malthus did not abandon his thesis on population, but he no longer based it on an arid biological algebra; it was more attenuated in tone and put in a problematical context. He argued that population increase should not be arbitrarily considered as a motor for economic development, especially when the structural requisites were absent. At this point he rejected Say's law in the section (III) on the dubious virtues of saving, which would earn him the unconditional admiration of Keynes. However, even here, rather than seeing signs of modernity, and a man looking towards the future, one has the impression that his empirical horizons lie in the past, in a society of an earlier period still lingering perceptibly in an England that was not yet, for good or bad, Benthamite:

> That an efficient taste for luxuries, that is, such a taste as will properly stimulate industry, instead of being ready to appear at the moment it is required, is a plant of slow growth, the history of human society sufficiently shews; . . . it is a most important error to take for granted, that mankind will produce and consume all that they have the power to produce and consume, and will never prefer indolence to the awards of industry.[20]

Thus Malthus's position was not contrary to a policy of saving, in as much as it had depressive effects on the reverse of *aggregate* demand, a concept that moreover did not belong to him. He was convinced that *collective* demand, left free, would stagnate again in any case, given the structural conditions of society; the object of his scepticism was investment ('accumulation'), as the country was not ready to sustain it:

> The real question is, whether under the actual habits and tastes of the society, any number of persons who might be inclined to save and produce . . . would be secure of finding such a demand for all they could bring into the market as to prevent the possibility of what is called a glut, or a great fall of profits in a large mass of commodities.[21]

In the *Definitions*, under the heading 'accumulation of capital', one also reads,

> Capital may therefore increase without an increase of stock or wealth.[22]

Malthus by no means underestimated the importance of technical progress, however. In Chapter 7 of the *Principles* the section entitled *Of Inventions* clearly distances itself from current opinions:

> [Inventions] are the natural products of improvement and civilization, and, in their more perfect forms, generally come in aid of the failing powers of production on the land.[23]

But for the positive effect of machines to spread to industry as well, and for technological unemployment implicitly to be remedied, the condition is the existence of a sufficiently extensive market (perhaps even opened up to foreign trade). By adopting machinery, savings in the labour force can be made; lower production costs, due to the effect of competition, cause sale prices to decrease; the market for the good produced expands, and the overall value of production increases as a consequence. In this way, 'notwithstanding the saving of labour, more hands, instead of fewer, are required', because the surplus labour will find new employment.[24]

Therefore the choice of which good to stake on becomes crucial: it will need to be such that it guarantees demand with good price elasticity and without the risk of early saturation.

> This effect has been very strikingly exemplified in the cotton machinery of this country. The consumption of cotton goods has been so greatly extended both at home and abroad, on account of their cheapness, that the value of the whole of the cotton goods and twist now made exceeds, beyond comparison, the former value; while the rapidly increasing population of the towns of Manchester, Glasgow,

> etc. during the last thirty years, amply testifies that, with a few temporary exceptions, the demand for the labour concerned in the cotton manufactures, in spite of the machinery used, has been increasing very greatly.[25]

Malthus, in his later period, thus provides a clear view of the potential of the capitalist system to expand and the form that this evolution should take, starting with basic products that would allow the development of an effective market even in the early stages. British industrialization was not advancing with the production of costly wool, but from the more modest cotton thread, a fibre with a multiplicity of uses, which found a natural outlet in the almost unlimited demand for personal underwear at that time.

Such a vision of things, however, was far from universally accepted. When Ricardo returned in the next year (1821) explicitly to the problem of the introduction of machinery, endorsing the thesis that technological unemployment was inevitable, he appeared only to dwell on the unfavourable effects on the wages fund, which was drying up, while the structure of fixed capital was growing and becoming more complex.[26] Not only was there no way out of the stationary state, but even the hope that the use of machines could act as a buffer, or delay the fall in profits, faded due to the high social costs. Machines had to be accepted – as a necessary evil – only in the face of a risk of capital flowing abroad, which would certainly have occurred in the absence of any barriers.[27] It goes without saying that, in this radical phase of Ricardo's thought, the principal conceptual tools that would later feature in Marx's system were being sharpened.

## Towards self-expansion of the system

Senior was the first, within the mainstream, to systematize the explanation of increasing returns in industry. The phenomenon had not escaped some of the Ricardians, principally McCulloch and West (who, it will be remembered, had hinted at it collaterally to his discussion on the performance of the primary sector), but it had never been specifically tackled. This disinterest is perhaps a significant indication of their priorities.

According to Senior,[28] the 'physiocratic' disadvantage of manufacturing, whereby each increase in output required a corresponding increase in raw material, is more than compensated for by the 'constantly increasing facility' with which this quantity of material is worked:

> A century ago the average annual import of cotton wool into Great Britain was about one million two hundred thousand pounds. The amount now annually manufactured in Great Britain exceeds two hundred and forty millions of pounds. But though the materials now manufactured are increased at least two hundred times, it is obvious that the labour necessary to manufacture them has not increased two hundred times.

The effect was evidently due to improvements in machines and the perfection of the division of labour. In addition, the special yields of the secondary sector were reflected in the price of the finished product – a synthesis of the quantity of labour employed throughout the whole of the production process – which had decreased about 12 times during the course of the previous century, despite the increase in costs due to the importation of large amounts of raw materials.[29]

This positive trend led him to predict that

> Unless our manufactures be checked by war . . . their produce may increase during the next century at the same rate, or at a still greater rate, than it increased during the last century.[30]

In the Oxford lectures of 1828 Senior had already questioned the inescapability of the Malthusian trap. Appealing to the principle of 'moral restraint', which Malthus had added to the list of 'preventive checks' in the second edition of his *Essay*, Senior argued that, as society progressed, the impelling nature of primordial instincts were replaced by the consideration of opportunities bred by social conditioning, such as the need to preserve status or to maintain an adequate lifestyle, with a positive effect on the regulation of demographic development.[31] John Stuart Mill was to use similar arguments; he imagined a future with a fixed population, in which technological change would play a role in increasing per capita wealth.[32] After a great deal of hesitation,[33] he finally cast aside the wages-fund doctrine; by institutionalizing increasing returns and recognizing the importance of the secondary sector he was to formulate a dual theory of value, for agricultural as well as industrial products.[34]

Perhaps at this point we could ask ourselves why Mill's theory of capital was still anchored to the model of Smith and Ricardo. We have already quoted a passage from the *Principles* that is very explicit on the subject, and others could also be mentioned. At the start of Chapter 4, in Book I, Mill repeats that capital is obtained from the products of past

labour destined for 'reproductive employment'; he adds that its function is 'to afford the shelter, protection, tools and materials which the work requires, and to feed and otherwise maintain the labourers during the process'.[35]

The temptation to dismiss this position outright as outdated, and as the result of cultural inertia, or even a reflection of the chronic fatigue of classical economics, needs to be resisted. It would be a superficial conclusion, and we would certainly not render justice to the author's profundity of speculation. If his pages are read carefully, which they deserve to be, Mill appears to be fully aware of the changes in ideas and in society that characterized his time. In setting out his famous 'Propositions', which aim to analyse how capital derives from labour and in its turn fosters it through saving, he unexpectedly declares,

> I do not mean to deny that the capital, or part of it, may be so employed as not to support labourers, being fixed in machinery, buildings, improvement of land, and the like. In any large increase of capital a considerable portion will generally be thus employed, and will only co-operate with labourers, not maintain them.[36]

However, Mill held that it was wrong to attribute capital *per se* with an autonomous productive capacity. His position is thus explained in philosophical rather than descriptive terms: however useful, and even indispensable it is, in developing modern economic life – seems to be the message – the function of capital is to serve labour (which is an extension of man), and labour should never become an accessory of capital.[37] Moreover, an increase in fixed capital at the expense of circulating capital is acceptable only because its negative effects on the level of employment, and on the living standard of the workers, are generally limited to the short run, while the gradual nature of the replacement is a guarantee against more serious repercussions.[38]

Another interesting *excursus* in the *Principles* concerns financial capital. Mill wonders if 'the property of those who live on the interest of what they possess, without being personally engaged in production' can be regarded as capital.[39] The answer depends on the *final use* that will be made of the money. If, after having gone through the whole chain of credit, it finishes in the hands of someone who will use it productively, it can legitimately be considered capital; but if it does not, and it is dissipated or destined for uses without any social utility, despite the intentions of its original holder, then it cannot. Mill again warns,

> To transfer hastily and inconsiderately to the general point of view, propositions which are true of the individual, has been a source of innumerable errors in political economy. In the present instance, that which is virtually capital to the individual, is or is not capital to the nation, according as the fund which by the supposition he has not dissipated, has or has not been dissipated by somebody else.[40]

The influence of Charles Babbage's book *On the Economy of Machinery and Manufactures* (1832) hangs over these developments, which regard general thought.[41] This is the first treatise dedicated expressly to the study of the economy of the factory system; at the same time it was a best-seller when it first came out, which sold 3000 copies in two months,[42] and went through various editions and translations until the middle of the century. In 1835 another two books on manufacturing were published: Andrew Ure's *The Philosophy of Manufactures*[43] and Edward Baines's *History of the Cotton Manufacture*;[44] these documents are no less interesting for industrial historiography, but as regards depth of analysis and subtlety of speculation are a long way from the former.

Nathan Rosenberg observed that Babbage (1792–1871)[45] 'has lived a furtive, almost fugitive existence in the literature of economics';[46] this is, I think, due to the fact that economists do not like his style. Along with Jones and Rae, he was, despite himself, a non-conformist. Gifted with a 'command of simple but sound economic theory',[47] he nevertheless distanced himself in terms of both method and language, instead looking to business studies for a more concrete foundation for his own arguments on the theory of production and the markets.

In an attempt to go beyond Smith's analysis, he took the division of labour as his theme. He affirmed that besides generating economies of time and learning, division makes it possible to give each operation of the production sequence 'exactly that precise quantity [of skill and of force] which is necessary';[48] that is, it leads to the full exploitation of the different individual skills. As regards 'human capital',[49] Smith had in fact been less concerned about efficiency and more far-sighted: he had understood that the initial leap in productivity in the end led to a loss for society, once knowledge had become reduced to being skill.

The part of the work that I would like to consider in particular begins with Chapter 22, *On the Causes and Consequences of Large Factories*. The motivating factors are correctly categorized into two types of situations: (a) combining several phases of the same production chain under the same roof generates economies; (b) fixed costs are only completely absorbed when production is organized on a large scale. Size, in its turn,

has an important corollary: it makes experimentation possible by providing the entrepreneur with the financial and structural requisites for the systematic innovation of the production process, which in itself entails a high level of risk in addition to information. On this subject Babbage quotes the report of the House of Commons commission on the wool trade for 1806:

> The little master manufacturers cannot afford, like the man who possesses considerable capital, to try the experiments which are requisite, and incur the risks, and even losses, which almost always occur, in inventing and perfecting new articles of manufacture, or in carrying to a state of greater perfection articles already established. He cannot learn, by personal inspection, the wants and habits, the arts, manufactures, and improvements of foreign countries; diligence, economy, and prudence, are the requisites of his character, not invention, taste, and enterprise; nor would he be warranted in hazarding the loss of any part of his small capital. He walks in a sure road as long as he treads in the beaten track; but he must not deviate into the paths of speculation. The owner of a factory, on the contrary, being commonly possessed of a large capital, and having all his workmen employed under his own immediate superintendence, may make experiments, hazard speculation, invent shorter or better modes of performing old processes, may introduce new articles, and improve and perfect old ones, thus giving the range to his taste and fancy, and, thereby alone enabling our manufacturers to stand the competition with their commercial rivals in other countries.[50]

In Chapter 23, he observes that it is typical for large plants to be grouped around centres or districts, sketching out a theory of industrial localization. This appears to be subordinated to various conditions (such as the abundance of raw materials, the presence of means of communication, the cost of their access and so on), many of which, however, were in the process of being superseded:

> The yet unexhausted applications of steam and gas, hold out a hope of attaining almost the same advantages for countries to which nature seemed for ever to have denied them.[51]

But the rise of actual industrial regions stimulates the formation of great basins for business activity, bringing benefits not only for consumption (as choice becomes much wider), but also for supply (as there is access

to the market for raw materials and a gauge for demand). They have the effect of stabilizing prices and the quantities produced and allocated. In the opposite situation, 'small markets' persist, as a residual outlet for traditional manufacturing, made a victim of 'accidental fluctuations' by information asymmetry.[52]

Machines are obviously seen in a favourable light. However, their use, as Malthus had deduced, appears to be tied to predictions regarding the scale of production: only if there is expansion will their costs be amortized, while the surplus in the workforce will be readily reabsorbed into the labour market, this argument being backed up by a number of quantitative examples.[53] In an industrial economy, it thus becomes essential that production itself is preceded by a phase of careful study of the market.[54] The following need to be estimated: (a) costs relating to the acquisition and preparation of machines and raw material; (b) demand; (c) the time required to recover the capital invested; (d) the time required for the new product to reach the up trend of its life cycle.

Far from being over-triumphant, Babbage's is thus a rather prudent attitude. Niche industries survived, such as the bobbinet manufacture, where a thousand people worked with two million pounds capital, distributed, however, predominantly among small and very small domestic producers (cf. Figure 4.2). Now, according to Babbage, the owners of looms would have to reflect seriously on whether to progressively introduce machines capable of enormous production into a sector already

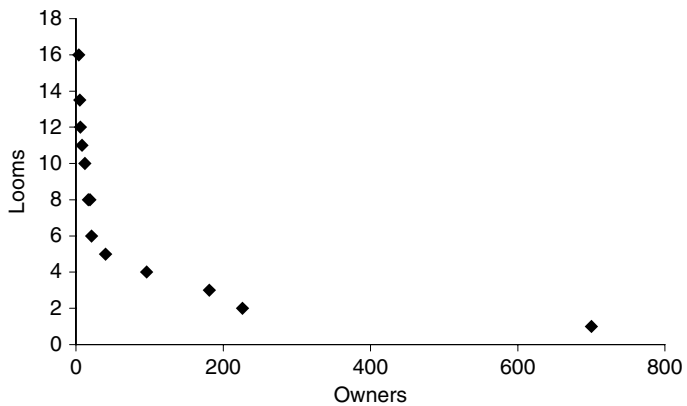


*Figure 4.2* Distribution of ownership for bobbinet machinery, 1832
*Source*: The graph is based on Babbage's data, *On the Economy of Machinery*, p. 357.

characterized by a very unstable demand, linked to that of worked cotton. The chronic indebtedness of small owners to the merchant-supplier, exacerbated with every new crisis, had the capability of reducing them to the condition of day-workers.[55]

Little does it matter if the hopes placed in the preservation of the old balances were disappointed, but Babbage's analysis was correct. It helps us to understand the transition from a low capital intensity system of fragmented ownership, where the majority entered 'into the class of journeymen as well as that of masters',[56] to the logic of the opposition between capital and labour, profit and wages, which was only just starting to emerge, and would culminate in Marx's time.

Subtle psychologist that he was, Babbage did not limit himself to deprecating Luddism and the first uncoordinated workers' protests,[57] but instead devoted chapters of his book to an analysis of industrial and trade union relations.[58] His prescriptive message can be summed up thus: satisfying different interests needs to be negotiated step by step, avoiding any ideological bias or refusing point blank to accept innovation; each option needs to be based on a calculation of the real consequences:

> I confess I am not without a hope that this volume may fall into the hands of workmen, perhaps better qualified than myself to reason upon a subject which requires only plain common sense, and whose powers are sharpened by its importance to their personal happiness .... I can claim only one advantage over them; namely, that I never have had, and in all human probability never shall have, the slightest pecuniary interest, to influence even remotely, or by anticipation, the judgments I have formed on the facts which have come before me.[59]

John Rae's *Statement* is worth reading, if nothing else for the profound intuition regarding the economic significance of innovation that it contains:[60] since the accumulation of capital alone cannot sustain, in the long run, the growth in profits, cyclical changes in the productive processes ('inventions') become indispensable.[61] To Babbage, the industrial fabric of Great Britain appeared to be characterized by a widespread tendency towards innovation:

> The power of inventing mechanical contrivances, and of combining machinery, does not appear, if we may judge from the frequency of its occurrence, to be a difficult or a rare gift.[62]

However, as argued above, he had well understood the need for new formulae to go with the changing size of enterprises. Chapter 33 stresses the importance of a policy of patents to act as an incentive for innovation on a wider scale. With hindsight, a comparison with the American situation exposes the shortcomings of the British system: in both countries a patent was valid for 14 years, but whereas in England it cost 120 pounds, in the United States its cost was only 6 pounds and 15 shillings.[63] Moreover, 'the difficulty of defending an English patent in any judicial trial, is very great; and the number of instances on record in which the defence has succeeded, are comparatively few'.[64]

Nevertheless, Babbage did not support the idea of protecting British industry from foreign competition with bounties on production or duties on imports – which would have meant transferring the burden of inefficient domestic production to the consumers[65] – or by preventing the emigration of workers[66] and the export of machinery. At the time he was writing, the ban on the free circulation of workers had already been abrogated; the measures against exporting machinery still stood; these had been adopted by parliament under pressure from entrepreneurs who were worried by the imitations and industrial espionage that the first followers on the Continent were carrying out. In Babbage's view, the provisions merely had the effect of harming the producers of machinery, and he made every effort to show how the success of industrialization depended more on a combination of circumstances (environmental, institutional, juridical, cultural) that were irreproducible elsewhere. Their defect

> together with the comparatively low estimation in which the master-manufacturers are held on the Continent, and with the comparative want of capital . . . would prevent foreigners from interfering in any great degree by competition with our principal manufacturers.[67]

History showed that Babbage was wrong; or rather that he was right in principle, but unfortunately underestimated the determination of the spies and, above all, the structural conditions that made other countries (for example, Belgium) a fertile terrain for industrial proliferation.

The final chapter, entitled *On the Future Prospects of Manufactures, as Connected with Science*, can be seen as one of the few expressly prophetic writings in economic and sociological literature in the broad sense. The author's extraordinarily wide range of intellectual experiences enabled him to deduce what path the Industrial Revolution would take 50 years later, and to describe with remarkable precision the terms of the mutual

relationship that would develop in theoretical research, technological repercussions and feedback of knowledge. The only mistake he committed was to take Great Britain as the setting for what he had imagined, which was one more act of presumption.

## Ideas and reality: A quantitative view

Paul Bairoch's celebrated work on the comparison of the levels of world industrialization between the eighteenth and the twentieth centuries forms the basis for the indexes for Great Britain (with the year 1900 equal to 100) which are displayed in Table 4.1.

Although the 'big spurt' in the level of industrial potential (that is, the total production) appears to have occurred during the first 30 years of the nineteenth century (182 per cent), with a difference of 24 percentage points over the rate of the previous 50 years, the leap forward in the level of industrialization occurred only between 1830 and 1860 (156 per cent). With respect to this second parameter, the break with the recent past is even more significant, showing a difference of 100 per cent.

The evidence presented here leaves no room for any ambiguity in its interpretation: about two thirds of the process that we call the Industrial Revolution (from the mid-eighteenth century to around 1830), which was marked by growing productivity, as we have seen, took place outside the factory system as conventionally understood. To confirm these observations, data from the most qualified study of capital formation currently available have been processed and given in Figure 4.3: it is clear that the growth rate of fixed capital investments in manufacturing first accelerated significantly only during the 1820s.

*Table 4.1* Level of industrialization and total industrial potential, Great Britain 1750–1880

| Year | Level of industrialization (1900 = 100) | Variation | Industrial potential (1900 = 100) | Variation |
|---|---|---|---|---|
| 1750 | 10 | | 2.4 | |
| 1800 | 16 | 0.6 | 6.2 | 1.58 |
| 1830 | 25 | 0.56 | 17.5 | 1.82 |
| 1860 | 64 | 1.56 | 45.0 | 1.57 |
| 1880 | 87 | 0.36 | 73.3 | 0.63 |

*Source*: My calculations based on P. Bairoch, 'International Industrialization Levels from 1750 to 1980', *The Journal of European Economic History*, 11.2 (1982), pp. 292, 294, Tables 8–9.

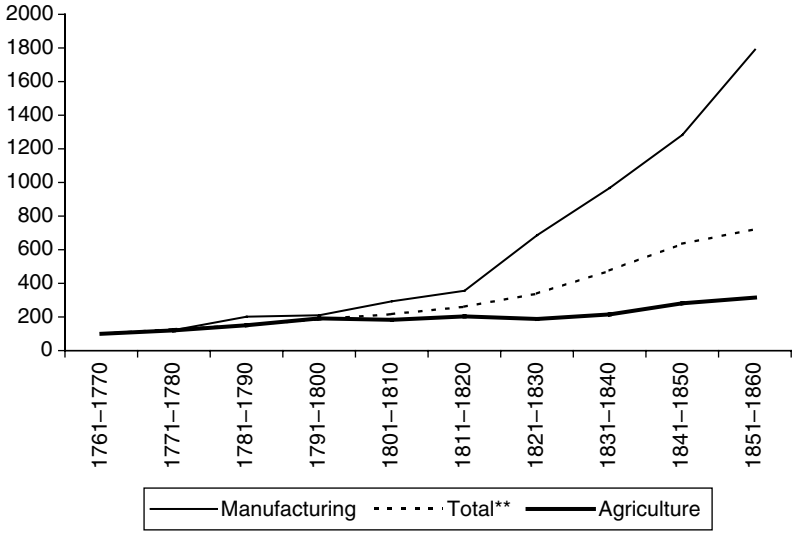


*Figure 4.3* Gross fixed capital formation by sector, Great Britain, 1761–1860*
*Note*: *ten-year averages at constant prices,1851–1860. Indexes based on 1761–1870 = 100.
**this includes the following sectors: agriculture, mining and quarrying, manufacturing, energy production, trade, building, railways, other transport-communications, public and social services.
*Source*: My calculations. The aggregate indexes were obtained using as a starting point the data of C.H. Feinstein and S. Pollard (eds), *Studies in Capital Formation in the United Kingdom 1750–1920* (Oxford: Clarendon Press, 1988), p. 444, Tab. IX *sub* Appendix.

To give an idea of how small an outlay was required to set up an enterprise, it is enough to cite the memorable extract from Ashton,[68] who, by means of a diary, reconstructs the start of the Walkers' steel company in 1741:

> In or about October or November of the same year, Sam[ue]l and Aaron Walker built an Air Furnace in the old nailer's smithy, on the backside of Saml. Walker's cottage at Grenoside, making some small additions thereto, and another little hutt or two . . . : and after rebuilding the chimney or stacks once, and the furnace once or more, began to proceed a little, Saml. Walker teaching the school at Grenoside, and Aaron Walker making nails and mowing and shearing, etc., part of his time.

Once the Walkers had rounded up two other partners, a third brother and a former employee, as well as a capital of 600 pounds (about 40

times the annual wage of an apprentice), they set up a cast-iron foundry and a steel furnace in about 1750. As the result of an ethics of saving and sacrifice, 'some addition, great or small, was made to the plant' each year, so that when Samuel died, in 1782, the reinvested capital had earned 128,000 pounds. In 1812 it had doubled again, and was on its way to tripling.[69] Outcomes of this order appear to be an extreme case, but the strategy that was followed was undoubtedly paradigmatic of the tendency towards self-financing, which was typical of the first phase of industrialization and underlined by F. Crouzet and S. Pollard in two works which have become classics.[70]

Cotton textiles required an even lower initial outlay in the form of a loom which, for good or bad, almost all families owned and traditionally utilized during the idle moments in agriculture. Due to its growing fortunes, the cotton industry (spinning, in this case) was one of the first branches to become mechanized, and was certainly the most mechanized within the textile sector.[71]

The data given in Figure 4.4 clearly indicate how modest, before 1835, the incidence of fixed capital was, even in this industry. At the end of the eighteenth century and before the mid-1830s, 'the size of the production units, despite the existence of very large factories, does not appear to have undergone decisive modifications .... Wooden mechanisms were substituted by iron ones, without resulting in phenomena characteristic

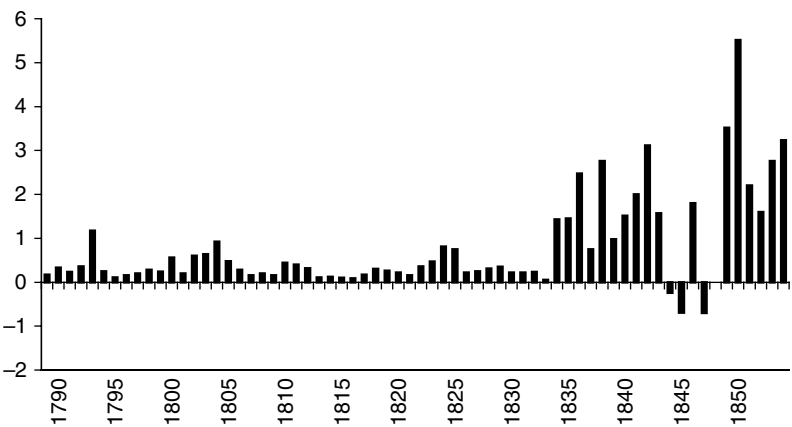


*Figure 4.4* Annual additions of fixed capital in the British cotton industry, 1788–1854 (£ million)
*Source*: The graph is constructed from S. Chapman and J. Butt, 'The Cotton Industry 1775–1856', in Feinstein and Pollard (eds), *Studies in Capital Formation*, pp. 124–125, Tab. II.

of economies of scale.'[72] This does not conflict with the widespread ownership of bobbinet machinery revealed by Babbage around 1830 and explains why the first Classics did not consider fixed capital important at all, and were consequently led to underestimate the role of investments in technology.

After this turning point, the mechanization of the textile industry rapidly increased; sectors such as the steel and machine industry, as well as the building of large infrastructures, also grew in importance,[73] and in mid-century these were beginning to take over the lead in the process of industrialization.

# 5
# The Revolt of 1867

At the height of British industrialization, in the midst of the period that Eric Hobsbawm defined as 'the age of capital',[1] classical political economy was hit by the full force of Karl Marx's critique. Marx, once he is stripped of 'Marxism' and distanced from all ideological interpretations, appears to us as he was at the outset – as the observer of a crisis of identity, brought about by the overturning of the relationship between society and the economy. The same crisis would be described in the next century by Karl Polanyi, in terms that reflected its progression.

*Das Kapital* was, in the first place, a reply and a reaction to a modernity that was deviating from the models and buffers of traditional society, and disregarding its conventions.[2] If a plain and evocative formula for the sense of his critique is needed, then it can be found at the end of Book I, in a statement that has an unexpected directness: 'capital is not a thing'.[3] In other words – he argued – in the same way that modern man looked on alienated labour as a commodity, and its product as a fetish, he deceived himself into thinking he could masquerade capital, whether under the guise of an impersonal instrument of the production process, or as the rightful reproducer of itself. But capital was in fact a social relation,[4] and machines – which had by now become all-pervasive and ubiquitous – formed its *organic* composition. They were the outcome of an appropriation, namely primitive accumulation; this was the setting up of property rights over things, thanks to which the capitalist decided on the distribution of income to his own advantage.

The problem of private ownership of the factors of production had already been raised in political thought, with a long tradition stretching from Thomas More to the Utopian socialists (in 1840, P.-J. Proudhon

had published his *Qu'est-ce que la propriété?*).[5] However, it is reasonable to wonder why it was that only in Marx's time did it begin to cause such an outcry. The explanation that can be given is threefold.

Firstly, in the sixteenth and seventeenth centuries, and throughout the eighteenth century, the problem of appropriation mainly concerned land, over which it was difficult to exercise full ownership anyway (due to the survival of traditional institutions such as the emphyteusis and ultimate ownership). With machines – when they became the decisive factor in production – the case was different. Secondly, even imagining areas without small owners – taking, for example, an English county peopled with landlords/farmers and agricultural labourers – it was reasonable to believe that the pre-industrial agricultural labourer was integrated into a solid network of relationships,[6] made up of family and kinship ties, safety nets, prohibitions, rewards, obligations and general solidarity. In the cities of the Industrial Revolution this context must have completely fallen apart. Finally, structural inequality between the social classes, which had been peacefully acknowledged under the ancien régime, began to be much less so in the climate that emerged at the time of the revolutions with its impersonal relations and egalitarian interaction (whether on the market or outside it).

## The social nature of capital

In Book I of *Capital* a clear distinction between capital and commodity is made. The possibility (and historical necessity) of representing product as a commodity entails the division of labour within society being developed to the point of a separation between use value and exchange value having been made. This implies the end of the gift economy system ('barter') and the coming of a monetary economy based on commutative justice, that is to say the exchange of equivalents on the market, and defined as such by the laws of utility and scarcity, demand and supply alone.

These conditions are no more than the necessary prerequisite, and in themselves insufficient for the advent of capital:

> It can spring into life, only when the owner of the means of production and subsistence meets in the market with the free labourer selling his labour power. And this one historical condition comprises a world's history. Capital, therefore, announces from its first appearance a new epoch in the process of social production.[7]

Over and beyond its tangible signs, capital is thus a relation of production. This is not an obvious fact, but needs deciphering, since the very human process that generates capital tends to mask its true essence, and often mystify it, making it appear as a natural constant of history, and reducing its scope to that of an object. The main element for penetrating the essence of capital lies in value; if this is broken down then the extent of exploitation and the relations of power between the classes can be gauged.

Value 'does not stalk about with a label describing what it is' but 'converts every product into a social hieroglyphic', a little like language does.[8] Inside Plato's cave as he is, modern man forgets the origin of his own product; he only catches its reflected shadow, which he sees as something foreign. In other words, he alienates himself from it:

> A commodity is therefore a mysterious thing, simply because in it the social character of men's labour appears to them as an objective character stamped upon the product of that labour; because the relation of the producers to the sum total of their own labour is presented to them as a social relation, existing not between themselves, but between the products of their labour. This is the reason why the products of labour become commodities.[9]

In the era dominated by the machine, society seems to have already lost sight of man's role within the production process: the thing (the commodity) is personified and the person becomes a thing. In order to underline this contradiction, Marx chooses to subdivide capital not into fixed and circulating capital, in the manner of the Classics, but into constant and variable capital.[10] This distinction is closely linked to his idea of the process of valorization. Variable capital is 'that part of capital, represented by labour power' (wages), and is variable in that it 'does, in the process of production, undergo an alteration of value' since, besides reproducing its own value, it generates a surplus value.[11] Constant capital, on the other hand, is the 'part of capital . . . which is represented by the means of production' (besides machines, raw materials, energy and other cost items). It 'does not, in the process of production, undergo any quantitative alteration of value';[12] alone it produces nothing at all, but on the contrary, without the assistance of human labour, could not even reproduce itself.[13]

## The form of capital: A phylogenetic approach

Capital arises with trade.[14] The production and circulation of goods are the 'historical ground-work' for its rise. Marx dates this event to the sixteenth century, with the expansion (also geographical) of exchanges, and the development of an autonomous sphere for the market.[15] The final product of trade is money, and money is precisely the 'first form in which capital appears'.[16] In this, it contrasts with land ownership, which conceives wealth in the form of a stock of land. But this precedence of money over capital is *logical*, even more than it is historical: capital can only come from money in whatever period.[17] But not all money is capital.

What difference is there between money as money and money as capital? Exchange is carried out for two reasons: to satisfy a need or to speculate. A man can sell the product of his own labour (corn) in exchange for the money he needs to buy any other consumer goods (say clothing). But he can also use the same money to buy a merchandise with the sole aim of selling it to someone else at a higher price. In the first case money is the *means*, in the second it becomes the *end* of the exchange. It is precisely when a person sets out on the path of trade not to satisfy a need but for gain, that is, to seek profit, that money is transformed into capital.[18] This transformation is only partly the product of a deception, as Benjamin Franklin would have it, the outcome of a 'two-fold advantage gained, over both the selling and the buying producers, by the merchant who parasitically shoves himself in between them', fixing an equivalence between what is not equivalent[19] (and clearly to argue for this thesis it was necessary to base it on an objective conception of value, based on the quantity of labour, since, from the subjective viewpoint of utility value, this reasoning would sound nonsensical. But Marx would probably have objected that utility is also a rhetorical artifice, a falsification so that the objective relations of production can be eluded).

There is also another way that money is transformed into capital, and this time it is direct. This is loan on interest, which does not even need any dissimulation of injustice through the medium of the commodity. On the contrary, the impudence with which a certain sum of money (the product of a certain quantity of labour) is exchanged against a greater sum of money (the product of a greater quantity of labour) makes it obvious. Marx re-echoes the passage from Aristotle that had been part of the Scholastic inheritance, when he states that 'interest is money of money, so that of all modes of making a living, this is the most contrary

to Nature'.[20] In Book III of *Das Kapital* he also points out that 'The social relation is [thus] consummated in the relation of a thing, of money, to itself. Instead of the actual transformation of money into capital, we see here only form without content.'[21]

But how does the transition from the 'primitive' forms of money-capital to the modern and complete one of machine-capital take place? At a certain point the merchant-capitalist discovers that a particularly suitable commodity for his predatory purposes comes onto the market. This commodity is labour,[22] and it is the best commodity of all since it does not even require there to be any information asymmetry between buyer and seller, in the spatial and temporal distance between whom the intermediation of the merchant normally comes into play. The labour-power has a particular feature: its very consumption generates value,[23] the added or surplus value that constitutes the capitalist's gain.

But if it is really to be a commodity that can be put on the market, labour has to be free. Thus even the most remote ramifications of the 'feudal system' need to be done away with. But also *free* in a negative sense, that is *deprived* of the necessary means for autonomously fulfilling the capacity for labour.[24] If the worker had tools and raw materials, and could keep himself for the duration of the production process, he would sell any other accessory good: he would have no reason to deprive himself of his own very last resource.[25]

Thus, in the caustic irony of Marx, the 'Eden of the innate rights of man' was realized in the England of the eighteenth and nineteenth century:

> There alone rule Freedom, Equality, Property and Bentham. Freedom, because both buyer and seller of a commodity, say of labour power, are constrained only by their own free will. They contract as free agents, and the agreement they come to, is but the form in which they give legal expression to their common will. Equality, because each enters into relation with the other, as with a simple owner of commodities, and they exchange equivalent for equivalent. Property, because each disposes only of what is his own. And Bentham, because each looks only to himself. The only force that brings them together and puts them in relation with each other, is the selfishness, the gain and the private interests of each. Each looks to himself only, and no one troubles himself about the rest, and just because they do so, do they all, in accordance with the pre-established harmony of things, or under the auspices of an all-shrewd providence, work together to their mutual advantage, for the common weal and in the interest of all.[26]

This chapter opened with a provocation: Marx and Karl Polanyi were placed alongside each other, but with the intention of restoring Marx to a separate context from the one in which Marxist ideology developed.[27] Polanyi would not only not have appreciated a similar comparison, but would have made several objections. He was somewhat ungenerous towards Marx; a footnote in Chapter 6 of the *Great Transformation* warns that commodity fetishism has nothing to do with the commodification of the factors of production – land and labour – he aims to describe, since the former concerns the process of self-valorization of the commodity towards man.[28] In reality, the history of a *fiction* (to use Polanyi's language) is being narrated in both cases. Moreover, Marx's fetishism and his discourse on value presuppose the advent of the historical situation described by Polanyi (enclosed land and the existence of a labour market). In addition, both the authors present this process as being profoundly artificial and unnatural, in short a social perversion; except that for Marx it is the material product of history, while for Polanyi it is a *fait accompli* from above, certainly not endogenous to the system of economic and social relations.[29]

Finally, Polanyi stresses exchange while Marx emphasizes production itself, which is functional to his theory of alienation: this is understandable, and by no means undermines the fact that the two readings are complementary. Certainly, for it to stand up, Polanyi's reconstruction has no need for Marx's theory of value, or for hypotheses regarding exploitation. Nevertheless, analogies do exist, one of which concerns the corruptive effect of machines. It returns in Part II of the *Great Transformation* with its reference to the 'Satanic mills' of William Blake.

## The age of machinery I. Manufacturing and industry: Difference of kind, not of degree

Two central chapters of Book I of *Capital* were devoted to clarifying why modern industry should not be confused with manufacturing, and what the consequences for society were of the advent of the new mode of production. The 'manufacturing period' that Marx mentioned lasted from the mid-sixteenth century to the end of the eighteenth century. However, what he meant by manufacturing was not only the putting-out system but, more generally, a mode of production (whether centralized under the same roof or scattered) based on the cooperation of labour[30] under the same circulating capital.[31]

He saw a close continuity of manufacturing with the evolution of artisan labour, and argued for its dual origin. This was because (a) in one case

it combined different, but autonomous, occupations with each other, making them interdependent of each other for the sake of the commodity being produced; (b) in the other, it developed the division of labour by segmenting the same job into a multiplicity of phases reflecting the sequence of the production process.[32] The result was identical: 'a productive mechanism whose parts are human beings'.[33] Artisan activity, the craft, was still the basis of the productive process,[34] but, in the name of efficiency, an external intruder – the rationalizing capitalist – came into it. Besides saving time, and thus increasing productivity, specialism often (though not always) enabled improvements in labour techniques to be made; and if the continuative repetition of the same action meant that the overall sense of the job was lost, the participation of different generations of workers in the process meant that knowledge could be passed on.[35]

In conclusion,

> manufacture . . . produces the skill of the detail labourer, by reproducing, and systematically driving to an extreme within the workshop, the naturally developed differentiation of trades which it found ready to hand in society[36] at large.[37]

Producing, and keeping up the connection between isolated functions required the continual transport of the semi-finished product from one place to the other. 'From the standpoint of modern mechanical industry, this necessity stands forth as a characteristic and costly disadvantage, and one that is immanent in the principle of manufacture.'[38] According to Marx industry was manufacturing's evolutionary destiny, since only in this way 'the different detail processes, which were successive in time, have become simultaneous, go on side by side in space', and hence there was a further gain in productivity.[39] Marx neglected to say – but the examples he gave (the production of paper, and steel wire,[40] as opposed to the clock-making that William Petty took as his paradigm)[41] let this embryonic intuition out – that no single rule existed: whether to centralize or disperse often depended on the physical and technical features of the process in question. However, there was an undeniable element of ambiguity in the fact that if continuity of the production sequence over time was the parameter adopted, then it was unclear where the advantage of modern industry over centralized manufacturing lay.

But let us go beyond the obscurities of Marx's often vertiginous prose in order to arrive at the main message, concerning the real difference

between manufacturing and industry. It was true that even during the period of manufacturing the use of machinery was developed sporadically. However, overall, it 'played that subordinate part which Adam Smith assigns to it in comparison with division of labour'.[42] 'The collective labourer, formed by the combination of a number of detail labourers', Marx continued, developing his organicistic metaphor, 'is the machinery especially characteristic of the manufacturing period'.[43] Thus the true discriminator between the two systems emerged: this was the advent of constant capital. If 'in manufacture, the revolution in the mode of production begins with the labour power, in modern industry it began with the instruments of labour'.[44]

No matter how much it was based on capitalistic logic as such,[45] the basis of manufacturing still lay in the activity of the artisan. Although a distinction between skilled and non-skilled workers was created, the role of the former still predominated. Although increasingly it required the hands of women and children, this tendency was resisted by society. Although the division of labour diminished the role of apprentices, apprenticeship was still an unavoidable rite of passage and the only mechanism for controlling access to occupations.[46] Marx concludes with his usual sarcasm, paraphrasing Andrew Ure: ' ''Order'' was wanting in manufacture based on ''the scholastic dogma of division of labour'', and ''Arkwright created order''.'[47]

The advent of the machine upset the social process of production in a twofold sense. In the first place it destroyed the figure of the artisan, who – whether he operated in his own workshop and completed the product from start to finish, or whether he cooperated in the combined activities of manufacturing with a specialized part role – was still the depositary of knowledge. Secondly, any objective limitations that the principle of artisan labour could hold up against the domination of capital were undermined.[48] In order to understand how it could happen, it was necessary to clarify the difference between 'instruments' (which aided pre-industrial labour) and 'machinery'. Marx was not searching for a physical and technical definition: that 'from the economic standpoint . . . is worth nothing, because the historical element is wanting'.[49] Every piece of machinery had three different parts, each with a specific function. These were: the motor mechanism (a steam or hot air engine, an electromagnetic machine; but also a water wheel, the sail of a windmill and so on); the transmitting mechanism (shafts, wheels, chains, cords, pulleys and so on); and finally, the tool or working machine that processed and transformed the raw material through the input it received:

> The tool or working machine is that part of the machinery with which the industrial revolution of the 18th century started. And to this day it constantly serves as such a starting-point, whenever a handicraft, or a manufacture, is turned into an industry carried on by machinery.[50]

This was not so very dissimilar to the tools of artisan labour (loom, spindles, needles, saws and knives were still basically the same, albeit modified, adapted or perfected so they could be applied to the main body, which in its turn was worked by machine).[51] In both cases there was an intermediate element between man and the raw material. But it was a very significant difference: in the second case man acted 'as mere motive power', and not as a worker who manoeuvred the tool:[52]

> It is this last part of the handicraftsman's implement [i.e. the tool] that is first seized upon by the industrial revolution, leaving to the workman, in addition to his new labour of watching the machine with his eyes and correcting its mistakes with his hands, the merely mechanical part of being the moving power.[53]

Excellent examples of these inventions are the *jenny*, which was spinning the moment it was introduced, equipped with 12–18 spindles, and the mechanical loom, which worked several thousands of needles simultaneously.[54] On the other hand, since its first appearance towards the end of the seventeenth century until around 1780, the steam engine (which in itself is only a motor) 'did not give rise to any industrial revolution':

> It was, on the contrary, the invention of machines that made a revolution in the form of steam-engines necessary. As soon as man, instead of working with an implement on the subject of his labour, becomes merely the motive power of an implement-machine, it is a mere accident that motive power takes the disguise of human muscle; and it may equally well take the form of wind, water or steam.[55]

Thus, in the first place the problem was not to establish whether the advent of machines caused unemployment or not; the problem was that they distorted man's activity by causing him to be alienated from the product of his toil. In addition, once the machine had become independent of him – literally made into an 'automaton' – it was able to operate a number of tools that exceeded the 'organic limits' linked to man's biological faculties, opening up the way to the continual growth of capital.[56]

## The age of machinery II. The destruction of the social fabric

Female and child labour was the first harmful consequence that the advent of modern industry had on society. Since machines replaced muscular strength, they became the incentive for the use of 'labourers of slight muscular strength, and those whose bodily development is incomplete, but whose limbs are all the more supple'.[57] In addition to depriving children of their play, industrial labour took away from women the possibility of taking care of the domestic sphere.

This had above all an economic significance: since the value of male labour was traditionally measured according to the size of the family to maintain, if the whole family was employed then the individual wage decreased. Overall, the capitalist spent little more to acquire the labour of the entire family nucleus, but gained many hands. There was also a juridical outcome, as it were. By recruiting minors or women, who had no rights of decision, the formally symmetrical relation between the owner of the money-commodity and the owner of the labour-force commodity was undermined. The new labour relations were precarious, and at times lasted no more than a few weeks. Marx even saw in this a return to forms of slavery:

> Previously, the workman sold his own labour power, which he disposed of nominally as a free agent. Now he sells wife and child. He has become a slave-dealer.[58]

Having reached this point, the modern reader of Marx cannot help making two considerations. On the subject of childhood, Marx overemphasized the break between the pre-industrial and the industrial period. It is no accident that the Marxist educationists of the twentieth century should contest the ideas of Philippe Ariès,[59] who in the 1960s argued that the concept of childhood was completely foreign to the ancien régime, when a child was seen as a miniature adult who could be productively employed in agriculture and manufacturing.[60] Perhaps this concept began to take shape precisely during the industrial period, and it was the far greater burden of work carried out by children in the changed context that attracted the attention of Marx's contemporaries and aroused a new awareness of the condition of children. As far as the position of women was concerned, it is necessary to put the reflections made in the *Capital* firmly into the socio-cultural context of the time. It is true that women, removed from their traditional form of participation in the division of labour within the domestic and

rural spheres, but still not emancipated,[61] were open to possible mistreatment. Yet it should also be pointed out that it was precisely the Industrial Revolution that *in the long term* furthered the process of emancipation. The suffragette movement arose in the England of 1835 at the same time as the high fixed-capital intensity phase of industrialization started. Even as Marx was writing, two British women were graduating in medicine for the very first time. Certainly, he could not have predicted the long-term effects on attitudes that the economic transformations of the period triggered off, and many of his apprehensions are therefore understandable.

In particular, Marx was shocked by the change that had taken place in the pace of work and how it was carried out (away from the home and in the factory), in the relationship between work and free time (indeed the change from the earlier period had been dramatic) in addition to the tyranny of productivity. He was shocked in that they corroded family relations and traditional morality, and caused an upheaval in the dynamics of socialization; it was everything that F. Engels had described as moral atrophy in his *Condition of the Working Class in England* (1845).[62]

Machines – observed Marx – lengthened the working day beyond all natural limits;[63] if the state made any attempt to limit its duration by law the capitalists reacted by increasing factory labour.[64] Parents very often lied about the age of their children, thus evading the norms that had been introduced for the protection of child labour, and they pocketed their wages. Another important aspect for analysis was the 'intellectual desolation' of the new proletariat; the state's response was to make elementary schooling for children employed in the factories compulsory, but this ruling was a failure, evaded by the employers in the first place and then by the teachers, who themselves were largely ignorant and irresponsible.[65]

In the *Capital* these considerations of an ethical and political nature, as it were, are alternated with objective data, the interpretation of which has generally been confirmed by recent historical research[66] – starting with the decline in the physical condition of children and adolescents, and with the high infant mortality rate in the industrial areas, which the author attributed to poor parental care (or even mistreatment) in the changed human environment, in addition to the unhealthy living conditions in the urban areas. An official report of the time depicted the dire situation in the country. While infant mortality was generally below 10 per cent in agricultural areas (compared to a modal value of around 13 per cent), in the highly industrialized areas such as Wolverhampton (the

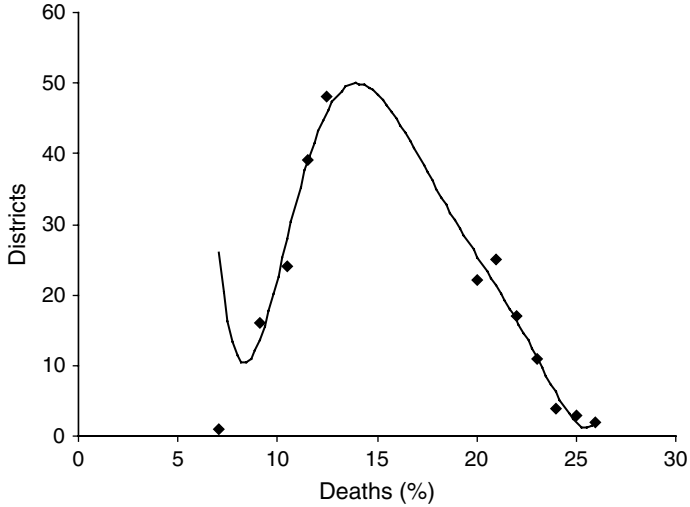


*Figure 5.1* Distribution of infant mortality (below one year of life) in the registration districts of England (1864)
*Source*: Data processed by me from Marx, *Capital*, vol. I, p. 401. The interpolation was obtained by means of a degree-6 polynomial.

notorious 'Black Country'),[67] Nottingham, Stockport and Manchester the incidence of deaths even exceeded 25 per cent, forming the right tail of the Gaussian curve in Figure 5.1.

But even some rural areas facing the North Sea showed infant mortality rates comparable to the industrial towns. According to Marx this was due to the gradual extension of the factory system to agriculture that had upset the natural rhythms of labour in the countryside as well as the attitudes towards parental care.[68] In the agricultural counties of East England the gang system was spreading as a system for the recruitment of labour.[69] The impressive works of land reclamation in the fenlands had led to the formation of large estates, but there was no corresponding provision of cottages to house the country workers. Tenant farmers signed on workers who had been hired by the leaders of the itinerant gangs: women, young people and children mixed together in 'coarse freedom, a noisy jollity, and obscenest impudence . . . . The open villages which supply the contingent of the gang [continues Marx's pitiless analysis], become Sodoms and Gomorrahs, and have twice as high a rate of illegitimate births as the rest of the kingdom.'[70] The future gang recruits came from the newborn babies, if they were not prematurely killed off

by opium.[71] Similar moral effects were caused by several family nuclei crowding into tiny dwellings.[72] Moreover, epidemics of typhus, cholera, tuberculosis and scarlet fever were generated and various exanthematous diseases spread,[73] weakening bodies that had already been debilitated by malnutrition.[74]

## Primitive accumulation

In Chapter 26 of Book I of *Capital*, Marx recounts the 'secret of primitive accumulation':

> This primitive accumulation plays in [classical] political economy about the same part as original sin in theology. Adam bit the apple, and thereupon sin fell on the human race. Its origin is supposed to be explained when it is told as an anecdote of the past.[75]

In the Marxian perspective, however, it is continually being played out, since it is nothing other than 'the historical process of divorcing the producer from the means of production'.[76] That is to say, the process that on the one hand frees the worker from feudal bondage, but on the other deprives him of the chance to guarantee his own subsistence. However, before it could fully make headway, capitalism, in the early modern period, also needed to weaken the structure of the guild-based economy, which Marx viewed in a positive light since it hindered the 'free development of production and the free exploitation of man by man'.[77] This happened around the sixteenth century[78] (he was probably thinking of the English experience, which saw the appearance of this phenomenon a couple of centuries before the Continent).[79]

If the epoch-making moments 'in the history of primitive accumulation' are especially 'those moments when great masses of men are suddenly and forcibly torn from their means of subsistence, and hurled as free and ''unattached'' proletarians on the labour market', then the dynamic of the enclosures and the concentration of land ownership in the hands of a few 'is the basis of the whole process'.[80] Marx was aware of the gradual nature of this upheaval, and the great sensitivity with which he covers three centuries of English agrarian history through contemporary witness accounts, from Fortescue to Thomas More and later, unequivocally proves this.[81] It was a long preparatory period, in which there was strong social resistance and no failure on the part of the political establishment to defend the status quo. Thus he recalled how under

Cromwell the building of houses in Greater London went with the stipulation that each should have at least four acres of land; and how, until the first half of the eighteenth century, it was not considered acceptable for the cottage of an agricultural worker to have less than 1–2 acres of land.[82] At the end of the seventeenth century, independent peasant farmers (yeomen) still outnumbered tenant farmers, and formed 'the backbone of Cromwell's strength'.[83] But around 1750 they had disappeared, and at the end of the century 'the last trace of the common land of the agricultural labourer' had disappeared.[84] The coup de grace was then to arrive on the eve of the Industrial Revolution: 'Nowadays', he wrote, the agricultural labourer was lucky if the cottage 'is furnished with a little garden, or if he may rent, far away from his cottage, a few roods'.[85]

The 'forcible means' of the 'agricultural revolution', which Marx was more interested in investigating than the driving causes of a strictly economic[86] and socio-cultural nature, included the expropriation of lands once belonging to the Catholic church,[87] the joining of estates carried out by applying the ultimate ownership of land as if it were an effective right[88] and the repressive legislation against the mass of new paupers during the reign of Elizabeth, and during the Restoration.[89] The pages on the 'genesis of the capitalist farmer' show great insight and are interesting to economic historians. They reflect England's unique peculiarity of almost never having experienced the figure of the métayer, who was historically midway between the late ancient and the medieval *villicus* ('bailiff' in the Anglo-Saxon tradition), who had links of servitude with land ownership, and the modern tenant farmer, who had complete autonomy as regards entrepreneurial risk-taking.[90]

But Marx's reconstruction breaks down when he tries to pinpoint the connection between these transformations with the Industrial Revolution. In the first place, in order to more convincingly demonstrate his thesis that it was implausible that free men would spontaneously become part of the factory system, he dates the emergence of the proletariat to the period of manufacturing, and attributes features to it that in reality it would not have until the nineteenth century:

> [Manufacture] produces, therefore, a new class of small villagers who, while following the cultivation of the soil as an accessory calling, find their chief occupation in industrial labour, the products of which they sell to the manufacturers.[91]

This hypothesis has been refuted by the empirical research of the last 25 years.[92] Moreover, in order to reinforce the predatory aims underlying capitalism, Marx is not content with seeing in the nineteenth-century industrial capital that he has before him a new system (more in line with the times) of exploiting the asymmetrical relationship between economic agents. His theory would have stood up in any case. At all costs he wants to see the cumulative product of previous phases of exploitation, the profits of which went into it. In other words, 'the money capital formed by means of usury and commerce' in the early modern period was now *transformed* into industrial capital,[93] a little like a tributary river that finally forms a lake after it has swollen during its descent from the mountain to the valley. But in view of the genesis of British industrialization with its low capital intensity, which was discussed in previous chapters (pp. 44–45, 62–64, 80–83), this association does not hold. A further contribution to increasing capitalistic power came from the colonial exploitation of the discovery of the New World, through African slavery and the stealing of riches as sources of accumulation.[94] Finally, Marx has it in for the 'system of public credit' of the modern state, which created a 'class of lazy annuitants' of financial parvenus, who acted as 'middlemen between the government and the nation', precursors of the speculators in 'stock-exchange gambling' and 'modern bankocracy'.[95] In short, Marx seems to be obsessed by three phantoms of the late nineteenth century – high capital intensity, colonial imperialism and finance – which he projects backwards into history.

Marx's ambiguity regarding these themes, in addition to his anything but crystalline prose, has led to a flourishing of interpretations and revisionism on the part of Marxist historians and sociologists during the twentieth century. They have painstakingly attempted to establish the most authentic basis for accumulation, to decide whether it came from above or below – whether the aristocracy or the enterprising bourgeoisie played the decisive role – to distinguish and put a date to its phases, to identify the actual contribution of colonization and so on.

## Revisions and self-interpretations: Marx and Anglo-Marxism

Anglo-Marxism has its roots in the Western current of Marxism inspired by the work of Lukács and Korsch, who, in conflict with both the positivistic drift of Karl Kautsky and the Second International (1889–1917), as well as with Soviet dialectic materialism, were trying to bring Marx's thought back to its matrix of historical and social doctrine and, in the final analysis, to Hegel. At the end of the Second World War a dynamic

group of exponents of the historical and economic disciplines was set up within the body of the Communist Party of Great Britain, which had been founded in 1920: among them were M. Dobb, C. Hill, R. Hilton, E. Hobsbawm, R. Samuel and E.P. Thompson.[96] While, on the one hand, they achieved brilliant historiographical results, by spreading over the Channel a feeling for 'history from below', which had already been dear to the *Annales* school, on the other, when they became involved in the exegesis of Marx, they often fell victim to abstractions and automatisms in their deductions. In other words, by transforming what for Marx had been basically *logical* links into *historical* links, they lent to his conception of history the rigid categories of a theory of stages, which when transferred to the explicative level necessarily generates unnatural readings as well as anachronisms.[97] Aside from differences in opinions on individual questions, they shared this tendency with the American intellectuals who had formed a group linked to the *Monthly Review*, which Paul Sweezy had founded in 1949.

**The 'historicization' of Marx**

In order to confer historical depth to Marxian theory (to the point of going beyond the bounds of social teleology), one initial front on which the British Marxists were involved was to explain the origins of the Industrial Revolution. Maurice Dobb had been intrigued by this aim ever since his university studies, as is documented by an undergraduate essay written around 1920,[98] perhaps the very earliest example of this attitude.

'Revolutions', Dobb writes,

> are always the culmination of a long series of tendencies gravitating towards the same point – the point of structural change; they are the birth-pangs of a new system, which has hitherto developed in the womb of the old. So the Industrial Revolution was the culmination of the growth of capitalism, which had been going on for centuries.[99]

Basically, three conditions were necessary for its advent.

The first was the accumulation of wealth, made possible by the private ownership of land. This accumulation also had a gradual development, and its nucleus was the extraction of a surplus over the subsistence of the agricultural worker, which was the rent. Ever since the Middle Ages wealth was being concentrated in the hands of the landed aristocracy; it was subsequently channelled into investment in town trade, and increased through military and commercial enterprises in the East

and in the New World; it even exploited forced and slave labour.[100] (But, again the question arises as to why 'past' riches are brought into it.)

The second condition, likewise a product of agrarian transformations, was the creation of a proletariat that was ready to sell its own labour-power to the capitalist at a cheap enough price to guarantee the latter a profit. With the growth in population of the lower classes, unemployment in agricultural labour increased, and in the Tudor period an over-abundance of paupers was created, who, deprived of their means of subsistence, would later provide the reserve army for capitalist production.[101] (Here one could object that two centuries are long time to wait, even for a 'reserve army': how can its survival in the meantime be explained?)

The third condition for the establishment of capitalism was the prospect of making profits in industrial enterprise, which would induce the holders of wealth to put their assets to productive use. This opportunity arose only in the eighteenth century. This century was marked by the growth of the maritime supremacy of England, which during the sixteenth century had overcome the Spanish power, and in the seventeenth century the Dutch: it opened up new markets for British trade, laying the foundations for its expansion. Even the traditional attitude towards protectionism, a product of the mentality of the guilds that associated the increase in wealth with the attainment of concessions and privileges, gave way to *laissez faire*. As the idea of a national economy disappeared into the wider horizons of a world economy, trade was increasingly conceived as the opening up of foreign markets through competition.[102] (Here Dobb seems to ignore the fact that British industrial development in the early phases rested almost entirely on the domestic market.)

There were thus two channels for investing the capital accumulated by the bourgeoisie: in the increasingly cheap production of goods, with the goal of conquering rival markets; in increasing labour productivity, and thus profits, in proportion to the value of the labour force employed, as calculated by wages.[103] This led to the discovery of the cooperative principle (at the heart of manufacturing) and the division of labour, which caused the gradual transformation of the structure of the secondary sector from the domestic to the factory system. This was the process which – continues Dobb – Toynbee called 'The Industrial Revolution' and, depending on the branch, lasted from the late eighteenth century until the mid-nineteenth century. The wage system also evolved, penalizing the worker; in this way the divorce took place between the worker and the product of his toil, and led to the purchase of the labour-power as a commodity.[104]

Although, during that phase, the capitalist already gained profit from the difference between the product of workers cooperating in manufacturing and the sum of the products of the same workers who had once operated separately, the material conditions of the worker there and then were not affected by the change, and the general demand for labour did not decrease. This was because the factory attracted the unemployed and the less productive workers from the cottage industries above all, and thus did not do away with domestic industry. The increase in productivity in the capitalistic industries brought prosperity even to the traditional sectors, increasing the demand for labour and wages.[105] This paradoxical effect, in clear contrast with the poverty of the hand weavers after 1800, was in fact the 'Golden Age of Domestic Industry' before the Napoleonic Wars. Such was the reality which, according to Dobb, Smith saw before him while writing the *Wealth of Nations*.[106]

This was followed by disaster – and this was how Ricardo's pessimism was to be explained – when the capitalist, urged on by the desire to further increase his profits, tried to save on the cost of labour by applying labour-saving technologies. Machines then came into play, the more notable of which were the inventions of Arkwright, Hargreaves, Crompton, Cartwright and Watt. They were generally pre-existing inventions, but without capitalistic enterprise to finance them and encourage their exploitation, they had not up until that time been widespread.[107] (But the facts openly contradict this point too, in view of the low investment needed to apply and perfect these inventions, with the exception of the last one.)

On the wave of the introduction of *labour-saving machinery* the economy of *power-driven machinery* finally emerged and, with the new steam technology, led the industrial development of the nineteenth century.[108] The unemployment caused in the traditional sectors was not transitory, nor was it reabsorbed with the expansion of production. (In this case the statement sounds apodictic, and the author is uncertain as to how to justify it).[109]

**The posthumous myth of accumulation**

In 1925–1926 the young Dobb, who had by now become a lecturer at Cambridge, held a course entitled *The Origins and Early Stage of Capitalism*.[110] This manuscript is also particularly interesting, and shows how the underlying interpretative features of his *Studies in the Development of Capitalism* (1946)[111] had already been outlined. There he defined Marx as 'one of the first economic historians', a discipline that

was then still largely unexplored territory.[112] In those years, he writes, 'considerably less was known about economic conditions prior to 1800 than about court intrigues, bar sinisters and kings' mistresses'.[113] Nor had significant progress been made with the 'bourgeois historians', who were caricatured as being 'absorbed, monk like, in their mediaeval script and Latin quotations'.[114] The decisive contribution to the development of this field would come from economists and sociologists under the auspices of the German historical school, from Schmoller, Sombart, Brentano and Weber.[115]

Dobb wanted to highlight a 'second form of what Marx called ''primitive accumulation'' '.[116] Alongside the direct expropriation of small producers following the enclosures or colonial dispossessions, there were no direct acts of expropriation but a more gradual and indirect exploitation of small producers through the influence exerted by various legal monopolies over prices. These could be privileges on the domestic market granted to the guilds by the communes, the crown or the parliament, in the same way as the colonial monopoly granted to the trading companies under mercantilism. The first type is described (clearly contradicting Marx) as an embryonic system of extraction of the surplus value that contributed to creating primitive accumulation; the second is seen as a sort of anticipation of imperialism.

In the second place, acting on the interpretative ambiguity of Book I of *Capital*, Dobb intended to show how, alongside the completion of primitive accumulation, an authentic 'pre-Industrial Revolution' took place during the manufacturing period, with the advent of a capitalistic production system before the factory system:

> In other words, a definitely *capitalist* Domestic System of handicraft production, in which the capitalist drew a type of embryo-surplus-value, not by exploiting proletarian wage-earners, but by exploiting semi-proletarian craftsmen, in a way which is not completely described as exploitation through trade, but was also to some extent an exploitation of them *qua* master in relation to servant.[117]

There is no need to point out that this idea preceded by many decades the proto-industrialization theory concerning the existence of a rural proletariat, which the followers of F. Mendels put forward.[118] In the third place, Dobb noted how the English bourgeoisie took over political power earlier than is usually assumed, and that from the fifteenth to the nineteenth century the 'bourgeois revolution' went through a number of complicated stages, during which different sections of the ascending

class put pressure on the establishment to steer the economic policy of the state.[119]

Four stages are outlined.[120] The first saw the re-emergence of the cities in the twelfth and thirteenth centuries, which put a final end to feudalism; after the merchant guilds were established there were the first conflicts with feudality over the appointment of mayors, and the establishment of the respective jurisdiction over town and country. The second stage was marked by the growing monopoly of rich merchants: around the thirteenth century (in Holland a hundred years earlier) the guilds were gradually disappearing to make way for the corporations of the professions or major arts. The third stage saw the birth of the national associations of merchants (*Hansa*), the development of the export trade and of loans to the crown, while economic power extended to political power. During the fourth stage, between the sixteenth and the seventeenth centuries, mercantile manufacturing arose. Then followed the betrayal of the bourgeoisie, which tended more and more towards the acquisition of land.[121] The control of the bourgeoisie over politics that had by now become pervasive is summarized in Dobb's definition of mercantilism as 'policy of the Bourgeois State'.[122]

As part of the complex gestation of Marxist theory concerning the transition from feudalism to capitalism, which impassioned the West in the second half of the twentieth century,[123] the 'Brenner debate' deserves a special mention. It was sparked off by an article in 1976 in *Past and Present* and by a controversial text that appeared the following year in the *New Left Review*, and continued on both fronts, involving scholars of differing ideological leanings, such as R. Hilton, M.M. Postan, E. Le Roy Ladurie and others until 1982 and later.[124] On the one hand, Robert Brenner was attacking the 'conservative' interpretation of the advent of the capitalistic system, which he closely associated with the changes that had taken place in agrarian structure. On the other hand, he was attacking all those (led by A.G. Frank, P. Sweezy and I. Wallerstein) who denied European autonomy in the gestation of this process, and who instead emphasized the role of colonialism and the centre–periphery dynamic on a world scale.

In this context, the less dogmatic interpretations of *Capital* on the subject of primitive accumulation, such as that of E. Mandel, have remained in a minority. Mandel agreed that the process of man's dissociation from the means of production had a logical rather than chronological precedence over the development of capitalism (moreover denying any link between mercantile expansion and subsequent industrial

development).[125] The outcome of this has been the multiplication, even in recent years, of the most varied and curious hypotheses on this phenomenon and how it should be dated, adding fuel to the legend that Marx had already written about. Thus, for example, it has even been argued that the classical economists played an active role in promoting it, since they were part of the bourgeois establishment;[126] not to mention the 'accumulation by dispossession' with regard to Margaret Thatcher and her policy of the privatization of social housing.[127]

**Was it real descent into poverty? From Engels to 'living standards'**

The question of the worsening living conditions of the proletariat in the age of capital, associated with the prediction of its increasing misery, has been one of the recurring themes of Marxism ever since the times of Engels and the *Condition of the Working Class in England*.[128] In retrospection, it cannot be denied that life in modern society has definitely become longer for everyone, and (at least in material terms) more comfortable, in comparison with the pre-industrial period. However, the problem of understanding how things went during the transition remains. Dobb tackled this issue in his paper for the *tripos*, which we have already referred to.[129] In support of his pessimistic vision he did not invoke the authority of Marx, who at Cambridge must have been forbidden reading matter, but William Cunningham – one of the fathers of British historicism, and one among the first critics of the liberal interpretation of industrialization – who in his *Growth of English Industry*[130] wrote,

> Unexampled progress had been made during the last decade of the 18th century, but there was no reason to believe that Englishmen were either better off or happier.[131]

In reality, in his procedure Dobb adhered closely to his true mentor. He quoted an article from the *Morning Chronicle* of 20 June 1842 which gave a truly depressing picture of the living conditions in the agricultural areas, from where the farm hands were escaping in vain to seek refuge in the towns.[132] He quoted a Royal Commission report on the urban situation of Leicester: poverty was so acute, and wages so low, that the workers pawned their woollen blankets during the day in order to obtain food, and the same happened on Monday with their Sunday clothes (if they had any) in the hope of being able to redeem them on Saturday. He diligently transcribed the weekly wages of the cotton weavers of this area, which decreased as industrialization proceeded: in 1800 wages were

26.8 shillings; in 1820, 8.6 (−213 per cent); in 1834, 5.6 (−54 per cent, or −384 per cent from the *terminus a quo*).[133] He then gave a very similar example to those contained in Chapter 25, Book I of *Capital*, of a lodging house at Holborn (London) in which, in 1835, 68 people of all ages and of both sexes were living crowded together in three small rooms.[134] But 'most terrible and revolting of all', he wrote, must have been the condition of women and children in the mines and in the factories,[135] with particularly dreadful consequences in the 1840s.[136] This was while the 'sentimentalism' and the 'humanitarianism' of the Owenite Socialists and the radical reformers were being regularly ridiculed by capitalist and manufacturing interests,[137] as in an article in the *Edinburgh Review* of 1819:

> After all we must own that it was quite right to throw out the Bill for prohibiting the sweeping of chimneys by boys, because humanity is a modern invention and there are many chimneys in old houses that cannot be swept in any other manner.[138]

The proto-marginal analysis of production, introduced in the School of Manchester by Nassau Senior, gave scientific legitimacy to this way of seeing things. Dobb rebuked Senior, who had been against reducing children's working hours on the grounds that, since profit from capital is given by the 'last hour of work', if the hours were reduced, profits would be reduced, and feared that the industrial development of the country would be held back through the consequent crisis in the export trade.[139]

The quantitative debate among economic historians on living standards during the British Industrial Revolution began with T.S. Ashton's article of 1949, which concluded optimistically that real income increased after 1820.[140] In the following decade this hypothesis was contested by Hobsbawm, who believed that data on income were not significant in themselves and, on the contrary, the high rate of unemployment made it more likely that the standard of living had worsened between 1790 and 1840. He also observed that per capita food consumption, especially of meat, had declined during this period, despite the significant growth in population. R. Hartwell in his turn criticized Hobsbawm with a typically neoclassical argument, pointing out that if output growth was going hand in hand with productivity growth, it would be impossible for there to be a decrease in wages, or an increase in unemployment and inequality. He then identified new forms of consumption that had appeared since 1820, such as periodicals, cotton

clothing and exotic fruit, and argued that Hobsbawm's failure to take these into consideration had lessened the significance of his analysis.[141]

The debate was reopened in 1983 by P. Lindert and J. Williamson, who provided new estimates for real wages between 1755 and 1851. According to these estimates, wages gradually increased between 1781 and 1819, and then showed a rapid increase that affected all categories of workers, in particular factory workers, for whom there might have been a 50 per cent increase from then until mid-century.[142] C. Feinstein found a slight increase in consumption before 1820, and a significant rise starting from this year. Wrigley and Schofield found data indicating that English life expectancy at birth must have increased by about 5 years between the second half of the eighteenth and the first half of the nineteenth century (but mainly before 1820). Other studies recorded a noticeable increase in the literacy rate coinciding with the time the factory system got underway.[143] By contrast, J. Mokyr underlined the serious limitation in the sample of Lindert and Williamson of excluding autonomous workers and those working at home, whose real income might in fact have declined, seeing that consumption in these categories showed no increase.[144]

More recently the discussion has widened, and shifted to the complementary fields of anthropometry, nutrition and health,[145] while the debate on income has mainly come to a standstill, except for hypotheses regarding a general improvement that can be dated to some point between 1820 and 1840, and for some 1830.[146] Less optimistic than in the past, Feinstein hypothesized a slight improvement in the standard of living (under 15 per cent) over the period between 1780 and 1850.[147]

At any rate, if we accept the Crafts–Harley thesis for the slow growth in per capita income (below 0.5 per cent per year between 1790 and 1840),[148] or the new estimates of Antràs and Voth (who indicate a slight improvement in Total Factor Productivity),[149] only a small increase in inequality, paradoxically, is needed to neutralize the beneficial effect of economic growth on the lower classes. But even if we reject the gradualist vision (along with M. Berg, P. Hudson or D. Landes), deeming it implausible, and 'rehabilitate' the historical importance of the Industrial Revolution,[150] this does not mean that we should consider sustained GDP growth as being enough to exclude that unequal distribution of income had jeopardized the living standards of the weaker sections of the population.

Berg and Hudson themselves emphasized the decisive role of the labour of women and children, who were exploited and poorly paid, in promoting economic growth (a role that started in the changing

rural context); it was an 'invisible item' that the 'optimists' often fail to account for.[151] If the effects of unemployment, pollution, urban crowding and the incidence of other social ills are also added, then it is likely that the standard of living of the working class during the first wave of industrialization suffered a decline. Nor would it have much sense – in our day, when the historical debate is tending to adopt the perspective of well-being[152] – to hypothesize any economistic compensations for these effects, at the same time arguing for the prevalence of positive elements.

# 6
# The Atlantic Reaction

The academic economists of the second half of the nineteenth century rarely took on Marx directly, and they certainly did not consider him as an equal interlocutor. In order to engage in debate with the awkward colleague from a distance what was needed was a free spirit like Thorstein Veblen,[1] or a gifted polemist like Eugen Böhm-Bawerk (who we will meet in the next chapter [pp. 128–133]). However, in view of the enormous stir that the *Capital* caused, no author could ignore him. Marx was at once a social scientist and a revolutionary: thus there was concern over the hold his doctrines were having on public opinion, rather than over the destabilizing potential of his economic theory. This was all the more so when, 13 years after the First International (1864–1876) had been dissolved, there came a second, during which the Marxist fringe clearly predominated over the other currents.

Economic thought in late-nineteenth-century Britain, whose highest exponent was Alfred Marshall, responded to Marx's attack, exalting the ethical nature of the accumulation of capital that reflected some of the more celebrated virtues of the country's bourgeoisie. On the other side of the Atlantic, John Bates Clark, who some rightly consider as 'the first major American economist',[2] broke definitively with the classical tradition. Since the time of N.W. Senior and J.S. Mill,[3] it had earnestly argued for a distinction between production and distribution – the former being ascribed to the physical and the latter to the moral component of economic life. According to Clark, the distribution of product itself was subject to a law of nature that guaranteed its justice. Starting from this premise, he set out to provide rigorous proof (in the style of engineering) that the Marxian allegation of capitalist appropriation of the surplus value was baseless. Similarly to Marshall, Clark's aim was to impart legitimacy to the *status*

*quo*; but while Marshall's apologia endeavoured to find an ethical basis for capitalism, arguing for the acceptability of accumulation in relation to its social function (that is, to guarantee development and full employment in the long run), Clark's was an unconditional defence and one of principle. We will see how its roots lay deep in a different environmental and cultural context, in which the ferments of traditional Puritanism were reinterpreted in the light of the Darwinism that pervaded American society at the time of the Second Industrial Revolution.

## The economic virtues of Victorian Britain

Among the set of values emerging out of nineteenth-century Britain,[4] those linked with the middle class[5] of the late Victorian period[6] in particular, deserve a special place. Developments in the urban areas had produced an assortment of new occupations, particularly in the service sectors: from clerks to public officials and professional figures (headed by lawyers and doctors) and with them secretaries and a whole legion of servants and butlers.[7] The composite nature of this group of people makes the category of the middle class heterogeneous with regard to functions and income. Within it there was room for social mobility, or for the mediocre to be perpetuated. But underlying it there was an esprit de corps, grounded on a common belief in the values of prudence, thrift, abstinence, parsimony and independence (the 'self-help' theorized by Samuel Smiles in 1859)[8] as vehicles for self-realization in a competitive context. It contrasted with the logic of privilege and status by birth that had regulated society in the ancien régime and that still survived in not a few corners of Europe. Fundamental to it was the idea that in the liberal state everyone, at least formally, had equal opportunities, and whoever put the above-mentioned moral virtues to good use could achieve success. Therefore if one failed to succeed, it was because these virtues were lacking (this is the sense of the explanation, for example, for J.S. Mill's liking of the inheritance tax and, at the same time, his aversion for the progressive taxation of income).[9] In conclusion, the responsibility was on the individual rather than on the group.

Legislation on schooling, labour and welfare had endorsed this *Weltanschauung*, while personal success stories (whether true or invented) were spread as propaganda in the form of modern 'lives of saints', which people were encouraged to emulate.[10] Even the campaign for the savings banks and insurance companies were part of the 'moral

economy of Victorian thrift'.[11] 'Responsibility' and 'respectability' were the key words of the new collective mentality: in the cult for order each segment of society was assigned a specific role. The working classes were encouraged to improve themselves but at the same time invited to be satisfied with their condition. Women, on the other hand, were expected to act as the custodians of family morality and spirituality. The general ethic required that everybody took care of themselves and their own families, taking it for granted that it would be for the social good. The agonistic behaviour of economic agents was marked by a certain degree of ambivalence that was never completely resolved between the market and morality; only the catechism of the Anglican religion could bring about any compromise.[12] This certainly did not mean that altruism had no place, but it was confined to the sphere of personal affection, and philanthropy was used with great caution, in view of the risk that it might encourage vice.

Political economy, which had by now emerged as the science of the 'progress of wealth', was a subject that was also much debated in journals and in the salons of the bourgeoisie.[13] Apart from fuelling the latter's constant anxiety for improvement, it was an instrument for persuading the working class to abandon the logic of conflict, under the conviction that the destiny of the whole of society was somehow a joint one.

In the 1870s, without being aware of it, Great Britain started on the path of industrial decline; it was marked by the progressive loss of competitiveness to two formidable rivals: in the first place Germany, and later the United States. Historians have put forward a number of explanations for a phenomenon that only caused the contemporaries alarm on the eve of the twentieth century. They include the incapacity to bring about extensive innovation in production processes; the problems of a capitalism that remained on a 'small' scale, while the general direction imposed by the new technologies was towards the large scale; the fatigue of the third generation of entrepreneurs who were ceding to a fascination with the gentry; and finally, the early crisis of the Empire.[14]

The figure of Alfred Marshall dominated, as we have said, the final quarter of the nineteenth century. The *Principles* of Mill was, however, still the basic text whereby new cohorts of students were educated until 1890 (and at Oxford until 1920!). For various reasons Marshall delayed producing his masterpiece,[15] but *The Economics of Industry*,[16] which he wrote in collaboration with his wife Mary Paley, already clearly marked the beginning of a new epoch.

## The sentimental education of Marshall

In order to form an idea of the world of values in which Marshall's scientific personality matured, it is instructive to read a handwritten memoir drawn up by Mary Paley for the use of J. Maynard Keynes, his first biographer, who wrote a long obituary that appeared in the *Economic Journal* of September 1924.[17] The manuscript is still kept among Keynes's papers in the archives of King's College, Cambridge.[18]

Marshall's father came from the lower middle class that crowded the suburbs of London, and seemed to correspond exactly to the portrait of the Anglo-Saxon Protestant that formed the backbone of Victorian society. As Mary writes,

> A[lfred]'s father, William, was a very strong Protestant, with great literary taste and faculty. He had a tremendous constitution. After his days work at the Bank of England he would settle down to his own work and write from 10–3 drinking black coffee to keep himself awaken. He was a man of great resolution, great perception, and somewhat of a tyrant in his family.[19]

He was a devoted parent, but a poor educator; his son remembers how his father made him stay up until late at night to devote himself to exhausting exercises, so that he arrived at school the next morning feeling sleepy and worn out. The young Alfred had no leanings towards friendships and games, except cricket. Even the game of chess was precluded (if only for therapeutic reasons, to alleviate the headaches he suffered from), as it was considered an unproductive pastime; Marshall was able to indulge in real moments of leisure only in the summer, when he moved to an aunt's house in the country.[20]

His father spared himself no sacrifice. When Alfred was nine, he wanted to send him to the prestigious Merchant Taylors School of Northwood and asked the Bank for a loan of 200 pounds. He was hoping that he would become an Anglican minister,[21] and later when he wanted to study mathematics at Cambridge he was against it. But the young Marshall was already made of stern stuff:

> So, in spite of the opposition of his family and in spite of want of funds, for his father was too poor to help further, he determined to go to Cambridge. He borrowed money from his uncle Charles and went to Cambridge to struggle with poverty and hardship in order to do the highest work of which he thought himself capable.[22]

Charles Henry, his favourite uncle (on his father's side), is another key person for understanding the mentality of the future economist: in the eyes of his nephew he was the heroic prototype of the self-made man, who had come up from nothing, relying only on his own enterprise and natural perspicacity. He had gone to Germany with no knowledge of German, bought a herd of sheep and from there had moved to Australia. He arrived in Australia just as the Gold Rush was starting, but did not make the mistake of joining it. Instead he continued to breed sheep, recruiting as many workers as he could from among people with all kinds of physical handicap. Thus when the Gold Rush reached its peak and the other breeders ended up ruined as they had been left without the labour of their work hands, Charles Marshall built his fortune on wool.[23]

The self discipline that exalted labour and the spirit of abnegation, which meant abstaining from present pleasures in favour of a forward-looking abstract sense of responsibility, would remain with Alfred Marshall right into his old age. His wife notes in her dairy for 26.7.20: 'A[lfred]'s birthday when he was 78. He said he did not much want a future life.' The eternal life did not interest him, since he would have felt ill at ease in a paradise where one led a contemplative, and thus inactive, existence. After more or less consciously paraphrasing Socrates with regard to *horror vacui*, Marshall declared, 'I don't care for living except to work', and added that he was happy to have done as much as he could to help the world. At this point his wife asked him whether he would like the idea of being able to return to the earth at regular intervals to see what was happening. His reply was somewhat disarming: 'If in another world in 100 years time I meet some new comer, the first question I should ask would be: how has the exhaustion of coal been met?'[24]

## Accumulation of capital and civil progress

If he could have been born again, we know that Marshall would like to have devoted himself to psychology, the science that for him had to do with 'ideals', men's true motivation. A few months before his death, he seemed to regret having chosen to write for the 'business man' instead, who could not be interested in these speculations.[25] Yet, throughout the whole body of his work there is a constant attention to the psychological and motivational aspects of economic action. In some of his notes, scattered among the papers that would serve as an outline for his university lectures, we read, 'The psychological basis of

economics must include the action of many classes of motives including ethical motives.'[26] To him the Western world seemed totally driven by a moral purpose. Thus

> any discussion of the causes that govern the values of goods and of labour in the Western world rests on assumptions as to the moral characters and motives of ordinary men.[27]

Marshall noted that their high level of civilization led European and North American workers to work longer than was strictly necessary to satisfy the needs of their families in case they died,[28] and such a non-material element was the authentic incentive for the accumulation of capital. This could explain the economic superiority of the West over the rest of the world:[29]

> Were this self sacrificing motive to cease to dominate the economic life of the Western world, the accumulation of capital would cease, the West would no longer lend capital to the countries of ancient wealth in the East; and the rate of interest would rise to the gross detriment of the working classes.[30]

Being provident, responsible and self-disciplined meant being 'moral': and morality in its turn coincided with progress.[31] Marshall believed that in civilized Great Britain the 'ordinary man' generally rewarded the faith placed in him by behaving well: the domestic servant and the workman did not work less well when the master's back was turned, and the business man did not disappoint the expectations of his counterparts. Conversely, this simple anthropology, which an ill-intentioned reader might interpret as being full of insular prejudice, led him to conclude that 'in less civilised countries such virtues are rare'.[32]

What emerges from *The Economics of Industry* is without doubt a *productivist* conception of capital, for the first time in a systematic form. Marshall distinguishes between a primitive stage of civilization, during which men barely manage to satisfy their immediate needs, and an evolved stage, during which they devote an increasing share of their labour to making tools that might be of use in the future:

> [Man] abstains from seeking immediate enjoyment from the whole produce of his labour, and devotes some part of it to producing things which will assist him in his future work. These requisites of production are called Capital.[33]

Then a definition is reached:

> Capital . . . consists of all wealth which is destined to be employed productively. . . . Capital is the result of labour and abstinence; it is saved. But it is also used.[34]

This is why a given amount of saved wealth – unless it is destined for a productive use – is not sufficient to qualify as a 'capital'. Nevertheless, it is also true that hoarding has lost its importance in more evolved economies:

> Hoarding has gone out of fashion in civilized countries. An Englishman, when he saves capital, intends either to use it himself, or to lend it out to be used by others; and capital when it is used is almost always spent: but it is so spent as to be reproduced: it is spent Productively.[35]

In this connection Marshall praises the work of the 'great Duke of Bridgewater', who had the network of canals around Manchester built:

> [He] derived from the excitement of his enterprise a keener pleasure than he would have obtained from spending his wealth in luxury. He bequeathed vast wealth to his descendants, but in the act of saving it he gave employment to vast numbers of working men. His canals are a source of the prosperity of his country, and afford permanent employment to thousands.[36]

On the other hand, if capital destined to produce goods for unproductive consumption enables workers to be maintained during the production process, it does not generate a new supply of capital. We will see in Chapter 8 to what extent the contribution of Keynes forms a break with regard to this point.

The accumulation of capital thus rests on two elements: the power and the will to save.[37] The power of saving depends, in its turn, on the quantity of wealth available for saving minus what is needed for subsistence, which means on the same causes that make the output/population ratio grow: an increase in the quantity of land, labour, capital and especially in their productivity.

On the other hand, the will to save is entirely linked to 'moral and social conditions', which vary widely from one context to the other: (a) in the first place there is the 'intellect' (reason), a conquest for adulthood

and for nations at an advanced stage of civilization. Children and primitive populations 'are almost incapable of realising a distant advantage; the future is eclipsed by the present. . . . They are industrious when the reward to their toil is immediate; but they will not set anything aside for the future.'[38] The poor act in the same unthinking way: 'They are too intent on satisfying their immediate needs to have time or inclination for forethought';[39] (b) sympathy and affection. The paragraph in question is a curious one, as Marshall's polemical vein seems to be directed here against Charles Dickens, to dispel the stereotype incarnated in his famous character, Ebenezer Scrooge:[40] 'affection for others is one of the chief motives, if not the chief motive, of the accumulation of capital. There is probably more wealth saved for the sake of others than for the future enjoyment of those who save it. If people were swayed entirely by self-interest, they would invest in annuities for their own lives instead of leaving a provision for their families. Lavish expenditure generally indicates a selfish disposition that cares above all things for its own enjoyments';[41] (c) the hope of getting on in the world or, as one would say today, the fact of living in a context marked by a certain degree of social mobility; (d) belonging to a determined class: the middle class is the one that is more inclined towards accumulation,[42] while those at the peak and the base of the social pyramid are generally inclined towards consumption, whether of luxuries or subsistence goods. Similarly, the inhabitants of recently developed countries are more provident, still keeping up their thrifty ways; (e) economic and political security, namely the defence of private property from fraud and violence, one of the few tasks that the Anglo-Saxon economists, from Adam Smith on, were ready to leave to the state. But the price for security should not be too high (in terms of taxation). Thus, capital needs to be protected, at the same time, '*by* the Government and *from* the Government',[43] an ambivalence that was already typical of the Classics.

In conclusion, the golden rule that Marshall wrote in his notes is applicable:

> For all classes we require certainty of possession, and security; also strength of family affection, also care for the future. For the middle classes we also want habits of solidity . . . . For the lower classes habits of temperance on special grounds and on the general ground that all habits which conduce to length of life lengthen the time during which each 'bread-winner' is earning full wages, and thus the difference between his total income and the necessary compense of bringing up his family is increased.[44]

Some of the finest pages in *The Economics of Industry* are to do with property. In countries where ownership of land is widespread – it is argued – rent, just like profits, can become a valid source of accumulation. Marshall's eulogy of peasant ownership ('Give a man secure possession of a bleak rock, and he will turn it into a garden' – he writes, quoting Arthur Young)[45] or, in less favourable circumstances like those in England, of enterprising tenant farmers is also a eulogy of the propensity towards self-financing as opposed to the strategy of depending on credit:

> This is a very cold-blooded affair compared with the application of earnings to the land by the proprietor thereof, who works over it and lives upon it, who feels that it is all his, and shall be his children's after him. Neither the imagination nor the affections are addressed very powerfully by the savings-bank.[46]

Is not this widespread mentality a critical success factor for the British industrial model and, at the same time, its greatest weakness?

## The defence of capital in America

After its initial stages with the cotton and tobacco plantations of the South, and the manufacture of textiles that integrated the farming activities of New England,[47] the economic expansion of the United States had acquired features that were entirely atypical. The low density of population, and hence the shortage of labour, in the unionist states soon led to mechanization and the considerable use of fixed capital in agriculture just as much as in industry. These conditions persisted, even after the Civil War and despite strong demographic pressure and increasing immigration, fostered by the continual shift of the frontier towards the West, which was the core of the nation's fantasy.[48] The revolution in heavy industry between 1870 and 1900, in an area extending from Pittsburgh to Cleveland and the Great Lakes, came about on the tide of cheap steel produced by A. Carnegie and his imitators and rivals. This area also contained the oil refineries of J.D. Rockefeller,[49] as well as mechanical works, chemical plants and hydroelectric power stations.[50] With extractive technology and the production of steel becoming progressively cheaper, around 1890 iron was being replaced by the new material in the construction of railways and buildings. The development of the railways had started in the 1830s, with the first transcontinental line being completed in 1869, alongside the telegraph: thus there was

a parallel movement of goods and information. Massive investments and the gradual formation of oligopolies in industrial activities were going hand in hand with the emergence of a huge market with low prices for foodstuffs, raw materials and consumer commodities.

The growing size and concentration of enterprises were partly the necessary result of the new phase of industrial development characterized by the systematic application of the discoveries in science and technology to productive activities. Leading players in this process were a new managerial class made up of engineers and planners.[51] Inventions and improvements were being made in the research laboratories of business groups and universities, with the latter being financed and controlled by industrial capital. At times they were white elephants created on the initiative of the great entrepreneurial families with the aim of training a class of qualified managers. Technicians moulded the productive system, and in the long term even the habits of society.[52] With the advent of the railways, which were an early example of spatial organization of the service economy, ownership was now becoming separated from control that to a larger extent was being entrusted to managerial figures.[53]

## The spectre of communism takes form

In 1887 Francis A. Walker, one of the founders of economic science in the United States, wrote,

> Three words have, of recent years, become very familiar, and yet not of less and less, but of more and more, formidable sound to the good and quiet citizens of America and of Western Europe. These words are: Nihilism, Communism, Socialism.[54]

In his opinion nihilism aimed to destroy the existing order, without putting forward any proposals. Communism sought to redistribute wealth that had been produced, while socialism would intervene more radically on how to produce it, appealing to the power of the state.[55]

Walker was ready to consider concessions that could ward off the advent of these systems; they were concessions that thinkers, who were certainly not socialist, were prepared to make in order to counter the pressures that were building up in the more exposed sections of the population. They included measures to protect national industry, more restrictive legislation to safeguard labour, nationalization of the means of communication (railways) under a natural monopoly, public control over industrial corporations, who were hostile to the principles of

competition; they also included the construction of public housing and radical agrarian reform. Nearly all these measures had been motivated by experiences in Germany, to where the United States looked with great interest at that time. The last proposal, however, was one of J.S. Mill, who had been the leading defender of the British Land Tenure Reform Association between 1871 and 1873. It became the rallying call of Henry George and Alfred R. Wallace,[56] who initiated a debate that was later further enlivened by the ideas of Achille Loria, the Italian economist (see Chapter 7).

Though Walker professed himself to be an enemy of indiscriminate *laissez faire*, and had no need to hide behind any hypocrisy regarding the pretended association of interests between capital and labour in the age of mass production,[57] the conclusion he came to was critical on all these points. In his view it was necessary to exercise great caution in defending greater involvement of the state in the American economy; its national character (*exceptionalism*) was very different to continental Europe, founded as it was on a culture that saw public interventionism as serious interference in private affairs.[58]

Simon Newcomb, a scientist and writer on economic matters, had held a very similar position in his *The Labor Question* (1870). He did not deny the defects of the system, but argued that for the moment no improvements could be hypothesized.[59] He addressed the working classes to persuade them that even if they had taken over from the capitalists in owning the means of production collectively, their condition would not have showed any significant improvement; indeed they would have to carry on the burden of reinvesting the surplus, which would permanently be taken away from consumption.[60] Nor did he consider the cooperative system, whereby the advantages of owning part of the capital were associated with the condition of workers, as a credible alternative. In the United States, it was relatively easy for an enterprising person to have access to capital, so that whoever did not succeed in this activity was evidently not sufficiently suited to managing a cooperative enterprise profitably either.[61]

On the other hand, in the early phase of his scientific career, J.B. Clark seemed to believe in the potential of cooperation and in the growing regulatory role of the state to ease the tensions between capital and labour, and thus avert the socialist and communist threat.[62] On his return from Germany, where he had studied with Karl Knies, who had instilled in him an inclination for institutional analysis, he wrote that

> Communism is a wild, lawless protest against some real and some imaginary grievances. Because it is wild and lawless, it demands the powerful restraint of army and police. Because there is something of truth at its foundation, as there always is in the case of an error that obtains extensive currency, it demands a more permanent remedy.[63]

This permanent remedy was to consist in removing the social ills at the root of any subversive temptations.[64] Though he did not quote Marx, he seemed to be persuaded by his critique, even to the point of admitting that the industrial system had introduced a new form of slavery:

> We do not enslave men now-a-days. The emancipation proclamation ended all that, did it not? We offer a man a pittance, and tell him to take it and work for us from morning till night or starve; but we do not coerce him. It is at his option to choose whether he will work or not; he is free, you observe! We do not eat men – precisely. We consume the product of their labor, and they may have virtually worked body and soul into it; but we do it by such indirect and refined methods that it does not generally occur to us that we are cannibals. We kill men, it is true; but not with cudgels in open fight. We do it slowly, and frequently take the precaution to kill the soul first.[65]

These were strong words, even more extreme perhaps than those found in the *Capital* itself. Later, when we discuss the period in which Clark would become the foremost apologist for American capitalism, after obtaining the chair at Columbia University, these words will come back as a sign of the author's contradictory nature.

## Social Darwinism and predestination

The doctrines of social Darwinism[66] very soon entered the debate on capital; its main interpreter in the United States was William G. Sumner. Sumner, who was an Episcopalian Minister, politician, polemist and Professor of Sociology at Yale,[67] carried the ideas of Herbert Spencer to their extreme. Spencer had limited himself to sanctioning the principle of the 'survival of the fittest': Sumner, on the other hand, recognized in it the fulfilment of the Calvinist prophecy of predestination. God and Nature had ordered the world right from the beginning, establishing who would be saved, and who not. If material success is indicative of

virtue, and reflects a special aptitude for work and abnegation, wealth is a tangible sign of success in adapting, and wealthy individuals are those who will perpetuate the species. The accumulation of capital should thus be encouraged, as it brings with it the progress of the human species.

Conversely, Sumner believed that the proletariat deserved the state of exploitation that they were in, as this was the stigma of failed predestination, and the confirmation that they were not suited to live on this earth. He described them generally as squanderers and addicted to entertainment, which impoverished them and left them at the mercy of capital:

> In an advancing society, in which population is becoming more and more dense, the virtues of industry and self-denial are becoming more and more influential, and . . . in the competition of life, poverty and misery are made the more direct and inevitable penalties of shiftlessness, laziness, extravagance, intemperance and imprudence. . . . It is fixed in the order of nature, not by any decree of governments, congresses, or academies, that the man of industry and self-denial shall possess great advantages over the man of idleness and improvidence, which shall increase as time goes on. The instrument of this advantage is capital.[68]

With the growing proletarian masses, the competition for food and wages would be triggered off, which would further aggravate conditions. The social Darwinists can be seen here to draw on certain elements of the classical legacy, such as the Ricardian 'Iron Law of Wages' and the Malthusian mechanism, using them instrumentally to back up the idea of the 'struggle for existence'.

It is clear that Sumner considered socialism as a potentially serious danger. Being unable to control the struggle between man and nature, the revolutionaries would try to block the struggle between man and man: but by doing so they would hinder the providential mechanism of social selection. Since it was impossible to raise the absolute well-being of the poorest, they proposed to lower the general level; this opened the way to *involution*, a form of regression towards forms of society that were increasingly worse off and less adapted to the environment.[69] Not even the 'third way' of Bismarck's Germany should be an example for the United States to imitate.[70] The only type of society that conformed to the order of nature was a contractual one, in which the classes were under no reciprocal obligation. On the other hand, the fact that towards the turn of the century the two emergent powers were beginning to

observe each other circumspectly can be read between the lines of the famous analysis of Werner Sombart on why no form of socialism had taken root in the United States.[71]

This American vision culminated in an apologia not only for the accumulation of capital, but also for its concentration; it thus defended the oligopolistic nature of industrial capitalism. An essay of 1902, *The Concentration of Wealth*,[72] is particularly significant in this respect; in it Sumner justified the accumulation of wealth in the hands of the few, obviously in the conviction that the few coincided with the best. This was an aspect of Darwinist thought that the magnates of industry – a handful of dynasties at the head of key sectors, popularly called 'robber barons' (or more euphemistically 'captains of industry' in Veblen's celebrated pages)[73] – very often adopted themselves to justify their predatory ways.[74] It should be said that the dictates and implications arising out of this credo were not always taken literally: as we know, many members of the 'leisure class' were philanthropists, whether disinterestedly or *obtorto collo*. But the sort of philanthropy in which they indulged, even when it was spontaneous or dictated by their personal biographies,[75] does not contradict the rule. It was almost always to the benefit of culture, the arts and higher education; only rarely was it turned into aid in support of the weaker classes.

## Distribution as a fact of nature: J.B. Clark

In the late 1880s, when his Heidelberg period must by now have seemed a distant memory, and particularly since he had come to the chair at Columbia University in 1895, Clark's ideological conversion had become complete.[76] He had announced his new convictions on the intrinsic justice of the capitalistic system in the 1889 work *Possibility of a Scientific Law of Wages*[77] and in a later one of 1891, *Distribution as Determined by a Law of Rent*,[78] but in 1899 he provided them with a definitive systematization in *The Distribution of Wealth*;

> It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates.[79]

Clark noted how, though wages appeared to be determined through negotiation, they were actually a result of the law of labour productivity, which fixed the level beyond which they could not go any further.

The natural law thus operated to separate the social product into three categories: wages (labour income), interest (capital income, including land rent) and profits (the entrepreneur's reward for his coordinating activity).[80] The same law was involved in guaranteeing each factor a reward equal to its actual contribution in the process:[81]

> If each productive function is paid for according to the amount of its product, then each man gets what he himself produces. If he works, he gets what he creates by working; if he also provides capital, he gets what his capital produces; and if, further, he renders service by coördinating labor and capital, he gets the product that can be separately traced to that function. Only in one of these ways can a man produce anything. If he receives all that he brings into existence through any one of these three functions, he receives all that he creates at all.[82]

Labour and its remuneration were critical issues of socialist propaganda. The attitude of the working class towards the other classes, and hence social stability, thus depended on whether what workmen earned was perceived as being what they produced, regardless of the *quantum*:

> If they create a small amount of wealth and get the whole of it, they may not seek to revolutionize society; but if it were to appear that they produce an ample amount and get only a part of it, many of them would become revolutionists, and all would have the right to do so. The indictment that hangs over society is that of 'exploiting labor.' 'Workmen' it is said, 'are regularly robbed of what they produce. This is done within the form of law, and by the natural working of competition.' If this charge were proved, every right-minded man should become a socialist.[83]

It should be noted that even the biologist T.H. Huxley alluded to a natural principle to justify the priority of capital over labour, and thus its full legitimate independence from the latter.[84] But Clark, in applying for the first time the theory of decreasing returns of land (worked out by Ricardo and by von Thünen) to labour and capital, stated that each factor was rewarded its marginal product, and this implied that the sum of their rewards would equal the total output. This was certainly especially valid for labour and capital, from which derived wages and interest respectively; however, competition excluded the existence of profit in the steady state.[85] In conclusion there was neither added gain of capital over what it had contributed to producing, nor a significant

margin of personal gain for the entrepreneur. These results were the 'scientific' reply to equally 'scientific' accusation of parasitism and of theft of the product of labour that Marx made against the capitalists. Clark gave a conceptual demonstration of his principle, with the use of some simple graphs to help him. The Englishman P.H. Wicksteed (a Unitarian theologian who had a passion for economics) in 1894 underlined more rigorously the need to make use of Euler's Theorem,[86] which requires the restrictive assumption of constant returns to scale (for each increase in input there has to be an exactly proportional increase in output).[87]

One might wonder – and Clark was well aware of this – whether the rule that assigned to each man his product was ethically just. Some socialists, following Louis Blanc,[88] would have objected that the only principle of justice was to work according to one's capacity and be rewarded according to one's need. However, for Clark to adhere to this point of view would mean taking away from some a part of what they had produced to give it to others, thus violating the right of ownership:[89] it would be 'institutional robbery'.[90] This leads us to reflect on the fact that Clark's theoretical discourse is valid, in fact, as long as the right of ownership over the means of production exists:[91] if this is questioned then the whole architecture collapses. It should be remembered that for Marx the root of injustice lay precisely in the undue appropriation of the means of production by the capitalist, and it was on this (primitive accumulation) that he directed his critique. Clark's persuasive force thus depended on having got round the fundamental question. Many of his detractors (contemporary and posthumous) did not realize this, and fell into the trap of seeking errors in the construction of the model, but which, from a strictly technical point of view, was unassailable. Thus G.B. Shaw, for example, limited himself to pointing out its scarce practical applicability.[92]

Someone who did realize that he had avoided the problem was Frank Knight, who wrote that 'The income does not go to ''factors'', but to their owners, and can in no case have more ethical justification than has the fact of ownership.'[93] Elsewhere he seemed to wonder how Clark could base his theory on the principle of competition (to which the ethical nature of the implications is subordinated) when staring him in the face was an economy tending towards monopoly.[94] They were criticisms that T. Veblen had already levelled against him in greeting the publication of the *Essentials of Economic Theory*[95] with a long denunciation in the *Quarterly Journal of Economics*.[96] This censure by the leader of the American Institutionalists is too complicated to go into here, as it also aimed to strike at the methodological aspects of Clarkian 'hedonism'.

The following words should suffice. They focus on the nucleus of a theory of distribution that was supposed to be revolutionary. But it was actually based on an acceptance of the 'commonplaces' of the existing order that it wanted to legitimize:

> It does not touch questions of equity beyond this, nor does it touch questions of the expediency or probable advent of any contemplated change in the existing conventions as to rights of ownership and initiative. . . . It is not easy to see that some hundreds of pages of apparatus should be required to find one's way back to these time-worn commonplaces of Manchester.[97]

If, for predictable reasons, the distance between Clark and the Institutionalists is wide,[98] there are methodological elements that show the profound distance that lies between Clark and the Classics. First of all, it is clear – as pointed out at the start of this chapter – that a similar theory of distribution plainly contrasts with the teachings of Mill. In addition, for Clarkian principles to be valid no social organization is called for: the relationship between man and nature is the only important one for the ends of production as much as for the pattern of distribution that arises from it.[99] Even the inclination towards exchange that distinguishes evolved societies in no way undermines the validity of the natural laws that are unchangeable:[100] 'A laborer's income may seem to come to him as a payment from another man; but in essence it is still the response that nature makes to his own labor.'[101]

Finally, the distinction that Clark makes between 'capital' and 'capital goods' (in Chapter 9 of the *Distribution of Wealth*) is worth mentioning collaterally to this discussion. Capital goods, or 'instruments', are perishable; they are born, and they die, whereas capital is something perennial, continually regenerating itself. The former are conditioned by particular uses, while the latter is 'fluid':

> Capital thus lives, as it were, by transmigration, taking itself out of one set of bodies and putting itself into another, again and again. . . . The life of such a capital is not torpid, like the life of a reptile having a sluggish circulation: it is rather like the life of a highly organized animal that casts off and renews its tissues at short intervals.[102]

Its reward is called 'interest', while the reward of the individual 'instruments' goes by the name of 'rent'.[103] There is a dynamics of

mutual determination between interest and rent, but the really decisive relationship is the one whereby rent is made to depend on interest.[104]

In the context of the Second Industrial Revolution, the distinction between fixed and circulating capital is undermined. Clark did not understand how capital goods (with the only exception of money, in the sense of a store of value) could be said to circulate: 'A table, when it has been finished in the cabinet shop, may go straight to the house of the man who is to use it and stay there. All the circulating that it will have done is thus reduced to a single movement from one proprietor to another.'[105] The only type of circulation it had sense to talk about concerned capital *tout court* which, existing perpetually as it did, poured its life blood into the various sectors of the economy.[106] Another difference between him and the British thinkers (Marshall in particular) is the fact that for Clark accumulation was a phenomenon to be explained in exclusively physical and technical terms: practically no considerations of a psychological and cultural order were made concerning it.[107]

# 7
# The Continent, 1870–1938

The state of Continental Europe between the nineteenth and the twentieth centuries with regard to its economic, political and intellectual history had many different facets. Germany, in 1870, was unified under the Prussian crown, and started out on the path of the Second Industrial Revolution with great success. Austria, by contrast, was losing its political importance (especially after the *Ausgleich* in 1867, when it was left as a dual monarchy) and was becoming resigned to remain on the fringes of the industrialization process. From the intellectual standpoint, the economic culture of the Central European elites had developed from an ideological current that had been a long time in the making; its roots lay in the Spain of the Habsburgs (after all, the last emperor of the dynasty – a Habsburg-Lothringen – was deposed in Vienna in 1918).

France had been defeated at Sedan, and was just emerging out of the political and social upheavals that had led up to the proclamation of the Third Republic; and to say the very least it was experiencing a troubled start. Italy was a backward and depressed agricultural country under the governments of the Historic Right (1861–1876), but during the subsequent protectionist phase achieved some positive results, and in the final decade of the nineteenth century experienced a definite wave of growth in the newly industrialized regions of the North West.[1]

Throughout this long expanse of time various attempts were being made to reconcile capital and labour in all these countries, with the exception of Austria. At the end of the century there were many good reasons for opening up a critical exchange with Marxism, on the level of academic economic theory as well. In the words of Sombart (who had never had any particular sympathy for proletarian socialism),[2] 'there is . . . a theoretic-historical Socialism of inestimable value to social science'.[3]

It was clear from the start that Germany was eager to gain hegemony on the Continent, and that this implied reducing the importance of France. German military might, in addition to industry, was being built up. Chemicals and pharmaceuticals, with the massive production of explosives, fertilizers and artificial dyes, as well as the steel industry, drove the development of the country, while in agriculture productivity was being increased through the application of eugenics. The universal banks, public expenditure and customs tariffs acted as substitute factors for take-off, in accordance with Gerschenkron's classic model.[4] The principle of competition remained wholly foreign to the economic culture of Germany, where agreements and cartels regulated the internal market with great efficiency. The cartels even went as far as to determine prices and the quantities produced, and to divide the share of the market among the large enterprise groups. The process of German industrialization was extremely rapid, taking into account that the Eastern areas of the country had only recently emerged from an almost feudal regime. Organized capitalism prevented the complete development of the middle class,[5] squeezed as it was between the *Junker* and industrialists on the one hand, and a proletariat that was strongly motivated by an esprit de corps on the other. This was the direction in which the conservatism of Bismarck was heading; however, though it tenaciously opposed the leftist movements, during the 1880s a pioneering packet of social and welfare measures had been approved that included old-age pensions, health insurance and a fund for accidents at work. Such policies gained the approval of the 'socialists of the chair' – the exponents of the younger German historical school, led by Gustav Schmoller.

From a theoretical point of view, the German writers, unlike others, realized there was a substantial difference between the phenomena of interest and profit of capital.[6] The discriminator was the role of the entrepreneur and, as Schmoller would not fail to point out, this figure was unknown to the British:

> The concept of the capitalist, which English political economy had confused with that of the entrepreneur, became, under the influence of this definition of capital [the Marxian], the collective denomination of all that and of those who, apparently or actually, were opposed to the interest of the workers.[7]

After 1890, when Wilhelm II, having got rid of the domineering chancellor, was free to follow his own impulses, Germany inaugurated a foreign,

commercial and military policy that was becoming increasingly aggressive. In the mean time, Great Britain and the United States were getting more impatient over the dumping of exports that was taking away their outlet markets.

The outcome of the First World War caused the situation to degenerate, triggering off a spiral of no return. Having lost their (few) colonies, which were divided out among the Allies (during the period in which colonialism was at its peak), with their territorial areas reduced, and burdened with expenses of reparation, the Germans felt themselves even more hemmed in, and victims of a plot hatched by international capital and headed by the Atlantic powers. German intellectuals then took to despising the thirst for money that had pervaded the decadent and doomed West, and to cultivating a utopian return to a society dominated by mythical pre-capitalist values, where heroism and philosophical virtues were contrasted with the mediocrity of trade. In 1938, after the parenthesis of the Weimar Republic (and when capital had been brought back under the control of the state, the corporation of corporations) the Third Reich of Adolf Hitler prepared for a new war of conquest.

## The legacy of the 'Austrias'

At the time when Carl Menger founded his school of theoretical economics in around 1870, Austria was an economically backward country which was also culturally deeply conservative. To convey an idea of the philosophy that permeated teaching in the Vienna Law Faculty (where one went after being imbued with the works of Aristotle at a good grammar school like the Benedictine Schottengymnasium) there seems little point in even mentioning Neo-Scholasticism (if this term alludes to the current of Franz Brentano), since it was simply a perpetuation of the Thomistic tradition by inertia. One only needs to bear in mind that the 'innovative' principles which led the Austrians to start up the famous *Methodenstreit* of the 1880s against the younger German historicists were the subjective theory of value based on the *complacibilitas*, and the deductive method, both of which were directly inherited from the School of Salamanca.[8]

Most of Eugen Böhm-Bawerk's academic work was completed in a decade, while he was teaching at Innsbruck.[9] The very title of his monumental *Kapital und Kapitalzins* reveals his intention of setting out a particular relationship between capital and interest. The work was developed along two lines: one was historical, and his *Geschichte und Kritik* of 1884 aimed to reconstruct and review the evolution of theories of

interest according to general type; the other, which was presented in the *Positive Theorie* of 1889, fully expounded Böhm-Bawerk's vision of capital.[10] This was followed in 1896 by *Zum Abschluss des Marxschen Systems*, a strong attack on Marx's theoretical system written on the occasion of the (posthumous) publication of Book III of *Capital*; it was an attack for which Chapter 12 of the *Geschichte* had been a preparation.[11] According to Böhm-Bawerk the faith Marx placed in the labour theory of value, which naturally he considered was antiquated, was where the main error of his system and its ramifications lay.[12]

Since the *Geschichte* broadly related yield from capital to interest, and basically distinguished (after Adam Smith) productivity theories, use theories, abstinence theories and finally labour and exploitation theories,[13] it is appropriate to open a parenthesis on Menger's conception, in order to arrive at Böhm-Bawerk's properly theoretical contribution. While Menger, in his *Grundsätze* of 1871, defined capital as any type of economic good whose essence was destined, whether technically or economically, for use and not for consumption[14] (namely the goods of 'higher order', to use his terminology), in 1888 with the article *Zur Theorie des Kapitals* the emphasis changed.[15] In the current language of business, as in that of jurisprudence – Menger stated – the term 'capital' designated nothing other than money (of course not money in itself, but only 'money that works').[16] In that case why should science construct an artificial concept of capital as a quantity of intermediate goods destined for productive purposes whose meaning had multiplied since the time of the Physiocrats? Menger really found it difficult to understand why there was any need for such an operation, which he considered was a mere intellectualistic fancy.

What to the present-day reader might seem to be a regression of Menger's thought was in actual fact the attainment of a more mature conception. In writing the *Grundsätze*, the author's attention had been completely taken up by the theory of wants and value; the pages on capital appear to be written *en passant*, going little beyond the acknowledgement of widely accepted ideas. However, in 1888, and certainly under the stimulus of what Böhm-Bawerk was publishing, Menger focused more closely on the subject. And even if the work showed up the huge gulf between his empirical references and the realities of a modern industrial economy, the analytical results were still unexpectedly subtle:

> The distinctions we insist upon so obstinately are not mere subtleties, because if the profit theory of acquisitive goods is so backward, this is because they have been misunderstood. The confusion between

> these two great categories – productive assets and capital – has only led to the belief that an explanation like that for interest generated from effective capital is enough to resolve the much more general problem of the yield from any productive goods. Any sharp-witted man knows perfectly that the rate of interest depends on other causes than rent from estates and leases, and rent that derives from pastures and hunting grounds has a different origin from that of corn lands and profits from industry and trade. The genesis and nature of each type of income obviously calls for its own explanation. In reality, this problem of income is highly complicated and cannot be mistaken for that of interest. This should also apply to scientific economics.[17]

Böhm-Bawerk never accepted Menger's volte-face and his call to construct 'a general theory of income' that differed from the theory of interest (which would now resurface only as a 'subordinate member'),[18] and remained faithful to the conception laid out in the *Grundsätze*. For him capital was both (in the broad sense) 'products that serve the purpose of acquisition', namely as a source of rent, as well as (in the strict sense) 'intermediate products', which were destined for productive purposes.[19] In the *Positive Theorie*, Böhm-Bawerk explained the origin of interest by bringing in the elements of time and impatience. He basically took up Cardinal Cajetan's old argument, according to which the individual tended to assign a greater use value to present money than to future money. This could be due to either an optimistic tendency regarding the expected income, or a constant underestimation of potential needs and the means required to meet them, or the technical superiority of the present goods, which had a potentially infinite number of productive applications.[20] Since the Austrians (like the Salamancans) believed the exchange value reflected the subjective valuation, the market price for an existing endowment was greater than the price for the same quantity foreseeable at a future time. Here was how to explain interest as a way to cover the intervening time gap between the use values of money. It was the reward that came from waiting, and compensated the capitalist for the reduced utility that resulted from rejecting present availability.[21]

If the *Positive Theorie* thus focused on the productive function of capital as a heterogeneous complex of goods, why did the *Geschichte und Kritik* focus practically only on the problem of interest? From an apologist of the *status quo* one would have expected a defence of one and/or other category (considered separately), all the more so since the continental writers were well aware of the difference between capitalist

and entrepreneur, between interest and profit. Why did Böhm-Bawerk opt for interest when he had such a choice before him? Surely a more effective defence of capitalism would have started from profit.

Certainly it cannot be explained by any hypothesis about profit having no place in a liberal tradition like the Austrian one: one only needs to think of Schumpeter.[22] Austrian theory is still a dynamic theory which, unlike other marginalist approaches (here Léon Walras comes to mind),[23] would never have considered zeroing of profits as a physiological condition of a market economy. Even the hypothesis that, from an abstractly analytical point of view, the category of profit can be at least partially assimilated to that of interest in the case of self-financing appears to be over-restrictive. In actual fact Böhm-Bawerk himself provided us with the exact explanation in Book IV, Chapter 2 (entitled *The Origin of Interest*), of his *Positive Theorie*. It was subdivided into three sections or eminent cases, including loan interest and the profit of the entrepreneur. From the empirical point of view, profit was considered the most important phenomenon. But – note carefully – it did not have a life of its own: it was defined as the 'real nub of the interest problem', and also 'that manifestation of the phenomenon *of interest* which not only has the greatest practical significance, but also rates ordinarily as the original source of all the others'.[24]

At this point we appreciate that, if on the one hand the *Geschichte* and the same investigation on monetary loans in the *Positive Theorie* were the preparation for what Böhm-Bawerk was only now to maintain, on the other, the phenomenon of profit was methodologically assimilated, in its genesis, to that of interest, which remained the higher category. Let us see how this happened. According to Böhm-Bawerk, who drew on Menger's classification of goods, the entrepreneur bought goods of higher order (the means of production, including labour) and, taking them through the production process, transformed them into goods of the first order, available for consumption:

> Let us disregard the compensation that should in any event be his for his personal contribution to the work of production as manager, foreman and the like. Besides that the entrepreneur derives a return which is approximately in proportion to the capital he has invested in the business.... What is the explanation for this return?[25]

The assumption was that the value of higher-order goods was strictly dependent on the value of the first-order goods that they aimed to

produce. It was also necessary to consider that equipment and raw materials, though physically present at the start of the production process, from an economic point of view were future goods: they acquired value only when their function had been accomplished, a little as if they themselves were to be transformed into their own product. It is no accident that Böhm-Bawerk left fixed capital, whose situation he was clearly aware of, out of the reasoning for so long, considering it as a tiresome 'complication'.

Thus, suppose that at the end of a production cycle 100 units of finished product have been created: they are the equivalent of 100 units of raw material providing this is considered in the precise instant (which will be called 'future') in which the cycle is concluded. If, however, it is valued at a previous moment – for instance, at the beginning of the cycle (which will be called 'present') then the corresponding units will be lower: say 80. This is because goods are subject to the same law that applies to money: a good today is worth more of the same good considered a year later. Profit, just like interest, thus serves to convince the holder of capital to reject immediate consumption in favour of its utilization.

In this way, the true origin of 'surplus value' lies in time, and has nothing to do with the social relations of production.[26] Only the intervention of time can upset things, allowing Böhm-Bawerk (by virtue of the psychological effect that he brings into play) to state that two plus two does not make four. It is as if he had introduced a new factor of production that by definition does not have an owner (that is, time), with the aim of attributing to it a return which actually goes to the entrepreneur. The insistence with which the author defends his result reveals his apologetic intention:

> That and nothing else is the reason for the 'cheap' purchase of means of production, and particularly of *labor*. The socialists are right in regarding that purchase as the source of originary interest, but they are wrong in flatly denouncing it as the fruits of the exploitation of the workers by the owners of property. The purchase is not so cheap as it looks[27]

since the good is paid for by the entrepreneur at its 'present value'.[28] And again, 'That is the truth about the entrepreneur's originary interest. I hope it will be found simple enough.'[29]

Naturally, the intervention of machinery, and the associated problem of depreciation, was to render the discussion intricate and awkward,

with the result that in seeking to get round these difficulties Böhm-Bawerk's argument becomes increasingly succinct.[30] No less complicated is the concept of the 'average period of production', which he introduced in order to take account of the different capital intensities; in the trivial case of simple interest it could hold, but proved to be quite incompatible with the case of compound interest. In short, not even Böhm-Bawerk's theory seemed suited to describing a modern industrial economy. It acknowledged that interest paid by the entrepreneur to the capitalist had the same praiseworthy function that Turgot might have assigned to it, over a century previously, that is to maintain the workers for the duration of the production cycle. Foreign writers who had been attracted by the undoubted elegance of this model and had circulated it in their respective countries – Irving Fisher in the United States,[31] and Knut Wicksell in Sweden[32] – sooner or later came up against the dilemma of whether to overturn it or abandon it completely. Fisher got rid of its real aspects by transforming it into an essentially monetary theory of interest; Wicksell, on the other hand, became increasingly perplexed as his awareness of its deep-seated contradictions grew.

## German socialism

In order to introduce the vision of the members of the younger German historical school, who formed the *Verein für Sozialpolitik*, it is appropriate to start with Gustav Schmoller's *Outlines of Economic Science* (1900–1904), which was in some way its primary text. In the first place it should come as no surprise that the Marxian conception figured prominently in Schmoller's discussion of present and past conceptions of capital.[33] It had in fact already been included in the critical review made by Karl Knies, one of the leaders of the older generation, to mark the Heidelberg lectures of 1886.[34] These writers were a long way from espousing Marx's theses (or even those of Johann K. Rodbertus, which were more compatible with their own), as they considered them to be tainted with ideological extremism, but they were still able to draw on them usefully.

Closely connected to the discourse on capital is Schmoller's reflection on credit and the development of the modern banking system, to which he devotes a great deal of space,[35] confirming the importance that the 'substitution for prerequisites' in German industrial capitalism had assumed. But in the view of the historicists, moral (in the Hegelian sense), or otherwise extra-economic, considerations – using current terminology

to avoid ambiguity – were still more important. Thus they could not help wondering whether capital formation was really so significant in determining the wealth of a nation:

> We know today that the causes of wealth, more even than in the existing stock of goods, lie in men, in their economic aptitudes and in their organization. These qualities of men, their level of education, their diversity in intellectual and moral, as in technical, concerns, to us seem to be the prime and most important factor. We do not place these personal causes on the same level as reserves and accumulated means of production. We know that a highly advanced nation easily bears great losses of capital and that lost capital is easily recovered, whereas indolent and aging peoples are struck down in a quite different way by equal losses.[36]

Among other things, this awareness was the prelude to the insight of an indisputable fact that development economists in the later twentieth century would come up against, despite themselves – the fact that backward countries receiving capital on credit would benefit from it only if they possessed appropriate institutions and an investment culture. Otherwise 'they decline, become slaves to their creditors, and go bankrupt'.[37]

Werner Sombart, one of the last exponents of European historicism, also developed his ideas along similar lines. They tended even more towards retrospective profundity, and were articulated in three stages: the study of Marx's thought, an investigation into the growth of the modern economic spirit, and finally the ideal of national socialism which he arrived at as a way of recovering romantic and pre-capitalist values. His master work, *Der moderne Kapitalismus*, was a parallel development, which took shape over a long period between 1902 and 1927.

For Sombart, reflecting on the Marxian system had an essentially methodological purpose. It helped to demonstrate and elucidate the fundamental dynamics of contemporary society, whereby the economic element had come to dominate other spheres of social life. If the review he wrote on volume III of *Capital*[38] ('the first time that a German university professor succeeds on the whole in seeing in Marx's writings what Marx really says'[39] in the words of Engels himself) irritated Böhm-Bawerk,[40] and earned him his reputation of *rote Professor*, even at home,[41] in actual fact it only showed the esteem that Sombart had for Marx's economic and social analysis.

His second phase deserves a little more attention. *Der Bourgeois* of 1913 set out to investigate the origin of the economic mentality in connection with the rise of modern capitalism. Sombart noted how the seigniorial ethic of the Middle Ages and Renaissance 'despised money'. Money was said to be 'dirty, like every activity that involves acquisition'. Or, according to the Thomist precept, 'money is there to be spent'.[42] Even the Florentine clergy of the fifteenth century, prey to an unrestrained desire for pomp and ostentation, so wonderfully described by Leon Battista Alberti, actually had no knowledge of any form of saving and accumulation: 'income never comes in, and there is always more expenditure than ordinary riches'.[43] But this passion for wealth had nothing to do with the modern capitalist spirit:

> It was not capable of rousing the spirit of pre-capitalist economic life; rather it is new proof for a lack of avidity of gain in the pre-capitalist economy, when people sought to satisfy the acquisitive desire . . . outside the field of production and the transport of goods, and even, to a large extent, outside trade . . . . People go to the mines, they dig for treasures, they turn to alchemy and all sorts of magic arts to obtain money, since they cannot acquire it in the framework of daily economic life.[44]

Ordinary economic activity was played out at a very slow rhythm, in Catholic countries punctuated by a great number of festivities. It was looked on with 'the same psychical attitude as a child towards learning in a school, to which he would certainly not submit if he was not obliged to'. At that time 'no trace of the love of economics or economic work is found . . . and in work there is never any urgency'.[45] Furthermore, the passion for gold or the taste for hoarding 'often exceeded the love for money',[46] and not only among the aristocracies. Sombart recalls how this tendency towards hoarding was so strong in the Spain of Philip III that the sovereign was induced, in 1600, to issue a decree for the confiscation of all the gold and silver plate in the country 'so that coin could be minted'.[47]

This traditional system of values was shattered in the Holland of the seventeenth century and the England of the early eighteenth century. The tulip mania of 1634–1637, a true collective obsession that caused the 'price of one flower to go beyond the value of its weight in gold'; gambling on the stock exchange; the English bubbles and the daring enterprises of John Law on the Continent – these were all signs that *homo ludens* (as J. Huizinga would have called him) was turning into

*homo oeconomicus*.[48] With patient determination Sombart searched out documentary sources and uncovered a fine Dutch satire of the period, *A Eulogy of the Avidity for Money*, by Jeremias de Decker (1609–1666),[49] which rightly deserves to be as well known as the celebrated *Fable of the Bees* of later.

For a long time the modern economic mentality had been confined to the shores of the North Sea, though the Jewish enclaves that existed everywhere – precisely because of their marginality – had managed to keep its flame alight.[50] On the other hand, 'the spirit of the French nation' had remained 'extraordinarily equal to itself over the last centuries'[51] due to the hegemony of a taste for elegance that tended towards expenditure on luxuries rather than on investments, while all the classes of society sought the security that came from state offices. As for the German situation, 'It could be said, without any fear of exaggeration, that in Germany a real flowering of the capitalist spirit only begins after 1850.'[52] The rapid transformation that in the space of only a few decades had led the country to 'compete with the United States for primacy in the capitalist field'[53] was a foreboding of the serious imbalances that would emerge before long.

Between *Der Bourgeois* and *Deutscher Sozialismus* (1934), there had come the resounding military defeat of Germany in 1918, and the humiliation suffered at Versailles. No work could better express the 'spirit of the time' (the *Zeitgeist*) than *The Decline of the West* (1918–1922) by Oswald Spengler.[54] The country's intellectual circles were pervaded by the same feelings of melancholia, demoralization and resignation that these pages emanated, but at the same time there was a sense of resentment and revanchism towards those who were accused of frustrating the ambitions of Germany by forcing it into an unjust financial grip – namely the 'imperialistic powers'. All this must be borne in mind when approaching Sombart's last work, in view of its predominantly political nature. Yet allowances need to be made; *Deutscher Sozialismus* (or *A New Social Philosophy*, as it is known in the English-speaking world) was intrinsically coherent with Sombart's whole life's work, and was, in some respects, its natural outlet.

Arrogance and prevarication were singled out as constants of capitalist development. In its early period the West had resorted to violence in order to subdue the world economy: when necessary, it exercised tyranny over primitive populations and had no qualms about destroying the institutions of others through its colonial policy and military power.[55] Later the method changed and became more refined: 'in place of force, resort was had to swindle; instead of political manipulation, befitting

an economic age, economic methods were employed'. This happened in the name of a threefold slogan of 'Peace–Free Trade–Goodwill'. In reality it was 'through the elaboration of a subtle credit system' above all that 'it was possible to make foreign peoples serve the interests of west-European capital':[56]

> This whole process was brought about, and these gigantic sums were administered, by a small group of banking houses, which were referred to as the 'representatives of international-finance capital.' Thus there arose that pernicious and accursed finance-capitalistic imperialism, or imperialism of international-finance capital, which felt perfectly at home wherever a field of exploitation opened up, as expressed in the Encyclical 'Quadragesimo anno'.[57]

Whatever Böhm-Bawerk might have thought, and despite what Hayek was to say,[58] Sombart had no sympathy for Marxism, especially as he matured. Marxism and capitalism appeared to him as two sides of the same coin. As Alessandro Cavalli aptly noted, Sombart would have willingly endorsed the words of his contemporary Ludwig Pohle: 'capitalism could almost be classified, on the basis of its origin, as the existing economic organization seen through the eyes of socialism'.[59] According to Sombart, proletarians 'are themselves the only product of the economic age unknown to any earlier period in similar form . . . . Karl Marx is fundamentally wrong in saying that classes and class wars have always existed . . . . Only in an economic age are economic interests decisive in the formation of group structures; not until that age do we find men united above all other interests – religious, political, kindred, and so on – into one class, that is, into a group fundamentally interested in the formation of an economic life.'[60] Marx was thus a product of an economistic society and his proletariat the product of the same 'trader-concept of the world'[61] which Sombart wanted to do away with:

> German Socialism aim[s] to lead the German people out of the desert of the economic age.[62]

And again,

> The economic age resulted . . . in an overvaluation of material goods and thereby gave the primacy to economics. This domination must be broken.[63]

He contrasted the 'heroes' of the mythical *Vaterland* with the 'merchants' over the Channel, the genesis of whose spirit had been the subject of his own activity as a scholar: in 1915 *Händler und Helden* was the title of a pamphlet loaded with anti-British resentment.[64] The Anglo-Dutch and the Jews were identified with the agents of modernization that were now holding Germany in a state of inferiority by means of their capital. The state of nature which Sombart dreamed of returning to was certainly not the one represented by the Enlightenment with its '*bon sauvage* . . . which through bad management was ruined'.[65] On the contrary, he wrote, 'We must free ourselves entirely from the fatal belief in progress, which . . . ruled the ideal world of proletarian Socialism, and even more that of liberalism.'[66] The longed-for liberation could only come about through the strength of the nation state,[67] the gigantic Leviathan machine, the organic whole which Carl Schmitt wrote about, where freedom and necessity coincide, and where the will of the individual was realized and merged at the same time.[68] This was how the romantic dream was being transformed into the ideology of Nazism.

## Italy and France: An *excursus*

Italian economic thought in the nineteenth century was for a long time dominated by a tendency towards historicism, and even when at the turn of the century marginalism showed early signs of infiltrating it, the new model was adopted only very cautiously, and it had to become acclimatized while maintaining a degree of sensitivity to the socio-cultural element.[69] The final fruits of the uninterrupted line of institutionalism that lasted into the twentieth century (in the work of Gustavo Del Vecchio) drew on German doctrine on the one hand, and on the nineteenth-century tradition of Melchiorre Gioja, Gian Domenico Romagnosi and Carlo Cattaneo on the other.[70] Cattaneo, in particular, in his *Intelligence as a Principle of Public Economy* (1861) had presented a highly innovative theory of the factors of production; the *primum movens* of production did not lie in either land, labour or capital but was to be sought higher up in 'intelligence', associated to the 'will'. Economic results depended on man's greater or lesser ability, which was refined by the education he had received, to set in motion the levers of wealth.[71]

In his *Economic Dynamics* of 1933, Del Vecchio followed Schmoller in stating that the 'essential capital' of society did not lie in assets of a physical or material nature, but was the result of 'social institutions'. While the former could easily be reconstructed should they be destroyed,

no form of organized social life between men was possible without the latter.[72] In the attack he made on the neoclassical theory of accumulation (in Clark's as much in the Austrian and Fisher's versions) he argued that the relation usually made between saving, expectations and rate of interest was baseless:

> The economic calculation has to be much more complex if saving is to be dependent on it. If such a complex calculation is to be excluded as being contrary to reality, this means that saving cannot result from economic calculation.[73]

Accumulation did not depend on the rational response of the agents to the rate of interest but on the force of 'habit' and 'ambition';[74] factors such as the asymmetrical development of social classes, endogamy and hereditary institutions, the circulation of elites, the political constitution and finally the conjuncture, which were hardly quantifiable, could affect it at different times.[75]

Neither did the Italian economists hesitate to engage with Marx, who was after all at the centre of an interest that was also broadly cultural (one thinks of the contribution of the philosophers Antonio Labriola and Benedetto Croce). The attitude of the economists and intellectuals was neither that of blind faith, nor of preconceived rejection.[76] In general, they accepted whatever they considered was good in Marxian analysis, but on the other hand rejected what they did not find convincing. Achille Loria, a prominent figure in the last 20 years of the nineteenth century,[77] wrote his first and major work, *Agricultural Rent and its Natural Elision* (1880), at the age of 23.[78] The independent variable was, fundamentally, the structure of landed property alone, while the phenomena of accumulation and distribution of wealth were explained in accordance. The difference between the pre-capitalist and the capitalist era lay in the fact that in the former, which is described as society's physiological state, rent was eliminated – that is, it was transferred as income to all the economic categories, including the state – while the evolution of capitalism, with its agrarian concentration, had led to its accumulation in the hands of only a few rentiers. This process must have taken place – as Loria would subsequently point out[79] – as 'free land' was decreasing, and increasingly poorer lands were being cultivated; furthermore, the subsistence wages that the agricultural labourers were paid made it impossible for them to make any savings and thus emancipate themselves. The way out of this was not collectivism, but an agrarian reform that rewarded small ownership and cooperation. The emphasis on land

reflected that this was a theory made to measure for a mainly agricultural country like Italy.[80] But the idea that the process Loria described was an inevitable one, and could also be applied to land in the New World, which was still in the process of being occupied, explained its success in the United States, where it was widely translated and commented on,[81] as mentioned in the previous chapter (p. 118). Similarly, Loria's strongly independent intellect led him, in 1895, in the review *Nuova Antologia*, to define Book III of *Capital* (which specifically tackled the problem of the transformation of values into prices) as Marx's 'scientific suicide'; for which Engels would repay him with the colourful nickname of 'gnome'.[82]

Another interesting case was that of Antonio Graziadei.[83] In his graduation thesis, which he debated with Tullio Martello at Bologna in 1895,[84] he argued against the idea that an increase in the organic composition of capital meant a fall in the rate of profit. Marx's mistake lay in his rigid faith in the labour theory of value, whereby he had attributed the origin of all profit to unpaid labour; but, according to Graziadei, constant capital did not contribute any less to creating the surplus that turned into profit. He also considered that Book III of *Das Kapital* was the reason for the failure of the Marxian system, and was generally counterproductive for the socialist struggle – a cause in which Graziadei, a future co-founder of the Italian Communist Party, firmly believed. At the very end of the nineteenth century it was impossible to ignore that though capital intensity was increasing, the Western economy was prospering rather than entering the crisis that Marx had to some extent predicted.

French thought also suggested important links with the German tradition. If the Franco-Prussian War, and the bitterness that it brought with it right up until the First World War, had seen the two countries politically divided, this did not mean that their cultural affinities had been undermined. After the Third Republic had been set up in 1870, and the Commune in the following year, Paris, in 1889 with the opening of the Second International, was a leading player once again. Apart from Georges Sorel and his revolutionary (and tendentially anarchic) syndicalism, the prevailing social philosophy inclined towards moderation. It was well represented in the charismatic figure of Jean Jaurès; a politician and scholar, as well as being the father of social democracy, he worked to polarize the various political formations around reformist ideas, keeping the radicals of Clemenceau at a distance, and isolating the communist fringe of Jules Guesde. After completing his studies at the Ecole Normale of Paris, he taught intermittently at the Faculty of Letters of Toulouse, where among other things he obtained his doctorate

in 1891 with a thesis on the origins of German socialism from Luther to Hegel. Worth recalling are his defence of Dreyfus in 1898, his battles in the early twentieth century for the Republic's first rulings regarding social legislation (such as free trade union membership and forms of social insurance and welfare), the foundation of *L'Humanité* in 1904 (together with Lucien Herr, the librarian at the Normale), and finally his campaign for peace (which cost him his life in 1914, when he was assassinated on the eve of the outbreak of war).

After the 1880s, a new generation of progressive economists had begun to supersede the liberal generation of the followers of Frédéric Bastiat and Michel Chevalier (who had traditionally taken over the chair at the Collège de France from each other). In 1876 the first chairs of political economy in the country's law faculties were being set up, soon to be filled by the young men with training in the principles of German historicism; the subject included juridical, historical and economic culture, in addition to political science. They were thinkers like Paul Cauwès, who was Professor at the Faculty in Paris;[85] deeply influenced by the teachings of Friedrich List, he supported nationalistic protectionism but combined this with contributions to labour economics and law that emphasized the role of the trade unions. He was equally involved in setting up the *Association française pour la protection légale des travailleurs*.

But the leading figure of the new generation was Charles Gide; he taught first at Bordeaux and Montpellier, and later in Paris. In some ways the supremacy of the historicists in the French academic world had been due to his control over the public examinations for university appointments,[86] an art which Schmoller himself also excelled in. Nevertheless, he showed he was capable of great pluralism. Though he strongly disagreed with Walras over method, he never failed to show his esteem for him, and this was at a time when most French economists were directly attacking the Lausanne school. In his textbook of 1883,[87] which saw numerous editions,[88] Gide had insisted on the relativity of economic and social institutions such as property and free trade. In 1887 he founded the *Revue d'économie politique* as the mouthpiece for professors of economics following the new developments so that they could voice their arguments against the conservative *Journal des économistes*.

Between 1885 and 1886 Gide joined the cooperative movement,[89] which saw the active participation of nuclei of the Protestant followers of Charles Fourier, especially in the south of France. He soon became its ideologist, producing an economic theory of cooperation, and founding what would become celebrated as the 'School of Nîmes' (which was actually the name given to it by the liberals, perhaps in mockery). According

to Gide, cooperation was the only way out of class struggle and social conflict, convinced as he was that the worker was entitled to more than just a wage. In the production cooperative, which was an association between individuals governed by the principle of solidarity, its members worked, but in addition they shared in any profits: in this way the burden of profit was 'off loaded' onto the consumer, and thus ensured against the risk of its being extracted from labour. In his writings Gide often highlighted another aspect that made cooperative socialism preferable to Marxist collectivism: membership in the former is voluntary, but in the latter it is compulsory.

Gide's concept of solidarity turned up again at the centre of the work of Emile Durkheim, who was the giant of French social science at the end of the century. In his view, as the division of labour progressed, there was a transition from a system of 'mechanical' solidarity peculiar to traditional societies to one of 'organic' solidarity typical of individualism, an outline that roughly corresponded to Ferdinand Tönnies's dichotomy between *Gemeinschaft* (community) and *Gesellschaft* (society).[90] Thus if Durkheim, who was a Jew from Lorraine, was also profoundly influenced by Germanic culture, no less evident were his socialist sympathies as well as the humanitarian motivation of his scientific work; and among other things he was also a good friend of Jaurès. In his *Division du travail social* of 1893,[91] labour, the parameter of the functional evolution towards growing levels of specialization, was also adopted as the explanatory principle for social cohesion, and played a role that was even more basic than that assigned to religion.

François Simiand, an economist, historian and sociologist, and among the first Europeans to cultivate the dream of a unified social science, built on the heritage of Gide and Durkheim. He had also been at the Ecole Normale; with his juridical background and social democratic convictions (close to Léon Blum), he taught at the Ecole Pratique des Hautes Etudes before subsequently moving to the Collège de France.[92] With Durkheim and pupils of him such as Marcel Mauss and Maurice Halbwachs, he was a member of the *Année sociologique* group, which was gradually opening up to the influences of structuralism. Henri Berr, who was aspiring to renew national historiography by liberating it from the political and chronological idols, looked to Durkheim's group with interest. Immediately after the war Berr's two successors, Lucien Febvre and Marc Bloch, were sent to the University of Strasbourg to build up a French cultural centre in Alsace, which had just been reconquered. The results exceeded all expectations; in 1929 the *Annales* school was established, and it would dominate French social sciences for a good part of

the century.[93] After the 1930s, two outside sympathizers, the Marxist Ernest Labrousse and the Catholic socialist François Perroux, were to attract the attention of historians to the economic issues and to material life. In 1926, Perroux himself, equally expert in mathematical economics and law, had produced an all-embracing volume on the problem of profit in the capitalist system.[94]

## The return of the Popes

In 1891, when the encyclical *Rerum novarum* was promulgated by Leo XIII, the Catholic Church once again took on a leading role in the sphere of economic ideas. In 1870 the taking of Rome, which had brought with it the end of the Church's temporal power and had been followed by Pius IX's '*non expedit*', had, if nothing else, produced the effect of inducing the popes to concentrate on their role as the spiritual guide of Christianity. For at least two centuries, or since the problem of usury had died a natural death, the economic opinions of the successors of Saint Peter had not enjoyed public, let alone universal, resonance. Pope Leo took a stance at a critical moment in industrial relations, in a climate of continual conflict and tension between capital and labour. Forty years later, Pius XI was to recall all this in decidedly hieratic terms:

> In such a sharp conflict of mind, therefore, while the question at issue was being argued this way and that, not always with calmness, all eyes as often before turned to the Chair of Peter, to that sacred depository of all truth whence words of salvation pour forth to all the world. And to the feet of Christ's Vicar on earth were flocking in unaccustomed numbers, men well versed in the social sciences, employers, and workers themselves, begging him with one voice to point out, finally, the safe road to them. The wise Pontiff long weighed all this in his mind before God; he summoned the most experienced and learned to counsel; he pondered the issues carefully and from every angle. At last, admonished by the consciousness of His Apostolic Office, lest silence on his part might be regarded as failure in his duty, he decided, in virtue of the Divine Teaching Office entrusted to him, to address not only the whole Church of Christ but all mankind.[95]

Leo XIII was conveying the urgency, and necessity, of 'unhesitatingly and with appropriate measures coming to the aid of the proletariat, whose condition for the most part is quite pitiable, unworthy of man'.

The advent of nineteenth-century liberalism, which, in the Latin countries too, had in fact swept away the corporations, had failed to replace them with any forms of security, or alternative mechanisms for their social welfare; it had left the workers 'alone and defenceless at the mercy of greedy employers and unbridled competition'. Subsequently, the trend towards 'monopoly of production and trade' had forced them into 'a yoke that was a little less than servile'. In addition to all this were the distortions created by the system of banking and finance: 'a devouring usury that, although many times condemned by the Church, continues just the same, under a different colour, due to rapacious speculators'.[96]

But socialism was a 'false remedy'. Leo intervened with all the authority he had as a depositary of divine law, endorsing private ownership of the means of production as a natural right.[97] Social inequalities were to be accepted as being ontologically necessary, since not all men received the gifts of intelligence, enterprise, health and vigour to the same degree from the Creator.[98] Likewise toil, which came with the earthly condition, should be accepted in good spirit. The way to bring the classes closer to each other lay in teaching how to save; in the long term this could enable workers to buy a small property.[99] Associationism was also seen as another powerful instrument.[100]

All these points were taken up by the Catholic economist Giuseppe Toniolo in his *Treatise of Social Economy* (1909–1921).[101] He artfully inverted the dependency relation between capital and labour by bringing back the distinction between primitive and derived factors. 'We do not deny . . . the *legitimacy of capital* in its genesis (as a factor of production), as this is the offspring of man's industriousness and hard work; we only say that it is a purely *subsidiary* or *instrumental* factor, and is thus not fundamental, but subordinate. We do not refute its *productivity*, that is its capacity for contributing to production; what we do state is that it is *mediated*, that is, it is expressed by means of active and natural forces.'[102] Thus, though admitting the increment that capital brought to production, which was greater the more complex machines became and the greater technical progress became, it was still human activity that set it in motion. Thus profit that came from the means employed was not due to the capitalist by virtue of his mere ownership, but came from his participating in the productive activity with his investment.[103] This was an idea, based on the clear separation of profit and interest, which as we will see was similar to the one developed quite independently by the Post-Keynesians in the second half of the twentieth century.

The great turmoil in financial capitalism in 1931 led to the intervention of Pius XI in the question, with the encyclical *Quadragesimo anno*. What had been the structural changes that disconcerted the new pope? Although he noted that agriculture still stood firm in many places, even in Europe,[104] he was convinced that the 'spread of modern industry throughout the whole world' led the capitalist economy, with its principles, to encroach on areas that were traditionally alien to it.[105] The acceleration of the process of globalization was being accompanied by not only the 'concentration of wealth, but also the accumulation of enormous power . . . in the hands of a few, and these are often not even owners, but only the trustees and managers of capital'.[106] This phenomenon was interpreted as 'the natural outgrowth of that unrestrained freedom of competition that allows only the strongest to survive'.[107] 'The whole economy has thus become horribly harsh, inexorable, and cruel' – the pope lamented – but there were other 'grave evils'. The lobbies that were competing for economic control had long been bending politics to suit their own interests. And if this, on the one hand, had led to the 'lowering of the dignity of the State, which is allowing itself to be the servant and docile instrument of human passions and ambition, while it should be attending to its role as sovereign and arbiter of things', on the other, it was using the economic interests of the elites as valid arguments in the struggle between nations.[108]

The solution that Pius XI envisaged was prompted by a rethinking of the relations between capital and labour. On the one hand he endorsed the centrality of labour,[109] but did not deny that owning capital could also be a legitimate entitlement to gain.[110] Hence the necessity that 'labour just as much as capital should come together in a common union, because the one without the other is not able to produce anything'.[111] There should be a rejection of the 'unjust claims of capital' that 'for so long . . . has claimed too much for itself', influenced by the 'principles of the so-called Manchesterian Liberals'.[112] Equally the 'unjust claims of labour' should be rejected; under the effect of the 'insidious poison' administered by the 'so-called Marxist intellectuals' there was a belief that it had a right to the profits, and that the means of production should be collectivized.[113] How exactly could a 'just distribution' be arrived at?[114] The *Rerum novarum* had offered a useful indication:

> Finally, the wise Pontiff showed that employers and workers themselves can accomplish much in this matter, 'manifestly through those institutions by the help of which the poor are opportunely assisted

> and the two classes of society are brought closer to each other'. First place among these institutions, he declares, must be assigned to corporations that embrace either workers alone or workers and employers together. He goes into considerable detail in explaining and commending them and expounds with a truly wonderful wisdom their nature, purpose, timeliness, rights, duties, and regulations.[115]

In reality, the reference was a clear endorsement of the decree of 3 April 1926, no. 564, with which the Italian state had set up its corporative legislation, and had overturned the labour laws of the liberals.[116] Because free contract bargaining between the parties had been replaced by the state, which now acted as a guarantor, with a magistracy whose very purpose was to resolve disputes between employers and workers, strikes and lockouts were no longer considered as violations of a private agreement, but as insubordination to state power and thus a criminal offence. Similarly to Germany, by restoring the primacy of politics over the economy, and even more so the primacy of the state over the individual, Fascist Italy was inaugurating a third way between capitalism and communism, which the Church hailed as the premise for a 'healthy and well balanced order'.[117] The moment of *Mit brennender Sorge* – 1937 – had still to come.

## The Eastern border

The transition to financial capitalism that had been observed in the first decades of the twentieth century in many quarters had not escaped Marxist analysis. The increasingly close dependency of production on credit, and the considerable role of the great banks were a glaring reality in the German areas. From this particular corner of the world, cut off from the great operations of international financial policy, it was nonetheless possible to have an overall view of two other correlated aspects: colonialism and imperialism. The most important contributions came from two writers, whose doctrinal positions were as distant as their sensibility and experiences were similar. They were Rosa Luxemburg and Rudolf Hilferding, who both shared Central Eastern European roots and the Jewish culture. They were both born in the 1870s, and both played an active part in the political life of Germany in the period spanning the First World War, though in different roles. Both their lives were erratic (bringing them into contact with a diversity of realities, from Poland to Switzerland, from Austria to France) and had tragic endings, within 22 years of each other. In the former

case it was under the blows of the *Freikorps* of the newly constituted Weimar Republic, and in the latter in a Gestapo prison in the Paris of 1941.

Aside from his impassioned defence of Marx against Böhm-Bawerk (whose subjectivism he charged with being short-sighted and inconclusive as it took no account, typically of 'vulgar economics', of the social dimension of action),[118] the name of Hilferding is linked to his study of 1910, *Das Finanzkapital*. The name of Luxemburg is linked to a slightly later book, *Die Akkumulation des Kapitals* (1913).

For Luxemburg, imperialism was the result of capitalism and, since it was in its final stage, the prelude to its collapse. She drew on Kautsky for her arguments relating to the disproportion between the rate of accumulation of capital and the rate of growth in consumption levels, namely the idea that, in the technical age, accumulation took on the features of an automatic and repetitive process (a point also made by John Hobson).[119] This meant that any crisis of over-production had to be resolved by expanding the market to non-capitalistic areas. In other words, the capitalist system tended towards saturation.

There are two parts to the *Akkumulation des Kapitals*. The first is theoretical in nature and focuses on a critique of Book II of *Capital*, while the second alternates between historical and comparative analysis. The diagram of enlarged reproduction, with which Marx explained the growth of the capitalist economy, had to be rewritten since it was not able to take account of the historical phase that capitalism was going through. Luxemburg was convinced that dividing the world into two departments of production and consumption, and looking only at the Western economies, would not go far:

> Accumulation is more than an internal relationship between the branches of capitalist economy; it is primarily a relationship between capital and a non-capitalist environment.[120]

In order to feed itself mature capitalism needed to conquer traditional societies by breaking up (and corrupting) the self-sufficient structure of the peasant economies that characterized them. The 'natural' economy, with production aimed at satisfying family needs and which had perpetuated itself, thanks to the coexistence of an agricultural base and its manufacturing complement, had to be overcome everywhere and replaced by a 'simple commodity economy'.[121] However, as soon as the latter had set in, 'capital [had to] turn against it'.[122] After the 'mercantilization' of pre-capitalist economies had been brought about,

the Western powers, with the aid of international loans,[123] dragged them into unequal competition for the means of production, the labour force, the supply markets and outlets:[124]

> Historically, the accumulation of capital is a kind of metabolism between capitalist economy and those pre-capitalist methods of production without which it cannot go on and which, in this light, it corrodes and assimilates.[125]

Marx's diagram of reproduction would be realized only at the end of the process, when, after the long and turbulent phase of imperialism, and with the total 'mercantilization' of the world, the productive forces, left without fuel, were destined to come to a standstill.[126]

Regardless of the central premise of the book (namely the fundamental disproportion giving rise to the predatory dynamic of capitalism), which may or may not be accepted,[127] the more interesting part is the second, with its description of the dismantling of traditional economies. Luxemburg had had occasion to observe the workings of a 'natural' economy, with its residual feudal elements, in the region of Zamość, in the fertile Polish plain a few dozen miles from Ukraine, where she was born and grew up. The sensitivity with which she developed the structural and conjunctural dynamics of these contexts is very reminiscent of those of another Eastern scholar: Aleksandr Chayanov.[128] Her conclusion that in colonized countries the international division of labour upset pre-existing productive balances and destroyed chances of autonomous development, subordinating them to the mercantile interests of colonizers and ex-colonizers, has been sadly confirmed by the more or less recent history of the Third World with a market economy.[129]

Hilferding's approach in *Das Finanzkapital* is different, since for him the collapse of capitalism was the product of political and social forces, not economic.[130] Contemporary capitalism was characterized by an incontrollable tendency towards concentration, which suffocated competition through the creation of cartels and trusts. At the same time the destiny of industry was becoming more and more tied to the banking system:

> Through this relationship . . . capital assumes the form of finance capital, its supreme and most abstract expression.[131]

After an analysis of the modern joint-stock company and its methods of financing (Chapter 7), the work then examines the

under-consumptionist interpretation of crises. The latter is considered limitative and the result of a superficial analysis of the question:[132] in reality, if the growth of cartels did not ward off the problem of disproportion, it did in any case manage to transfer the burden onto the non-cartelized industries (Chapter 20). The defect of the system lay elsewhere.

The development of cartels led to protectionist trade policies, which also eliminated foreign competition. Thus the overall effect could not be anything other than an increase in prices on the home market and a fall in demand. At that point, national capitalism came to depend largely on the volume of exports that it was able to realize (Chapter 21); simultaneously, attempts were made to keep up the rate of profit by moving production to areas of the world where labour was cheaper. The state, which Hilferding from the left also depicts as being hostage to financial capital,[133] became the accomplice and direct promoter of these policies by means of colonialism and imperialism (Chapter 22). But in this way, state bureaucracy, banking, finance and industry became as one. The moment that the social forces of the proletariat took over power, it would be easy, if not automatic, to control the whole complex and thus carry out a painless transition from capitalism to socialism (Chapter 25).

The importance of these contributions is attested by the far-reaching and long-lasting influence that they exerted, which went far beyond the circle of Marxist sympathizers, and inspired re-readings and re-examinations. Lenin drew abundant material from *Das Finanzkapital* for his 1917 essay on imperialism, but its underlying themes would also return in the study by Baran and Sweezy on *Monopoly Capital* (1966) in the America of the second post-war period.[134] Schumpeter also owed a great debt to Hilferding; he drew on him for concepts and interpretative ideas in his *Sociology of Imperialism* (1919) and later in his *Capitalism, Socialism and Democracy* (1942).[135] The destiny of Luxemburg's controversial book was similar. It was the subject of violent criticism by the more intransigent defenders of Marx (one for all Bucharin),[136] while many years later it was to have a decisive and important appeal for Joan Robinson, the leader of the Cambridge school.

# 8
# Keynes and After: Crisis and Continuity

The Keynesian paradigm brought with it a change of direction in the way of thinking capital. Keynes called on his contemporaries to break with the *Belle époque* and its distorted morality, as it had sacrificed the 'true values' of life to the accumulation of wealth. Besides, the historical circumstances – the turmoil in the world economy after the Peace of Versailles, as well as the 1929 crash, with the illusory euphoria that went before it and the terrible depression that came after it – called for an immediate and painless way out of the slump.

Due to the general state of economic theory, during the second post-war period the capital debate became increasingly polarized. Germany and Italy lost their bid in the challenge for control of Europe, and seemingly not only wanted to be free of their dictators but also of their own independence of thought. Until the fall of the Third Reich, it could rightly be said that marginalism was unknown to Germany, with the gospel of historicism still being proclaimed. After the defeat, and in the wake of the vogue for the American lifestyle, neoclassical economics was introduced into the new Federal Republic, while the sole idea that spread in the universities of the German Democratic Republic and Eastern Europe was Marxist planning. The new stream of continental economists began to look to Great Britain, and increasingly to the United States, to complete their postgraduate training.[1] As a result of the *Anschluss* and the diaspora towards London and New York, even the Austrian school had disappeared, and its vision of capital would only be revived in 1973 by John Hicks. Firmly entrenched in the bastions of Gaullism, French Institutionalism remained true to its own programme, but enforced isolation, with its inevitable self-reliance, brought it to a state of suffocation in the space of a few decades.

Next, differences of vision and method that had been brewing on either side of the Atlantic, but which had long been passed over in silence, finally came to a head, in the same way as between distant relatives who deep down have little in common but have merely tolerated each other. For almost 25 years Cambridge (England) and Cambridge (Massachusetts), 'authentic' Keynesians and 'bastard' Keynesians (supporters of the so-called 'neoclassical synthesis') fought on opposite sides and the issue that divided them was none other than the theory of capital. The old unresolved question was camouflaged behind esoteric mathematics and extenuating disputes of a coldly technical nature: whether capital was a means or an end, whether it was relation of production, or whether it was money to generate money. The problem was an ethical and political one, but there was an illusion that once again it could be resolved in scientific terms. This was demonstrated by the fact that in the end, despite confirmation of the analytical superiority of British theory, it was unable to make any impression on the overriding dominance of the American model, and the *Economics* of Paul Samuelson[2] became the undisputed standard for the discipline. In the meantime, the United States was attaining the rank of superpower.

## Britain's decline and the challenge of affluence

The United States, with the Great War, had shown to the world how decisive the importance of its economy had become. However, facts are one thing and subjective perceptions are another. The facts are that Britain's economic decline had already begun at the end of the nineteenth century: it is true that in 1870 its GDP still exceeded American GDP, and would do so for 30 years, but labour productivity in industry had become lower.[3] Due to the great shock it had suffered during the inter-war period, it was less certain whether Germany had overtaken, but productivity indexes are very persuasive in this case as well.[4]

Nevertheless, in the national imagination, Britain's relative weakness did not become fully visible until after the end of the Second World War. In the middle of the Great Depression, Keynes wrote, 'We are suffering, not from the rheumatics of old age, but from the growing-pains of over-rapid changes, from the painfulness of readjustment between one economic period and another.'[5] Victory over the Axis Powers raised confidence in the superiority of British institutions over those of other European countries, and the growth experienced by more or less all the Western economies in the second post-war period – the *golden age* – contributed to disguising the situation. However, its

loss of competitiveness and greatly diminished political importance on the international scene showed up quite clearly with the crisis of the early 1970s, breaking out into a genuine national neurosis that culminated with Thatcherism. In 1976, when the Chancellor of the Exchequer Denis Healey went begging to the International Monetary Fund, the morale of the country reached its lowest point.[6]

In a global context two phases stand out particularly clearly in the history of the United Kingdom – the period between the two wars,[7] and the boom during the 1950s and 1960s.[8] The Twenties and the Great Depression marked the definitive close of the Victorian era, and saw a change in British society, which was now becoming accustomed to living in a state of uncertainty. The logic of parsimony and long-term decision-making was abandoned for the short term. The gold standard, which had been the banner and guarantee for the solidity of the *Pax Britannica*, faltered on several occasions. The theories that Keynes had worked out based on the awareness that 'in the long run we are all dead'[9] were the offspring of this climate. But the crash of 1929, when the collapse of the stock exchange turned into a credit crisis that would subsequently cause an upheaval in the real economy, striking mercilessly at its raw nerves, had a decisive impact especially on the collective mentality. On the one hand, it was the first crisis of over-production that the capitalist economies had experienced, and an unexpected interruption of the ten roaring years of the American economy; on the other, it also demonstrated the devastating power that finance without governance could have. It resulted from speculative bubbles and a poorly regulated system that allowed shares to be purchased on credit with no guarantee that they could be covered. It gave an idea of the extent to which finance had become separated from the productive apparatus, and was functioning according to autonomous principles: the determining cause of the rentiers, it would be said. The shock was to strongly influence the Keynesian way of conceiving capital.

The boom that followed the Second World War, which was a war of waste and destruction, was the other phase and revitalized the Western economies. In the changed context, Keynes's apprehensions seemed to be exaggerated; but above all there was a feeling that what was needed was a theory for the long term, a recipe for maintaining balanced growth and full employment, which Marshall's rebellious disciple had never supplied.[10] This was a task that occupied not only the economists of the neoclassical synthesis, who sought to reduce the phenomenology Keynes described to a particular case of general equilibrium, but also the Post-Keynesians, who pledged to extend its explicative value more

generally to structural change,[11] drawing on the repertoire of classical and Cambridge theory.

By the early 1970s, which is where our story closes, British society had thus changed twice. After remoulding its lifestyle on the wave of uncertainty, it had to pursue the goal of a new equilibrium under the challenge of the affluent society;[12] the recovery of prosperity made it feel satisfied, but without forgetting that recession could be lying in wait. Moreover, the end of the Empire and decolonization would open the chapter of the Third World; this would also bear on our debate, in view of the growing awareness that protracting the debt of underdeveloped countries did not go hand in hand with the creation of real productivity.[13]

## Keynes and the Great Depression: A new economic ethics?

In a chapter of *The Economic Consequences of the Peace* (1919) entitled *Europe before the War*, Keynes ponders on the great differences between his own time and that which had passed. Before the war, European society was seemingly organized to guarantee maximum accumulation, and was marked by strong inequality. In the nineteenth century those with wealth did not indulge in spending on luxuries, preferring the power that came with investment to the pleasures of immediate consumption. Herein lay the tacit agreement that enabled capitalism to survive. Indeed, if the elites had spent their acquired wealth on pleasures, the entire world would have found the system intolerable. Instead, in the half century that preceded the Great War, 'like bees they saved and accumulated'[14] to the common benefit. The titanic effort whereby the railways were built at the same rate that the pyramids had been constructed at the time of the Pharaohs[15] had been made possible by the fact that everybody sacrificed immediate pleasures. In its turn, this attitude rested on a twofold deception. The wage earners, either through ignorance or because they were forced into it by relations of power, were persuaded to accept a situation that allowed them to claim only a small share of the cake they had contributed to produce, while the capitalists, who had the best part of the cake for themselves and were theoretically free to consume it, in actual fact were abstaining from doing so:[16]

> The duty of 'saving' became nine-tenths of virtue and the growth of the cake the object of true religion.[17]

Thanks to the 'instincts of puritanism', the cake was growing in size. But it would not even be consumed at a future time, since the *redde*

*rationem* was permanently postponed. It was growing because of the love of progress,[18] the curious mirage that was hypnotizing the elites by inducing them to live 'in a contemplation of the dizzy virtues of compound interest'.[19]

Those 50 years, for the most part cemented by the leadership of William Gladstone, were in reality – as would be explained in the *General Theory* – the result of the 'opprobrium of two centuries of moralists and economists' that had advocated austerity in all circumstances.[20] An attitude that would inevitably clash with the Great War. During the war, the cake was prematurely consumed, along with what remained of social positivism and what the *Belle époque* had promised. In effect the anomalous accumulation of the pre-war period was the result of psychological circumstances that would have been impossible to recreate: it was highly unnatural in such an unequal economy, and such a regimen would have been unsustainable. The episode of the war had upset the cards on the table, reshaping productive patterns and opening up the way to social demands. Hence capitalists no longer nurtured an unshakeable confidence in the future, and instead turned to the uninhibited consumption that they could still enjoy in order to seek immediate fulfilment, thus accelerating 'the hour of their confiscation'.[21]

In *A Treatise on Money* (1930) the subject of abstinence is taken up again, from a theoretical perspective:

> It has been usual to think of the accumulated wealth of the world as having been painfully built up out of that voluntary abstinence of individuals from the immediate enjoyment of consumption which we call thrift. But it should be obvious that mere abstinence is not enough by itself to build cities or drain fens.[22]

Up to this point it might seem that Keynes is reproving his predecessors for having eliminated the problem of hoarding: saving does not mean *ipso facto* to destine resources for production (as we saw earlier, Marshall did not ignore the question, but he did not consider it worthy of much attention). On the other hand, in Chapter 23 of the *General Theory*, that sort of appendix that uses the past as an instrument of persuasion, Keynes even seems to go as far as interpret the Thomist ban on usury as a way of discouraging liquidity preference that diverted capital from productive uses:[23] it is hard to think of a more blatant anachronism. Whatever the case, his criticism transcends this aspect and lies at a deeper level.

A little way after the passage quoted, A *Treatise on Money* continues with the statement that enterprise is the decisive economic factor[24] and

its motor is not thrift but profit, or the expectation of profit.[25] With his habitual irreverence Keynes wonders, 'Were the seven wonders of the world built by thrift? I deem it doubtful';[26] he then launches into a long sequence of examples claiming to re-read economic history from the time of the Sumerians, only to disprove the one that he considers a popular belief.[27] Growth has little to do with thrift, and accumulation has a counterproductive consequence as it inhibits consumption, which is what mainly drives the industrial economy. The problem of thrift is thus connected to that of effective demand. And here is a reassessment of the mercantilists and their belief 'in the utility of luxury and the evil of thrift',[28] of Petty and his apparently unproductive public works,[29] of Mandeville and his scorn for the 'prudent economy, which some people call *Saving*'.[30] And especially of Malthus, who understood the need to find an 'intermediate point' between consumption and savings,[31] that optimal blend that was a synthesis of two principles contradicting each other, but which was the only golden rule that could sustain the economy.

## The generation divide at Cambridge

At this point, the Keynesian economic vision and the ethical motive became interlinked. It should be remembered that Keynes's thought developed in the university years through his association with George E. Moore, whose *Principia Ethica* came out in 1903,[32] just when the 20-year old Maynard's first months as a student at Cambridge were drawing to a close. Before the advent of analytic philosophy, enquiry into these issues proceeded along the lines of the Victorian compromise between ethics and conventional morals,[33] so much so that Moore himself – as his disciple saw it – 'had one foot on the threshold of the new heaven, but the other foot in Sidgwick and the Benthamite calculus'.[34] Moore made a basic distinction between ethics and morals, conceiving the latter as depending on the former. Questions on what was good in itself, and what should exist as intrinsically conforming to this principle, lay higher up. The moral problem of how to act and behave followed on from that. The authentic good, and the purpose of human life, consisted in beauty, truth and knowledge; action was only a means to achieve it.[35] Keynes and the young members of the Society of Apostles rejected any Benthamite elements that still remained in Moore:

> I do now regard [the Benthamite tradition] as the worm which has been gnawing at the insides of modern civilisation and is responsible

> for its present moral decay. We used to regard the Christians as the enemy, because they appeared as the representatives of tradition, convention and hocus-pocus. In truth it was the Benthamite calculus, based on an over-valuation of the economic criterion, which was destroying the quality of the popular Ideal.[36]

But, though they had been brought up on Platonic idealism, and had been warned about vanity fair by their fathers,[37] they did not adopt Moore's austere puritan ideas either,[38] and openly declared that they were 'immoralists'.[39] The generation divide of Keynes's contemporaries came to completion along such lines as these. One of the great advantages of the Moorite philosophy lay in the fact that it allowed an individual to have an ethics without the need for morals (in the sense of 'traditional wisdom').[40] It was the ideal 'religion' for anyone who, from a totally elitist perspective, wanted to find legitimacy for the faculty to state what they subjectively thought to be true values, without having to come to any compromise with social convention.[41] The Apostles were sufficiently individualistic to be saved from Marxism, and sufficiently anti-hedonistic to shun Bentham.[42] With regard to the conception of time, they would repeat that their reasoning drew nourishment from 'states of mind', moments of 'contemplation and communion, largely unattached to ''before'' and ''after'' '.[43] Contemplation was a luxury that the generation of Alfred Marshall had not been able to afford. On the other hand, Maynard, as the son of John Neville Keynes, a member of the intellectual aristocracy of Cambridge, was pursuing his studies in very different material circumstances from his mentor, who had arrived there 40 years previously thanks to the sacrifices of a cashier at the Bank of England.

In *Economic Possibilities for Our Grandchildren* of 1930, Keynes predicted the advent of the society of plenty. He envisaged that in the space of a century the economic problem – namely man's relationship with scarcity, on which the whole of his evolution hinged – would be solved once and for all. Then, modern man, who had been living in the religion of 'compound interest', would find himself seeking a new meaning for his daily life. But it would be an important opportunity to recover lost values:

> When the accumulation of wealth is no longer of high social importance, there will be great changes in the code of morals. We shall be able to rid ourselves of many of the pseudo-moral principles which have hag-ridden us for two hundred years, by which we have exalted

> some of the most distasteful of human qualities into the position of the highest virtues.[44]

The persisting state of material need had led society to develop an ethics that confused means with ends. For the sake of the accumulation of capital economic practices had been justified and turned into aberrant distribution patterns. It was necessary to re-establish the proper relations:

> We shall be able to afford to dare to assess the money-motive at its true value. The love of money as a possession – as distinguished from the love of money as a means to the enjoyments and realities of life – will be recognised for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease.[45]

And again,

> I see us free, therefore, to return to some of the most sure and certain principles of religion and traditional virtue – that avarice is a vice, that the exaction of usury is a misdemeanour, and the love of money is detestable . . . . We shall once more value ends above means and prefer the good to the useful.[46]

This point would be taken up again in the *General Theory*. In it, Keynes would praise the doctrine of the medieval Church that condemned gain from money that had been loaned, being distinct from legitimate gain from investments: 'an honest intellectual effort to keep separate what the classical theory has inextricably confused together, namely, the rate of interest and the marginal efficiency of capital',[47] the size of the latter being tied to the expected rate of profit. In other words, it was like saying that the prevailing theory in the liberal age had confused interest and profits.

Hence interest as a mark of avarice. In Keynes's eyes the acrobatics of the Jesuits to get out of the impasse of *lucrum cessans* and *damnum emergens* were of little importance. On the contrary, his poor sense of history prevented him from understanding them, believing them to be sinister expedients for masking the inherent injustice of extracting from the borrower more than the corresponding sacrifice made by the lender.[48] But above all, as we have already pointed with regard to *A Treatise on Money*, he believed that high rates of interest had disastrous effects on the economy, by encouraging the accumulation of rentier wealth to the

detriment of socially beneficial uses of money: what, in the final analysis, was the origin of economic crises.

However, the moment for commitment to true values had still not arrived. For at least another hundred years men would have to continue acting as if what was despicable was just and what was just was despicable: 'for foul is useful and fair is not':

> Avarice and usury and precaution must be our gods for a little longer still. For only they can lead us out of the tunnel of economic necessity into daylight.[49]

From these considerations it is clear that in Keynes the issue of ethics was indivisible from the short-term perspective to where it had been confined. This acclamation of the short period in preference to the tendentially infinite compass of the Victorian mentality, with its teaching on how to think in inter-generational terms, reflected the need for a profound break with the past. In Keynes's anthropology, the virtuous and mentally balanced man was the one who thought about the tomorrow as little as possible[50] and had no illusions about gaining immortality for himself by disdaining present fulfilment.[51] But was it realistic to think one could be free of the past? Let us put the pieces together: as a 'non-conformist', Keynes accepted Moore's ethics but not his morals; equally he had a clear idea of the distinction between means and ends but relegated it to 'states of mind', to the fleeting moment (easily transposable into the *short run* of economics). It was almost inevitable that the job of finding a point of contact between the spheres of ethics and tradition by means of wider-reaching prescriptions fell to his successors.

## Accumulation as a moral duty: Joan Robinson

This important work of reconciliation was performed by Joan Robinson, based on the following premise:

> Keynes's *General Theory* smashed up the glass house of static theory in order to be able to discuss a real problem – the causes of unemployment. But his analysis was framed in terms of a short period in which the stock of capital and the technique of production are given.[52]

Aware that Keynes had given 'only vague hints as to how the shattered structure could be rebuilt'[53] in the late 1940s and 1950s she was led to develop an autonomous vision, which, though remaining completely

true to the cardinal principles of the Keynesian gospel, ended by recovering a number of elements from the pre-existing tradition of Cambridge. It was clear that any compromise with the Americans and Austrians was out of the question. The following anecdote will convey an idea of how bitter the international disagreement was from the very start. During the winter to spring of 1941, the year in which F.A. Hayek published the *Pure Theory of Capital*,[54] the evacuation of the London School of Economics to Cambridge was the occasion for a correspondence on this subject between the Austrian economist and Robinson. Without entering into technical details as to the issues they were arguing about, the correspondence had the air of a dialogue between deaf people. In one of his last letters, Böhm-Bawerk's disciple replied in an irritated tone:

> Dear Mrs Robinson,
> It would be easier to clear up differences if you could believe that one could differ from you without being a complete fool.[55]

Hayek must have appeared to her as a terrible reactionary in a context in which to her even Hicks seemed to no longer underestimate Marx. In an article in the *Economic Journal* in the summer of the same year Joan Robinson wrote that

> Latter-day academics have, for the most part, undergone a striking change. The circumstances of the times have forced them to concentrate on two problems, monopoly and unemployment, which naturally raise doubts as to whether all is for the best in the best of all possible economic systems, and they are more inclined to analyse the defects of capitalism than to dwell upon its merits. The attempt to represent merely owning capital (waiting) as a productive activity has been abandoned, and the view is gaining ground that it is misleading to treat capital itself as a factor of production, on the same footing as labour.[56]

Her argument continued with comments on a passage taken from the *General Theory*, in which Keynes put forward that, in a given context of techniques, natural resources, capital and effective demand, labour should be considered the only true factor of production.[57]

In the *Accumulation of Capital* of 1956, accumulation is first investigated in a simple model with rigid technical coefficients, and subsequently in a dynamic setting considering technical change in its relation with wage rates, and introducing hypotheses on consumption,

the availability of factors, returns and financial structure. The book opens with a fine biological metaphor from the life of robins:

> The economic life of a robin is simpler than that of a man. Most of the year a robin's work consists in finding and eating food. He occupies a certain area of ground, and other robins behave as though they recognised his right of property in it, for each appears to fight with a good heart to defend his own territory and to be feeble and easily intimidated when invading a neighbour's. In the spring he is joined by a wife who, in addition to the work of feeding herself, undertakes capital construction, finding materials and building a nest. He does some extra work to feed her while she is sitting, and both do extra work to feed their young.[58]

Some human economies are only slightly more complex than that of the robins: Robinson is thinking of the peasant economies that depend on self-consumption, in which the structure of exchanges is reduced to the bone. But with the evolution of society (*modernization* as we could say) the level of functional specialization increases, and the division of labour advances; and hence the economic game becomes more complicated. The method in which the product of these increasingly interconnected activities is distributed thus becomes crucial[59] – a reasoning that closely recalls Turgot.

The robin swallows insects that it finds while in flight, and does so instantaneously, without any need for demanding interruptions. For the robin the phases of production and consumption are integrated, and largely coincide with each other. But a man who lives in a developed economy consumes a part of the product which is destined for the whole of his society. This is the reason for the importance of the 'rules of the game', according to which it is shared out. Moreover, production requires time. It is an activity that is planned in advance and makes use of instruments that have been constructed in the past, and that need to be kept efficient and protected from damage. This implies the existence of the ownership of capital goods and land. 'Work without property can produce nothing, and property without work is soon consumed', Robinson writes. It is up to society to establish the way to combine them in production, and the rights over any gain that comes out of it.[60]

The *entrepreneurs* and the *rentiers* are the classes of income that are considered in her analysis, apart from the workers. In his pure form Robinson's entrepreneur coincides with the Marshallian ideal type – coming before the managerial revolution and the advent of

the joint-stock company with the separation of ownership from management – who bases his activity on self-financing and accepts its risk. However, she is ready to define as such any individual, including the manager, who effectively takes upon himself the destiny of an enterprise.[61]

This new phase of capitalism made the treatment of the other class – the rentiers – problematical. However, Robinson saw nothing scandalous in the possibility of interest arising from lending to others some purchasing power. In modern economies credit for production is beneficial. The point was that the development of the financial system had made matters complicated by confusing the roles. With the stock corporation, the model of general shareholding and limited liability had made headway. The shareholder was legally co-owner of the enterprise, and thus had a right to any returns, even if he had no entrepreneurial or managerial function. From a juridical and formal point of view, his position with regard to the enterprise was very different from that of its external financers (for example, bond holders), but that did not mean that his involvement in the company was not a purely speculative operation.[62]

As we have said, ever since the interwar period there had been a clear tendency for finance to gradually free itself from production, in ways that did not always operate in harmony with the general logic. While capital flows channelled by the market had the aim of furthering the life of the enterprises, investments had no other aim except that of pursuing the profitability of highly volatile financial products. Thus the speculator's main preoccupation was to procure shares that would soon gain in value, and get rid of them equally quickly the moment they lost in value. But

> this involves a utilisation of finance, and an expenditure of brain power and nerves, which are quite out of proportion to any contribution that they make to the productivity of the economy.[63]

What was even worse was that the fate of the real economy came to depend on such disjointed operations. Capital, once again, was under accusation; instead of a means it was becoming an end. Having freed itself from being a subsidiary to the productive process, it was taking advantage of the productive process to increase itself. In the age of organized capitalism, the ancient problem that had engaged Aristotle and been taken up by Marx returned to the forefront with a new power of persuasion. But it was also the revival of Ricardo. Whereas in the Ricardian model it was parasitical land rent that had stifled profit, in this

case it was financial returns that risked bringing the process of industrial accumulation to a halt. Robinson and the orthodox Keynesians would demand euthanasia of the rentier; it could take various forms, but by means of the fiscal instrument in the first place.

In the world that had opened its eyes to the baselessness of the invisible hand as the harmonizing element of the multiplicity of interests, all that was left was to appeal to the morality of economic agents. In 1977 Robinson would devote a prolusion to the concept of morality at the University of Maine,[64] but in the *Accumulation of Capital* it had already been outlined with great clarity:

> The morality of a peasant, who gathers his crops according to the rhythm of the seasons, is to put back into the soil what he takes out of it, and to set aside seed from each harvest, so as to preserve productive capacity for the future, not only for his lifetime, or his children's lifetime, but for the future as such. It is this morality which produces the conception of capital and income. Income consists in the kindly fruits of the earth, and capital in the fertility of the soil.[65]

The morality of the yeoman – and in reality it is to this very particular type of 'peasant' that Robinson looks – remains in some way built into the entrepreneur's genetic heritage. The entrepreneur does not destine profit for consumption, but he invests it for the upkeep and development of his own enterprise. And he does not do this because he is subjected to pressure from competition, but rather because he is obeying an ethical code. It is true that the entrepreneur – whether capitalist or manager – very likely enjoys a higher standard of living than those he employs. But it is equally likely that he places the aims of his business before those of his family's comforts, and shares out just enough profit to keep the shareholders at bay and to prevent them from carrying out any opportunistic operations. According to Robinson this is the type of inner tension that has led to the development of capitalist economies.[66]

The rentier follows another type of logic, and its development only partly implements the effects of the entrepreneur's morality. It largely acts against them. This is an *ethos* whose aim is to save profitably and as free from risk as possible; it is not to increase productive capacity and face risk. Moreover, widespread thrift leads to abstention from consumption and holds back demand for industrial products. There is no reason to believe that a failure to consume is translated into investment, since the activities of the rentiers and those of entrepreneurs are not coordinated.[67] In order to sustain the accumulation of capital, wherever this is the main

social imperative of the entrepreneur, the morality of the peasant should prevail:

> Animal and human economies can flourish for a time by mining the soil, creating deserts, or by preying upon other economies, but to be viable over a long run, in peaceful conditions, an economy must be impregnated with the peasant's morality; this is pre-eminently true of an industrial economy whose productive capacity consists largely in a stock of long-lived equipment which must be maintained by repairs and renewals, and which can function only in an environment in which the rules of the game in respect to property, trade and the financial system are accepted and maintained in working order.[68]

In this way Joan Robinson attempted, more or less consciously, the alchemy of combining Keynes and Marshall. But after all was it really alchemy? When one refers to the 'Keynesian revolution' it is often overlooked that the break in continuity had been dictated by conjunctural circumstances rather than by any real methodological differences: in the long run it seems that the atmosphere of Cambridge had overshadowed its leading players and their points of view.

## Beginning and end of a controversy

On the American front, J.B. Clark's spiritual heredity had been condensed into the Cobb–Douglas production function (1928), with its mathematical properties that adopted refinements from Wicksteed and Wicksell.[69] On the basis of this 'law', capital was perfectly interchangeable with labour, without it having any repercussions on output. The amount of output being shared out among the factors was also believed to be constant in time for a given level of technology. In the simple prototype, as indeed in subsequent generalizations, capital was considered as a commodity, with properties that were wholly analogous to those of other commodities. However, this required it to be measurable, and to belong to the class of 'normal goods', that is with a downward sloping demand curve. In that way the rate of interest (which, as we will see, coincided with that of profit) could be interpreted as an index of the scarcity of capital.

In the second post-war period, Robert Solow's macroeconomic model (1956)[70] tied national income to the aggregate quantities of capital and labour, still under the hypothesis of constant returns to scale, and thus made it possible to forecast that output per worker would

increase together with capital intensity at a decreasing marginal rate. In the model, the rate of interest was identified with productivity of capital, just as in Clark. The mechanism that would rebalance monetary perturbations that caused its fluctuation lay in demand for capital from entrepreneurs, which would restore parity between marginal productivity and cost of financing. Even unemployment was considered only as frictional, since equilibrium wages had to be aligned to labour productivity, making the adjustment through wage flexibility and the consequent switching of techniques. The great popularity that this bare and mechanical description of the economy enjoyed was also due to environmental circumstances; in effect, during the 1950s and 1960s, Western countries almost reached a condition of full employment, and there was a widespread notion that the pessimism of Keynes was largely unjustified.[71]

In his simple economy, Solow treated capital like gelatine (a 'butter economy' – as Joan Robinson was to caustically label it)[72] that could be broken down to its infinitesimal parts and homologated to a single category. Such an aspect of neoclassical theory, which led to the production function, was the object of Robinson's criticism for the first time in 1953. The student – she noted – 'is instructed to assume all workers alike' and to measure labour in hours. A hint is dropped as to the problem of index numbers that can measure output, 'and then he is hurried on to the next question', in the hope that he will forget to ask himself what units capital will be measured in. 'Before ever he does ask, he has become a professor, and so sloppy habits of thought are handed on from one generation to the next.'[73]

Piero Sraffa had been similarly puzzled for 20 years. In 1936 he wrote,

> If one measures labour and land by heads or acres the result has a definite meaning, subject to a margin of error: the margin is wide, but it is a question of degree. On the other hand if you measure capital in tons the result is purely and simply nonsense. How many tons is, e.g., a railway tunnel?[74]

According to Robinson, neoclassical ambivalence about the concept of capital – as the amount of monetary savings (due to abstention from consumption) and the consequent variation in the stock of goods that can be used for productive purposes, which was the outcome of the postulate of equilibrium that even sanctioned parity between the marginal product of capital and interest – made it impossible to find any unit of measure that could take account of both dimensions. The flaw was exposed by

the so-called 'Wicksell Effect', by which if there was a variation in the rate of interest, the same quantity of savings gave rise to non-univocal variations in the stock of capital. But this observation could also go in another direction, and so it did.

After a long period of gestation, 1960 saw the appearance of Sraffa's *Production of Commodities by Means of Commodities*,[75] and it touched off the bitterest of capital controversies between the two Cambridges.[76] In the eye of the storm was the question of 'reswitching', which Robinson had not failed to mention *en passant* in her book of 1956. Reswitching is the phenomenon whereby a decrease in the rate of interest, or the relation between the cost of capital and the cost of labour, is not necessarily accompanied by a greater use of capital in the productive process. It could happen that after a 'normal' phase in which the classical hypothesis seems to be confirmed, the process is inverted and there is a return to labour-intensive techniques for economical reasons. The curious case of 'capital reversal' – seemingly little more than a quirk – actually dealt a mortal blow to the neoclassical conception of interest/profit rate understood as an index of the scarcity of capital,[77] the hypothesis on which the production function, and associated assumptions on the distributive justice of the system, were based:

> The consequences of admitting this . . . are far-reaching, because on that principle has been erected the dominant theory of distribution. From the rise of the proportion of capital to labor in the economy as interest falls, there have been deduced 'demand functions' for 'capital' (i.e., 'saving') and for labor; and, with them, the idea of distribution as governed by a tendency to the equality between demand and supply for these 'factors of production.' Hence, in particular, the explanation of interest (profits) by the scarcity of 'capital' and as the reward for 'waiting.' It is hard to see how this elaborate structure can stand, when its premise is found wanting.[78]

It should also be mentioned that, according to Sraffa, income distribution takes place before the price mechanism comes into play, and outside it. Prices can only be calculated as a consequence, as a reflection of the costs of production once the distribution pattern has been fixed. In Sraffa's model, the rate of profit and the wage rate are antagonistic measures, and are inversely proportional, in the manner of Ricardo. Profits therefore do not measure the productive contribution of capital, nor do they reflect its scarcity, but are a residual – a surplus that comes to depend on the social and technical relations of the production process.

In 1965, with the intention of undermining Sraffa's construction, Samuelson put forward a 'non-substitution theorem', which he suggested should be presented to the *Quarterly Journal of Economics* by one of his former students, David Levhari, in order to refute the possibility of reswitching.[79] The operation turned out to be a flop, since the theorem was invalidated due to an analytical error that was soon recognized and condemned by Luigi Pasinetti, and others not only from Cambridge.[80] Samuelson conceded defeat, and tried to limit the damage.[81] And with that Robinson thought the question could be declared closed.[82] The prestige of the economists of the MIT (Modigliani, Samuelson, Solow) and their Oxbridge allies (Meade, Bliss, Hahn) seemed to be irremediably tarnished. Hicks watched from a distance; this complicated personality, who during the 1960s was experiencing the turmoil that would ultimately bring him to reject his own neoclassical past, but without actually arriving at an alternative view, remained neutral throughout the whole question – see *Capital and Growth* of 1965 – despite recognizing the greater rigour of the Keynesian analysis.[83]

However, very soon the power of the mainstream managed to snuff out the whole issue, so that in the long run no traces of it were left in the textbooks (starting with the new editions of Samuelson's text). This provides an excellent example of how – more than 'rational' reconstructions according to the 'intrinsic worth' of theories – the sociology of power relations helps in understanding the course of economic science; it should warn historians against positivist temptations. Indeed Robinson did not take long to understand what was happening. In 1976, she wrote, 'the mainstream economists accept many of the points made against them but continue to propound the same doctrines as before: He who is convinced against his will/Is of the same opinion still',[84] realizing that for the battle to have any hope of not being forgotten, it had to be transferred from the analytical to the more political plane. That was how she was to set out on the new course she would follow in the final years of her life:

> Ambiguities in the meaning of the word 'capital' lie much deeper than the problems of measurement or the esoteric controversy about 'reswitching'.[85]

Underlying the controversy about techniques – she insisted – was a deep-rooted laceration between cultures, more so even than between schools of thought. For some, distribution was a fact of nature, and acceptance of the *status quo* made it superfluous to seek social justice. For others, its

cause lay rather in an exogenous element (typically the dialectic between social classes), and thus required political intervention. The neoclassical economists believed that capital was a financial phenomenon (at least in part): 'The basis of this doctrine – one reads in the *Economic Heresies* of 1971 – seems to be a confusion between the idea of the productivity of investment and the productivity of ''capital''.'[86] This had an important consequence in legitimizing the separation between the ends and the means of investment, or the total inversion of the relationship. With the additional snag that money capital as conceived, for example, by Hicks in his neo-Austrian manifesto (1973)[87] was rather different from how it was theorized by the seventeenth-century Scholastics and its implications as an economic category appeared more powerful, finance being the key to controlling the contemporary production process. Ironically, all those in the mainstream who did not limit themselves to ignoring the outcome of the controversy maintained that studying the distribution of income among classes was unimportant, since in the long run it was plausible that their composition would vary.[88] In other words, where there was social mobility the existence of injustice did not matter very much.

## Where are we heading?

In an age that has not stopped praising the commodification of the factors of production or the profitability of money, in conformity with Keynes's predictions, it is in some way natural that there should still be ambiguity between the means and the ends of economic action. The theory of growth, the theory of the real business cycle, and the overlapping generations models continue to be based on the Solovian function, while microeconomics has long abolished capital from its field of investigation, looking on production as the outcome of a general vector of inputs.[89] This weary repetition of formulae, and the refusal to look inside the black box of economic relations, might make it reasonably seem that the theory of capital is still at the stage of the Cambridge controversies.[90] The newest development of the last 40 years has involved an increase in the range of meanings of the term 'capital', and often its misuse, in the wake of what George Stigler has proudly defined the methodological 'imperialism' of economics,[91] as well as reactions from the opposing front.

So in 1964 the future Nobel laureate Gary Becker published his book on 'human capital',[92] a few years after an article by Jacob Mincer in the *Journal of Political Economy*.[93] The central idea of this approach was that intellectual and spiritual resources, as well as the psychological and

physical well-being of individuals, should be treated on a par with the factors of production. The suggestion was that they should be invested only in (through education or the health services) in relation to the level of benefit expected from their application to the productive process. This implied that those resources that were not able to bring any material benefit to the system did not deserve any support. Treating 'human capital' like any other stock of assets that could generate a return comparable with interest was to allow it to be partially replaceable with other factors within the production function. This vision, which at first to many seemed to be an aberration, and brought upon Becker the misgivings of American academia itself, cannot even be attributed with the merit of having drawn attention to an issue (education) which in effect has important economic repercussions. One simply needs to remember the great importance that Adam Smith had attached to it,[94] and Cattaneo too, as we have seen. Moreover, in 1928 Pigou had used the expression 'human capital' to indicate consumption which, like education, had to be protected from the imperative of saving, since it was by nature a socially useful investment.[95]

As a reaction to the Chicago reductionist crusade, French sociology mounted a counter-attack that would make 'economic' capital part of a more general concept, connecting it with 'social' capital and 'cultural' capital. In his essay *The Forms of Capital* (1986),[96] Pierre Bourdieu defined capital as a social relation that could be extended to all goods, regardless of whether they were material or symbolic, but which shared a certain importance not only by virtue of their scarcity. Thus, while relational capital determined social recognition, accumulated education was valuable in that it conferred power and status. 'Symbolic capital', in the form of prestige,[97] can be related to the latter type, while economic capital conferred control over material resources. Naturally Bourdieu's scheme allowed for the possibility 'to convert' one form of capital into another, but this operation was never immediate and entailed costs of varying amount.

Debate in recent years has been linked precisely to the concept of social capital. After its use by the Chicago sociologist James Coleman, who drew water to Becker's mill,[98] it has been taken up by the political scientist Robert Putnam with a more neutral meaning.[99] Putnam, who for some time has been speculating on the declining participation in American society, limits himself to stating that social capital implements democracy and the good functioning of institutions. However, the way the neoclassical economists have distorted the use of this result has aroused sharp criticism from a gifted Marxist economist; he has highlighted how

the expression 'social capital' in effect implies the existence of capital that *is not* social, thus revealing the intention of the mainstream to connect all human relationships to the logic of market exchange.[100] Conversely, other theoretical contributions have shown that a different development of the concept is possible, in the direction of an investigation of the role of civil society in the economic system.[101] It could be combined with the 'capability approach' of Amartya Sen,[102] who is also interested in the constraints and opportunities that social conditionings bring to the production and distribution of wealth. But these are authors who are generally working on the margins (if not outside the margins) of orthodoxy. Contemporary debate is thus still dominated by the Chicago agenda for microeconomics, and by Cambridge (Massachusetts) as its macroeconomics correspondent, so to speak. Even the perspective of 'political economics' is essentially materialistic, and interprets the development of political and social institutions (otherwise defined as 'institutional capital') as merely reflecting rational decisions. Thus a recent work even goes as far as to speak of the 'economic origins' of dictatorship and of democracy,[103] posing a challenge to good sense, along with Barrington Moore.

The lesson that can be drawn from this epilogue leads to an awareness of how damaging it is to forsake an abundance of ideas. Two noted critics of the mainstream, R. Heilbroner and W. Milberg, have spoken of a 'crisis of vision' with regard to the sickness that afflicts contemporary economic theory.[104] One wonders about the end of national traditions of thought, with the subsequent reduction of theory to a small number of opposing positions, and to what extent it played a role in such a crisis. It is difficult to deny a priori that debate in the later twentieth century might have been much more effective if it had not been reduced to the dualism between Keynesians and anti-Keynesians; an exchange that experienced moments of particular aridity, being as it was a dispute between only two academic traditions. Even the Italian economists took part in it not as an independent group, but only by virtue of their affiliation with the leading schools.

Now that the power of Great Britain has declined definitively, and Keynesian voices have been sidelined practically everywhere, there is no effective counterbalance to the prevailing order as it now stands. For the future, a certain degree of pessimism thus seems to be justified. The historian often comes to his own defence by saying that it is not his job to make predictions, and besides one hardly needs to be a historian to realize that the disappearance of so many voices has led to an impoverishment of the age-old debate, which is without precedent.

# Notes

## Introduction

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7. C.M. Cipolla, *The Economic History of World Population* (Harmondsworth: Penguin, 1962), pp. 109, 111.
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9. Cf. P. Burke, *Varieties of Cultural History* (Cambridge: Polity Press, 1997), p. 166.
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## 1 Capital as money: the emergence of modernity

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10. R. de Roover, *Business, Banking and Economic Thought in Late Medieval and Early Modern Europe* (Chicago: University of Chicago Press, 1975); M.-T. Boyer-Xambeau, G. Deleplace and L. Gillard, *Monnaie privée et pouvoir des princes: l'économie des relations monétaires à la Renaissance* (Paris: CNRS-FNSP, 1986).
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13. K. Pribram, *A History of Economic Reasoning* (Baltimore: Johns Hopkins University Press, 1983), p. 26.
14. See O. Langholm, *The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power* (Cambridge: Cambridge University Press, 1998), pp. 59ff.
15. Boyer-Xambeau, Deleplace and Gillard, *Monnaie privée et pouvoir des princes*; C.P. Kindleberger, *Economic and Financial Crises and Transformation in Sixteenth Century Europe*, 'Essays in International Finance' series, Department of Economics, Princeton University, no. 208, 1998, pp. 8–10; H. van der Wee, 'Antwerp and the New Financial Methods of the 16th and 17th Centuries', in *The Low Countries in the Early Modern World* (Aldershot: Variorum, 1993), pp. 145–166.
16. For the division into periods, see Braudel, *Les temps du monde*.
17. *Trésor de la Langue Française* (Paris: CNRS, 1997), s.v. *chatel*.
18. Ibid.
19. Cf. *Oxford Latin Dictionary*, ed. by P.G.W. Glare (Oxford: Clarendon Press, 1996), s.v. *capitalis*.
20. Cf. C. Ducange, *Glossarium mediae et infimae latinitatis* (Niort: Favre, 1883 [1678]), s.v. *capitale*.
21. Quoted in *Grande dizionario della lingua italiana*, ed. by S. Battaglia (Turin: UTET, 1961–2004), s.v. *capitale*.
22. Quoted in *Oxford English Dictionary*, ed. by J.A.H. Murray *et al*. (Oxford: Clarendon Press, 1961), s.v. *capital*.
23. Ibid. There are records of earlier uses of the word, apparently limited to the lexis of accounting. 'Capitall' appears in bookkeeping manuals written by James Peele (1569) and John Mellis (1588), who imported the double-entry method from Italy into England (R.D. Richards, 'Early History of the Term Capital', *Quarterly Journal of Economics*, 40.2 (1926), p. 330).
24. Quoted in *Oxford English Dictionary*, s.v. *stock*.
25. Ibid.
26. The use of this term is documented from 1777. Cf. ibid., s.v. *live stock*.
27. *Grande dizionario della lingua italiana*, s.v. *capitale*. This seems to be the main meaning for E. Cannan, 'Early History of the Term Capital', *Quarterly Journal of Economics*, 35.3 (1921), pp. 469–470.
28. See *Frammenti d'un libro di conti di banchieri fiorentini del 1211*, in *La prosa italiana delle origini: I. Testi toscani di carattere pratico*, ed. by A. Castellani (Bologna: Patron, 1982), p. 24; identically on p. 25.
29. Ibid., p. 30.
30. Quoted in *Grande dizionario della lingua italiana*, s.v. *capitale*, like the following examples.

31. 'Main part of a debt or an income'. See *Trésor de la Langue Française*, s.v. *capital*.
32. Ibid. Cf. J. Nicot, *Thresor de la langue françoyse* (Paris: Douceur, 1606), s.v. *dame* and s.v. *fond*.
33. 'He has paid the interest but still owes the capital.' See *Dictionnaire de l'Académie Française* (Paris: Coignard, 1694), s.v. *capital*.
34. (Paris: J.J. Smits & Ce., 1798).
35. *Oxford English Dictionary*, s.v. *stock*.
36. Quoted in ibid., like the following examples.
37. See F. Boldizzoni, 'The Italian Way to Seignorage: Public Finance, Personal Power and Inflation Shocks in the Po Valley between the 16th and 17th Centuries', *The Journal of European Economic History*, 33.3 (2004), p. 630, footnote 18.
38. G.D. Peri, *Il Negotiante* (Venice: G. Hertz, 1697–1707 [1638]).
39. *Quaderno dei capitali della Compagnia dei Boni di Pistoia, 1259*, in *La prosa italiana delle origini*, p. 259.
40. Peri, *Il Negotiante*, Part IV, p. 45.
41. Ibid., Part III, p. 14.
42. Ibid., Part I, p. 54; Part IV, p. 51.
43. Ibid., Part I, pp. 71–72.
44. Braudel, *Afterthoughts*, p. 61.
45. Pius V banned it in 1571, Urban VIII reinstated it in 1631 (cf. Boyer-Xambeau, Deleplace and Gillard, *Monnaie privée et pouvoir des princes*, p. 188, footnote 1).
46. Cf. R. de Roover, 'What is Dry Exchange? A Contribution to the Study of English Mercantilism', *Journal of Political Economy*, 52.3 (1944), pp. 250–266.
47. Peri, *Il Negotiante*, Part II, p. 25.
48. Quoted in ibid.
49. Bianchini, *La parola e la merce*, p. 194. Cf. F. Boldizzoni, 'Davanzati e Hobbes: nascita e diffusione di un paradigma (XVI-XVIII secolo)', *Il pensiero economico italiano*, 13.1 (2005), p. 11.
50. Peri, *Il Negotiante*, Part II, p. 26.
51. See C.M. Cipolla, *Le avventure della lira* (Bologna: Il Mulino, 2001).
52. B. Davanzati, *Notizia de' cambi* [1582], in *Scrittori classici italiani di economia politica. Parte antica*, ed. by P. Custodi, vol. II (Milan: Destefanis, 1804), pp. 54–55.
53. B. Mandeville, *The Fable of the Bees: Or, Private Vices, Publick Benefits* (Oxford: Clarendon Press, 1924 [1714]).
54. Davanzati, *Notizia de' cambi*, p. 55.
55. N. Machiavelli, *Il Principe* (Milan: Rizzoli, 2006 [1532, written 1513]); see Q. Skinner, *Machiavelli* (Oxford: Oxford University Press, 2001), ch. 2.
56. The text is given in M. Grice Hutchinson, *The School of Salamanca: Readings in Spanish Monetary Theory, 1544–1605* (Oxford: Clarendon Press, 1952), App. I. The passage quoted is on p. 125.
57. Antonino da Firenze, *Summa Theologiae*, vol. III (Venice: Juntae, 1581–1582 [1477]), f. 93v.
58. Ibid., f. 91r.
59. Ibid., f. 91v.
60. Ibid., f. 92r.

61. T. de Vio (Caietanus), *De cambiis* [1499], in *Scripta philosophica: opuscula oeconomico-socialia*, ed. by P. Zammit (Rome: Institutum Angelicum, 1934).
62. M. Grice Hutchinson, *Early Economic Thought in Spain 1177–1740* (London: Allen & Unwin, 1978), p. 90.
63. See M. Tavuzzi, *Prierias: The Life and Works of Silvestro Mazzolini da Prierio 1456–1527* (Durham NC: Duke University Press, 1997).
64. S. da Prierio, *Summa summarum quae Silvestrina dicitur* (Bologna: Benedetto di Ettore, 1514), Usura IV, *Quo ad cambio*.
65. Grice Hutchinson, *Early Economic Thought in Spain*, p. 94.
66. D. de Soto, *Libri decem de justitia et jure* (Salamanca: Andrea de Portonariis, 1553), Lib. VII, q. 5, art. 2. He suggested that the rule whereby a measure of grain consigned where its price is high is exchanged with two measures where its price is low should also be applied to the money trade.
67. Ibid., Lib. VI, q. 11, art. 1.
68. M. de Azpilcueta, *Comentario resolutorio de usuras* (Salamanca: Andrea de Portonariis, 1556), p. 58.
69. Ibid.
70. L. Baeck, *The Mediterranean Tradition in Economic Thought* (London: Routledge, 1994), pp. 188–189.
71. Grice Hutchinson, *Early Economic Thought in Spain*, pp. 48–51.
72. J.A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1954), p. 104, footnote 31.
73. Grice Hutchinson, *Early Economic Thought in Spain*, pp. 52–54; M. Cattini, *I contadini di San Felice: metamorfosi di un mondo rurale nell'Emilia dell'Età moderna* (Turin: Einaudi, 1984), pp. 122ff.
74. B. Stracca, *De mercatura, seu mercatore tractatus* (Venice: Aldus Manutius, 1553).
75. B. Stracca (ed.), *De mercatura decisiones, et tractatus varii, et de rebus ad eam pertinentibus* (Lyons: Landry, 1621 [1556]).
76. P. Santerna, *Tractatus perutilis et quotidianus, de assecurationibus et sponsionibus mercatorum*, in *De mercatura decisiones, et tractatus varii*, p. 750.
77. K. Polanyi, C.M. Arensberg and H.W. Pearson (eds), *Trade and Market in the Early Empires: Economies in History and Theory* (Glencoe: The Free Press, 1957), pp. 250ff.
78. A. Genovesi, *Lezioni di economia civile* [1765], in *Scrittori classici italiani di economia politica. Parte moderna*, ed. by P. Custodi, vol. IX (Milan: Destefanis, 1803), p. 177. The need to distinguish between categories of borrowers was part of public ethics even above religious principles: Francis Bacon himself in 1625, suggested that two rates of maximum interest should be introduced into England: one for ordinary loans and another, higher one, for business loans. See M. Grice Hutchinson, *Economic Thought in Spain: Selected Essays*, ed. by L.S. Moss and C.K. Ryan (Aldershot: Elgar, 1993), p. 18.
79. Grice Hutchinson, *The School of Salamanca*, p. 59.
80. Schumpeter, *History of Economic Analysis*, pp. 95ff.
81. B.W. Dempsey, *Interest and Usury* (Washington DC: American Council on Public Affairs, 1943).
82. F. Boldizzoni, 'Il governo della moneta a Milano dal 1650 alla Guerra di successione spagnola', *Storia economica*, 6.3 (2003), p. 420, footnote 119.
83. Baeck, *The Mediterranean Tradition*, p. 206.

84. L. Molina, *De justitia et jure* (Mainz: Balthasar Lippius, 1614), vol. II, Tract. II, Dispp. 398–410.
85. Ibid., p. 705: '*In principio, medio, aut fine nundinarum, plures aut pauciores sunt, qui ea [pecunia] indigent, aut eam velint ad cambium ad diversa loca, & plures aut pauciores qui illam ad cambium dare possint aut velint*'.
86. Ibid., Dispp. 303ff.
87. Ibid., Dispp. 314–316.
88. M. Rothbard, *Economic Thought before Adam Smith: An Austrian Perspective on the History of Economic Thought* (Aldershot: Elgar, 1995), p. 114.
89. L. de Leys, *De iustitia et iure* (Milan: Bidelli, 1618 [1605]), Lib. II, Caput 20, Dub. 11.
90. Quoted in Rothbard, *Economic Thought before Adam Smith*, p. 124.
91. Ibid., pp. 124–125.
92. de Leys, *De iustitia et iure*, Lib. II, Caput 20, Dub. 10.
93. Cf. ibid., Dub. 13.
94. Rothbard, *Economic Thought before Adam Smith*, p. 125. As for the fact that this was not previously the norm (and in many parts of Europe continued not to be) cf. C. Muldrew, *The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England* (Basingstoke: Macmillan, 1998).
95. de Leys, *De iustitia et iure*, Lib. II, Caput 20, Dub. 14.
96. Baeck, *The Mediterranean Tradition*, p. 190.
97. Rothbard, *Economic Thought before Adam Smith*, p. 125.
98. Ibid., p. 126.
99. J. de Lugo, *De iustitia et iure* (Lyons: Prost, Borde & Arnaud, 1646 [1642]), Disp. 25, no. 6.
100. Rothbard, *Economic Thought before Adam Smith*, p. 127.
101. Grice Hutchinson, *Early Economic Thought in Spain*, p. 112.
102. See D. Sella, *Italy in the Seventeenth Century* (London: Longman, 1997).
103. M. Bianchini, 'La riflessione economica nell'Italia seicentesca', in M. Cattini (ed.), *Il Seicento: un secolo in chiaroscuro* (Brescia: Astrea, 1984), 'Cheiron' series, p. 36.
104. S. Scaccia, *Tractatus de commerciis et cambio* (Rome: Mascardi, 1619), especially Lib. I, q. 7.
105. Bianchini, 'La riflessione economica nell'Italia seicentesca', p. 37.
106. B. Pascal, *Les Provinciales: ou les Lettres écrites par Louis de Montalte à un provincial de ses amis et aux RR. PP. Jésuites*, ed. by L. Cognet and G. Ferreyrolles (Paris: Bordas, 1992), VIIIe lettre, 28 mai 1656.

## 2 Land and labour, 1650–1800

1. At the height of the English agricultural revolution (around 1815), despite low yields (0.64 tons per hectare, compared with 1.16 tons in England) France was producing 2960 thousand tons of grain compared with England's 1184 thousand. Thus the English per capita output (103.01 kg) only just exceeded the French (100.74 kg). But if the data for Scotland (which produced food cereals on a small scale) is included in the calculation then the French situation would appear even better. France was never to give up her vocation for agriculture: between 1850 and 1900 production continued to grow, running

counter to trends in industrial Europe. The following were used for the calculations: B.R. Mitchell, *International Historical Statistics: Europe 1750–1993* (Basingstoke: Macmillan, 1998), pp. 79, 216, 273; M.E. Turner, J.V. Beckett and B. Afton, *Farm Production in England, 1700–1914* (Oxford: Oxford University Press, 2001), p. 218, Tab. 7.1.

2. A. Young, *Travels, During the Years 1787, 1788, and 1789, Undertaken more particularly with a View of ascertaining the cultivation, wealth, resources, and national prosperity, of the Kingdom of France* (Bury St Edmunds: Richardson, 1792), passim.
3. F. Caron, 'La Grande-Bretagne 1815 vers 1850', in P. Léon (ed.), *Histoire économique et sociale du monde*, vol. III (Paris: Colin, 1978), p. 389. In 1811, while 30 per cent of the active population was occupied in industrial and mining activities English agriculture still employed about 33 per cent. In 1841 this figure fell to 22 per cent, while industry gained 10 percentage points. At this point, its overall weight is practically double that of the agricultural sector (calculated on the data given ibid.).
4. See F. Boldizzoni, 'Davanzati e Hobbes: nascita e diffusione di un paradigma (XVI–XVIII secolo)', *Il pensiero economico italiano*, 13.1 (2005), pp. 9–29.
5. W. Petty, *Verbum Sapienti* [1691, written c. 1665], in *The Economic Writings of Sir William Petty*, ed. by C.H. Hull (Cambridge: Cambridge University Press, 1899), vol. I, p. 113.
6. A.-M. Piuz, 'Les économies traditionnelles en Europe', in P. Bairoch, *Victoires et déboires: histoire économique et sociale du monde du XVIe siècle à nos jours*, vol. I (Paris: Gallimard, 1997), p. 169.
7. W. Petty, *Treatise of Taxes and Contributions* [1662], in *Economic Writings*, vol. I, p. 44.
8. Ibid.
9. Ibid., p. 28.
10. Ibid., p. 44.
11. W. Petty, *The Political Anatomy of Ireland* [1691], in *Economic Writings*, vol. I, p. 181.
12. Ibid. and Id., *Treatise of Taxes and Contributions*, p. 45.
13. Petty, *The Political Anatomy of Ireland*, p. 181.
14. Although the interpretations put forward are at times questionable, see the interesting study by S. Fiori in this connection: 'Immagini organiciste della produzione di ricchezza nell'economia politica preclassica', *Storia del pensiero economico*, 45 (2003), pp. 115–145.
15. T. Hobbes, *Leviathan, or the Matter, Forme & Power of a Commonwealth Ecclesiastical and Civil* [1651], in *The English Works of Thomas Hobbes of Malmesbury*, ed. by W. Molesworth, vol. III (London: Bohn, 1839), p. 232.
16. Petty, *Treatise of Taxes and Contributions*, p. 68.
17. J. Graunt, *Natural and Political Observations upon the Bills of Mortality* [1676], in *The Economic Writings of Sir William Petty*, vol. II, p. 377.
18. N. Barbon, *An Apology for the Builder: or a Discourse shewing the Cause and Effects of the Increase of Building* (London: Cave Pullen, 1685), p. 13. Cf. also p. 16.
19. J. Locke, *The Second Treatise of Government*, in Id., *Two Treatises of Government*, ed. by P. Laslett with an introduction and apparatus criticus (Cambridge: Cambridge University Press, 1970), p. 311.

20. Ibid., p. 312.
21. Ibid., p. 315. The polysemy of this term is interesting in that it also conveys desolation and bareness.
22. Ibid., p. 310.
23. Ibid., p. 308.
24. Ibid., pp. 309–310.
25. Graunt, *Natural and Political Observations*, p. 377.
26. Young's contemporary John Arbuthnot, a tenant-farmer at Mitcham in Surrey, also reminds us that the greatest nightmare of rural societies was de-population. J. Arbuthnot, *An Inquiry into the Connection between the present Price of Provisions, and the Size of Farms. With Remarks on Population as affected thereby. To which are added, Proposals for preventing future Scarcity* (London: Cadell, 1773), p. 2. On pre-Malthusian thought see C.E. Stangeland, *Pre-Malthusian Doctrines of Population: A Study in the History of Economic Theory* (New York: Columbia University Press, 1904); and G. Gioli (ed.), *Le teorie della popolazione prima di Malthus* (Milan: Angeli, 1987).
27. V. Riqueti, Marquis de Mirabeau, *L'ami des hommes, ou Traité de la population*, vol. I (Paris: Herissant, 1758–1759 [1756]), p. 7.
28. Ibid., p. 22.
29. Ibid., pp. 77–78.
30. See below, Ch. 6.
31. See, for example, Mirabeau, *L'ami des hommes*, p. 58.
32. R. Cantillon, *Essai sur la nature du commerce en général*, ed. and with an English translation by H. Higgs (London: Frank Cass for the RES, 1959 [1755, written c. 1732]), p. 3. Passage later reproduced by Mirabeau, *L'ami des hommes*, p. 22.
33. Cantillon, *Essai sur la nature du commerce en général*, p. 3.
34. Ibid., p. 111.
35. 'Everybody must live.' Ibid., p. 113.
36. Naturally there are still special classes of goods whose price fully reflects the subjective laws of taste. For example, in the case of an aristocrat who has carried out additional highly aesthetic maintenance work on his own garden, 'If he offers to sell the Garden possibly no one will give him half the expense he has incurred. It is also possible that if several persons desire it he may be given double the intrinsic value', ibid., p. 29.
37. Ibid., p. 31.
38. Ibid.
39. Ibid., p. 30.
40. A.-R.-J. Turgot, *Réflexions sur la formation et la distribution des richesses* [1769–1770, written 1766], in *Oeuvres de Turgot*, ed. by G. Schelle, vol. II (Paris: Alcan, 1914). In later references to this work the Roman figures refer to the sections that Turgot himself set. The quotations in English are taken from *Reflections on the Formation and Distribution of Wealth*, in *The Economics of A.-R.-J. Turgot*, ed. and transl. with an introd. by P.D. Groenewegen (The Hague: Nijhoff, 1977).
41. Ibid., II.
42. 'Every type of soil by no means produc[es] everything.'
43. Ibid., III.
44. Ibid., IV.
45. Ibid., VII.

46. Ibid., IX–XVI.
47. Ibid., XVI.
48. Ibid., XVII.
49. Ibid., XVIII.
50. Ibid., XXIV.
51. Ibid., XXVI.
52. Ibid., XXVII.
53. See M. Bloch, *Les caractères originaux de l'histoire rurale française* (Paris: Colin, 1987).
54. T. Mun, *England's Treasure by Forraign Trade* (New York: Kelley, 1968 [1664]), ch. 19.
55. Ibid., pp. 81–82.
56. Ibid., pp. 71–72.
57. Ibid., p. 73.
58. Ibid., p. 72.
59. Ibid., pp. 72–73.
60. Ibid., p. 12. Additionally, 'Compare our Fleece-wools with our Cloth, which requires shearing, washing, carding, spinning, Weaving, fulling, dying, dressing and other trimmings, and we shall find these Arts more profitable than the natural wealth, whereof I might instance other examples . . . ', ibid., p. 13.
61. Locke, *The Second Treatise of Government*, p. 314.
62. Ibid., p. 309, as well as the quotations that follow.
63. This reflected a fairly widespread opinion among the gentlemen of the period. In Timothy Nourse's work *Campania Foelix* (1700), the open fields were described as 'Seminaries of a lazy Thieving sort of People'. Quoted by R.E. Prothero (Lord Ernle), *English Farming Past and Present* (London: Heinemann and Cass, 1961), p. 150.
64. There is a famous passage in which the Anglo-Dutch Mandeville describes the land as mean and hostile towards man, for whom work is a necessary torment (B. de Mandeville, *An Essay on Charity, and Charity-Schools* [1723], in *The Fable of the Bees*, vol. I, p. 286). It is worth recalling that 'Even Bacon recommended torturing Nature ("*torquere naturam*"), proposing the model of the judicial system of his day, to bring Nature up for trial and force her to reveal her secrets, setting this against the traditional school, which preferred to intervene in harmony with natural forces', M. Ambrosoli, *The Wild and the Sown: Botany and Agriculture in Western Europe 1350–1850* (Cambridge: Cambridge University Press, 1997), p. 401.
65. N. Barbon, *A Discourse of Trade* [1690], in J.H. Hollander (ed.), *A Reprint of Economic Tracts* (Baltimore: The Johns Hopkins Press, 1905), pp. 10–11.
66. Barbon, *An Apology for the Builder*, p. 3: 'the Builder ought to be encouraged in all Nations as the chief promoter of their Welfare'.
67. Ibid., p. 25.
68. A. Young, *Political Arithmetic: Containing Observations on the Present State of Great Britain; and the Principles of her Policy in the Encouragement of Agriculture. Addressed to the Œconomical Societies established in Europe* (London: Nicoll, 1774).
69. Ibid., pp. 287–296.
70. Ibid., pp. 267–274. This was the earlier traditional concern of the peasants. As Arbuthnot noted (*An Inquiry*, p. 2), they feared the following situations

as being the cause of price increases: a decline in yields and thus of output as margins were extended; food supplies from the large tenant-farmers who could speculate on prices during periods of under-production, safe as they were from the risks of subsistence; the fact that, unlike the small farmers, they did not concentrate on the production of pork, milk products, eggs and poultry, the only sources of animal protein for the less-well-off classes.

71. M. Peters, *The Rational Farmer: or a Treatise on Agriculture and Tillage*, 2nd edn (London: Flexney, 1771), p. 5.
72. Cf. Anonymous, *Etat présent de l'Agriculture des Isles Britanniques*, in the French edition of Young's work: *Aritmétique politique* (with other writings), ed. by M. Freville (The Hague: Gosse, 1775), vol. II, pp. 455ff.
73. Ibid., pp. 420ff.
74. Ambrosoli, *The Wild and the Sown*, ch. 3; T. Kjærgaard, 'A Plant that Changed the World: The Rise and Fall of Clover 1000–2000', *Landscape Research*, 28.1 (2003), pp. 43–44.
75. A. Gallo, *Le vinti giornate dell'agricoltura et de' piaceri della villa* (Venice: Percaccino, 1569 [1550–1569]); C. Tarello, *Ricordo d'agricoltura* (Venice: Rampazzetto, 1567).
76. A.J. Bourde, *Agronomie et agronomes en France au XVIIIe siècle* (Paris: PUF, 1967).
77. A. Young, *A Course of Experimental Agriculture* (London: Dodsley, 1770), vol. I, pp. vii–viii.
78. Ibid., p. viii. As regards Gallo and Tarello, Young candidly confesses that he bases his opinion on the knowledge of a few extracts, not having ever read them in the original. Lord Ernle writes about his disastrous activities as a businessman and his great literary success in *English Farming Past and Present*, pp. 195ff.
79. R. Stone, *Some British Empiricists in the Social Sciences 1650–1900* (Cambridge: Cambridge University Press, 1996), ch. 5.
80. A. Young, *The Farmer's Guide in Hiring and Stocking Farms* (London: Strahan, 1770).
81. R. Kirwan, 'What are the Manures most advantageously applicable to the various Sorts of Soils? And what are the Causes of their beneficial Effect in each particular Instance?', in *Annals of Agriculture*, ed. by A. Young, vol. XXIII (1795), p. 89.
82. Ibid., pp. 84–85, 110–111.
83. L. Brunt, 'Rehabilitating Arthur Young', *Economic History Review*, 56.2 (2003), pp. 265–299.
84. M. Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500–1850* (Cambridge: Cambridge University Press, 1996), pp. 3–4.
85. Lord Ernle, *English Farming Past and Present*, p. 477.

## 3 Reproduction and transition

1. See the classic work of E. Le Roy Ladurie, *Les paysans de Languedoc* (Paris: SEVPEN, 1966).
2. F. Crouzet, *Britain Ascendant: Comparative Studies in Franco-British Economic History* (Cambridge: Cambridge University Press, 1990).

3. See P.T. Hoffman, *Growth in a Traditional Society: The French Countryside 1450–1815* (Princeton: Princeton University Press, 1996). In disagreeing with the historiography of the *Annales* school, the author actually hypothesizes sustained growth of the national income. Unable to use the abundant direct data for production, population and arable areas in the archives, which would have confirmed the traditional view, he bases his reasoning on indirect estimates and deductions. However, the calculation of the Total Factor Productivity for this period can hardly be considered anything other than 'a picaresque adventure in pseudo-statistics' (ibid., p. 82), as even Hoffman himself seems to admit, despite basing most of his speculations on it.
4. C. Heywood, *The Development of the French Economy 1750–1914* (Cambridge: Cambridge University Press, 1995); see also the '*comptes rendus*' in the *Annales*: 52.6 (1997); 53.3 (1998); 55.4 (2000).
5. Heywood, *The Development*, pp. 6–7.
6. A. Maddison, *The World Economy: A Millennial Perspective* (Paris: OECD, 2001), p. 261, Tab. B-18; p. 264, Tab. B-21.
7. Heywood, *The Development*, p. 44.
8. This is clear from observing the relative growth of British per-capita income, what is more in a period (from the second half of the eighteenth century) of strong population growth. The weaker overall performance of the French economy was certainly linked to early population check, but only after the nineteenth century.
9. In 1870 even the total British income is greater than the French (by 39 per cent according to Maddison's most recent estimates).
10. P. Bairoch, *Révolution industrielle et sous-développement* (Paris: SEDES, 1963).
11. Ibid., p. 74.
12. P.K. O'Brien, 'Path Dependency, or Why Britain Became an Industrialized and Urbanized Economy Long before France', *Economic History Review*, 49.2 (1996), pp. 216–217.
13. Ibid., pp. 241–242.
14. F. Caron, *An Economic History of Modern France* (New York: Columbia University Press, 1979), p. 117.
15. V. Riqueti, Marquis de Mirabeau, *L'ami des hommes, ou Traité de la population*, vol. I (Paris: Herissant, 1758–1759 [1756]), p. 67.
16. Ibid., p. 77.
17. 'When a nation has no territory there is no point in teaching it how to farm.'
18. Mirabeau, *L'ami des hommes*, p. 98.
19. Crouzet, *Britain Ascendant*, p. 127.
20. J. Thirsk, 'L'agriculture en Angleterre et en France de 1600 à 1800: contacts, coïncidences et comparaisons', *Histoire, économie et société*, 18.1 (1999), p. 13. This also applies more generally to technology, as C. MacLeod shows: 'The European Origins of British Technological Predominance', in L. Prados de la Escosura (ed.), *Exceptionalism and Industrialisation: Britain and its European Rivals 1688–1815* (Cambridge: Cambridge University Press, 2004), pp. 111–126.

21. Thirsk, *L'agriculture*, p. 16.
22. Ibid., pp. 13–14. See also J. Thirsk, *Alternative Agriculture: A History. From the Black Death to the Present Day* (Oxford: Oxford University Press, 2000).
23. Thirsk, *L'agriculture*, p. 18.
24. D. Woronoff, *Histoire de l'industrie en France. Du XVIe siècle à nos jours* (Paris: Seuil, 1994), p. 6.
25. Ibid., p. 7.
26. T.H. Harris, 'French Industrial Policy under the Ancien Regime and the Pursuit of the British Example', *Histoire, économie et société*, 12.1 (1993), pp. 99–100.
27. Heywood, *The Development*, p. 1.
28. Ibid., p. 63.
29. This will be examined here and in Chapter 4, making use of the study F. Boldizzoni, 'I limiti della crescita: i Classici dinanzi alla Rivoluzione industriale 1776–1836', *Storia del pensiero economico*, n.s., 1.2 (2004), pp. 115–148.
30. As A. Smith puts it [*An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. by R.H. Campbell and A.S. Skinner (Oxford: Clarendon Press, 1976 [1776]), vol. I, pp. 418–419], everything began when 'For a pair of diamond buckles perhaps, or for something as frivolous and useless, [the landlords] exchanged the maintenance . . . of a thousand men for a year, and with it the whole weight and authority which it could give them.' Cantillon had not expressed himself very differently as far as content was concerned.
31. M. Overton, *Agricultural Revolution in England: The Transformation of the Agrarian Economy 1500–1850* (Cambridge: Cambridge University Press, 1996), pp. 203–204; Thirsk, *L'agriculture*, p. 22.
32. Overton, *Agricultural Revolution in England*, chs 2, 5; M.E. Turner, J.V. Beckett and B. Afton, *Farm Production in England, 1700–1914* (Oxford: Oxford University Press, 2001), ch. 7.
33. P. Bairoch, 'Agriculture and the Industrial Revolution 1700–1914', in C.M. Cipolla (ed.), *The Fontana Economic History of Europe*, vol. III (Glasgow: Fontana/Collins, 1973), p. 453; E.A. Wrigley, 'The Transition to an Advanced Organic Economy: Half a Millennium of English Agriculture', *Economic History Review*, 59.3 (2006), pp. 435–480.
34. B.H. Slicher van Bath, *The Agrarian History of Western Europe, A.D. 500–1850* (London: Arnold, 1963), pp. 240ff.; J. de Vries, *Dutch Rural Economy in the Golden Age 1500–1700* (New Haven: Yale University Press, 1974); J. de Vries and A. van der Woude, *The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy 1500–1815* (Cambridge: Cambridge University Press, 1997), ch. 6.
35. P. Bairoch, *Victoires et déboires: histoire économique et sociale du monde du XVIe siècle à nos jours*, vol. I (Paris: Gallimard, 1997), p. 304; Overton puts forward an estimate of 70 per cent (*Agricultural Revolution in England*, p. 82, Tab. 3.8c).
36. See Smith, *Wealth of Nations*, pp. 411ff.

37. M. Berg, 'New Commodities, Luxuries and their Consumers in Eighteenth-Century England', in M. Berg and H. Clifford (eds), *Consumers and Luxury: Consumer Culture in Europe 1650–1850* (Manchester: Manchester University Press, 1999), pp. 63–87; M. Berg, 'In Pursuit of Luxury: Global Origins of British Consumer Goods in the Eighteenth Century', *Past and Present*, 182.1 (2004), pp. 85–142.
38. J.-Y. Grenier, *L'économie d'Ancien Régime: un monde de l'échange et de l'incertitude* (Paris: Albin Michel, 1996), p. 149.
39. A.-R.-J. Turgot, *Réflexions sur la formation et la distribution des richesses* [1769–70, written 1766], in *Oeuvres de Turgot*, ed. by G. Schelle, vol. II (Paris: Alcan, 1914), XXXIII.
40. Ibid., XXXV.
41. Ibid., XXXVI.
42. Ibid., XXXIX.
43. Its common use, homological qualities, ready divisibility into equal parts.
44. Turgot, *Réflexions*, XL.
45. Ibid., XLIII.
46. Ibid. However, it should be noted that worth is not a requisite determining whether a metal is suitable or not for being coined (XLII); rather it is the fact of being particularly in demand for this activity that determines the high value of gold and silver as materials (XLV).
47. Ibid., LVIII.
48. Ibid., L (emphasis omitted).
49. F. Quesnay, *Analyse du Tableau économique* [1766], in Id., *Oeuvres économiques et philosophiques*, ed. by A. Oncken (Frankfurt and Paris: Baer & Peelman, 1888), pp. 310n, 313.
50. N. Baudeau, 'Suite des Observations économistes à M. l'Abbé de Condillac, par M. l'Abbé Baudeau, III: Des diverses classes de citoyens qu'on doit distinguer dans les Etats civilisés', *Nouvelles Ephémérides économiques, ou Bibliothèque raisonnée de l'histoire, de la morale et de la politique*, Avril 1776 (Tome V), pp. 134–136.
51. 'All this undoubtedly contains a money value, but none of it is money.'
52. F. Quesnay, *Du Commerce. Premier dialogue entre M.H. et M.N.* [1766–1768], in Id., *Oeuvres économiques et philosophiques*, p. 481.
53. Ibid., pp. 481–482.
54. Turgot, *Réflexions*, LVII (emphases omitted).
55. 'The penny of the price of land'; ibid.
56. Ibid., LII.
57. Ibid., LIII.
58. Ibid., LII.
59. Ibid., LIX.
60. Ibid., LXIX.
61. Ibid., LXVIII.
62. Cf. F. Boldizzoni, 'Davanzati e Hobbes: nascita e diffusione di un paradigma (XVI–XVIII secolo)', *Il pensiero economico italiano*, 13.1 (2005).
63. B. Davanzati, *Lezione delle monete* [1588], in *Scrittori classici italiani di economia politica. Parte antica*, ed. by P. Custodi, vol. II (Milan: Destefanis, 1804).
64. Turgot, *Réflexions*, LX.

65. Ibid., LXI.
66. Ibid., LXVI.
67. Ibid., LXVII.
68. Ibid., XXIX.
69. Ibid., LXXI.
70. Ibid., LXXIV.
71. Ibid., LXXIV.
72. Ibid., LXXII.
73. Ibid., LXXIV.
74. Ibid., LXXII.
75. Ibid., LXXXII.
76. Ibid., LXXXIII.
77. Ibid., LXXXIV.
78. Ibid., LXXXV.
79. Ibid., LXXXVI.
80. Ibid., LXXXVII. This section corresponds to section 88 in the Groenewegen edition.
81. Cf. M. Bianchini, *Bonheur public et méthode géométrique: enquête sur les économistes italiens 1711–1803* (Paris: INED, 2002), passim.
82. Turgot, *Réflexions*, LXXXVII.
83. J.A. Schumpeter's position is well known: 'he [Turgot] should not be classified as a physiocrat with reservations, but as a nonphysiocrat with physiocrat sympathies', *History of Economic Analysis* (New York: Oxford University Press, 1954), p. 244.
84. Smith, *Wealth of Nations*, p. 10.
85. Cf. J. Keith, 'Age in Social and Cultural Context: Anthropological Perspectives', in. R.H. Binstock and L.K. George (eds), *Handbook of Aging and the Social Sciences* (San Diego: Academic Press, 1990), p. 92.
86. Smith, *Wealth of Nations*, p. 10.
87. Ibid., p. 96.
88. Ibid., p. 97.
89. P. Sylos Labini, 'Adamo Smith', *Rivista di storia economica*, 17.2 (2001), p. 256.
90. Smith, *Wealth of Nations*, p. 96.
91. This definition traces out a system marked by 'Smithian growth', which was limited growth based, from a physical and technical point of view, on the division of labour and the use of fossil fuels, and which is usually contrasted with the so-called 'Schumpeterian growth', based on technical progress and the exploitation of mineral resources. See E.A. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge: Cambridge University Press, 1988).
92. L.L. Pasinetti, 'A Mathematical Formulation of the Ricardian System', *Review of Economic Studies*, 27.2 (1960), pp. 78–98.
93. See D. Winch, 'The Emergence of Economics as a Science 1750–1870', in Cipolla (ed.), *Fontana Economic History*, vol. III, p. 531 and *Riches and Poverty: An Intellectual History of Political Economy in Britain 1750–1834* (Cambridge: Cambridge University Press, 1996), p. 337; E. Screpanti and S. Zamagni, *An Outline of the History of Economic Thought* (Oxford: Clarendon Press, 1993), pp. 73–74. The position of M. Berg also needs to be mentioned. By contrast, she portrays Ricardo as an optimist. See M. Berg, *The Machinery Question*

*and the Making of Political Economy 1815–1848* (Cambridge: Cambridge University Press, 1980), pp. 58ff.

94. T.R. Malthus, *Principles of Political Economy*, ed. by J. Pullen (Cambridge: Cambridge University Press, 1989 [1820, with alterations from the 1836 edn]), vol. I, p. 299.
95. Ibid., vol. II, p. 228 (passage added in the second edition).
96. C. Napoleoni, *Valore* (Milan: ISEDI, 1976), p. 34.
97. Bairoch, 'Agriculture and the Industrial Revolution 1700–1914'.
98. Smith, *Wealth of Nations*, pp. 674ff.
99. Ibid., p. 364.
100. Malthus, *Principles of Political Economy*, vol. I, p. 402.
101. Smith, *Wealth of Nations*, pp. 363-364, emphasis added.
102. T.R. Malthus, *Definitions in Political Economy* (London: Murray, 1827), p. 238.
103. Smith, *Wealth of Nations*, p. 15.
104. Ibid.
105. M. Berg, *The Age of Manufactures 1700–1820: Industry, Innovation and Work in Britain* (London: Routledge, 1994).
106. Smith, *Wealth of Nations*, pp. 133-134.
107. Ibid., p. 134.
108. Ibid., pp. 70-71.
109. D. Ricardo, *On the Principles of Political Economy and Taxation*, ed. by P. Sraffa (Cambridge: Cambridge University Press, 1951 [1821, 1st edn 1817]), pp.75–76.
110. Jones succeeded Malthus to the chair of Haileybury and was – writes Schumpeter (*History of Economic Analysis*, n. 22 of p. 822) – 'a vital personality of strong convictions. His dislike of Ricardian economics took the form of vigorous protests against hasty generalization and of an advocacy of patient factual research, the results of which were eventually to replace the provisional structures of existing ''systems''.'
111. R. Jones, *An Essay on the Distribution of Wealth and on the Sources of Taxation* (New York: Kelley, 1964 [1831]).
112. Schumpeter, *History of Economic Analysis*, pp. 563–565, 631–632.
113. Smith often uses the terms 'profit' and 'revenue' synonymously (cf. Smith, *Wealth of Nations*, p. 279).
114. Ibid., pp. 280–283.
115. For example, Screpanti and Zamagni, *An Outline of the History of Economic Thought*, p. 57.
116. See K.H. Hennings, 'Capital as a Factor of Production', in J. Eatwell *et al*. (eds), *The New Palgrave: A Dictionary of Economics*, vol. I (London: Macmillan, 1987), pp. 330ff.
117. Smith, *Wealth of Nations*, p. 277.
118. Ibid., p. 282.
119. Ibid., p. 277.
120. E. Cannan, *A History of the Theories of Production and Distribution in English Political Economy from 1776 to 1848* (New York: Kelley, 1967 [1917]), p. 54.
121. Smith, *Wealth of Nations*, p. 337.
122. Ibid., p. 292. See also Cannan's points in *A History of the Theories*, p. 66.
123. Naturally minus the 'money' component, which here is considered purely as a medium of exchange (Smith, *Wealth of Nations*, p. 295).

124. Ibid., p. 283.
125. Cannan, *A History of the Theories*, p. 89.
126. Ricardo, *Principles of Political Economy and Taxation*, p. 32.
127. J. Barton, *Observations on the Circumstances which influence the Condition of the Labouring Classes of Society*; quoted in ibid., p. 396n.
128. Thus it is no surprise that in his *Definitions in Political Economy* (pp. 237–238) the items 'stock', 'capital', 'fixed capital' and 'circulating capital' are a faithful reproduction of Smith's outline.
129. Cannan, *A History of the Theories*, pp. 80–81, 89.
130. Ibid., pp. 74–76.
131. Quoted in ibid., p. 92.
132. J.S. Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy* [variorum edn, 1st edn 1848], ed. by J.M. Robson, in *The Collected Works of John Stuart Mill*, vols II-III (London: Routledge & Kegan Paul, 1965), pp. 63–64, emphasis added. Cf. Cannan, *A History of the Theories*, p. 93.

## 4 Industrial maturity

1. J.A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1954), p. 571.
2. This eclectic Scot – who had emigrated to Canada, the only one of the North American economists in the first half of the nineteenth century who enjoyed some renown in Europe – until a few decades ago was commonly identified with the label of 'precursor of Böhm-Bawerk'. Only more recently has he become the subject of real interest as a thinker *tout court*. See O.F. Hamouda, C. Lee and D. Mair (eds), *The Economics of John Rae* (London: Routledge, 1998).
3. Schumpeter, *History of Economic Analysis*, p. 468.
4. J. Rae, *Statement of Some New Principles on the Subject of Political Economy* (New York: Kelley, 1964 [1834]).
5. Ibid., pp. 87–88.
6. Ibid., ch. 5.
7. Ibid., Book I, pp. 19–20.
8. Ibid, Book II, p. 87.
9. N.W. Senior, *An Outline of the Science of Political Economy* (New York: Kelley, 1965 [1836]), pp. 58–59.
10. Ibid., p. 58, emphasis added.
11. Ibid., p. 59.
12. N.W. Senior, *Letters on the Factory Act, as It Affects the Cotton Manufactures* (London: B. Fellowes, 1837), p. 11.
13. M. Longfield, *Lectures on Political Economy* (London: B. Fellowes, 1834), p. 189.
14. Ibid., p. 198.
15. E. West, *Essay on the Application of Capital to Land* (London: Roworth, 1815).
16. R. Jones, *An Essay on the Distribution of Wealth and on the Sources of Taxation* (London: Murray, 1831), ch. 7, sect. II.
17. Longfield, *Lectures on Political Economy*, pp. 180–186.

18. D. Ricardo, *On the Principles of Political Economy and Taxation*, ed. by P. Sraffa (Cambridge: Cambridge University Press, 1951 [1821, 1st edn 1817]), p. 120, emphasis added.
19. T.R. Malthus, *An Essay on the Principle of Population*, ed. by P. James (Cambridge: Cambridge University Press, 1989 [variorum edn]).
20. T.R. Malthus, *Principles of Political Economy*, ed. by J. Pullen (Cambridge: Cambridge University Press, 1989 [1820, with alterations from the 1836 edn]), vol. I, p. 359.
21. Ibid., vol. II, pp. 255–256 (passage added in the second edition).
22. T.R. Malthus, *Definitions in Political Economy* (London: Murray, 1827), p. 238.
23. Malthus, *Principles of Political Economy*, vol. I, pp. 401–402.
24. Ibid., p. 402; cf. also pp. 264–265. Even compared with Ricardo's early opinions on machinery, Malthus's analysis formed a considerable advancement. Ricardo (see his *Principles of Political Economy*, p. 387) had supposed that an excess of labour in one market could be 'employed on the production of some other commodity' (evidently, it would be a zero-sum game). Malthus did not need to resort to any auxiliary hypotheses like this, since for him the adjustment would occur through an endogenous growth process (the sum would now be positive). The intermediate steps in the development of Ricardo's position cannot be discussed here: the best reference is still S. Hollander, *The Economics of David Ricardo* (London: Heinemann, 1979), pp. 346ff.
25. Malthus, *Principles of Political Economy*, vol. I, pp. 402–403. Similar considerations are found on pp. 262–263.
26. Ricardo, *Principles of Political Economy and Taxation*, pp. 387ff.
27. Ibid., pp. 396–397.
28. Senior, *An Outline of the Science of Political Economy*, p. 83.
29. Ibid., p. 84. It is interesting to note how the figures on which Senior bases his arguments are correct, except for underestimating imports in the 1830s; however, their amendments further reinforce his conclusions. Here is a comparison with the quantity–price series reconstructed by P. Bairoch (*Révolution industrielle et sous-développement* (Paris: SEDES, 1963), Tabs 11 and 12, on pp. 235, 237) using other sources:

| | Imports and consumption of raw cotton (millions of pounds) | | Price of yarn no. 100 (shillings and pence per pound) | |
|---|---|---|---|---|
| | Senior | Bairoch[a] | Senior | Bairoch |
| 1735 | 1.2 | 1.7 | n.a. | n.a. |
| 1786 | 20.0 | 15.5 | 38.0 | 38.0 |
| 1792 | 34.0 | 30.1 | 16.0 | 19.0[b] |
| 1806 | 60.0 | 66.9 | 7.2 | 7.3[c] |
| 1835 | 240.0 | 359.6 | <3.0 | 2.11[d] |

[a] Estimates relating to a ten-year interval;
[b] The value is for the year 1795;
[c] Value obtained as the average for the years 1805–1807;
[d] The value is for the year 1832.

30. Senior, *An Outline of the Science of Political Economy*, p. 83.
31. N.W. Senior, *Two Lectures on Population, with a Correspondence between the Author and T.R. Malthus* [1828; 1831], in his *Selected Writings on Economics* (New York: Kelley, 1966), pp. 14, 26–27. It is curious how on p. 24 Senior shows that he underestimates the spread of birth control in the world (and, paradoxically, on the other side of the Channel) thinking it to be a trivial phenomenon.
32. I do not think that seeing Mill as 'the first major environmentalist', as in W. Rostow's *Theorists of Economic Growth from David Hume to the Present: With a Perspective on the Next Century* (New York: Oxford University Press, 1990), p. 117, does truth any credit; it does, however, have a certain fascination.
33. See the discussion in M. Donoghue, 'Mill's Affirmation of the Classical Wage Fund Doctrine', *Scottish Journal of Political Economy*, 44.1 (1997), pp. 82–99.
34. J.S. Mill, *Principles of Political Economy with Some of Their Applications to Social Philosophy* [variorum edn, 1st edn 1848], ed. by J.M. Robson, in *The Collected Works of John Stuart Mill*, vols II–III (London: Routledge & Kegan Paul, 1965), pp. 497–500.
35. Ibid., p. 55.
36. Ibid., p. 66.
37. Ibid., p. 63.
38. Ibid., pp. 93–99.
39. Ibid., p. 60.
40. Ibid.
41. C. Babbage, *On the Economy of Machinery and Manufactures*, 4th enlarged edn (London: Knight, 1835). The first edition came in 1832.
42. Rostow, *Theorists of Economic Growth*, p. 104.
43. A. Ure, *The Philosophy of Manufactures* (London: Knight, 1835).
44. E. Baines, *History of the Cotton Manufacture in Great Britain* (London: Fisher and Jackson, 1835).
45. One of the brightest Cambridge mathematicians, he owes his fame to the design of the first calculator. The *forma mentis* that came from long application in the fields of computer engineering and logistics led him to become interested in business economics (cf. B. Schefold, *Charles Babbage: Pioneer of the Theory of Industrial Organisation and Development*, in L. Magnusson *et al.*, *Innovations and Economic Changes* (Galatina: Congedo, 1996), pp. 19–38).
46. N. Rosenberg, *Exploring the Black Box: Technology, Economics and History* (Cambridge: Cambridge University Press, 1994), p. 24.
47. Schumpeter, *History of Economic Analysis*, p. 541, footnote 1.
48. Babbage, *On the Economy of Machinery*, p. 175.
49. See below, Ch. 8.
50. Babbage, *On the Economy of Machinery*, p. 223.
51. Ibid., p. 226.
52. Ibid., p. 228.
53. Ibid., pp. 334–341.
    Effect of the introduction of the steam engine on employment in Stockport, according to a House of Commons report based on a sample of 65 factories:

| | 1822 | 1832 | Difference |
|---|---|---|---|
| Hand-loom weavers | 2800 | 800 | −2000 |
| Persons using power-looms | 657 | 3059 | +2402 |
| Persons to dress the warp | 98 | 388 | +290 |
| Total persons employed | 3555 | 4247 | +692 |
| Power-looms | 1970 | 9177 | +7207 |

*Source*: Babbage, *On the Economy of Machinery*, p. 339. Some obvious misprints have been amended.

54. Ibid., ch. 25.
55. Ibid., pp. 358–359.
56. Ibid., p. 358.
57. Ibid., p. 229.
58. Chapter 26 discusses the need to give each workman a financial interest in the factory, and proposes a 'powerful union' between the small capitalists and the workmen. The topic of juxtaposition between capital and labour comes back in Chapter 30, where it is treated with the tools of economic analysis.
59. Ibid., p. 230.
60. Rae, *Statement of Some New Principles*, Book II, Chapter 10.
61. On this point cf. also Longfield, *Lectures on Political Economy*, pp. 184ff.
62. Babbage, *On the Economy of Machinery*, p. 260.
63. Ibid., p. 360.
64. Ibid., p. 361.
65. 'One part of the price of any article produced under such circumstances, consists of the expenditure, together with the ordinary profits of capital: the other part of its price may be looked upon as charity, given to induce the manufacturer to continue an unprofitable use of his capital, in order to give employment to his workmen' (ibid., 348–349).
66. Ibid., pp. 362–363.
67. Ibid., p. 368. Babbage quotes from a report of the House of Commons commission on the export of tools and machinery.
68. T.S. Ashton, *The Industrial Revolution 1760–1830* (Oxford: Oxford University Press, 1968), p. 77.
69. Ibid., pp. 77–78.
70. Both contributions can be read in F. Crouzet (ed.), *Capital Formation in the Industrial Revolution* (London: Methuen, 1972).
71. Cf. F. Caron, 'La Grande-Bretagne 1815-vers 1850', in P. Léon (ed.), *Histoire économique et sociale du monde*, vol. III (Paris: Colin, 1978), p. 396.
72. Ibid., p. 397.
73. J. Mokyr, *The Lever of Riches: Technological Creativity and Economic Progress* (Oxford: Oxford University Press, 1990), ch. 6.

## 5 The revolt of 1867

1. E.J. Hobsbawm, *The Age of Capital 1848–1875* (London: Widenfeld & Nicolson, 1975).
2. He explicitly states, in the preface to the work, that his laboratory is the Industrial Revolution: 'In this work I have to examine the capitalist mode of production, and the conditions of production and exchange corresponding to that mode. Up to the present time, their classic ground is England. That is the reason why England is used as the chief illustration in the development of my theoretical ideas. If, however, the German reader . . . in optimist fashion comforts himself with the thought that in Germany things are not nearly so bad, I must plainly tell him, *"De te fabula narratur!"* ', K. Marx, *Capital: A Critique of Political Economy*, vol. I [1867], in *Collected Works of K. Marx and F. Engels*, vol. 35 (London: Lawrence & Wishart, 1996), p. 8.
3. Ibid., p. 753.
4. Or to be exact, 'a social relation between persons, established by the instrumentality of things' (ibid.).
5. P.-J. Proudhon, *What is Property?* ed. by D. Kelley and B.G. Smith (Cambridge: Cambridge University Press, 1994 [1840]). On the general evolution of the idea of property, see P. Garnsey, *Thinking about Property: From Antiquity to the Age of Revolution* (Cambridge: Cambridge University Press, 2007).
6. See P. Laslett, *The World We Have Lost: Further Explored* (London: Routledge, 2004).
7. Marx, *Capital*, vol. I, p. 180.
8. Ibid., p. 85.
9. Ibid., pp. 82–83. And again, 'There it is a definite social relation between men, that assumes, in their eyes, the fantastic form of a relation between things. In order, therefore, to find an analogy, we must have recourse to the mist-enveloped regions of the religious world. In that world the productions of the human brain appear as independent beings endowed with life, and entering into relation both with one another and the human race. So it is in the world of commodities with the products of men's hands. This I call the Fetishism which attaches itself to the products of labour, so soon as they are produced as commodities, and which is therefore inseparable from the production of commodities' (p. 83). Alienation, introduced in the *Economic and Philosophic Manuscripts* of 1844, is in fact a wider and fourfold concept. But our main interest here is man's alienation from his own labour, which is later taken up in *Capital*.
10. Marx, *Capital*, vol. I, ch. 8.
11. Ibid., p. 219.
12. Ibid.
13. Ibid., pp. 209ff.
14. Ibid., p. 157.
15. F. Braudel, *Civilisation matérielle, économie et capitalisme, XVe–XVIIIe siècle* (Paris: Colin, 1979), vol. II, *Les jeux de l'échange*; I. Wallerstein, *The Modern World-System* (New York and San Diego: Academic Press, 1974–1989), vol. I.
16. Marx, *Capital*, vol. I, p. 157.

17. Ibid.
18. Ibid., pp. 158–164. 'M–C–M, the transformation of money into commodities, and the change of commodities back again into money; or buying in order to sell. Money that circulates in [this] manner is thereby transformed into, becomes capital, and is already potentially capital' (Ibid., p. 158).
19. Ibid., p. 174.
20. Ibid., p. 175. In following Aristotle, Marx recalls that the very word 'usury' got its name from this parthenogenetic property: '*tokos*' is the 'interest', namely the 'offspring' of money.
21. K. Marx, *Capital*, vol. III [1894], in *Collected Works*, vol. 37 (London: Lawrence & Wishart, 1998), p. 389.
22. Marx, *Capital*, vol. I, p. 177.
23. Ibid.
24. Ibid., p. 179.
25. Ibid.
26. Ibid., p. 186.
27. It is no accident that the relationship between the Marxist scholars and Polanyi is controversial. See: R. Halperin, 'Polanyi, Marx and the Institutional Paradigm in Economic Anthropology', *Research in Economic Anthropology*, 6 (1984), pp. 245–272; M. Cangiani, *Economia e democrazia: saggio su Karl Polanyi* (Padua: Il Melangolo, 1998), and the debate in the special issue of the review *Inchiesta*, 27 (1997).
28. K. Polanyi, *The Great Transformation: The Political and Economic Origins of our Time* (Boston: Beacon Press, 1957 [1944]), p. 72, footnote 3.
29. There are naturally other points of disagreement in the two approaches, whether they concern specific interpretations or general questions of method. On pp. 151ff., Polanyi argues that the Marxists, especially the vulgar ones, have, like the Liberals, misunderstood protectionism between the nineteenth and the twentieth centuries; they did not understand its true nature of self-defence of society. Moreover, he reproaches them for putting class interests (conceived within a void and detached from the context of human environmental and cultural conditions) at the centre of the processes of change.
30. Chapter 13 of Book I of *Capital* is devoted to an analysis of the cooperative principle.
31. Ibid., p. 348.
32. Ibid., pp. 341–343.
33. Ibid., p. 343. Marx takes this image from the Scottish Illuminist A. Ferguson, as will become clear on p. 367, footnote 1.
34. Ibid., p. 343.
35. Ibid., p. 344.
36. This prospect would famously animate the work of E. Durkheim, *De la division du travail social* (Paris: PUF, 2004 [1893]).
37. Marx, *Capital*, vol. I, p. 344.
38. Ibid., p. 349.
39. Ibid.
40. Ibid.

41. The reference to Petty is ibid., p. 347; the one to clock-making in Vaud and Neuchatel, as an example of dispersed manufacturing, is on p. 348. Cf. J.-F. Bergier, *Histoire économique de la Suisse* (Paris: Colin, 1984), pp. 166–167.
42. Marx, *Capital*, vol. I, p. 353.
43. Ibid., p. 354.
44. Ibid., p. 374.
45. Ibid., pp. 364ff.
46. Ibid., p. 372.
47. Ibid., p. 373.
48. Ibid., pp. 373–374.
49. Ibid., p. 375. 'Mathematicians and mechanicians, and in this they are followed by a few English economists, call a tool a simple machine, and a machine a complex tool. They see no essential difference between them, and even give the name of machine to the simple mechanical powers, the lever, the inclined plane, the screw, the wedge, &c. . . . Another explanation of the difference between tool and machine is that in the case of a tool, man is the motive-power, while the motive power of a machine is something different from man, as, for instance, an animal, water, wind, and so on. According to this, a plough drawn by oxen, which is a contrivance common to the most different epochs, would be a machine, while Claussen's circular loom, which, worked by a single labourer, weaves 96,000 picks per minute, would be a mere tool. Nay, this very loom, though a tool when worked by hand, would, if worked by steam, be a machine' (pp. 374–375).
50. Ibid., p. 376.
51. Ibid.
52. Ibid., p. 377.
53. Ibid.
54. Ibid.
55. Ibid., p. 378.
56. Ibid., pp. 377, 381, 384.
57. Ibid., p. 398.
58. Ibid., p. 399.
59. See E. Becchi and D. Julia, 'Histoire de l'enfance, histoire sans paroles?', in *Histoire de l'enfance en Occident*, vol. I, *De l'Antiquité au XVIIe siècle* (Paris: Seuil, 1998), pp. 7–39.
60. P. Ariès, *L'enfant et la vie familiale sous l'Ancien Régime* (Paris: Plon, 1960). Child labour in Dutch textile manufacturing at the beginning of the seventeenth century has, for example, been documented by N.W. Posthumus, *De geschiedenis van de Leidsche lakenindustrie. II: De Nieuwe Tijd* ('s-Gravenhage: Nijhoff, 1939), pp. 575ff.
61. S. Horrell and J. Humphries, 'Women's Labour Force Participation and the Transition to the Male-Breadwinner Family 1790–1865', *Economic History Review*, 48.1 (1995), pp. 89–117; D. Valenze, *The First Industrial Woman* (Oxford: Oxford University Press, 1995).
62. F. Engels, *The Condition of the Working Class in England* (Oxford: Oxford University Press, 1993 [1845]), pp. 121ff.
63. Marx, *Capital*, vol. I, pp. 406ff.
64. Ibid., pp. 412ff.

65. Ibid., pp. 403–404. Cf. the study of S.J. Nicholas and J.M. Nicholas, 'Male Literacy, ''Deskilling,'' and the Industrial Revolution', *Journal of Interdisciplinary History*, 23.1 (1992), pp. 1–18.
66. D.M. MacRaild and D.E. Martin, *Labour in British Society 1830–1914* (Basingstoke: Palgrave Macmillan, 2000); C. Nardinelli, *Child Labor and the Industrial Revolution* (Bloomington: Indiana University Press, 1990); P. Horn, *Children's Work and Welfare 1780–1880s* (Cambridge: Cambridge University Press, 1995); M. Winstanley (ed.), *Working Children in Nineteenth-Century Lancashire* (Preston: Lancashire County Books, 1995); E. Roberts, *Women's Work 1840–1940* (Cambridge: Cambridge University Press, 1995).
67. One sufficient witness report of the period is C. Dickens, *The Old Curiosity Shop: A Tale*, ed. by N. Page (London: Penguin, 2001 [1841]), ch. 45.
68. Marx, *Capital*, vol. I, p. 402.
69. Ibid., pp. 684ff.
70. Ibid., p. 686. Cf. also p. 402.
71. Ibid., p. 686.
72. Ibid., p. 676.
73. Ibid., pp. 677–678.
74. Ibid., pp. 671–672.
75. Ibid., p. 704.
76. Ibid., p. 705–706.
77. Ibid., p. 706.
78. Ibid., p. 707.
79. On the longevity of the guild system in Continental Europe see for Italy: A. Guenzi, P. Massa and F. Piola Caselli (eds), *Guilds, Markets and Work Regulations in Italy, 16th–19th Centuries* (Aldershot: Ashgate, 1998); for Germany: S. Ogilvie, 'Guilds, Efficiency and Social Capital: Evidence from German Proto-Industry', *Economic History Review*, 57.2 (2004), pp. 286–333.
80. Marx, *Capital*, vol. I, p. 707.
81. Ibid., pp. 707ff.
82. Ibid., p. 711.
83. Ibid., p. 713. Cf. on this subject the results of the study by R.C. Allen, *Enclosure and the Yeoman: The Agricultural Development of the South Midlands 1450–1850* (Oxford: Clarendon Press, 1992).
84. Marx, *Capital*, vol. I, p. 713.
85. Ibid., p. 711.
86. Ibid., p. 713.
87. Ibid., p. 711.
88. Ibid., pp. 718ff.
89. Ibid., pp. 725–726.
90. Ibid., pp. 731–732.
91. Ibid., p. 737.
92. See M. Berg, P. Hudson and M. Sonenscher (eds), *Manufacture in Town and Country before the Factory* (Cambridge: Cambridge University Press, 1983); P. Hudson, 'Proto-industrialization in England', in S. Ogilvie and M. Cerman (eds), *European Proto-Industrialization* (Cambridge: Cambridge University Press, 1996), pp. 49–66.
93. Marx, *Capital*, vol. I, pp. 738–739.
94. Ibid., pp. 739–741.

95. Ibid., pp. 742–743.
96. See H. Kaye, *The British Marxist Historians* (Cambridge: Polity Press, 1984); G.S. Jones, 'Anglo-Marxism, Neo-Marxism and the Discursive Approach to History', in A. Lüdtke (ed.), *Was bleibt von marxistischen Perspektiven in der Geschichtsforschung?* (Göttingen: Wallstein, 1997), pp. 148–209; G. Himmelfarb, *The New History and the Old* (Cambridge MA: Belknap Press, 1987), pp. 70ff. See also the recent assessment from the British Academy: *Marxist History-writing for the Twenty-first Century*, ed. by C. Wickham (Oxford: Oxford University Press, 2007).
97. Cf. J. Hatcher and M. Bailey, *Modelling the Middle Ages: The History and Theory of England's Economic Development* (Oxford: Oxford University Press, 2001), pp. 76–77, 98ff.
98. Trinity College Archives, Cambridge (TCA), Dobb DB 3, *The Social Distress Attending the Industrial Revolution and its Connections with Power Machinery*.
99. Ibid., f. 10.
100. Ibid., ff. 10–11.
101. Ibid., ff. 11–12.
102. Ibid., ff. 12–13.
103. Ibid., f. 13.
104. Ibid., ff. 13–14.
105. Ibid., ff. 14–15.
106. Ibid., f. 15.
107. Ibid., ff. 15–16.
108. Ibid., f. 16.
109. Indeed he seems to contradict himself when, in order to show how unemployment during the Industrial Revolution was not a frictional or transitory phenomenon, he argues that in certain areas descent into poverty preceded the introduction of machines. Ibid., ff. 17–18.
110. TCA, Dobb DD 21.
111. M. Dobb, *Studies in the Development of Capitalism* (London: Routledge, 1946).
112. TCA, Dobb DD 21, f. 1.
113. Ibid.
114. Ibid., f. 2.
115. Ibid.
116. Ibid., f. 4.
117. Ibid., f. 5.
118. F. Mendels, 'Proto-Industrialization: The First Phase of the Industrialization Process', *Journal of Economic History*, 32.1 (1972), pp. 241–261; D. Levine, *Family Formation in an Age of Nascent Capitalism* (New York: Academic Press, 1977); P. Kriedte, H. Medick and J. Schlumbohm, *Industrialization before Industrialization: Rural Industry in the Genesis of Capitalism* (Cambridge: Cambridge University Press, 1981). A more recent synthesis is to be found in R.S. Duplessis, *Transitions to Capitalism in Early Modern Europe* (Cambridge: Cambridge University Press, 1997).
119. TCA, Dobb DD 21, f. 5.
120. Ibid., ff. 6–10.
121. A concept that would later be developed, giving rise in the 1950s and 1960s to a debate on the so-called 'general crisis' of the seventeenth century, carried out by E. Hobsbawm, H. Trevor-Roper and others in the pages of *Past and*

*Present*. See T. Aston (ed.), *Crisis in Europe 1560–1660: Essays from Past and Present* (London: Routledge & Kegan Paul, 1965). For a recent re-examination of the subject within a wider and more diversified historiographical framework see G. Parker (ed.), *The General Crisis of the Seventeenth Century* (London: Routledge, 1997).

122. TCA, Dobb DD 21, f. 9.
123. See the collection edited by R. Hilton, *The Transition from Feudalism to Capitalism* (London: New Left Books, 1976). Belonging to the same period are I. Wallerstein, *The Modern World-System* (New York and San Diego: Academic Press, 1974–1989); and A.G. Frank, *World Accumulation 1492–1789* (New York: Monthly Review Press, 1978).
124. R. Brenner, 'The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism', *New Left Review*, no. 104, July–August 1977, pp. 25–92; T.H. Aston and C.H.E. Philpin (eds), *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe* (Cambridge: Cambridge University Press, 1987).
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## 6 The Atlantic reaction

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18. King's College Archives (KCA), The Keynes Papers (JMK), EJ 6/4/8ff.
19. KCA, JMK, EJ 6/4/10.
20. KCA, JMK, EJ 6/4/11–12.
21. Keynes, 'Alfred Marshall 1842–1924', p. 313.
22. KCA, JMK, EJ 6/4/14–15.
23. KCA, JMK, EJ 6/4/9.
24. KCA, JMK, EJ 6/4/30–31. This general attitude does not contrast with the religious sentiment that Marshall had rediscovered in the final years of his life, once the subtleties of theology had been put aside (ibid., EJ 6/4/34). The problems posed by evolutionism weighed heavily on the way the author experienced the relationship between faith and reason, which he tended to interpret cosmically as well as, finally, by physical relativity, that had thrown the very concept of time into crisis (ibid., EJ 6/4/31–33). After all, the Victorian epoch had been dominated by doubt, as is remarked by T.R Wright, *The Religion of Humanity: The Impact of Comtean Positivism on Victorian Britain* (Cambridge: Cambridge University Press, 1986).
25. KCA, JMK, EJ 6/4/33. The episode relates to 25.12.1923.
26. Marshall Library of Economics, Cambridge (MLE), Marshall 5/5/3, undated manuscript.
27. Ibid., f. 21.
28. Ibid.
29. Ibid., ff. 22–23.
30. Ibid., ff. 21–22.
31. This identification between morality and progress is also endorsed in his last years of life. Cf. KCA, JMK, EJ 6/4/31–32. It is no accident that at the moment of his death, what Marshall was working on, and never finished, had to do with progress (Keynes, 'Alfred Marshall 1842–1924', p. 372).
32. MLE, Marshall 5/5/3, f. 22.
33. Marshall and Paley, *The Economics of Industry*, p. 13.
34. Ibid., pp. 13, 14.
35. Ibid., p. 15.
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39. Marshall and Paley, *The Economics of Industry*, pp. 37–38.
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41. Marshall and Paley, *The Economics of Industry*, p. 38.
42. See also MLE, Marshall, 4/7: 'Capital, accumulation of', ff. 2–3.
43. Marshall and Paley, *The Economics of Industry*, p. 39. See also p. 12.
44. MLE, Marshall 4/7, 'Capital, accumulation of', f. 3.
45. Marshall and Paley, *The Economics of Industry*, p. 40.
46. Ibid.
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56. See C.A. Barker, *Henry George* (Oxford: Oxford University Press, 1955); M. Gaffney, 'Alfred Russel Wallace's Campaign to Nationalize Land: How Darwin's Peer Learned from John Stuart Mill and became Henry George's Ally', *The American Journal of Economics and Sociology*, 56.4 (1997), pp. 609–615 and, more generally, the journal's special issue.
57. Walker, 'Socialism', p. 117.
58. Ibid., pp. 115–116, 118–119. Cf. also Id., 'Henry George's Social Fallacies', *The North American Review*, 137 (1883), August, pp. 147–158.
59. S. Newcomb, 'The Labor Question', *The North American Review*, 111 (1870), July, p. 150.
60. Ibid., pp. 135–137.
61. Ibid., p. 145.
62. See: J.B. Clark, 'How to Deal with Communism', *New Englander and Yale Review*, 37 (1878), July, pp. 533–543; Id., 'The Nature and Progress of True Socialism', *New Englander and Yale Review*, 38 (1879), July, pp. 565–582.
63. Clark, 'How to Deal with Communism', p. 535.
64. Ibid., p. 540.
65. Ibid.
66. See: R.C. Bannister, *Social Darwinism: Science and Myth in Anglo-American Social Thought* (Philadelphia: Temple University Press, 1989); C.N. Degler,

*In Search of Human Nature: The Decline and Revival of Darwinism in American Social Thought* (Oxford: Oxford University Press, 1992); M. Hawkins, *Social Darwinism in European and American Thought 1860–1945: Nature as Model and Nature as Threat* (Cambridge: Cambridge University Press, 1997), especially ch. 5.

67. R.C. Bannister, *Foreword* to *On Liberty, Society, and Politics: The Essential Essays of William Graham Sumner* (Indianapolis: Liberty Fund, 1992), pp. ixff.
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80. Ibid., pp. 2–3. Concerning the entrepreneur Clark explains: 'The function in itself includes no working and no owning of capital: it consists entirely in the establishing and maintaining of efficient relations between the agents of production' (ibid., p. 3).
81. Ibid.
82. Ibid., p. 7.
83. Ibid., p. 4.
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85. Clark, *The Distribution of Wealth*, pp. 203–204.

86. P.H. Wicksteed, *An Essay on the Co-Ordination of the Laws of Distribution* (London: LSE, 1932 [1894]); see also A.W. Flux's review in the *Economic Journal*, 4 (1894), June, pp. 305–313. Ten years earlier, Wicksteed had written in the columns of *Today* a polemical article against Marx: '*Das Kapital*: A Criticism' [1884], repr. in *Karl Marx: Critical Responses*, ed. by R. Marchionatti (London: Routledge, 1998), vol. I, pp. 218–231.
87. A function $Y = f(K, L)$ is homogeneous of degree 1 (or linearly homogeneous, or characterized by constant returns to scale) if $\alpha f(K, L) = f(\alpha K, \alpha L)$, where $\alpha$ is a scalar. Euler's Theorem establishes that a homogeneous function of degree $r$ can be thus broken down, in terms of its own partial derivatives: $Y(K, L) = \frac{1}{r}\left[\frac{\partial Y}{\partial K}K + \frac{\partial Y}{\partial L}L\right]$. Now, if $r = 1$, it is clear that $Y$ will be equal to the sum of the partial derivatives: $Y'_K = \partial Y/\partial K$ and $Y'_L = \partial Y/\partial L$ multiplied by the respective arguments. If we call $Y$ 'output', $K$ 'capital', $L$ 'labour' and the two derivatives 'capital productivity' and 'labour productivity', the economic significance of the equation is immediate: the whole output is exhausted by interest ($Y'_K K$) and wages ($Y'_L L$), whose rates coincide with the above-said productivity rates.
88. L. Blanc, *Organisation du travail* (Paris: Inalf, 1961 [1839]).
89. Clark, *The Distribution of Wealth*, p. 8.
90. Ibid., p. 9.
91. Ibid., p. v.
92. G.B. Shaw, *The Intelligent Woman's Guide to Socialism and Capitalism* (London: Constable, 1928), p. 21.
93. F.H. Knight, 'The Ethics of Competition', *Quarterly Journal of Economics*, 37.4 (1923), p. 598.
94. Ibid., pp. 591, 593.
95. J.B. Clark, *Essentials of Economic Theory* (New York: Kelley, 1968 [1907]).
96. T. Veblen, 'Professor Clark's Economics', *Quarterly Journal of Economics*, 22.2 (1908), pp. 147–195.
97. Ibid., p. 172.
98. See G. Forges Davanzati, *Ethical Codes and Income Distribution: A Study of John Bates Clark and Thorstein Veblen* (London: Routledge, 2006).
99. Clark, *The Distribution of Wealth*, p. 25.
100. Ibid., p. 52.
101. Ibid., p. 53.
102. Ibid., p. 120.
103. Ibid., p. 123.
104. Ibid., p. 125.
105. Ibid., p. 142.
106. Ibid., p. 145.
107. See Clark, *Essentials of Economic Theory*, ch. 20.

## 7 The Continent, 1870–1938

1. S. Fenoaltea's 'liberalist' re-interpretation in *L'economia italiana dall'Unità alla Grande Guerra* (Rome and Bari: Laterza, 2006), according to which the performance of the Italian economy was largely unrelated to the economic policies of the governments, does not seem convincing.

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3. W. Sombart, *A New Social Philosophy* (Princeton: Princeton University Press, 1937 [1934]), p. 77.
4. A. Gerschenkron, *Economic Backwardness in Historical Perspective: A Book of Essays* (Cambridge MA: Belknap Press, 1962).
5. F.A. Hayek, *The Road to Serfdom* (London: Routledge & Kegan Paul, 1976 [1944]), p. 125.
6. For example, G. Schmoller, *Grundriss der allgemeinen Wolkswirtschaftslehre*, vol. II (Leipzig: Duncker & Humblot, 1904), p. 204.
7. Ibid., p. 179. For the concept of the entrepreneur as being peculiar to the Continent, see G. Berta, *L'imprenditore: un enigma tra economia e storia* (Venice: Marsilio, 2004), especially pp. 47ff.
8. Cf. E. Kauder, 'Intellectual and Political Roots of the Older Austrian School', *Zeitschrift für Nationalökonomie*, 17.4 (1957), pp. 411–425; M.N. Rothbard, 'New Light on the Prehistory of the Austrian School', in E.G. Dolan (ed.), *The Foundations of Modern Austrian Economics* (Kansas City: Sheed and Ward, 1976), pp. 52–74; A.M. Diamond, 'The Austrian Economists and the Late Hapsburg Viennese Milieu', *Review of Austrian Economics*, 2.1 (1988), pp. 157–172.
9. See K. Hennings, *The Austrian Theory of Value and Capital: Studies in the Life and Work of Eugen Böhm-Bawerk*, ed. by H. Kurz (Cheltenham: Elgar, 1997), ch. 2.
10. The following edition is being used: E. Böhm-Bawerk, *Capital and Interest* (South Holland IL: Libertarian Press, 1959); vol. I: *History and Critique of Interest Theories* [1884]; vol. II, *Positive Theory of Capital* [1889].
11. It is obvious that the first edition of *Geschichte* was limited to investigating only one volume of *Capital* (the 1867 one).
12. E. Böhm-Bawerk, *Karl Marx and the Close of His System*, ed. with an introd. by P.M. Sweezy (Clifton NJ: Kelley, 1973), pp. 64ff.
13. Böhm-Bawerk, *History and Critique of Interest Theories*, chs 7–10, 12.
14. C. Menger, *Principles of Economics* (New York: New York University Press, 1981 [1871]), p. 155.
15. C. Menger, 'Zur Theorie des Kapitals', *Jahrbücher für Nationalökonomie und Statistik*, 17 (1888), pp. 1–49; here the more widely available (though abridged) French version is referred to: 'Contribution à la théorie du capital', *Revue d'économie politique*, 2 (1888), pp. 577–594.
16. Ibid., pp. 589, 592.
17. Ibid., p. 593.
18. Ibid., p. 594.
19. Böhm-Bawerk, *Positive Theory of Capital*, pp. 32–33.
20. Ibid., pp. 259ff.
21. Ibid., pp. 290ff.
22. J.A. Schumpeter, *The Theory of Economic Development* (Cambridge MA: Harvard University Press, 1934 [1911]).
23. L. Walras, *Eléments d'économie politique pure, ou théorie de la richesse sociale* [1874], in *Oeuvres économiques complètes d'Auguste et Léon Walras*, ed. by P. Dockès, vol. VIII (Paris: Economica, 1988).
24. Böhm-Bawerk, *Positive Theory of Capital*, p. 299, emphasis added.
25. Ibid.

26. Ibid., p. 302.
27. Ibid., p. 300.
28. Ibid., p. 301.
29. Ibid., p. 302.
30. Ibid., pp. 303, 325ff.
31. I. Fisher, *The Nature of Capital and Income* (New York: Macmillan, 1906); Id., *The Rate of Interest* (New York: Macmillan, 1907); Id., *The Theory of Interest* (New York: Macmillan, 1930).
32. K. Wicksell, *Über Wert, Kapital, und Rente* (Jena: Fischer, 1893); Id., *Lectures on Political Economy*, vol. I, *General Theory* (Kelley: New York, 1967 [1901]), pp. 172ff.; Id., 'Böhm-Bawerk's Theory of Capital' [1911], in his *Selected Papers on Economic Theory*, ed. by E. Lindahl (Cambridge MA: Harvard University Press, 1958), pp. 176–185.
33. Schmoller, *Grundriss der allgemeinen Wolkswirtschaftslehre*, vol. II, p. 179.
34. Cf. K. Knies, *Allgemeine (theoretische) Volkswirtschaftslehre* [1886], ed. by T. Mizobata and H.-E. Caspary, *The Kyoto University Economic Review*, 69.1–2 (2000), ch. 20.
35. Schmoller, *Grundriss der allgemeinen Wolkswirtschaftslehre*, vol. II, pp. 186ff., 216ff.
36. Ibid., p. 185.
37. Ibid.
38. W. Sombart, 'Zur Kritik des ökonomischen Systems von Karl Marx', *Archiv für soziale Gesetzgebung und Statistik*, 7.4 (1894), pp. 555–594.
39. F. Engels, 'Supplement to *Capital*, Volume Three' [1895], in K. Marx, *Capital*, vol. III [1884], in C*ollected Works*, vol. 37 (London: Lawrence & Wishart, 1998), p. 881.
40. Böhm-Bawerk, *Karl Marx and the Close of His System*, pp. 102ff.
41. A. Cavalli, *Introduzione* to W. Sombart, *Il capitalismo moderno* (Turin: UTET, 1967), p. 16.
42. W. Sombart, *Der Bourgeois. Zur Geistesgeschichte des modernen Wirtschaftsmenschen* (Munich and Leipzig: Duncker & Humblot, 1923 [1913]), p. 13.
43. Quoted in ibid.
44. Ibid., pp. 16–17. Sombart takes this curious list of 'means for making money' from Alberti: '1. seeking treasure; 2. looking for inheritances, to which he says ''not a few'' were addicted; 3. patronage: become the favourite of some rich bourgeois, in the hope of obtaining some of his wealth; 4. usury (money-lending); 5. hiring out herds, beasts of burden, etc. What an extraordinary assortment! No less strange appears to be another list of favourite methods of gain, which come to us from the seventeenth century. According to this source there are three good ways to gain wealth: 1. service at court; 2. service in war; 3. alchemy. A close study of those centuries teaches us that these men had made correct observations. All the means of gain that have been listed were actually in vogue and in the judgement of anyone desiring wealth were often more important than trade, crafts and agriculture' (ibid., pp. 44–45).
45. Sombart, *Der Bourgeois*, p. 20.
46. Ibid., p. 34.
47. Ibid., p. 35.
48. Ibid., pp. 43, 62ff.

49. Ibid., pp. 39ff.
50. Ibid., pp. 60, 131–132. For a closer investigation see Id., *Der moderne Kapitalismus*, *Dritte Auflage*, vol. I.ii (Munich and Leipzig: Dunker & Humblot, 1919), pp. 896ff., and especially, *Die Juden und das Wirtschaftsleben* (Leipzig: Duncker & Humblot, 1911).
51. Sombart, *Der Bourgeois*, p. 179.
52. Ibid., pp. 183–184.
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54. O. Spengler, *Der Untergang des Abendlandes. Umrisse einer Morphologie der Weltgeschichte* (Munich: DTV, 2006 [1918–1922]).
55. Sombart, *A New Social Philosophy*, p. 13.
56. Ibid., p. 14.
57. Ibid., pp. 14–15.
58. Hayek, *The Road to Serfdom*, pp. 125–126.
59. Cavalli, *Introduzione*, pp. 19–20.
60. Sombart, *A New Social Philosophy*, p. 24.
61. Ibid., p. 79.
62. Ibid., p. 146.
63. Ibid., pp. 147–148.
64. W. Sombart, *Händler und Helden: patriotische Besinnungen* (Munich and Leipzig: Duncker & Humblot, 1915).
65. Sombart, *A New Social Philosophy*, p. 146.
66. Ibid., p. 149. I have corrected the American edition with its erroneous translation of the expression 'noch mehr aber die [Ideenwelt] des Liberalismus' of the original text; cf. W. Sombart, *Deutscher Sozialismus* (Berlin: Buchholz & Weisswange, 1934), p. 164.
67. Sombart, *A New Social Philosophy*, pp. 157ff.
68. C. Schmitt, *Der Leviathan in der Staatslehre des Thomas Hobbes: Sinn und Fehlschlag eines politischen Symbols* (Stuttgart: Klett-Cotta, 1995 [1938]).
69. R. Faucci, *L'economia politica in Italia: dal Cinquecento ai nostri giorni* (Turin: UTET, 2000), pp. 221–224. See also G. Tusset, *La teoria dinamica nel pensiero economico italiano 1890–1940* (Florence: Polistampa, 2004).
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72. G. Del Vecchio, *Lezioni di economia applicata*, vol. I, *Dinamica economica* (Padua: CEDAM, 1933), p. 39.
73. Ibid., p. 398.
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82. Cf. Engels, 'Supplement to *Capital*, Volume Three', pp. 876–877.
83. With regard to his biographical profile see P. Maurandi, *Il caso Graziadei: vita politica e teoria economica di un intellettuale scomodo* (Rome: Carocci, 1999). Several works of Graziadei are collected in *Scritti scelti di economia*, ed. by M. Ridolfi (Turin: UTET, 1969).
84. A. Graziadei, 'Il capitale tecnico e la teoria classico-socialista del valore' [1895], ed. by M. Gallegati, *Quaderni di storia dell'economia politica*, 2 (1983), pp. 147–173.
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87. C. Gide, *Principes d'économie politique* (Paris: L'Harmattan, 2000 [1883]).
88. E. Antonelli, 'Recent Tendencies in French Theoretical Economics', *Journal of Political Economy*, 31.4 (1923), p. 562.
89. For an overall view, see A. Gueslin, *L'invention de l'économie sociale: le XIXe siècle français* (Paris: Economica, 1987).
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92. L. Frobert, *Le travail de François Simiand 1873–1935* (Paris: Economica, 2000); see also L. Gillard and M. Rosier (eds), *François Simiand 1873–1935: sociologie, histoire, économie* (Amsterdam: Editions des Archives Contemporaines, 1996).
93. P. Burke, *The French Historical Revolution: The Annales School 1929–89* (Cambridge: Polity Press, 1990), pp. 16ff.
94. F. Perroux, *Le problème du profit* (Paris: Giard, 1926). In it, Perroux concluded that Marxian theory had 'the important merit of making one think'. But, whereas the idea of surplus value had 'a true explicative value', its empirical bases were less certain (ibid., pp. 366–367). A study of the facts 'communicates to anyone who has a desire for justice a feeling of uneasiness which, in itself, is not without its use', calling for 'that particular form of intellectual humility which is moderation' (ibid., pp. 544–545).
95. *Quadragesimo anno: Encyclical of Pope Pius XI on Reconstruction of the Social Order* (15 May 1931), paras 7–8.
96. *Rerum novarum: Encyclical of Pope Leo XIII on Capital and Labour* (15 May 1891), para. 2.
97. Ibid., paras 5–7.

98. Ibid., para. 14.
99. Ibid., para. 35.
100. Ibid., paras 36ff.
101. For a general overview of the author see R. Molesti (ed.), *Giuseppe Toniolo: il pensiero e l'opera* (Milan: Angeli, 2005).
102. G. Toniolo, *Trattato di economia sociale*, vol. II, *La produzione* (Florence: Libreria Editrice Fiorentina, 1909), p. 33.
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119. J.A. Hobson, *Imperialism: A Study* (London: Unwin Hyman, 1988 [1902]).
120. R. Luxemburg, *The Accumulation of Capital*, with an introd. by J. Robinson (London: Routledge & Kegan Paul, 1951 [1913]), p. 417.
121. Ibid., p. 402.
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124. Ibid, p. 402: 'The first aim of capitalism is to isolate the producer, to server the community ties which protect him, and the next task is to take the means of production away from the small manufacturer.'
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126. Ibid., p. 417.
127. Cf. the balanced analysis of P. Bairoch, *Victoires et déboires: histoire économique et sociale du monde du XVIe siècle à nos jours* (Paris: Gallimard, 1997), vol. II, pp. 675ff.
128. Regarding the Russian agrarian economist A.V. Chayanov (1888–1939) see his anthology, *The Theory of Peasant Economy*, ed. by D. Thorner, B. Kerblay and R.E.F. Smith (Manchester: Manchester University Press, 1986).
129. See again Bairoch, *Victoires et déboires*, vol. III, pp. 809–814, 855–856.
130. R. Hilferding, *Finance Capital: A Study of the Latest Phase of Capitalist Development*, ed. with an introd. by T. Bottomore (London: Routledge & Kegan Paul, 1981 [1910]), p. 366.
131. Ibid., p. 21.
132. Cf. in particular p. 241.
133. Hilferding, *Finance Capital*, p. 342.

134. V.I. Lenin, *Imperializm, kak vysshaya stadiya kapitalizma (Populyarnyy ocherk)* [1917], in Id., *Polnoe sobranie sochineniy*, vol. 27 (Moscow: Gosudarstvennoe izdatel'stvo politicheskoy literatury, 1962); P.A. Baran and P.M. Sweezy, *Monopoly Capital: An Essay on the American Economic and Social Order* (New York: Monthly Review Press, 1966).
135. J.A. Schumpeter, 'Zur Soziologie der Imperialismen', *Archiv für Sozialwissenschaft und Sozialpolitik*, 46 (1918/1919), pp. 1–39, 275–310; Id., *Capitalism, Socialism and Democracy* (London: Unwin Paperbacks, 1987 [1942]).
136. N.I. Bucharin, *Imperializm i nakoplenie kapitala* (Moscow: Gosudarstvennoe izd-vo, 1928 [1924–1925]).

## 8 Keynes and after: crisis and continuity

1. See, for example, G. Garofalo and A. Graziani (eds), *La formazione degli economisti in Italia 1950–1975* (Bologna: Il Mulino, 2004).
2. Since it first appeared in 1948, Samuelson's textbook has seen an average of a new edition every three years; the most recent is P.A. Samuelson and W.D. Nordhaus, *Economics*, 18th edn (New York: McGraw-Hill, 2004).
3. N.F.R. Crafts, 'Long-Run Growth', in R. Floud and P. Johnson (eds), *The Cambridge Economic History of Modern Britain*, vol. II, *Economic Maturity 1860–1939* (Cambridge: Cambridge University Press, 2004) pp. 2–5. Other structural factors are investigated, but need to be accepted with caution, by S.N. Broadberry, *The Productivity Race: British Manufacturing in International Perspective 1850–1990* (Cambridge: Cambridge University Press, 1997).
4. Crafts, 'Long-Run Growth'.
5. J.M. Keynes, *Economic Possibilities for Our Grandchildren* [1930], in *The Collected Writings of John Maynard Keynes*, ed. by A. Robinson and D.E. Moggridge (London: Macmillan, 1971–1989), vol. IX, *Essays in Persuasion*, p. 321.
6. An excellent account of these questions is given in B.W.E. Alford, *Britain in the World Economy Since 1880* (London: Longman, 1996), chs 6–10.
7. D. Aldcroft, *From Versailles to Wall Street 1919–1929* (London: Allen Lane, 1977); B. Eichengreen, *Golden Fetters: The Gold Standard and the Great Depression 1919–1939* (Oxford: Oxford University Press, 1996); C. Feinstein, P. Temin and G. Toniolo, *The European Economy Between the Wars* (Oxford: Oxford University Press, 1997).
8. M. Kitson, 'Failure Followed by Success or Success Followed by Failure? A Re-Examination of British Economic Growth Since 1949', in Floud and Johnson (eds), *The Cambridge Economic History of Modern Britain*, vol. III, *Structural Change and Growth 1939–2000* (Cambridge: Cambridge University Press, 2004), pp. 27–56; for the general picture see H. van der Wee, *Prosperity and Upheaval: The World Economy 1945–1980* (Berkeley: University of California Press, 1986).
9. J.M. Keynes, *A Tract on Monetary Reform* [1923], in *Collected Writings*, vol. IV, p. 65. Emphasis omitted.
10. This point will be developed further on. For a precise reconstruction of the problems of economic policy see T.W. Hutchison, *Economics and Economic*

*Policy in Britain 1946–1966: Some Aspects of Their Interrelations* (Aldershot: Gregg Revivals, 1992).

11. Cf. J. Robinson, 'The Generalisation of the General Theory' [1952], in *The Generalisation of the General Theory and Other Essays* (London: Macmillan, 1979), pp. 1–76.
12. In particular, see A. Marwick, *British Society Since 1945* (Harmondsworth: Penguin, 1982); A. Offer, *The Challenge of Affluence: Self-Control and Well-Being in the United States and Britain since 1950* (Oxford: Oxford University Press, 2006).
13. King's College Archives (KCA), The Joan Robinson Papers (JVR), 2/27, 'Capital and Aid to Development', undated ms. (post-1974).
14. J.M. Keynes, *The Economic Consequences of the Peace* [1919], in *Collected Writings*, vol. II, p. 11.
15. Ibid.
16. Ibid., pp. 11–12.
17. Ibid., p. 12.
18. Ibid.
19. Ibid., p. 13.
20. J.M. Keynes, *The General Theory of Employment, Interest and Money* [1936], in *Collected Writings*, vol. VII, p. 362.
21. Keynes, *The Economic Consequences of the Peace*, p. 13.
22. J.M. Keynes, *A Treatise on Money* [1930], vol. 2, in *Collected Writings*, vol. VI, p. 132.
23. Keynes, *The General Theory*, p. 351.
24. Keynes, *A Treatise on Money*, vol. 2, p. 132.
25. Ibid., p. 133.
26. Ibid., p. 134.
27. Ibid., pp. 134ff.
28. Keynes, *The General Theory*, p. 358.
29. Ibid., p. 359.
30. Quoted in ibid., p. 361.
31. Ibid., p. 363.
32. G.E. Moore, *Principia Ethica* (Cambridge: Cambridge University Press, 1993 [1903]).
33. R. Skidelsky, *John Maynard Keynes*, vol. I, *Hopes Betrayed 1883–1920* (London: Macmillan, 1983), p. 140.
34. J.M. Keynes, *My Early Beliefs* [1938], in *Collected Writings*, vol. X, *Essays in Biography*, p. 436. Here is how Keynes recalled the intimacy of the meetings of the Apostles with Moore and his bizarre way of philosophizing: 'Moore at this time was a master of this method – greeting one's remarks with a gasp of incredulity – *Do* you *really* think *that*, an expression of face as if to hear such a thing said reduced him to a state of wonder verging on imbecility, with his mouth wide open and wagging his head in the negative so violently that his hair shook. *Oh!* he would say, goggling at you as if either you or he must be mad; and no reply was possible' (ibid., p. 438).
35. With regard to the impact of this conception on Keynes see Skidelsky, *John Maynard Keynes*, vol. I, ch. 6. On p. 125 Skidelsky recalls what A.C. Pigou wrote about the young Keynes in 1904: 'never in his presence shall

confusions between ''good as means'' and ''good as end'' pass without challenge'.
36. Keynes, *My Early Beliefs*, pp. 445–446.
37. Ibid., p. 442.
38. Skidelsky, *John Maynard Keynes*, vol. I, pp. 135, 138. Keynes notes, 'Socrates had persuaded Protarchus that pure hedonism was absurd. Moore himself was only prepared to accept pleasure as enhancement of a state of affairs otherwise good. But Moore hated evil and he found a place in his religion for vindictive punishment' (*My Early Beliefs*, pp. 441–442).
39. Keynes, *My Early Beliefs*, p. 446.
40. Ibid., pp. 436, 446.
41. Skidelsky, *John Maynard Keynes*, vol. I, p. 134.
42. Keynes, *My Early Beliefs*, p. 446.
43. Ibid., p. 436.
44. Keynes, *Economic Possibilities for Our Grandchildren*, p. 329.
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48. KCA, JMK/PP/45/126, J.M. Keynes to Sir Cornelius Gregg, 9 April 1946; the reference to the 'jesuitical attempts' can be found in the *General Theory*, p. 351. Cf. H. Somerville, 'Interest and Usury in a New Light', *Economic Journal*, 41.4 (1931), p. 649; and Dempsey's harsh criticism, *Interest and Usury*, p. 220. It was no accident that Dempsey was a Jesuit.
49. Keynes, *Economic Possibilities for Our Grandchildren*, p. 331.
50. Ibid.
51. Ibid., p. 330.
52. J. Robinson, *The Accumulation of Capital* (London: Macmillan, 1986 [1956]), p. v.
53. Ibid.
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55. KCA, JVR/7/194, F.A. Hayek to J. Robinson, 24 March 1941, f.11r.
56. J. Robinson, 'Marx on Unemployment', *Economic Journal*, 51.2–3 (1941), p. 234.
57. Ibid.
58. Robinson, *The Accumulation of Capital*, p. 3.
59. Ibid.
60. Ibid., pp. 3–4.
61. Ibid., pp. 5–6.
62. Ibid., pp. 7–8. On this question compare the observations already made by R. Hilferding, *Finance Capital: A Study of the Latest Phase of Capitalist Development*, ed. with an introd. by T. Bottomore (London: Routledge & Kegan Paul, 1981 [1910]), p. 107.
63. Robinson, *The Accumulation of Capital*, p. 11.
64. J. Robinson, 'Morality and Economics', in *Collected Economic Papers*, vol. V (Oxford: Blackwell, 1979), pp. 43–47.
65. Robinson, *The Accumulation of Capital*, pp. 33–34.
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71. E. Screpanti and S. Zamagni, *An Outline of the History of Economic Thought* (Oxford: Clarendon Press, 1993), p. 307.
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73. J. Robinson, 'The Production Function and the Theory of Capital', *Review of Economic Studies*, 21.2 (1953–1954), p. 81.
74. P. Sraffa to J. Robinson, 27 October 1936, quoted in J.E. King, *A History of Post Keynesian Economics Since 1936* (Cheltenham: Elgar, 2002), pp. 80–81.
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77. King, *A History of Post Keynesian Economics*, p. 93.
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82. J. Robinson, 'The Measure of Capital: The End of the Controversy', *Economic Journal*, 81.3 (1971), pp. 597–602.
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87. J. Hicks, *Capital and Time: A Neo-Austrian Theory* (Oxford: Clarendon Press, 1973).
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