Oxford University Press, Amen House, London E.C.4
GLASGOW NEW YORK TORONTO MELBOURNE WELLINGTON
BOMBAY CALCUTTA MADRAS KARACHI CAPE TOWN IBADAN
Geoffrey Cumberlege, Publisher to the University

A REVIEW OF Economic Doctrines 1870-1929

BY

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OXFORD
AT THE CLARENDON PRESS
1953

To trace the affiliation of ideas in the progress of science is calculated to correct one's estimates of authority. . . . The history of theory is particularly instructive in political economy.

F. Y. EDGEWORTH

A study of the history of opinion is a necessary preliminary to the emancipation of the mind.

LORD KEYNES

PRINTED IN GREAT BRITAIN

PREFACE

THE composition of this book has posed rather severe problems of selection and arrangement. The table of contents gives in outline my attempted solution, but there are one or two explanations I should like to add. First, as to the different principles of arrangement adopted in Part I (by individual economists and schools) as compared with Part II (by the different main branches of economic theory). In Part I the work has been taken separately of each of the leading economists at the close of the nineteenth century. The majority and the most important of these economists constructed unified comprehensive systems of economic principles, which, in many cases, they elaborated through a number of writings and over long lives of intellectual achievement. There are clearly great advantages in considering each of these systems of thought, with its origins and subsequent developments, separately and as a whole. It is possible to put the close of this part of our survey as lying in the decade before the First World War. The fifth edition (approximately the final version) of Marshall's *Principles* appeared in 1907; Wicksteed's *Common Sense of Political Economy* in 1910; Pareto's *Manuale* and *Manuel* in 1907 and 1909; Wieser's *Theorie des Gesellschaftlichen Wirtschaft* in 1913; and various editions of Wicksell's *Lectures* throughout this decade. I expect that a number of readers will wish to study this period without going through all of the seventeen chapters which I devote to it. Though I hope that each will make his own selection, I would suggest that the following nine chapters will cover the most important and representative parts of the ground: Ch. 1 on Political Economy in England; Ch. 2 on Jevons; Ch. 4 on Marshall; Ch. 8 on German Political Economy; Ch. 9 on Menger; and Chs. 13–16 on Walras, Pareto, Wicksell, and J. B. Clark.

In the second part of the book, covering a period when the comprehensive treatise was no longer the main vehicle of progress in the subject, which had tended to break up and undergo its development in specialized branches, we have taken one by one the main divisions of economic theory and have attempted a severely selective survey of some of the leading writings, with the intention of tracing the main thread of internal logical development in each branch. We have called this part, which is more compressed and unified than Part I, 'From Static to Dynamic Analysis', not because there was some steady trend from the cultivation of purely 'static' analysis in 1870 to a mainly, or

much more, 'dynamic' analysis at the end of the period. There was, of course, no such simple regular development. But the working out after 1870 of micro-economic maximization analysis, often mathematically formulated, and of the self-equilibrating dynamics that went with it, was accompanied by a more deliberate and rigorous process of abstraction on static and stationary assumptions. As the full rigour of these assumptions was gradually realized, or more or less deliberately imposed, it became more obvious how many problems of the real world would require a systematic 'dynamic' analysis to replace the simplifying assumptions of general and partial self-equilibration, which had been employed to supplement the static maximization formulae. A very great deal of the controversy of the period, in all branches, centred around this difficult process of clarifying the significance of 'static' and 'dynamic' analysis, and the transition from the one to the other.

Part III on the 'Economics of Instability and Disturbance' is about theories of crises and cycles. This subject could not be treated like the subjects in Part II, because the story of trade cycle theories could not consist of a summary of the main doctrines of the leading neo-classical authors, continued by an account of the more important later writings on the subject. The majority of the leading economists discussed in Part I either hardly wrote at all on crises and cycles (e.g. Sidgwick, Wicksteed, Edgeworth, Menger, Wieser, Böhm-Bawerk, Walras, and J. B. Clark) or else only contributed chapters of comparatively minor scope (e.g. Marshall and Pareto). Even Wicksell's *Interest and Prices* is not primarily concerned with cyclical fluctuations. Jevons here is a leading exception, and Hobson an exception the treatment of whose ideas proves the rule. Fisher's and Cassel's works on the trade cycle came in the second half of our period. Many, or most, of the important earlier contributors, before about 1910, to the problems of crises and cycles, were outside the main group of the architects of neo-classical 'marginal' economics: for example, Juglar, Tugan-Baranovsky, Spiethoff, Aftalion, Johannsen, and Mitchell. However, from the start of the century, and especially after 1919, this subject gradually absorbed more and more attention by economists of all schools of thought. In Britain in the 1920's it was inevitably examined in close connexion with the new problem of chronic unemployment. It is with the state of British economic opinion in 1929 on this problem of the causes and cure of unemployment that we end our survey.

As regards the branches of the subject to be included or omitted, the main problem has been how far to accommodate theories of money and credit. We have included theories of money in so far as they have been closely integrated parts of the general theory of a monetary economy, but more specialized doctrines of money, credit, and banking have been omitted, as have theories of international trade and the foreign exchanges. We have especially tried to review the thought and doctrines of the leading economists on the principles of economic policy and on the role of the State in economic life. But discussion of the particular problems of applied economics which arose in our period (for example, bimetallism, tariff reform, the capital levy, and reparations) has been left out. An exception has been made in the last chapter on the problem of unemployment in Britain, a special problem which eventually had such profound effects on general theory.

We are not attempting in this book, and certainly not relying on, any comprehensive generalizations about the economic thought of our period, or the construction of any general interpretation of it in terms of contemporary economic events, or in other terms. This is not out of any great confidence in the common liberal-professional assumption that intellectual progress in a particular subject arises simply out of professional intellectual ingenuity working purely on its own particular subject-matter as though in a vacuum. Over the later part of our period there may be wide scope for the economic, or other, interpretation of economists in respect especially of theories of money, monetary economics, and unemployment. But particularly in the earlier part of our period the development of economics as an academic specialism coincided with a period of *comparatively* stable politico-economic development in the Western world, during which economic reality did not force itself *too* brusquely or strikingly on the more detached student. At the same time there had been discovered in 1871 a principle capable of much precise and abstract mathematical elaboration, and of a considerable range of applications. This principle was, of course, that of the maximizing individual acting in the conditions in which succinct formulae for compatible maximization by a number of parties can be deduced, that is, conditions of perfect competition or isolated monopoly. Therefore, over several of the decades with which we are here concerned, the 'internal' logical requirements of economic theory exercised—for better or for worse—a predominant directing influence comparatively more immediate than the problems of the contemporary economic world. This was the case to a much greater extent than in much of the previous history of the subject. At any rate, the development of 'marginal' economics consisted mainly in the logical

elaboration and application to successive branches of the subject, of one or two fundamental concepts or assumptions. On the other hand, the subsequent development of the theory of crises, trade cycles, and aggregate employment and unemployment, had a certain broad and obvious relation to world economic events.

In so far as we attempt any interpretation 'external' to, or in addition to, the 'internal' logical development of the central problems themselves, we do so individually (or 'micro-historically') in terms of the particular intellectual biographies of the leading great economists. In this way we have tried, on the one hand, to capture, for its own sake, something of what Edgeworth referred to as 'the interest which attaches to the working of great minds', and also to show, where possible, some of the particular external influences of contemporary thought and philosophy, and of topical economic problems, which helped to shape and direct economic ideas at particular points.

We would, however, mention here one very broad generalization about the background of economic history which is implied in the transition from the 'equilibrium' economics of our first part to the economics of instability and disturbance discussed in Part III. Today any priority given to static and 'stationary-dynamic' analysis is usually defended heuristically or propaedeutically. Analysis of the stationary state is pursued as a highly simplified exercise, useful perhaps as what is described as 'a first approximation'. This was also to some extent the contention of the neo-classical equilibrium economists, and in any case their loose, normal quasi-stationary models were not understood or employed with the same extreme mathematical precision as subsequent more rigorous analysis imparted to them. This meant that though they were vested with a certain degree of ambiguity, they were not necessarily so thoroughly stripped of realistic content. But our point is that these static or 'stationary' self-adjusting models had a far greater realistic justification when compared with the economic life of the last quarter of the nineteenth century than they can have today.

The world which economists were then living in, and which they set out to explain, was one in which the dangerous adjective 'normal' still had some considerable immediate significance in economic life. The economic life which they set out to explain was, in fact, by no means so impossibly remote from their looser quasi-stationary models, which were in some genuine sense recognizable as 'first approximations' to it. As A. C. Pigou said in 1939:

> Economists had then grown up in, and their whole experience was confined to, a world which as regards politics and economics alike was reasonably stable. There were of course local political disturbances. There were the ups and downs of the so-called trade cycle, fairly moderate in amplitude. There were also large basic changes going on due to the impact of American and later Antipodean agriculture upon the structure of our economy. But the basic changes were gradual and slow-working. There were no catastrophes. How different is the experience of economists today! (*Economic Journal*, 1939, p. 217.)

Marshall, writing in 1898, had held that there had been a 'perceptible change' towards a lessening in the realism and relevance of the analysis of stationary State since J. S. Mill's day. 'Perceptible' may be the right description for the change from 1848 to 1898, but we can only guess at the adjective Marshall would have applied to the change from 1898 to 1948.

The adequacy of the static and stationary analysis built up by our authors must be judged in the first place by the contemporary conditions it was devised as a 'first approximation' to explain. At the same time we are, of course, today entitled, or rather obliged, to examine its relevance for a world where it is reasonably certain, or can 'normally' be expected, once or twice per decade, that the economic systems of most countries will be going through either acute inflation, open or suppressed, or acute deflation, either wholesale conversion to war, or wholesale reconversion to peace, monetary collapse or monetary reconstruction, prolonged mass unemployment or prolonged over-full employment, extensive rationing or drastic de-rationing, a New Deal or a New Economic Policy, 'Democratic Planning' or a Four-Year or Five-Year Plan.

Having enjoyed or endured so expensive an education in the Economics of Disturbance, Instability, and Insecurity, it would surely be stupid to exploit it in captious criticism of the achievements of those who missed its advantages, or its lessons. On the other hand, conservatively to deny or obscure the great limitations of doctrines formulated for a different sort of world might be even more disastrous practically. In this book we are trying, primarily, simply to expound the economic doctrines of our period with fair accuracy, in the way and often in the words of their originators. But in trying to expound a doctrine we must indicate some of its implicit as well as its explicit assumptions, and therefore, to some extent, we define its applicability and suggest a judgement on its significance. Applicability and significance, however, also depend on the economic world for which the doctrine is being

formulated and applied. Therefore, some effort of the imagination must constantly be made not to forget that much of what may today seem to betray a lack of realism in what economists in, say, 1890 took as their 'normal' model, is due simply to the immense differences in the economic world with which they were confronted, as contrasted with that of our own day.

My debts to other writers are very numerous though in the main very widely scattered. I must especially acknowledge the very valuable help in a number of chapters in Part I which I have had from Professor G. J. Stigler's distinguished work, *Production and Distribution Theories, the Formative Period.* I must also mention here my indebtedness to the essays of Schumpeter (now collected in the volume *Ten Great Economists*), and to some of Keynes's *Essays in Biography.* Professor Marget's book, *The Theory of Prices*, is a vast mine of learning on which I have drawn particularly in Chapter 21. Finally, I am most grateful to Professor L. C. Robbins and Professor R. S. Sayers. Professor Robbins read an earlier draft of a considerable part of the book and made many valuable comments and suggestions. Professor Sayers gave valuable aid and encouragement with regard to publication. Of course the usual formula holds good in this case that the author alone is responsible for the contents and shortcomings of the book as it finally stands.

T. W. H.

LONDON
August 1952

ERRATA

p. v line 19: For *des* read *der*
p. 83 line 30: *For* his objection *read* this objection
p. 153 10 lines from bottom: For *Theory of Social Value* read *Theory of Social Economy*
p. 181 footnote: For *de* read *der*
p. 188 16 lines from bottom: For *Wahrungsfrage* read *Währungsfrage*
p. 189 1st line of footnote: For *gesamte* read *gesamten*
p. 222 line 4 of footnote: *For* 1923 *read* 1932
p. 251 line 4: For *Value and Price* read *Value and Prices*
p. 325 line 17: *For* Rosenstein Rodan, on Grenznützen, *read* Rosenstein-Rodan, on Grenznutzen
p. 336 line 5: *For* Stewart *read* Steuart
p. 444 1914: For *Theorie des ges. Wertes* read *Theorie der ges. Wirtschaft*

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THE ECONOMICS OF INSTABILITY AND DISTURBANCE

Part I

THE ARCHITECTS OF EQUILIBRIUM ECONOMICS AND THEIR MAIN CRITICS

1

Political Economy in England after 1870

1. *Prelude: The Centenary of the 'Wealth of Nations'*

ON 31 May 1876 the Political Economy Club of London held 'a grand dinner and a special discussion' (as Jevons described it), in honour of the 100th anniversary of the publication of *The Wealth of Nations*. Mr. Gladstone was in the chair. The company was representative, in the most distinguished way, of politics, learning, the city, the civil service, and the aristocracy (a duke, two earls, &c.), and comprised a social and intellectual blend remarkable even in the England of that period. The eight Cabinet Ministers, or ex-Ministers, were headed by the Chairman, Forster, Goschen, and Lowe. The regular members included Chadwick, Newmarch, Bagehot, and Morley, and the comparatively small company of university professors was represented by Fawcett, Thorold Rogers, Cliffe Leslie, and Jevons. Among the visitors were Cardwell, Acton, Froude, and M. Léon Say, the French Minister of Finance and grandson of J. B. Say.[1]

After dinner Mr. Lowe,[2] ex-Chancellor in the greatest of Gladstone's administrations, opened the discussion of the following question: 'What are the more important results which have followed from the publication of *The Wealth of Nations* just one hundred years ago and in what principal directions do the doctrines of that book still remain to be applied?' Rather than a commemoratory anthology of after-

[1] *v.* Political Economy Club: *Revised Report of the Proceedings at the Dinner of 31st May 1876*, London, 1876.

[2] Robert Lowe, Viscount Sherbrooke, Chancellor 1868–73: claimed to have taken £12 millions off taxation. On his leaving office the income tax was at about the lowest level it has ever attained—2*d.* in the pound. Author of the phrase, 'We must educate our masters' (or, more accurately, 'induce our future masters to learn their letters'). First Member of Parliament for the University of London.

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Political Economy in Germany

(*c.* 1870)

1. *Introductory*

ENGLISH classical political economy had been at certain key points closely allied with English Philosophic Radicalism, which in turn had been the main intellectual stimulus behind the great Liberal Reform movement which had attained its greatest triumphs in 1832 and 1846, and which continued to provide the dominant inspiration and the underlying principles for economic policy and legislation till well past the middle of the century. In Germany there had been no such single outstanding 'orthodox' body of opinion (outstanding at any rate outwardly, in its hold on the public mind, if not internally in uniting all the more distinguished economists). Nor, in Germany, had there been any triumphant movement of practical reform at the head of which any such school could have reached the extraordinary public influence of the English classical system (or of the widespread interpretation of that system). Nor was there in Germany a philosophical tradition providing comparatively agreed methodological principles or criteria for social and economic studies, like the tradition of Locke, Hume, Bentham, and J. S. Mill. The prevailing tradition in German philosophy had much more transcendental and comprehensive ambitions.

The mystical 'national socialist' economics of Adam Müller (1779–1829), the liberal nationalism of List (1789–1846), the State socialism of Rodbertus (1805–75), and later of Marxism, the liberal-conservative-cameralist tradition maintained by Hufeland (1760–1817), Rau (1792–1870), and Hermann (1795–1868), and a brand of extremist liberalism libellously known as 'Smithianism' or 'Manchesterism', all had their followers between whom there could be little common political or methodological ground. Each writer, or group, felt he had to begin for himself from the beginning (or even from before the beginning) and defend his method of approach, or *Richtung*, against rivals, with the result that the detailed discussion of particular problems according to generally accepted criteria, was very much obstructed. In addition there came the Historical Movement.

Here we wish simply to distinguish briefly two of the more important

streams of economic thought running in Germany at the outset of our period in the sixties and seventies: (1) that of the Historical Movement and (2) (and by no means at many points diverging or clashing with the historical economists) the line of more theoretical writers, sometimes called the German Classical economists, among whom were Rau and Hermann mentioned above, Thünen (1783–1850), and Mangoldt (1824–68). (There was also, of course, separately and in addition, Gossen (1810–58), the most original of all, whose work had no influence until it was discovered two decades later by Jevons and others whom he had anticipated.)

2. *The Historical Movement*

The historical movement in Germany, with the powerful drive of Hegelian philosophy behind it, had been, in the second quarter of the nineteenth century, taking hold of more and more branches of the social and 'human' sciences. Jurisprudence and philology were the first to be reformed. The birth of German historical economics may be said to have taken place in 1843 when the encyclopaedic Roscher (1817–94) of Göttingen and Leipzig, published his programme in his *Grundriss zu Vorlesungen über die Staatswirtschaft nach geschichtlicher Methode*. He was followed later by Hildebrand (1812–78), and Knies of Heidelberg (1821–98).

The objectives of the movement were partly critical and partly positive. It was urged in criticism of English classical political economy, the value of which was not unappreciated by Roscher, that its conclusions were inapplicable to the contemporary political and industrial conditions of Germany and elsewhere, and that a system of political economy must be built up on a wider range of temporal and geographical facts, and must be as closely related as possible to the studies of other parts of the lives of nations. Much in these arguments, as a programme of objectives, remains thoroughly justifiable. More positively, and less justifiably, the historical programme saw the task of political economy in the discovery of the 'laws' and 'stages' of national economic development, as was particularly stressed by Hildebrand. It was also, of course, part of the historical conception of the 'social' sciences that these were fundamentally different, in some sense, in procedure and criteria, from the 'natural' sciences, as was particularly emphasized by Knies.

Neither Roscher nor Knies made any aggressive or revolutionary

claims against other methods of approach. The pattern and balance of their works is not strikingly different from those of Rau or Hermann, or even from those of Adam Smith, J. S. Mill, and Marshall. On many points in the analysis of value and distribution they were very close to, and contributed something to, the work of Hermann, and Mangoldt and later even Carl Menger. One subject on which the German historical economists contributed some notable surveys, in a later period (1880–1910) when comparatively very little work was being attempted on it by English theoretical economists, was that of economic crises and cycles. Roscher himself, and later Nasse, Wagner, and finally Spiethoff, not to mention the followers of Marx and Rodbertus, all contributed to a body of work which compares very favourably with English and American writings during these three decades.

At the outset of our period in the later sixties and early seventies a new development of historical economics was led by Gustav Schmoller (1838–1917). In 1872 this new movement found a political rallying point in the *Verein für Sozialpolitik*, which stood for a 'paternal' policy of social reform. We shall return to Schmoller in a subsequent chapter.

3. *German Theoretical Economics*

The 'classical' school of German theoretical economists derived in part from Adam Smith, and in part from the French eighteenth-century 'utility' theorists, notably Condillac. Ricardian doctrines were at most points rejected, and the school maintained some of those fundamental truths about value, price, and distribution which tended to be neglected or obscured in the English classical system. Though, to a limited extent, the German 'classics' moved with the current of liberal ideas, they were also much influenced by the cameralist tradition, which gave their work a strongly realistic bent, with much analysis of detailed measures of State policy and taxation, and which led them to emphasize the important economic duties and leadership that the State must undertake. The titles of their journals, books, and chairs (of *Staatswirtschaft*, *Staatswissenschaft*, *Kameralwissenschaft*, *Verwaltungswissenschaft* and *Polizeiwissenschaft*) show their emphasis and approach, and the close association of the studies of political economy and of law in Germany.

In their analysis of value, production, and distribution one or two of the German 'classics' were, on many questions, several decades ahead of their English contemporaries. Stressing the relation of utility and consumers' demand to value led them in their account of distribution

to stress the common influence of ultimate consumers' demand on the value of all the agents of production. This is much nearer the approach of marginal productivity analysis than the emphasis of the English classics on the separate characteristics of the services and rewards of three main factors, or the social classes owning them. It was from this point of view that Hermann attacked the Wages Fund doctrine with the arguments which were eventually to destroy it, nearly forty years before Mill's retraction. Similarly the rent concept was generalized and held to be common to all factors or their rewards, and not simply to be peculiarly applicable to land. In fact, Hermann included land in his definition of capital. We cannot here enter into Thünen's analysis of production and marginal productivity, but the specially refined analysis of entrepreneurs' profits in Hermann, Thünen, and Mangoldt deserves to be mentioned, as this subject also is bound up with the subsequent development of the marginal productivity doctrine.

4. *Mangoldt*

Mangoldt's analysis of profits and of the different constituent elements in the entrepreneur's income, with his stress on the uniqueness of profit as a form of income, is known from F. H. Knight's discussion in his *Risk, Uncertainty and Profit*. Edgeworth, with his wide knowledge of economic literature in many languages, considered Mangoldt's work on the theory of international trade the outstanding contribution in its field (1894), and recognized also that Mangoldt 'may claim to be one of the independent discoverers of the mathematical theory of demand and supply', along with Cournot, Dupuit, and Gossen (none of whom were known to Mangoldt). We wish here to discuss some of the contributions of Mangoldt's *Grundriss der Volkswirtschaftslehre* (1863), and to give some indication of the very high level to which Mangoldt, the final culminating representative of the German classical theorists, brought economic theory in several of its most important branches.

Mangoldt turned to the study and teaching of economics after twice resigning government posts in the reactionary years of the early fifties, because of political disagreement with his employers. His work on profits (*Die Lehre vom Unternehmergewinn*, 1855) was his *Habilitationsschrift* at Göttingen. His *Grundriss*, or *Outline*, is a very compressed but very comprehensive book, designed as a text for further discussion and elucidation in class, rather than to present a fully

elaborated exposition. With its geometrical diagrams, and its derivations from the English classics on the one hand, and from Hermann, Thünen, and the German historical economists on the other, it might be a distant infant cousin of Marshall's *Principles*.

In his opening discussion of value Mangoldt points out that this depends on the urgency and extent of the needs which a good is able to satisfy, and that the value of a single good depends on the proportion this represents of the total stock available (p. 2). He begins his chapter on exchange with a Marshallian 'cross' diagram of intersecting supply and demand curves (p. 47), sets out what amounts to Jevons's law of indifference for competitive markets, and adds that in such markets the prices of goods of different quality will be proportional to their costs of production. He then turns to the demand curve, which will, in general, slope downwards, as 'the use-value (*Nutzwert*) of each unit, will always be smaller, the more one adds' (p. 48). This implies that a rise in price will lead to a decline in demand until 'the point is reached where the utility is balanced by the price'. On the diagram of the demand curve 'the distance' (of any point on the demand curve) 'from the quantity axis represents the utility of the last unit of the quantity demanded'. Mangoldt points out that fear of a further rise may lead to a rise in price being followed, contrary to the general rule, by an increase in demand. (p. 49.)

Turning to the supply side, Mangoldt draws and explains various differently shaped supply curves: a horizontal straight line represents constant costs; a horizontal straight line, rising abruptly vertically at a certain point, is the case of constant costs up to the limit of a certain rigidly fixed supply. Finally, a rather flat U-shaped curve, falling over a certain output owing to economies of large scale, and then subsequently rising, is explained (p. 50). Though not mathematically defined, the concept of elasticity of supply (*Ausdehnbarkeit*) corresponding to Mill's 'extensibility' is introduced. Finally, Mangoldt explains that with rising costs the lower limit for the market price will be given by 'the costs of the last unit, or the highest necessary production costs'. (p. 53.)

In his analysis of production and distribution Mangoldt combines the classical 'real' cost notion and the Malthusian doctrine of population and wages, with a marginal productivity analysis of the rewards to each factor. Rent, however, is treated not as the specific return to land but as an element which may enter into 'all separate types of income, profits and wages, as well as interest'. (p. 142.)

The level of wages will be determined by 'the prospective net return of the least productive, that is presumably the last, labour to be applied'. Mangoldt held, however, that according to the Malthusian doctrine of population this would be forced down to subsistence level (p. 129) (which Marshall held to apply to the greater part of the world).

Similarly for interest:

> According to the law that similar goods in the same market at the same time must exchange at the same price, the least productive unit of capital must determine the price for the services of the others. We therefore arrive at the proposition . . . that the net yield of the last unit of capital applied determines the level (or *den relativen Schwerpunkt*—Mangoldt's term for the equilibrium maximizing level) of net interest.

Mangoldt's *Grundriss* also contains much advanced monetary analysis of interest, of the demand and supply of the precious metals, and of hoarding and the desire for liquidity. He devoted two sections to interest, one to 'Divergencies between Actual Average Interest Rates and the Equilibrium Rate', and the other on 'Interest and the Value of Money'. The former clearly outlines much of what was to be Wicksell's doctrine of natural and market rates, and gives an interpretation of cyclical fluctuations as a cycle of divergencies between natural and market rates of interest. Mangoldt brings out more clearly, on the whole, than Wicksell, the dependence of the natural rate on the *expected* marginal efficiency of capital and gives a distinct place in his outline model both to changing expectations and to innovations:

> The average of actual interest rates diverges from the equilibrium rate (*von dem relativen Schwerpunkte*), being sometimes above and sometimes below the rate indicated by the yield of the last unit of capital applied. This is to be explained by the lack of agreement between the actual facts and the ruling opinions as to the prospects for the employment of capital. . . . The occurrence of mistaken views about the economic prospects for employing capital seem to be due above all to the speed with which the conditions of economic life alter. . . .
>
> [Once speculation gets under way] . . . all capital is believed to be profitably employable, and while the continued increase in capital ought to lead to a fall in the rate of interest a demand has been created which prevents this. Gradually accumulation ceases to correspond with the continued demand, and the failure of the rate of interest to fall is followed by a positive rise. This is the turning point. This rise uncovers the mistaken calculations on which many undertakings have been based, and shows that the actual stipulated rate of interest, however low it may have *seemed*, *should* have been regarded as too high. But this conclusion is strongly resisted. The difficulties

are treated as transient, and an attempt is made to surmount them by borrowing still more capital. The rate of interest is now driven well above its natural level. Meanwhile the distrust of creditors is aroused, and loans are not renewed but called in. Finally comes a general liquidation, and the capital which had been borrowed and lent at too high rates of interest, is lost, either by the creditors or the debtors. At this point opinion about lending is exactly the reverse of what it was previously. The capitalists are thinking only of a safe haven for the funds they have recovered, rather than of high interest rates, and in their panic even leave considerable funds lying 'dead' for the time being, rather than take any risk. The entrepreneurs, for their part, are excessively timid about the use of capital and the interest to be paid. In these circumstances the actual rate will for some time fall below the natural rate. Only gradually, when on the one side the fear of any speculative expansion of business activity disappears, and on the other the profitability of lending is considered equally with security, only then will the actual rate gradually approach the equilibrium rate, and often will not only reach it but again begin to diverge on the other side, so that the whole movement we have described begins over again. (p. 120.)

Mangoldt had built this analysis out of his marginal productivity doctrine and his studies in the early 'psychological' and over-investment theories of the trade cycle (including notably James Wilson, the first editor of *The Economist* whom he quotes elsewhere on the importance of the proportions between fixed and circulating capital).[1] He was also indebted to Roscher's sensible and comprehensive discussion of crises and of 'Say's Law'. Unlike many of the writers of the 'over-investment' school of thought, Mangoldt, following Rau and Roscher, was critical of 'Say's Law', pointing out that though in a two-commodity barter world 'general overproduction' of both commodities would be logically impossible, as would a 'general' excess of demand over supply, 'on the other hand it is quite conceivable that an oversupply of all other goods may periodically occur in terms of one particular good, especially in terms of that good which is being used as the general means of exchange, that is, of commodities in relation to money'. (p. 68.)

Mangoldt died at the age of 44 after a career as an economist lasting about fifteen years, and the further books he might have left must, like Jevons's *Principles*, be counted among the great unwritten works of economics. Marshall included his immediate predecessors Hermann

[1] *Volkswirtschaftslehre*, p. 190. This was an unfinished work more introductory (though lengthier), and more readable than the *Grundriss*, with none of its mathematics or diagrams, which had apparently made the earlier work unpopular.

and Thünen ('the great unrecognized') among four supreme examples of great 'classical' authors (the other two were Petty and Jevons), and he considered that 'the most important economic work that has been done on the Continent in this century (19th) is that of Germany'. (*Principles*, 2nd ed., p. 66.) The work of Mangoldt represents a culminating point in German theoretical economics but it received little or no recognition either from Marshall or from the Austrian School. But, of course, both Menger (in his first book) and Wieser recognize their indebtedness to their German predecessors. According to Wieser:

> It may be said that, in great part, the German school long ago formulated the conceptions, leaving for us only the task of filling them out by adequate observation. In this it has laid up a treasure from which all succeeding economic effort may draw indefinitely. . . . The new value theory is in truth the fulfilment of what German theory had long demanded. (*Natural Value*, p. xxxiv.)

We must now turn to the founder of the Austrian School, and we shall find him in his first great work—the foundation stone of that school—paying a similarly generous tribute to his German predecessors. In his second work, as we shall see, he came to view German political economy in a very different light.

9

Carl Menger

1. *Menger's 'Principles': Essays on Money and the Theory of Capital*

We come now to the second of the three economists who independently expounded the marginal utility theory of value in the early seventies. Unlike Jevons (but like Marshall), Carl Menger was also the founder of one of those curious, and in some ways often rather questionable intellectual-psychological phenomena, a great 'School'. His first two great pupils, Wieser and Böhm-Bawerk, became as famous economists as himself, and were followed in their turn by many descendants. On many important subjects the original triumvirate of the Austrian School, as well as its later members, held very divergent views, even, or particularly, about some of those subjects on which their writings have been especially celebrated. If there is more reason for speaking of an 'Austrian' School than an 'English' School (including all the writers discussed in Chs. 2–6), it is not because the considerable common ground in methods of approach and in political and philosophical presuppositions extended much farther in the one case than in the other, but rather because the Austrians were all pupils, directly or indirectly, of Carl Menger and his book the *Grundsätze*, and were all connected with the same university.

Little seems to be recorded about Menger's early interests and studies. It was apparently his task in the *Ministerratspräsidium* (or, approximately, 'Cabinet Offices'), which he joined shortly after graduating, to write surveys of market conditions, and this rather empirical stimulus acted on his own developing ideas about the theory of value. However, the foreword and extensive footnotes in his first and supreme work the *Grundsätze* (1871), give clear indications of the main influences on his thought. The book is dedicated 'with respectful esteem' to Wilhelm Roscher the founder of German historical economics. Menger is 'especially pleased' to note, in his foreword, that 'German political economy, by its latest developments, has really to a large extent made its own that part of the field which is concerned with the most general theories of the science', and that the reform he is attempting is based 'almost entirely' on the previous work of German writers. He hopes

that his work may be regarded as 'a friendly greeting from an Austrian fellow-worker, and a slight return for what Austria owes Germany in learned men and distinguished writings'. (Op. cit., p. xlviii.)

Going back to the eighteenth century, Condillac and Adam Smith are the authors Menger cites most frequently. Auguste Walras's concept of *rareté* is also mentioned. But the English classics, notably Ricardo and the Mills are not influential. The nineteenth-century economists often referred to are Hermann, Rau, Roscher, Hildebrand, Knies, Schaeffle,[1] and on a few occasions, Schmoller. From these sources Menger would have started with a 'utility' approach to value, and, unlike Jevons, with no firmly established or orthodox labour and cost-of-production theory to 'revolt' against. He would have derived also an approach to distribution that would have encouraged a unified 'productivity' treatment, rather than the separate threefold 'class', and mainly 'macro-economic', treatment of Ricardo, the influence of which was still noticeable on Jevons and Marshall. Menger refers but once to Mangoldt's *Grundriss*, and does not seem to have recognized either the valuable contributions of the book itself or the extensive discussion of Thünen's work which it contains. Gossen, Cournot, and Dupuit had no influence on the *Grundsätze*, and Mangoldt and Thünen not the influence they might have had.

The opening three chapters of the book present, in contrast it must be said to Jevons's *Theory*, a superbly solid, finished, and carefully worked out argument, which, bearing in mind its marked degree of originality, must be placed with the supreme achievements of theoretical economics. At no point is there any attempt at mathematical formulation, the nearest approach to which being a number of purely illustrative numerical tables of valuations and reserve prices. Even brief convenient technical terms are eschewed. Nor is there anything of Marshall's wealth of illustration from modern industrial history, nor even of Wicksteed's homely parables from the everyday activities of the housewife. The analysis proceeds in a stark elemental 'ur'-world. Deep in the primeval forest (*'Urwald'*, p. 82), or on some distant island rock (p. 100), patriarchal Crusoe-like figures gravely allocate tree-

[1] Menger rightly gives special recognition to Schaeffle, and in particular his paper of 1862 'Die ethische Seite der nationalökonomischen Lehre vom Werte' (see *Gesammelte Aufsätze*, vol. i). Here Schaeffle contrasted 'usefulness' with 'use-value' in a good—the latter depending on the difficulty of obtaining it. Already by 1874 Schaeffle had made a penetrating critique of socialist economies based on the point that the labour theory of value provided no criterion for the economic guidance of production, for which the concept of use-value was indispensable. (*v. below* Ch. 18, sect. 3.)

trunks, measures of corn, or beakers of water, between alternative uses, or ponder the problem of whether to exchange a horse for a cow, all with the object of maximizing their *Bedürfnisbefriedigung* ('need-satisfaction'). Historical illustrations have to keep their distance, few getting much nearer in time or space than Tacitus, Ancient Mexico, or seventeenth-century Indonesia (p. 199). This considerable degree of abstraction and remoteness is common to most of the main work of Menger, Wieser, and Böhm-Bawerk. It is the more noteworthy because all three played a leading part at one stage or another in framing practical policies, the two latter as Ministers.

The opening chapter of the *Grundsätze* is on the Theory of Goods. From the start the valuation of production goods and services (or in Menger's terminology 'goods of a higher order') is treated in the same way as the valuation of final consumption goods which satisfy needs directly, and from which production goods ultimately derive their value. Complementarity between goods is first mainly illustrated in relation to production goods: for example, the services of cotton spinners are valueless without the complementary raw cotton. This strong emphasis on the complementarity of production goods is traceable in many subsequent writings of the Austrian School. A picture is thus built up of the structure of production as an immense combination of complementary production goods and services, each one of which is largely dependent for its value on the availability of all its other complementary goods and services at earlier and later stages in the process. Economic progress means that men adopt longer and more indirect processes of production, and thereby plan far ahead into the future in their economic activities (p. 33). Similarly, consumers' goods depend on one another for their values, and it is emphasized that it is not single goods by themselves, but totalities of interdependent goods of different kinds that are significant (pp. 30–31).

All economic activity is based on our foresight as to our future needs (*Bedarf*), and economic goods are those the needs for which are greater in quantity than the available supply. Since, therefore, some needs for them will have to go unsatisfied, the needs for economic goods have to be arranged in order if, with the available means, they are to be satisfied to the best advantage (p. 51). Between economic goods it is necessary to choose. Economic goods and private property, as Auguste Walras had pointed out, both derive from scarcity. It follows that production goods ('of a higher order') are only economic goods, if the final consumption goods ('of the first order') which they

serve to produce are scarce economic goods. Non-economic goods may be 'useful' but not 'valuable'.

The third chapter on value is the keystone of Menger's work. Differences in the values of goods depend on differences in the needs they satisfy, and differences in the significance of needs occur not only between different sorts of needs, but between greater or lesser satisfactions of the same sort of need. The first units of food are worth life itself, but successive units gradually lose significance. Menger produces his well-known table to illustrate his argument (op. cit., p. 93):

I	*II*	*III*	*IV*	*V*	*VI*	*VII*	*VIII*	*IX*	*X*
10	9	8	7	6	5	4	3	2	1
9	8	7	6	5	4	3	2	1	0
8	7	6		(Tobacco)					&c.
7	6								
6									
&c.									
(Food)									

These numbers seem to have a purely illustrative significance, and to be in any case no more than ordinal. Menger is simply concerned to point out how needs may be arranged in order and does not even formulate a principle of diminishing marginal utility. He does not explain how his tables work when account is taken of the intricate complementarity relationships between goods, which he had earlier emphasized. On the whole, in spite of his early emphasis on complementarity, Menger's analysis seems to be based more on the assumption made by Jevons, Walras, and Marshall, that the utility of a good is a function of the quantity of that good only, than on the more general assumption introduced by Edgeworth in his *Mathematical Psychics* (1881). More broadly, though Menger did not try to fill out his analysis of the consumer with a hedonist content, it is not easy to say just what, and how much content he did ascribe to it.

The most important part of a man's economic activity is this constant weighing up and choosing of which needs shall be met and which not. As later with production goods, Menger defines the value of consumption goods in terms of the 'loss' principle: that is, what determines the value of a good is the satisfaction that would not be obtained if the good was not available: 'The value of a unit (*Teilquantität*) of the available stock of a good is for any individual equal to the significance of the least important want-satisfaction yielded by any unit of the total quantity of a good' (p. 99). The allocation formula for the consumer is not stated with any very full generality or precision, but

a lengthy footnote concludes (p. 98): 'The most important of the needs of all different sorts which are not satisfied are of equal significance for each sort, so that all needs are actually satisfied up to the same degree.'

Menger then turns aside, as the three leading Austrian economists frequently did, to chastise labour and cost-of-production theories of value. In a passage reminiscent of Jevons's 'bygones are forever bygones', Menger notes that

> No-one asks about the historical origin of a good in estimating its value, but takes account of the services which it is going to yield. . . . Certainly, comparing the value of a good with the value of the means of production used in producing it, may tell one how far the past act of production was economic or worthwhile; but the goods used in its production have no necessary or direct influence on the value of a product. (p. 120.)

Menger went too far in dismissing the role of cost of production, and indeed attempts no analysis of the cost side, or of the principle of diminishing returns as Mangoldt had done. This subject was to be taken up by Wieser. But what came to be called the principle of imputation (*Zurechnung*) is clearly stated by Menger when he emphasizes (p. 124) that the value of consumption goods cannot be determined from the value of production goods, but, on the contrary, it is the values of production goods that are always determined by the prospective values of the consumption goods they serve to produce.

In a section on the productivity of capital several of the ideas later to be developed by Böhm-Bawerk are sketched out, though some were withdrawn by Menger from his second edition: the increased use of production goods in more lucrative processes of production involves also longer processes; and the under-estimation of future wants is also appealed to. The function of the entrepreneur is to use his knowledge of the economic situation to calculate costs and choose the most economic method of production. Menger criticizes Mangoldt for emphasizing risk-bearing as the essential function of the entrepreneur.

He contends (p. 140) that there is generally a very wide field for varying the combinations in which complementary production goods are employed, and that chemically fixed proportions are not the rule, an *aperçu* which is the necessary starting-point for a marginal productivity analysis of distribution. As with consumption goods, the value of a unit of a factor depends on the difference to final satisfaction its absence would result in, via the effect on the product. Units of land, labour, and capital, or units of their services, are all to be valued on this common principle. Pieces of land have no such special place among

economic goods as the analysis of the English classics had given them. Further, the cost-of-production theory as applied to the services of labour is not merely practically absurdly far-fetched, but in any case theoretically irrelevant.

We are more than half-way through the book before we pass from value to exchange, and from this point the thoroughness, finish, and interest of the analysis fall off somewhat. Rightly contradicting Adam Smith, Menger points out (p. 158) that it is through no sheer inclination to 'truck barter and exchange' that men enter the market, and that the possibility of exchange depends on the coincidence of each party possessing a good that he values less than one possessed by the other party. Under isolated barter the exchange rate is shown to be indeterminate. In discussing competitive and monopoly markets the significant distinction is drawn between the two lines of policy, or 'action-parameters', open to the monopolist, quantity and price. But with no diagrams and no analysis of costs the argument cannot proceed very far.

In a chapter on the Theory of Merchandise (*Waare*) there is some description of marketing and transport conditions. But the main point of the chapter is to lead up to the final subject of money. His concept of the 'marketability' or 'saleability' (*Absatzfähigkeit*) of goods introduces an analysis of 'liquidity', and it is the most *absatzfähig* or 'liquid' good that will come to be adopted as money. (p. 252.)

In his chapter on Money, and in his later article on the subject, Menger shows the clearest signs of the influence of the German historical movement. Most of the references are to ancient history, and there is considerable etymological discussion of the origin of the various names of coins (pp. 254 and 262). The different goods used as money at various periods of history are discussed. Above all, Menger is concerned to emphasize that it is the economic interests of individuals which lead to the emergence of money, without any formal agreement, legislative compulsion, or even any concern for the general public interest (pp. 253 and 259). Money is one of the spontaneous, unconscious, unplanned social discoveries, which are not inventions of the State or products of a legislative act, as Knapp was to emphasize.

Menger's encyclopedia article on Money develops further the argument of the final chapter of the *Grundsätze*. There is much historical discussion of terminological and legal issues. 'Stages' and 'laws' of economic development, corresponding with different monetary systems, are discussed. (*Works*, vol. iv, pp. 12 and 29.) The 'state' theory of money and the view that the status of legal tender is essential

for 'money' are vigorously opposed. It is the sections on the 'internal' and 'external' factors affecting the value of money (*innere und äussere Tauschwert*), and the final section on the demands for money or the quantity needed, that are of most interest for modern analysis. Stability of the 'internal' factors affecting the value of money (that is stability of the 'factors on the side of money') seems to correspond with that elusive post-Wicksellian concept of 'neutral' money. Menger seems rather optimistically confident that theoretically and practically a stable measure of the 'internal' value of money (or of the changes in its value arising 'on the side of money') is attainable.

On the subject of the demand for money Menger describes the 'transactions' and 'precautionary' motives for holding money and the reasons for, and cost of, liquidity: 'Economic units of the same type and size often have very different holdings of cash, according as to whether their managers consider necessary a greater or lesser degree of security against disturbances in economic activity, and are ready to make the necessary sacrifice of interest' (p. 108). Menger criticizes an over-simplified concept of velocity of circulation. When business is more active what happens is not that units of money circulate more rapidly but that inactive precautionary stocks are drawn into the active circulation (pp. 110–11). These hints come right at the end of the essay. No formal or precise quantity equation is presented.

We cannot attempt to discuss here Menger's considerable practical contributions to contemporary problems of the Austro-Hungarian currency, his main contributions to applied economics. But mention might be made of a passage in an address by Menger on the revaluation of the currency, where he discusses the merits of a more inflationary favouring of the debtors, as contrasted with a more deflationary favouring of creditors. Menger held that as things were in Austria-Hungary it was the small men, who could not themselves get credit, who lent to the rich. Any revaluation that favoured the debtors would be strongly regressive and Menger favoured on the whole the deflationary side, like subsequent Austrian economists.

Menger's essay on Capital (1888) is mainly critical, implicitly but not explicitly, of Böhm-Bawerk, whose first work had then recently appeared. It is much concerned with terminological distinctions and clarifications, in a field where such analysis has always been particularly necessary. He attacks the notion of land and labour as being 'original' factors as contrasted with capital, or 'the produced means of production', holding that this distinction cannot be drawn in practice,

and in any case is economically irrelevant. He argues that economists should follow what he considers to be the practical everyday monetary concept of capital and interest. (*Works*, vol. iii, pp. 37 and 44.)

2. *The 'Methodological Studies' and Later Essays*

Two years after the publication of the *Grundsätze* Menger obtained a professorial post at Vienna, and at about the same time his two greatest disciples were discovering his work and building much of their own upon it. Menger's first work seems, therefore, to have received considerably more prompt and concrete recognition in its immediate surroundings than did that of Walras, or Jevons's *Theory*. The second of Menger's two books, his *Studies in the Methods of the Social Sciences and of Political Economy in Particular* appeared in 1883. It is a work very different from the detached, precise, carefully constructed, and thoroughly documented *Grundsätze*. In some respects powerful and profound, it ranges very widely, in its four books and nine appendices, over the manifold problems of what economists and social scientists are doing and how they are doing it, as contrasted with what they ought to be doing and how they ought to be doing it.

The main purpose of the book and such unity as it possesses, lies in the challenging attack on the German historical economists which is opened in the Introduction: 'Misleading methodological principles' (p. xix) are being followed by German economists, which have reduced their subject to a 'pernicious' condition (*Verderblichkeit*): 'The main objectives of the study are being lost sight of because trivial tasks are being given an exaggerated or even decisive importance' (p. xii): 'A senseless phraseology about fundamental problems' is being repeated (p. xx). It is Menger's intention 'to bring the study of political economy in Germany back to a consciousness of its true paths'. (p. xxi.)

It might well be asked what had happened in the twelve years since Menger's generous tributes in his first book to German economists in general, and to Wilhelm Roscher in particular, as well as to the latest German developments of the subject. The contrast between the prefaces to Menger's two books could not be greater. It is true that in 1872 the *Verein für Sozialpolitik* had been formed by a number of historical economists in Germany who were inclined towards social reform, but the significance of this body was political rather than methodological. Gustav Schmoller had also come more to the front as leader of a new school of historical economics, which, however, by

no means a majority of German economists agreed with. For example, Schmoller's senior colleague at Berlin, Adolf Wagner, later inclined more towards Menger's point of view than Schmoller's, though neither Wagner nor any of the great classical German contributors to economic theory—Hermann, Thünen, and Mangoldt—relied on abstraction and deduction to the extent that Menger and his Austrian disciples did. As regards German political economy, at any rate, Menger was as much an innovator at one extreme as was Schmoller at the other. In any case, Menger does not concentrate on the more recent German writings. He takes as the representative exponent of the historical method Karl Knies, of the older historical school, much of whose work had been published long before, and he says explicitly, though very questionably, that all the more recent doctrines of Schmoller and others are given 'at least in outline' by Knies (p. 230). Menger also opens his pamphlet on *The Errors of the Historical School* (1884) by claiming that these 'were clearly apparent on the first foundation of the school nearly five decades previously'—that is by Roscher in 1843. Certainly a critical study of the historical method would have been most timely and was indeed most necessary. There was much to fasten on, particularly the whole notion of laws of historical development—a notion of the older historical school of which the younger, led by Schmoller, was most critical. But such a work would have had to have shown at least some comprehension of what the historical writers were contributing both critically and constructively.[1]

The first parts of the book are concerned with Menger's attempt to make a rigid separation between historical and statistical economics on the one hand, and theoretical economics on the other, and with his conception of the 'exact' laws of the latter and the assumptions on which they rest. Menger distinguishes (p. 3) between two main classes of sciences or of scientific knowledge. 'Individual', historical or statistical

[1] Perhaps at this point Marshall's verdict on the German historical school is worth recalling: 'The work of a few members of this school is tainted by exaggeration, and even by a narrow contempt for the reasonings of the Ricardian school, the drift and purpose of which they have themselves failed to understand: and this has led to much bitter and dreary controversy. But with scarcely an exception, the leaders of the school have been free from this narrowness. It would be difficult to overrate the value of the work which they and their fellow workers in other countries have done in tracing and explaining the history of economic habits and institutions. It is one of the great achievements of our age; and an important addition to the real wealth of the world. It has done more than almost anything else to broaden our ideas, to increase our knowledge of ourselves, and to help us to understand the central plan, as it were, of the Divine government of the world.' (*Principles*, 2nd ed., p. 68, 8th ed., p. 768.)

knowledge, and 'general' theoretical knowledge. To this he adds, subsequently, a third category of practical sciences or arts. The methods of these three separate disciplines are quite distinct and they must be kept strictly apart. There is no sense in speaking of '*the* method of political economy comprehending economic theory and economic policy'. (p. 21.) Menger repeatedly insisted on this strict separation of theory from history and statistics. In his pamphlet in which he replies to Schmoller's criticism, Menger objected strongly to Schmoller holding that economic history and statistics were 'the descriptive parts of political economy' since 'they are actually not parts of political economy at all but auxiliary disciplines'. (*Die Irrtümer des Historismus*, pp. 27 and 37.) Schmoller's view 'is comparable with that of a carter who wants to be considered as the architect because he has carried some loads of stones and sand to the building site'. (*Die Irrtümer*, p. 46.)

The exact laws of theoretical economics depend on assumptions of pure self-interest, and infallibility or omniscience (*Allwissenheit*), and freedom of movement. (*Untersuchungen*, pp. 72–75.) To point out, as Schmoller was alleged to have done, that such abstraction is unrealistic in that altruism and mistakes are common in the real world is to misunderstand the procedure of all sciences. Menger does not argue, as was later done, that the assumptions can easily be extended, though thereby made more empty, to include altruistic actions. He argues that chemistry, for example, makes use of such concepts as 'pure oxygen' and 'pure hydrogen', which like 'pure self-interest' are never to be found in the real world. (p. 76.)

It is doubtful whether the misunderstandings were all on the side of Schmoller. It might well have been inquired whether it does not make a fundamental difference that practically pure chemical substances can actually be isolated, tested, and observed in a laboratory, in a way in which pure self-interest and omniscience cannot be extracted, observed, and measured separately from the rest of human qualities.

Menger strongly rejected the notion of mutual determination and interdependence so emphasized by Marshall, Edgeworth, Walras, and Pareto:

> That the parts of a whole and the whole itself can be at once the cause and effect of one another (i.e. that there is mutual determination) which is a point of view that has gained ground, . . . is an idea so obscure and inadequate to our laws of thought that we can hardly be wrong in taking it as a sign that our age still lacks in many respects a profound understanding both of natural organisms and of social phenomena. (p. 144.)

Various later members of the Austrian School were to follow this line of thought, as also Menger's small regard for the mathematical method. For example, Menger criticized severely the clear and precise abstraction of Auspitz and Lieben's mathematical analysis, and in a letter to Walras he insisted that what the economist is after is not only relationships between quantities (*Grössenverhältnisse*) but the essence (*das Wesen*) of economic phenomena: 'How can we attain' he asks Walras, 'to a knowledge of this essence, for example, the essence of value, the essence of land rent, the essence of entrepreneurs' profit, the essence of the division of labour, the essence of bi-metallism &c. by mathematics?'[1]

In spite of the rather metaphysical ring of his observations on the mathematical method, Menger makes much use throughout of comparisons (rather than contrasts) between the natural and the social sciences, and he was concerned to emphasize the common elements in the methods of the natural and social sciences. In his introduction to the *Grundsätze* Menger had explained his work as follows:

> We were concerned to study how the most complex economic phenomena developed in accordance with laws from their simplest elements. . . . That is, to follow that method of investigation which has come to prevail in the natural sciences, and has led to such great results, and which therefore has misleadingly been called the method of the natural sciences, whereas it is common to all empirical sciences and should more properly be called the empirical method. (*Grundsätze*, p. xlv.)[2]

His view of the practical application of economic science to practice was highly 'technocratic': 'The practical science of economics "masters" economic life in the same way as technology "masters" nature, and surgery and therapy the human body. . . . It is their task to teach us the principles and procedures by which the state and subordinate bodies analogous to it can suitably intervene in economic life.' (*Works*, vol. iii, p. 216.)

In some later essays Menger seems to be withdrawing somewhat from the more extreme arguments and phraseology he had adopted in 1883–4, but his final position is not easy to discern—one can seldom expect very clear communiqués from those engaged in a rearguard action. In a very appreciative review of a *Handbook of Political Economy* by a representative group of German economists, mostly influenced

[1] In a letter of 1884. *v.* W. Jaffé, *Journal of Political Economy*, 1935, p. 200.

[2] Cf. the interesting article by J. Dobretsberger, 'Zur Methodenlehre Carl Mengers und der Österreichischen Schule', *Zeitschrift für Nationalökonomie*, 1949, pp. 78 ff.

by, but not regular adherents of, the historical school, he again complains that a sharp separation (*Trennung*) between economic history and statistics on the one side, and economic theory on the other, is not recognized, 'or that a recognition in principle is made, but in such a way as in fact to be withdrawn' (vol. iii, p. 118). The German economists mistakenly regard as an advance the combination of the theoretical and practical rather than their separation, whereas 'the efforts of all of us should be directed' to pushing farther the separation of the two. (p. 120.)

Menger certainly achieved his separation or *Trennung* in one respect. German and Austrian economists were for a generation split to some extent into extreme exponents of the historical viewpoint and extreme exponents of pure theory, with no sort of co-operation, quite the reverse, between the two. He did not succeed very far, however, in lessening the influence or diminishing the extremism of the school of Schmoller. His tactics probably worked rather in the reverse direction. When one reads his last pronouncements on this subject in his obituary of Roscher (1894), it is certainly tempting to inquire why the *Studies in Method* took the form they did. Here he again recognizes Roscher's great services as the founder of the historical school, reacting justifiably against 'the abstract unempirical schematism of some of the followers of Adam Smith'. Menger explains (*Works*, vol. iii, p. 280):

> The issue between the Austrian school and a part of the historical economists of Germany was not at all one of method in the real sense of the word. If the historical German economists appeared often in scientific works as the representatives of the inductive method, and the Austrians of the deductive method, this does not really express their relative positions. Neither empirical studies as contrasted with abstract reasoning, nor induction as contrasted with deduction, characterize truly these schools. Both recognize in experience the necessary foundation for studying the real world and its laws; both, I presume, recognize in induction and deduction, means of knowledge which mutually support and supplement one another. What still remains as a contrast not fully reconciled, is something much more important; it relates to the aims of their studies and to the system of tasks which science has to solve.

It would therefore seem that Menger was concerned with problems of methodological *norms* rather than with 'positive' methodological analysis or elucidation, that is, with trying to lay down what economists *ought* to aim at or study, and how they ought to study it, and with fixing the value of history and statistics as being simply 'auxiliary'.

The *Methodenstreit* which Menger's *Studies* of 1883 introduced, did

not give rise to much positive methodological analysis, the problems of which lie rather in how empirical, analytical, and 'practical' propositions combine and apply to one another. For such analysis it may well be vitally significant to distinguish in respect of individual propositions between their analytical or empirical significance. But this is quite different from trying to classify whole sciences, or parts of them, into separate watertight compartments. The episode has, however, a certain sombre instructive value as an extreme example of the consequences of intolerant normative methodologizing: of trying to lay down what people ought to aim at and be interested in, of what is 'auxiliary' and what is 'primary', instead of being content with detailed positive analysis and the elucidation of particular propositions, their ambiguities and inexplicit assumptions, which is hardly a field in the social sciences where there is any shortage of material. Whether or not it is in the province of the economist as such to lay down for the citizen and politician what ought to be the aims of economic policy, it is even much more doubtful whether he should try to lay down what other adult students ought to be aiming at or ought to be interesting themselves in. In fact the *Methodenstreit*, opened in such a challenging manner by Menger's *Studies*, was, as Schumpeter has described it, a struggle for '*Luftraum oder Herrschaft*' ('breathing-space or mastery'). Neither of these rather Teutonically conceived desiderata has much to do with the search for truth or the eradication of error. In fact, of course, they usually beckon in precisely the opposite direction.

Menger's *Studies on Method* contain a number of interesting minor themes. There is his doctrine of 'methodological individualism', where he argues that all analysis must start from the individual, and not with 'aggregate' and 'collective' concepts which are meaningless until reduced to the individual 'atoms' of which they are made up. It is not always easy to distinguish in this doctrine of 'methodological individualism' how far simply a logico-scientific principle is being stated, and how far a political judgement is being pronounced. Certainly in some later Austrian writers the principle of 'methodological individualism' seems to be connected with the doctrine that socialism is in some sense economically 'impossible', that the individualist competitive economy must be taken as the only possible norm.

There is also Menger's conception, derived from Burke, of the importance and, on the whole, beneficence of spontaneous, 'unreflected', social phenomena, the result of no formally agreed plan or legislation, like language, the State itself, competition, or money.

Certainly many things individual and social, have clearly been better done 'unconsciously' than when deliberately thought out and planned. Sudden accessions of self-consciousness are notoriously apt to produce crises in individual lives, and presumably also in societies. Since Menger's day there has been an immense further growth in what may be called 'social self-consciousness', with the spread of urbanization, literacy, popular means of communication, and (usually on a somewhat higher level) social and economic statistics, which have together produced that state of 'fanaticised consciousness' that characterizes the modern world. Among the most profound transformers of the socially unconscious into the socially conscious are, of course, the economists and social scientists. Perhaps this was particularly the case with writers like Booth and Rowntree in England who made one part of society conscious of how another part was living. Particularly in the field of monetary policy and institutions, which was one of Menger's main examples of a beneficent 'unconscious' creation, the collapse of a 'closed' traditional attitude has inevitably resulted—for better or for worse—from the advance of monetary analysis. For society, as for an individual, a heightening of self-consciousness is obviously an irreversible step, at least in a democratic society with free distribution of increased social knowledge. There is no going back to a blissful unselfconscious childhood either for society or the individual, and each has to learn to bear the burden easily, not to throw it off, which cannot be done except through madness or self-destruction.

In view of the immense and irreversible growth of social self-consciousness since his time Menger's distinction is of profound interest and importance. But he hardly gets beyond the initial distinction, and a general emphasis on the importance and beneficence of the spontaneous and unselfconscious. One can only wish that his views were available on what has happened since and what is happening now.

Menger's one essay touching directly on the political application of economic doctrines is that defending the classical economists against the criticisms of the social-reformist members of the German *Verein für Sozialpolitik*, such as Brentano. He defends the English classics against charges of dogmatic opposition to State intervention and callous disregard of the interests of the masses, and points out that they supported State activity in many directions, including tariffs. The true descendants of classical political economy are held to be not Cobden, Bright, and Bastiat, but John Stuart Mill with his liberal socialism. Menger's liberalism is shown in his emphasis on individual thrift and

energy directed towards the individual's private advancement as the main stimulus to an improved standard for all, and in his warning that socialistic reformers never banish self-interest from the world, but fix it in national and class appetites far more dangerous and unpleasant. (vol. iii, pp. 232–3.)

Like the earlier editions of Marshall's *Principles*, Menger's *Grundsätze* has 'Part I' on its title-page. It was presenting '*General Principles*', to be followed by three further parts covering distribution money and credit, production and commerce, and economic policy. But unlike Marshall he never completed anything in publishable form of these later parts, though working at them for many decades. The loss is immeasurable, and the time and energy spent on the *Studies on Methodology* all the more regrettable.

10

F. von Wieser

1. *Wieser's Approach to Economics*

FRIEDRICH WIESER'S two early contributions to economic theory, his books *On the Origin and Laws of Value* (1884), and *Natural Value* (1889), both bear strong family resemblances to Menger's *Grundsätze*. There is the same abstraction from the facts of contemporary economic conditions and industrial organization, and the same preference for 'Crusoe', back-to-nature illustrations. Except for the simplest arithmetical examples, all mathematical or diagrammatic methods are avoided, as are statistical references or estimates. There is the same tendency to an 'essentialist' formulation of theoretical problems, that is, in terms of the 'nature' or 'essence' of value or costs, rather than in terms of consumers' or producers' actions. On the other hand, all Wieser's writings bear a highly individual stamp, and his ideas seem to have been worked out without reference or obligations to others, except for his initial point of departure, Menger's *Grundsätze*. He was sceptical of Menger's methodological investigations and polemics, and thought that Menger had erred in returning to the individualism of the classical economists (*Gesammelte Abhandlungen*, p. 124). The main difference in his approach, however, is that he regarded his early works on economic analysis as somewhat in the nature of preliminaries for his later historical and sociological studies. Meanwhile he contributed several essays in applied economics, and developed his 'income' theory of money in various papers (collected in *Gesammelte Abhandlungen*). In his *Social Economics* (or *Theory of Social Value*, 1913), his crowning achievement in economics, he combined economic analysis with an historical and sociological analysis of the development of modern economic society. In his final work, *The Law of Power*, he leaves economic theory behind, like Pareto, for a survey and analysis of political and social history.

Wieser came to economics via history and law. His early enthusiasm for history was given a new direction by Herbert Spencer's *Introduction to Sociology*, in which Spencer pours scorn on the 'great man' theory of history, and argues that serious history must concern itself

with the great movements of the anonymous masses, a point of view strengthened, for Wieser, by his reading of *War and Peace*. His ambition at this point was to write 'anonymous history', of which economic relationships seemed the most important part, and to explain economic relationships it was necessary to have a theory of value. The theory of value of the English classics seemed to lead to inconsistencies, and the Marxian socialists simply carried to their logical conclusion the ideas 'which the classics themselves had not the courage to think through to the end' (*Gesammelte Abhandlungen*, p. 116). In this intellectual dilemma Menger's *Grundsätze* came as a revelation to Wieser when he first read the book in 1872.

Wieser's early views on the historical role of the anonymous masses, views which he was to change very considerably later, find expression in his methodological essays and are even connected by a curious argument with the emphasis he lays on the fundamental differences between the natural and the social sciences. He argues that 'the natural sciences result from the achievements of great and famous men . . . the beginnings of the sciences of man have been quietly created by the anonymous masses' (*Gesammelte Abhandlungen*, p. 9). Wieser includes economic theory with 'pure philosophy and psychology and the applied branches of morals and aesthetics', which are entirely different in basis and procedure from the natural sciences. In the natural sciences,

> no one who claims to study them will believe that by examining the generally adopted language and concepts of everyday life he has contributed anything whatsoever to an understanding of the essence of things. But the opposite is the case with the sciences of man: In many cases the reader will in spite of the closest attention be unable to decide what his author really aims at investigating, whether the empirical condition of a phenomenon, or the concept connected with the name of the phenomenon. (p. 2.)

For Wieser this is not an unfortunate, if frequent, ambiguity but a norm:

> The definitions of concepts which one sets out are almost always meant to serve both purposes at once, that of determining the essence of things and defining terms or concepts. (p. 2.)

The accusation of anti-empirical scholasticism which might be brought against this procedure, Wieser considers is both to some extent justified, and to some extent beside the point. For the social sciences differ from the natural sciences, which seek to discover the unknown, in that 'in those sciences to which theoretical economics belongs, man

seeks to understand himself . . . and what he himself has experienced and done, and only to a small extent try to bring to light something he has not experienced or not already discovered'. This gives the social scientist a great start or advantage over the natural scientist:

> We can observe natural phenomena only from outside but ourselves from within. . . . This psychological method chooses the most advantageous position for observation. It finds for us in common experience all the most important facts of economy. . . . It finds that certain acts take place in our consciousness with a feeling of necessity. What a huge advantage for the natural scientist if the organic and inorganic world clearly informed him of its laws, and why should we neglect such assistance? (p. 17.)

In a later version Wieser wrote:

> For all actions which are accompanied by a consciousness of necessity, economic theory need never strive to establish a law in a long series of inductions. In these cases we, each of us, hear the law pronounced by an unmistakeable inner voice. (*Social Economics*, p. 8.)

The notion of the laws of the economic world being clearly revealed to the economist by a process of introspection or reflection, much easier and more certain than anything available to the natural scientist, goes back via the Physiocrats to Cartesian rationalism: 'Cogito, ergo the laws of the economic world are revealed to me.' Wieser gives his own twist to the doctrine with his notion of the inherent wisdom in popular language and concepts (rather than the ambiguities and paradoxes which are so often to be found).

Let us simply note how very different this sounds from the warnings of Sidgwick, Jevons, or Edgeworth, and potentially how much more confidence (and even possibly dogmatism) about its results it may engender. Wieser's own standards of caution, detachment, and responsibility were, of course, exemplary. But that is often not the case with those who listen to 'inner voices', and are struck by the certainty and infallibility of what they hear. It is one thing to emphasize the role, in all sciences, of introspection and *Gedankenexperimente* in suggesting hypotheses to be tested out. It is quite another thing to put introspection on the same level, or even on a higher level, than empirical observation by insisting on the certainty and infallibility of inner voices, the promptings of which seem to require no ordinary inductive testing in respect of other individuals, about whom, by definition, introspection can tell one nothing.

2. *Cost and Imputation*

Wieser's first essay on economics was a seminar paper entitled 'On the Relation of Cost to Value' (1876). Menger had not entered very far into this problem, though he had left important pointers to its solution. Among Wieser's best-known contributions, outlined in this early essay, is his formulation and analysis of the alternative cost concept, that is, that the costs of goods are what is foregone, or what might have been produced by the same resources. The alternative cost concept is not necessarily simply a definition of the term 'cost'. It is a corollary of the fundamental postulate of maximizing behaviour, and enjoys all the elusiveness of content belonging to that comprehensive generalization. The alternative cost analysis is most conveniently presentable on the assumption of fixed total stocks of resources, and permits of various rather elegant, if, of course, probably fairly empty, elaborations of the standard allocation formulae for household, firm, or society. To the extent that this alternative cost analysis has rested on this assumption of fixed stocks of resources, it may perhaps have had a part, though this is not a fault in the analysis itself, in fostering the assumption, tacit or explicit, of a fixed level of employment of resources, which is bound to be somewhat obstructive in the analysis of economic fluctuations.

Proceeding from this concept of cost, Wieser went on to build up his theory of distribution, or 'imputation' (*Zurechnung*) of shares to the different factors of production, which he compares to the procedure of a judge imputing the responsibility for a crime among the different parties to it. He starts by criticizing Menger's 'loss' principle, according to which the value of a unit of a factor is measured by what would be lost of the product by the withdrawal of this unit. He substitutes the principle of the 'productive contribution', or what is gained by the factor's retention, which, of course, assuming continuous variability, comes to the same thing. All through Wieser's discussion he fails to mark off, and take separately, the cases of fixed and variable proportions of the factors. His emphasis on fixed proportions is no doubt connected with the great emphasis on the complementarity of production goods and services, which had been laid by Menger, and which has been followed by subsequent Austrian writers. But Menger also clearly described the case of variable proportions, which is the necessary basis for a marginal productivity analysis, and the case to which marginal productivity analysis is applicable. The avoidance of even the simplest

mathematical formulation seems undoubtedly to have been a great handicap to the Austrians against formulating the marginal productivity theory in a clear and precise manner.

Though Wieser's general treatment of imputation suffers severely from this lack of clarity, his discussion of the rewards to particular factors contains many sound points. The rent concept is generalized into a 'universal law of differential imputation', applicable to labour and capital as well as land. On the subject of wages, Wieser is mainly concerned to attack the labour theory of value (a constant preoccupation of his) as well as the Malthusian 'subsistence' theory. On profits Wieser does not follow up the analysis of Thünen and Mangoldt.

It is, of course, Böhm-Bawerk's theory of capital that has come to be known as 'the Austrian' theory. But Wieser, also, developed a considerable analysis of capital, differing markedly from Böhm-Bawerk's, and having much more in common with that of Walras, and also Clark and Fetter. He makes no use of the concept of the period of production, and is critical of, though does not dismiss, the element of the undervaluation of future wants in the explanation of interest. He sees sufficient proof of the productivity of capital, and the payment of interest, simply in its general employment, like labour and land.

3. *Social Economics*

We shall try to present some of the main points of Wieser's social economics and economic sociology under three heads: (*a*) his analysis of economic calculation and of the role of the State in an exchange economy, a mixed economy, and a socialist economy, (*b*) his critical sociology of capitalism, (*c*) his outline of a 'middle way', or mixed economy.

(*a*) Wieser's treatment of the problem of economic calculation in different forms of society along, perhaps, with Sax's work on public finance, represents the nearest Austrian equivalent to English 'welfare economics', and to Pareto's and Barone's formulae for the optimum allocation of a society's economic resources. But it is neither a systematic review of cases like the former, nor an elaboration of pure and precise theoretical formulae like the latter. It is rather a comparison of different types of economic system or economic order, differing in property relationships and in the way in which economic decisions are taken.

Economic problems arise out of the fact that the world is neither a

paradise nor a prison: in a paradise all goods would be free, and in a prison all would be allocated in fixed unalterable rations to be taken or left. The private household in seeking the optimum solution of its economic or allocation problem tries to maximize utility, the exchange economy maximizes exchange values, and the State maximizes (or ought to try to maximize) social utility, or what Wieser calls 'natural values' (*v. Natural Value*, p. 55). The aim of the private enterpreneur to maximize exchange values will conflict with the aim of the State, though Wieser does not follow up precisely how this comes about, or examine cases.

It is because of the common form and characteristics of maximizing allocation formulae, whatever the maximizing units or authorities, and whatever the form of economy, that Wieser insists on the similarity of the 'laws' of a socialist and a capitalist economy. He omits to add that the social 'maximands', whatever they may be, and the processes by which the attainment of these social maximands is sought, in fact the whole aim and content of economic life, will be different in the two economies. There is obviously much difficulty in Wieser's concept of 'natural value' or social utility, the maximand of the socialist economy. Particularly, as he comes to insist on a thoroughly neutral or even empty concept of utility (or rather *Nutzen* which is in any case a rather more colourless term): 'The economic principle of maximizing utility, in the form in which it occurs in theoretical economics, is to be separated from hedonist philosophising. There is no doubt that it is reconcilable with ascetic views. . . . The principle makes no attempt to lay down the ends of existence or how they should be chosen.' (*Social Economics*, p. 33.) On the other hand Wieser considers that, through the principle of diminishing utility, progressive taxation finds 'a firm theoretical basis in the concept and laws of economic value'. (p. 433.)

In the exchange economy the exchange values of goods and services will be precisely calculable, and the controllers of a socialist economy, if they were carrying out their task 'rationally', would have to aim at accounting for and economizing goods and services (including not only the services of labour, but of land and machines), according to precisely the same formulae. The labour theory of value would provide no aid in the solution of such allocation problems, either in a socialist, or in any other economy.

However, though comparatively exact calculations can be made for exchange values in an exchange economy—(Wieser seems to abstract from uncertainty and speculation)—the 'natural' or social values which

the state aims at maximizing are not calculable, and are bound to be vague and controverted. The more precisely calculable exchange values cannot be taken as criteria for social policy. (*Natural Value*, p. 231.)

Wieser emphasizes the function of free markets in an exchange economy in making possible economic calculation and a 'rational' allocation of resources. But he is also quite clear that many of the most important decisions in allocating social resources cannot possibly be based on the sort of calculations which may be possible for an entrepreneur in a fairly stable market, and that, in any case, these market calculations have no special social validity. He clearly has in mind the social considerations of distributive fairness, education, defence, and so on, which are bound to dominate so much of any society's allocation of resources:

> It is the exact calculation *and* the incalculable but actually observed influences that, *together*, make up the full value of goods. The theorist must admit so much, however hard it is for him, when he considers how greatly economic theory loses by it in the exact conception of its formulae and precepts. How simple and how easy to apply any advice whenever only calculable quantities are concerned;—whatever, calculated by exchange value, yields a profit is economically permissible; everything else is forbidden! And how misty and obscure all theoretical solutions become when they put absolute laws aside, and are obliged to appeal to concrete existing circumstances to decide for them! In the end it is to politics we must leave the task of deciding. . . . However much the pride of theory may suffer in recognizing this, it is a fact not to be gainsaid. (*Natural Value*, p. 231.)

(*b*) *Competitive Capitalism*: Almost nowhere does Wieser attempt any contribution to analytical dynamics, except for a few passing assumptions of the stereotyped self-equilibrating mechanism ('Finally the disturbance will be overcome and an equilibrium re-established', *Social Economics*, p. 107,[1] or, 'Until with the establishment of a new price, the market once more recovers its equilibrium and supply and effective demand coincide', p. 194). But he certainly does not attribute any optimistic teleological significance to the workings of the free market. On the whole he sees competition as a dangerous rather than a beneficent force, and suggests that it is conventional notions of 'fairness' which fortunately prevent continual competitive price warfare:

> Were every individual here to follow his private interests only, then a

[1] I have used the translation by C. A. Malloch of *Natural Value* (1893 edition), and that by A. F. Hinrichs of *Social Economics* (1927 edition), the latter with slight amendments.

struggle for the most profitable price would break up into any number of single combats, where the stronger would too often find opportunities of mercilessly exploiting the weaker. . . . [But] the exploitation of the individual case is not countenanced; men endeavour to ascertain the just, the common price; the mass of individuals falls voluntarily into line, following the call of those 'natural controls', which step by step have come to dominate in human affairs. Experience has gradually driven home its lesson, that the common price will work out best for the benefit of all (*Social Economics*, p. 185.)

There is probably much realism in this notion of the stabilizing influence of convention on price fixing, but it is not easily reconciled with the assumptions of the usual analysis. It is also to 'excessive competition' that Wieser attributes economic crises in one of his few references to the subject. As new investment opportunities open up, the rush to exploit them results in 'excessive production', and 'over-' or 'excessive competition' (pp. 209–10). (In a single passing reference he orthodoxly claims that 'an old doctrine asserts correctly that general overproduction is inconceivable'. (p. 285.))

Wieser holds that the English classical economists 'had no correct idea of the dangers which accompany competition on a large scale. Their later followers, looking at the new world around them should have known better; but in their pedantry they clung to their dogmas careless of the breadth and depth of the cleft which separated them from actuality.' (p. 209.) Formerly one was justified in saying that the competitive struggle performed a service of personal selection. But today it is the power of vast aggregates of capital which decides the outcome of competition 'Now, however, the revolutions of trade, brought about by the irresistible advance of large-scale capitalism, are mass phenomena. . . . The displaced masses of unemployed cannot easily, and certainly not quickly, find employment under approximately equal conditions; meanwhile these workers are abandoned to abject poverty, and, more lamentable still, their best powers may be scrapped forever.' (p. 210.) In his rejection of the classical defence of competition, Wieser was much nearer to the members of the German historical school, and of the *Verein für Sozialpolitik*, than to Carl Menger: 'The classical theorists thought the doctrine of non-intervention applied for all succeeding periods. This is now rejected. . . . The recognition of the state's protective duty is the most important theoretical result of modern economic policy. German economists may take pride in having established it and broken the spell of the classical dogmas.' (*Social Economics*, pp. 409–10.)

Wieser was also critical of any unqualified opposition to monopoly. The nature of capitalism had, in any case, completely changed: 'The modern trend to production on a large-scale has called into being numerous novel intermediate monopoloid forms, which today are far more important than either of the pure forms. The classical formula, unconditional approval of competition and the absolute repudiation of anti-social monopoly, can no longer do justice to the institutions of today.' (p. 217.) Wieser was deeply impressed by what he considered 'the present trend to enterprises of vast size' (p. 216), both by the dangers to freedom, and by their creative possibilities: 'Today, at any rate, it must be insisted that the effect of the personal selection of leaders, usually ascribed to competition, is most strikingly illustrated by the trusts. The trusts are creations of men of extraordinary abilities in practical business pursuits, men who possess the insight, the knowledge, the energies, required to plan and organize the giant enterprises of modern commerce and industry.' (p. 227.) From his early romantic Tolstoyan notion of the role of the anonymous masses, Wieser had come to emphasize, like Pareto and Schumpeter, the role in economic as in political history of the élite leadership.

It was on the social rather than the economic weaknesses of competitive capitalism that Wieser concentrated. First, there was the inequality in the distribution of wealth. Secondly, there was the conglomeration in huge new urban industrial areas of workers shortsightedly attracted by the higher money wages, but threatened with the 'degeneration' he considered urban industrialism to bring, and the new and still obscure forces it was fostering: 'All through the Middle Ages and down to the beginnings of modern times, our ancestors were threatened with barbarian aggression. Modern civilisation has grown so strong that it no longer fears this outside invasion, but the people are haunted by the fear that there may spring from its midst a new barbarism which may some day overpower them.' (p. 383.) Indeed, possibly at the very moment Wieser was writing in Vienna, Adolf Hitler (not to mention Bukharin) was lurking in preparation for his subsequent career. Wieser approvingly quoted Wilhelm Foerster: 'Intellectually and morally modern society is unequally matched against the enormous material forces which it has unchained through its science and technology.'

Thirdly, the existing order had not solved the problem of the right relation between employer and employed, and the worker and his work. Wieser saw little immediate—though some long-run—hope in

systems of profit-sharing or partnership, and made a special study of producers' co-operatives. He saw trade unions as the inevitable and justifiable weapon of workers in the existing economic order, and regarded marginal productivity as in practice establishing an upper limit but no lower limit to wages. Trade unions could at least force the entrepreneurs to agree to the competitive price for labour (p. 378):

> The freedom of personal contract, however, is not that supreme blessing that the liberal school sought to portray. With the existing weak position of the labouring class, class-consciousness, resting upon cooperative solidarity, is to be valued more highly than individual liberty based on private interest. Only the former is strong enough to represent with good effect the interests of the masses. Thrown upon his own resources, the individual is nearly powerless. In view of the helplessness of the individual, the slogan of the liberal school, '*Laissez-faire, laissez-passer*', becomes almost a mockery. Those who truly wish for freedom must not begrudge it to the working class, though they may be fully aware that in its own class interests it is inclined to encroach on the individual interests of some of its members too freely. (p. 379, see also p. 405.)

(*c*) *The Mixed Economy*: In spite of these grave weaknesses in the existing order, in spite of what he seemingly regarded as the inevitability of 'the march to socialism' in all countries including the United States, and of what he referred to as 'the socialistic state of the future' (p. 408), Wieser seems to have favoured a mixed economy relying mainly on the competitive spirit for its motive force: 'No economic order, without suffering very great disadvantages, may dispense with the use, in one way or another, of the supreme power of competition.' (p. 211.)

Only a competitive decentralized system provides the necessary adaptability and incentive. With extensive division of labour the different individual tasks

> will be executed far more effectively by thousands and millions of human beings, seeing with thousands and millions of eyes, exerting as many wills: they will be balanced, one against the other, far more accurately than if all these actions, like some complex mechanism, had to be guided and directed by a superior control. A central power of this sort could never be informed of the countless possibilities, to be met with in every individual case. . . . The private constitution of the economy is what is needed to enlist the tremendous force of self-interest in the service economic life—the force which, in case of impending war, submits without demur to the command of one leader. (p. 396.)

Socialist ideals may seem to give an easy and obvious answer to the problems of distribution. But that is only one half of the matter, which must be weighed against the other half, the effects on production. Moreover the abuse of economic power is not necessarily inherent in an exchange economy, 'nor will, on the other hand, the dissolution of the exchange economy free society from the possibilities of economic despotism. Even the socialistic state of the future will need leadership; will, by leadership, create power; and, as the outgrowth of power there will again be despotism, . . . whenever the masses are not sufficiently strong to offer resistance to the prevailing leaders.' (p. 408.)

Wieser hardly examines cases but only briefly offers general directions in which the balance of free enterprise and State control can be corrected. He discusses the taxation of rural and urban rents and of the profits of speculation and company promotion (p. 413), social insurance, some middle way in industrial organization between complete socialization and 'the despotism of the all-powerful entrepreneur', and possible measures for the control of monopoly. He accepted List's case for tariff protection to develop a nation's productive powers.

Wieser's last book *Das Gesetz der Macht* ('The Law of Power') was completed just before his death, and he regarded his whole life-work as leading up to it. He had meanwhile served as Minister of Commerce in one of the last cabinets of the Austro-Hungarian Empire towards the end of the First World War. In this book Wieser develops on a much larger political and historical canvas the main sociological themes of his *Social Economics*: the dangers and the creative possibilities of the growing 'bigness' of modern political and economic organizations: the problems of leaders and led: that the liberal revolution of the nineteenth century had been simply the revolution of the bourgeoisie: 'Just as the bourgeois political philosophers demanded fundamental civil rights for the bourgeoisie, so the political philosophers of the proletariat demand fundamental economic rights. Without these economic rights the abstract principle of 'equal rights for all in practice amounts to complete inequality'.

Except for some not very systematic chapters in J. S. Mill's *Principles*, English political economists have not been much concerned with the sociological background of their economic analysis. English economists have, like Marshall, mainly combined their economics with, and applied it to, a more detailed background of industrial history and organization, and to the practical possibilities of contemporary government

policy. They have not so much applied it to, or combined it with, an historical analysis of the sociological and political framework of capitalism, as have some continental economists. Presumably, the existence of the English Channel, and the background of a more assured social stability, had much to do with this difference. But recent history has, of course, somewhat altered the position, and for those who want it, the works of Pareto, Wieser, and Schumpeter, on economic sociology, do possess a certain lively, if controversial, relevance to, and awareness of, the social revolutions of our time, which is somewhat missing, for example, in the writings of Marshall and Keynes.

11

E. Böhm-Bawerk

1. *The Nature of Böhm-Bawerk's Work*

THE extensive writings of Böhm-Bawerk, the exact contemporary and brother-in-law of Wieser, have been more widely known and discussed than any other works of the Austrian School. On the subjects of value and distribution he added little that was of essential importance to the doctrines of Menger and Wieser, and we shall pass over fairly briefly this part of his work. Nevertheless, he formulated the Viennese doctrines with a lucidity and persuasiveness not previously achieved, and the translations of his writings made 'the Austrian leader', as Edgeworth called him, the best known representative of his school in England and the United States. In addition, in his great work on capital and interest, he developed, with an unparalleled weight of argumentation, a theme he made peculiarly his own. In fact his theory of capital is often referred to as 'the Austrian Theory', though Menger and Wieser profoundly disagreed with it in their own valuable writings on the subject.

In his work on methodology, and on value and distribution, or 'imputation', many of the Austrian family traits are discernible. His criticism of the historical school is much more moderate and tolerant than is Menger's but it is firm. He avoids, like Menger and Wieser, all mathematical formulation, and his work is stamped by a thoroughgoing rejection of the concept of 'mutual determination', all-pervasive in Walras and Marshall. This often lends to his exposition a confident monocausal simplicity, apt, however, to lapse into a rather one-sided dogmatism, for example in his pertinacious insistence that marginal utility is the sole 'ultimate standard of value'. There is a tendency also to dogmatism in terminology, and as to what are, or are not, legitimate simplifying assumptions. Though prepared for many sorts of extremely abstract assumptions he is never ready to agree to those of continuity and divisibility in economic quantities, so useful for a precise formulation of marginal analysis. On the subject of utility he rejects hedonistic interpretations, though occasional phrases of his point clearly in that direction, and he holds that utility is measurable and to some extent comparable inter-personally.

In his theory of distribution he professedly follows Menger, but misses the essential principle of the variability of the proportions of the factors, and gives an analysis based mainly on different cases of fixed proportions and employing the somewhat awkward concept of the *Schlußstück*, the last factor to join a productive combination (which is the 'last' is apparently arbitrary) which is in a position to bargain down the rewards to the other factors in the combination, to the advantage of its own share. His monocausal principles and his avoidance even of the simplest mathematical assistance make impossible a satisfactory formulation.

In examining Böhm-Bawerk's theories of capital and interest it should be remembered that he never rounded off his great work with the completeness and consistency he would have liked. His life fell into three main phases. The first lasted till 1889, by when his theory of value and the first editions of the two parts of his work on capital and interest had been written. But, as he explained to his distinguished disciple Wicksell, Böhm-Bawerk never properly revised or finished off the first edition of his work, and for fifteen years had no opportunity of preparing a second edition.[1] For in 1889, immediately on the appearance of the first edition of the *Positive Theory*, Böhm-Bawerk began a period of fifteen years' service in the Austrian Government, in the course of which he was three times Minister of Finance, and carried through an important reform of the income tax. For the third phase, and last ten years, of his life (1904–14), he returned to academic work as Professor at Vienna, and started on a thorough revision of his book. But he proceeded not by removing weaknesses or inconsistencies from the existing edition but by engaging in extensive controversies with the numerous critics it had attracted, notably with J. B. Clark, Fisher, and Schumpeter, which were summarized and extended in a third volume of fourteen *Critical Excursions* (*Exkursen*).

Böhm-Bawerk was an indefatigable but not pugnacious controversialist, more it seems from a conscientious sense of duty to his critics and to the truth as he saw it, than for any other reason. Every critic had to receive his full due, not in some oblique footnote, but in a full length 'excursion' where he could be informed plainly, but politely, as to just where he had gone astray. Marshall referred to what he called

[1] See Wicksell's last essay, 'Zur Zinstheorie', in *Die Wirtschaftstheorie der Gegenwart* edited by H. Mayer, vol. iii, p. 199, and the quotation and translation therefrom by G. J. Stigler, *Production and Distribution Theories*, p. 194. All our references to Böhm-Bawerk's *Kapital und Kapitalzins* are to the fourth German edition.

Böhm-Bawerk's 'rather rough method of thumping' (*Memorials*, p. 416), but Böhm-Bawerk could take 'thumps' with urbanity as well as give them, and it is only fair to cite also the judgement of Schumpeter: 'One cannot be a good controversialist without being a good, and above all an honourable man. On this point, than which there are in life few more exacting tests of character and qualities, and in connection with which the most unaimiable traits are all too often apt to reveal themselves where one least expects them, Böhm-Bawerk is a shining example beyond all praise.' (*Zeitschrift für Volkswirtschaft*, 1914, p. 454.)

It is obvious to look for parallels between Böhm-Bawerk's massive work on Capital and Interest, and Marx's book on Capital, both eventually comprising three volumes in all, the first of which were published within twenty years of one another. There are a number of superficial, and unfortunately mainly rather unpalatable, resemblances. There is the same prolixity, the same inclination to terminological pedantry, the same Teutonic insistence on the virtues of 'profundity' ('Professor Marshall' has a '*nicht genug tiefe Erfassung des Problemes*'). There is the same 'essentialist' philosophizing, and the same tendency to push towards, or even well over into, the confines of metaphysics. There is the same attempt to illuminate contemporary problems by models of a primitive pre-capitalist 'Ur'-world. But there is no history and no sociology in Böhm-Bawerk, and though he was long a Cabinet Minister nothing resembling Marx's masterly use of blue-books. Böhm-Bawerk agreed at one point that his problem of interest could be interpreted as amounting to the Marxian problem of surplus value. (*Positive Theorie*, 4th ed., p. 378.) But a 'capitalist' economy has a completely different meaning for the two authors. For Böhm-Bawerk the capitalist economy is not an historical phase of economic society, with a particular property system and class structure. A 'capitalistic' economy is one that uses indirect 'roundabout' methods of production, other than the hand-to-mouth method of employing simply the two 'original' factors land and labour. 'Capitalist' production can and does occur in any form of society or economy, and presumably most socialist societies will be trying to make themselves more 'capitalist' (or 'capitalistic') in this sense.

Böhm-Bawerk deals with an isolated social economy, and monetary problems, crises, or fluctuations, are hardly mentioned. Competition is generally prevalent, and few problems of monopoly are discussed. All savings in a period seem to be invested in that period, and full employment equilibrium is generally attained. As Haberler has stated,[1]

[1] *Quarterly Journal of Economics*, 1950, p. 361.

the analysis is essentially static or 'comparatively' static, though it may be difficult to generalize precisely about so voluminous a book, which is not always fully self-consistent. The main *quaesitum* of the *Positive Theory* seems to be to propound a static formula for the rate of interest, and to interpret with great thoroughness the factors in or behind the formula, which in the concluding chapter are displayed in a comparative static analysis. The problems Böhm-Bawerk raised undoubtedly called especially for dynamic treatment, of which here and there he gives indications. But the extensive discussion of the element of time is not concerned with analysing the course of economic actions *through* time (that is, with 'dynamic' analysis), but with arriving at a static 'maximizing' formula for allocating resources between different methods of production, which for technical reasons take different periods of time. Even if that elusive technical generalization which Böhm-Bawerk sought after, which would connect the 'productivity' of, and the time taken by, different methods of production could be satisfactorily formulated; even if the baffling problem of measuring the time taken by different production periods could be regarded as solved (a possibility which probably most readers would reject), Böhm-Bawerk's formula would remain a 'static' marginal productivity formula, though, of course, immensely elaborated in certain directions.

If one is to run with patience the somewhat exacting race that Böhm-Bawerk's three volumes on capital and interest set before one, it is particularly desirable to keep in mind a general outline of the course, and its main contours and detours. Further, as in many discussions of the theory of capital, it is particularly important to be clear all the time as to what sort of answer is being given to what sort of question, empirical or definitional, 'static' or 'dynamic', technological or economic, 'micro'- or 'macro'-economic.

2. *Capital and Interest: and Some Later Essays*

The first volume of Böhm-Bawerk's great work is a 550-page *History and Criticism of Interest Theories*, in which the views of more than 150 authors from Aristotle onwards are discussed. Here we shall only mention briefly his treatment of one or two particular authors, and something of the method of criticism. Generally, a specialist writer, with his own particular doctrine to 'sell', will not make a satisfactory historian of previous doctrines.

The authors to whom Böhm-Bawerk pays most tribute are John Rae, Thünen, with his marginal productivity analysis of interest, and

Carl Menger. Jevons, who had recently emphasized the time dimension of different methods of production, in the analysis he had built up on his own as a lonely young man in Australia, is referred to as a *geistvoller Eklektiker* ('an intelligent eclectic'). The chapter on John Rae, and his work the *New Principles* (1834) is perhaps the most interesting in the book. Rae had spent much of his life as a schoolmaster and medical officer in the remoter parts of Canada, the United States, and the Pacific islands and his work was comparatively unknown, except from some high praise by Mill, and from quotation, without always perhaps sufficient acknowledgement, in Hearn's *Plutology*. Rae had discussed the role of invention in relation to the formation of capital and economic progress, and also the under-estimation of future wants, and the period of consumption of durable goods (which Böhm-Bawerk was to call the *Wartezeit*—period of waiting). In discussing Rae's doctrines Böhm-Bawerk gives a brief preview of his own answer to the problem of interest:

> I hold it to be completely correct that a root cause of interest lies in a different estimate of present and future goods, and that this different estimate, as Rae argues, based on grounds of a purely psychological nature, plays a very important part. But I also hold that these grounds certainly do not give an exhaustive explanation of the actual phenomena of interest, as both Rae and Jevons well realised. The facts of experience leave no doubt that the existence and level of the rate of interest are not based simply on psychological considerations as to the shortness and uncertainty of human life, and of the capacity for enjoyment, or on the greater attractions of the present, but that the technical facts of production also play a part. These facts of experience lead us to the idea, already well-known, of the independent productivity of capital. The difficulty—as I believe the main and most acute difficulty—of the whole problem of interest, is to set out the ways and means by which these heterogeneous grounds, partly objective and technical, partly highly subjective and psychological, work together to produce the rate of interest as we know it. . . . For myself, I attempt to show that the technical facts of production, which I describe as the greater technical productivity of time-consuming methods of production, provide a partial ground for the higher valuation of present goods, the possession of which permits the use of those more productive time-consuming methods. From this point of view the technical and psychological facts are coordinated from the start, and their effects work together to produce the common result of present goods being valued more highly than future goods. This result provides the explanatory link between the partial grounds which produce it, and the rate of interest which emerges as a further consequence from it. (*Geschichte*, 4th ed., pp. 301–2.)

From this account one might have expected that elsewhere Böhm-Bawerk might have shown more appreciation of the notion of mutual determination. His criticism of other theories, classified as 'productivity', 'abstinence', 'exploitation', and the 'services of capital' theories, is usually to the effect that they are not sufficiently profound, or that they do not get to the essence of the problem. He holds that there is some 'riddle' (p. 60) or 'secret', the 'key word' for solving which has not been discovered. (p. 168.) He finally formulates the problem as follows: 'The problem of interest is that of studying and explaining the causes which direct a part of the stream of goods from the annual national production, into the hands of the capitalists. It is therefore, without doubt, a problem of the distribution of goods. (p. 444.) But Böhm-Bawerk does not regard it simply as a 'micro-economic' distribution problem of the buying and selling of a class of factors by individuals, but as a problem of an entire category of income, as analysed in the English classical account of distribution between the three 'classes' of society.

The *Positive Theory* opens with a long examination of the 'Concept and Essence of Capital', in which Böhm-Bawerk criticizes the many differing definitions of this much-controverted term. He wants to establish 'terminological discipline', and finds Marshall's attitude 'somewhat resigned', that 'economists remain therefore free to choose their standard definition of capital with a view to their own convenience'. His own concept of capital is that it consists, in by far its most important form, of 'intermediate products' or 'produced means of production'. This concept is refined further by his distinction between 'social' and 'private' capital, or 'produced means of production'. Machines, raw materials, stocks of finished consumption goods in the hands of traders, factories, but not schools &c., are 'social' capital, and all these, with the addition of the means of subsistence of workers and durable consumption goods (provided they are not consumed by their owners, but hired out to others), are 'private' capital.

This concept of capital follows directly from Böhm-Bawerk's doctrine of the two 'original' factors. Nature and labour are the only two fundamental factors of production, capital being simply 'intermediate' and not of itself 'productive', its function being to make it possible to transcend 'direct' hand-to-mouth production by 'indirect' roundabout methods. These indirect methods have the advantage of being more productive, though in given technological conditions their productiveness will be in decreasing proportion to the increase in

'roundaboutness'. But they have the disadvantage of demanding generally a greater sacrifice of time (though there may be exceptional cases where a more indirect method may be both more productive and 'quicker'). (p. 112.)

In his second book of the *Positive Theory* on 'Capital as an Instrument of Production', we are at the heart of the Böhm-Bawerkian matter. He subsequently makes it clear that it is only 'cleverly chosen' lengthenings of the method of production that are more productive. Of course, for every one 'longer' method that is more productive, there are an infinite number, which no one would ever dream of using, that are less productive. But there always exist at any moment these more productive longer methods available for the 'clever chooser' who possesses present goods.

As soon as one begins to discuss 'longer' and 'shorter' methods of production the problem arises of how to measure the temporal length of a method of production. Böhm-Bawerk's answer is that the period of production is measured by an average of the lengths of time between the application of the different inputs going to produce a good, and the final completion of the good. It is unnecessary today to emphasize how unsatisfactory this definition is, except possibly for highly oversimplified and unrealistic cases. Generally, particular inputs cannot be linked with particular outputs, and the problem of 'weighting' the average of the lengths of time between all the different inputs and the final output is more or less insoluble. Moreover, corresponding with the period of production is the period of consumption (or *Wartezeit*) of durable goods, and there is no particular relation between the length of the two 'periods' in respect of any particular good. An essential element of Böhm-Bawerk's analysis of the relation between the time taken by, and the productivity of, different methods of production is that every lengthening of the period of production requires 'more capital', and that every increase in the amount of capital must 'lengthen the period of production'.

Stripped of what is purely definitional, and somewhat arbitrarily so, and also of all doubtful technological generalizations, what remains in Böhm-Bawerk's analysis? That there are different methods of production, of different degrees of productivity: and that different methods would take different lengths of time, if one could agree on some method of measurement, but any such method of measurement would be arbitrary and without much economic significance. However, though Böhm-Bawerk did not answer the problem he posed, and

though it is very doubtful whether he posed a meaningful problem, his discussion of the elusive relation between 'time' and 'productivity', ultimately perhaps completely elusive, may be said to have been a challenge that at one stage or another had to be met and disposed of.

Böhm-Bawerk closes this part of his work with a section on the formation of capital, or saving and investment. For the formation of capital the negative element of saving must be joined by the positive element of investing, or employing intermediate products. (p. 139.) Not only does Böhm-Bawerk distinguish the two processes in this way, but he corrected Adam Smith's long dominant dictum that 'parsimony and not industry is the immediate cause of the increase of capital'. 'To be correct', Böhm-Bawerk emphasizes, 'this must be precisely reversed. The direct cause for the existence of capital goods is production, the indirect cause is the previous saving.' However, after this promising emphasis Böhm-Bawerk reverts to the Smithian concept of the invariable (or inevitable) linking of saving and investment. He examines what happens in a free market economy when aggregate saving increases. Previously the entire national income (equal to the product of 10 million man-years) has been consumed. Now only the product of $7\frac{1}{2}$ million is consumed and that of $2\frac{1}{2}$ million is saved:

> If for a time the old disposition of production was continued by the entrepreneurs and 10 million worth of consumption goods put on the market, then the over-supply would result in a lowering of prices, and the pressure of losses would cause the entrepreneurs to adjust their production to the changed conditions of demand. They would now ensure that in one year only the product of $7\frac{1}{2}$ million man-years would be put on the market . . . and the remaining $2\frac{1}{2}$ million, superfluous for the annual supply of consumption goods, can and will be devoted to increasing capital. It *will* be so employed because an economically educated people does not hoard but applies what is saved: by buying shares, depositing it in a bank or savings bank, lending etc. In these ways it is directed into productive credits, increases the purchasing power of producers for productive purposes, and so is the cause of an increased demand for means of production or intermediate products, which in the last analysis causes the directors of firms to invest the available productive factors in producing the required intermediate products. We therefore see, in fact, a precise connection between saving and capital formation. . . . If individuals save, the changed demand forces employers by the impulse on prices to change their dispositions of the productive forces: less are devoted in the year to current satisfaction, and the quantity is increased of those devoted to intermediate products. (pp. 149–50.)

Without any particular warning as to any degree of abstraction involved, Böhm-Bawerk, as we shall see again later, was dealing with the case where all savings in a period are invested and there is full employment.

At this point, at the end of his Book II, Böhm-Bawerk asks what determines whether people save and produce intermediate products? The answer is in their valuations of different goods. Böhm-Bawerk then breaks off abruptly from problems of capital, for his lengthy third book on value and utility. We have already indicated very briefly something of Böhm-Bawerk's views on utility, value, and imputation. The order of subjects in the *Positive Theory*, that is, Capital, Value, Interest, certainly seems something of a 'roundabout method'. Whether it is a 'cleverly chosen' one, it is perhaps legitimate to question.

The subject of the final Book IV is that fitting together of the 'objective-technical', and 'subjective-psychological' explanations which, as we have seen, Böhm-Bawerk regarded as the main problem of interest. The 'objective-technical' grounds work on the side of the demand for capital, and the 'subjective-psychological' on the supply side of saving. But before proceeding to his analysis of the determination of the rate of interest in the market, Böhm-Bawerk seems to be trying to establish independently the necessity of a positive rate of interest. Wicksell argued that: 'Böhm-Bawerk's real error . . . is that at this point in his exposition he seeks to solve the problem of the *existence* of interest—as distinct from its actual rate—without referring to the market for capital and labour.' (*Lectures*, vol. i, p. 171.) Whether or not this is justly describable as his 'real' error, it is surely mainly one of exposition, and not necessarily fundamental.

The problem of interest is interpreted by Böhm-Bawerk as the problem of the relative values of present goods and future goods of the same kind and quantity. His explanation is summarized in his three 'grounds' for the general superiority of present over future goods.

(1) The first ground is described as the different relative needs for goods and the supply of them in present and future. (*Positive Theory*, p. 328.) For example, there will be those undergoing some present crisis in their affairs, and those also who look forward to a higher income in the future. To the objection (made, for example, by Wieser) that these valuations will be offset by those of other people with an opposite time-preference, Böhm-Bawerk replies that those who wish to have more future goods can simply store their present goods. As all goods have their cost of storage this is not a very satisfactory answer.

(2) The second ground is the general irrational under-estimate of future wants, partly a weakness of will, partly a tendency to wrong estimates, and partly an extravagant *carpe diem* regard for the uncertainties of the future. Böhm-Bawerk definitely treats this as a systematic irrationality, again a generalization that Wieser contested.

(3) Böhm-Bawerk's much-controverted third ground is based on his generalization about the greater productivity of roundabout time-consuming methods of production, causing the 'technical superiority' of present over future goods. The fisherman who has, or can, obtain a stock of 'present' fish is able to subsist while making a net which will enable him to catch many more 'future' fish when he has completed the net. Böhm-Bawerk insisted to the end against Fisher and others, that this should be called an entirely 'independent' ground. But of itself it seems to be a purely technological generalization, which can only obtain economic significance by working through the first ground and explaining a general subjective preference for present over future goods. Doubtless the concept of 'time preference' needed more elucidation by all parties to the lengthy debate over this third 'ground'.

The fixing of the rate of interest under the influence of these three grounds is worked out almost entirely 'macro-economically', for aggregate markets. Böhm-Bawerk first takes the general labour market. Here on the one side are the propertyless workers demanding present goods, and offering their services in return. On the other side are the capitalists in possession of present goods and demanding future goods, or more precisely the services of the workers which will produce future goods after an interval of time and in accordance with the degree of technical superiority of roundabout methods.

The labour market may be regarded as the most important component of the general market for the means of subsistence, or the principal source of demand on the subsistence fund of society. Böhm-Bawerk, in the first instance, abstracts from the demands of landowners, capitalists, and consumption-borrowers for subsistence goods. The function of this subsistence fund is to maintain the members of society over the average social period of production (the average of all the individual average periods of production of all the different goods). The function of the rate of interest is to set a limit to the length of the average social period of production, which, if no interest had to be paid, would be lengthened indefinitely. The supply of present subsistence goods is limited by the national wealth, and the rate of interest has to limit the length of the social period of production to this fund. The

agio on present goods, or their higher valuation as compared with future goods, must correspond with the rate of interest. There is one paragraph at this point which suggests the application of these Böhm-Bawerkian concepts to the particular form of the 'capital shortage' explanation of crises adopted by later members of the Austrian School. If the rate of interest is too low:

> An excessive expansion will be undertaken so that the subsistence fund of society will be exhausted before the fruits of the longer production methods are available or ripe for consumption. The result is losses and shortages, and only as a result of the 'scarcity' prices will the misdirected productive forces be called back to provide as required for present needs. This can only be accompanied by severe disturbances, costs, and losses. (p. 405.)

Böhm-Bawerk turns at this point to the socialists. He argues that sometimes in the general labour market there is a possibility of monopolistic exploitation of the propertyless workers' needs for present goods, without which their labour cannot be applied except in the most sterile hand-to-mouth methods of production. But:

> Though the sellers (of present goods, i.e. the capitalists) may be few, they have all the more present goods to be employed fruitfully. If they are all to find their labour, the capitalists must, in competition, reduce the prices they demand from high to more moderate levels, which will make impossible the exploitation of the propertyless. Happily this sort of case is the rule in the real world. Only occasionally does something limit the competition of the capitalists' (p. 429),

—a generalization to which Adam Smith, for one, would hardly have subscribed. (In his later discussion, in his essay on 'Power and Economic Law', Böhm-Bawerk appeared to go very far towards reversing this generalization.)

Böhm-Bawerk agrees that private saving is not the only means by which capital can be increased, and further that Rodbertus and Lassalle are justified in denying the 'heroism' of the 'abstinence' by the rich. But, on the other hand, 'in the socialist state, just as in the present society, the owners of the present goods will earn interest on them from the workers who by their work are creating a future product'. (p. 435.)

Böhm-Bawerk deals with the formation of the market rate of interest, first for a simplified case where the workers' demand for present subsistence goods is the sole demand (landowners', capitalists', and consumption borrowers' demands being, for simplicity, excluded).

The entire supply and demand for present goods meets in a single 'giant' market covering the whole economy. He assumes, also, that all branches of production have the same productivity and yield the same increase in productivity if the methods of production are 'lengthened'. For this aggregate 'macro-economic' model, full employment of labour, and full investment of present goods, are assumed as inevitable: 'It is always *possible* to buy the whole labour supply with the existing stock of wealth (or subsistence), and there are strongly effective forces ensuring that this possibility is always realised.' (p. 448.) The workers would rather sell their labour cheap than not at all, and will always underbid one another for work if unemployed. The capitalists will always find it profitable to advance their capital to the workers rather than leave it inactive. Consequently: 'A period of production must be chosen just long enough to require the whole disposable subsistence fund for paying the entire available labour force, and no longer. The wage-level must be such that there is no idle capital to bid up wages and no idle labour seeking employment to bid them down.' (p. 453.) There may be various such wage-rates giving full employment (a point which Böhm-Bawerk neglects), but only one will be compatible with the capitalists' selection of the most profitable method of production—a condition of equilibrium. Assuming these equilibrium conditions, 'the level of interest is determined by the additional yield of the last permissible lengthening of the productive process'. (p. 457.) As Böhm-Bawerk recognizes, this is an adaptation or elaboration of Thünen's marginal productivity analysis.

The equilibrium rate of interest, therefore, varies (1) with the size of the subsistence fund (inversely), (2) with the number of workers (the more workers to be employed the higher the rate of interest), and (3) technological conditions (the more productive are the available lengthenings of the production process, the higher the rate of interest). (p. 464.) Böhm-Bawerk here provides a comparative static analysis, taking a given change in each of these three factors.

The dropping by Böhm-Bawerk of his simplifying assumptions makes little essential difference to the shape of his conclusions. Irrationalities and slowness in adaptation may prevent the equalization of returns to more roundabout methods from each line of production. Böhm-Bawerk does not believe that any precise or persistent calculation of investment yields does, or can, take place in a private enterprise economy, owing to the baffling uncertainties involved. Consequently saving and investment decisions are strongly under the influence of

habit. (pp. 478–9.) He points out the similarities of his analysis with that of the classical wages fund doctrine. But he claims that his concept of the subsistence fund is far more precise, and that he has introduced the vital element of the length of the social period of production.

There is no doubt that a 'micro-economic' marginal productivity analysis of interest and wages *could* easily be presented, *mutatis mutandis*, in Böhm-Bawerk's terminology. But the significance of marginal productivity analysis applied to labour and capital, *as a whole, in aggregate markets*, is extremely doubtful. There is not much point in trying to argue that Böhm-Bawerk's model with its assumption of equilibrium full-employment is 'illegitimate'. It is simply remote from the dynamic problems of a modern monetary economy, and Böhm-Bawerk does not sufficiently emphasize his high level of abstraction, and the very special nature of the assumptions he is making. On the contrary, his final chapter is entitled 'The Capital Market in its Full Development'. Even if the insurmountable difficulties of his fundamental concept of the period of production are disregarded, his 'macro-economic', static, and comparative-static analysis remains highly abstract. This would not be a fair point for criticism if Böhm-Bawerk had clearly indicated to his readers (and to himself) the full importance of the elements from which he was abstracting. Translating the 'macro-economic' formulation into 'micro-economic' terms, and leaving out the period of production concept, one is left with a marginal productivity analysis of interest, filled out at great length by a number of interesting, but often highly questionable, 'grounds' or explanations.

In one of his last and finest writings, his essay on 'Power and Economic Law', Böhm-Bawerk carried much farther his long-run analysis of the relations between general wages and interest. He was concerned with the problem of how far trade unions had the power to raise wages above whatever level was fixed by 'economic law'. As contrasted with the *Positive Theory*, the assumption of generally perfect competition in the labour market is not made in this essay, nor is its realism upheld. The most important question analysed turns on whether a wage-rate can be held in the long run which, though it does not bring a positive loss to entrepreneurs on their investments, reduces the interest on their capital below the 'natural' level. (*Gesammelte Schriften*, p. 277.) The analysis again is in general 'macro-economic' terms, but its clarity is, as before, impaired by an occasional reference to 'micro-economic' conditions and the analysis of production plans of the individual firm. As the discussion also involves guessing at the shape

of such very elusive concepts as the long-run supply curve of savings and business enterprise, it cannot, and wisely does not, come to any very clear-cut conclusions. Böhm-Bawerk does not try to insist that trade unions cannot raise wages, but argues that they certainly can in the short run, and that *possibly* by raising efficiency the higher wages can be held in the long run. He simply argues that very often the apparent success of unions in raising money wages is illusory because of consequential price increases, or that the gains are at the expense of other workers outside the unions. He argues, further, that unemployment is a likely consequence, though this may only prove 'frictional' because the unemployed workers will usually sooner or later bid down the wage-rate. He concludes, simply, by refusing to assent to the general proposition that trade unions can in the long run increase the share of labour at the expense of the share of capital, and that such success in raising wages as they had had in recent decades was made possible by the rapid technological progress then going forward. He is dealing with a society with a considerable trade union movement, but great inequalities in the distribution of wealth, and where the function of saving is performed largely or entirely by the rich, a set of conditions which the last half-century has, as a matter of historical fact, shown to be itself of doubtful stability in the long run.

We may mention, in conclusion, Böhm-Bawerk's essay on Marx: 'Karl Marx and the Close of his System', written as an essay in honour of Karl Knies in 1896. It is a criticism of the labour theory of value in the light of marginal utility analysis, written with all Böhm-Bawerk's pertinacity and urbanity. It does not discuss Marx's theory of crises, and demonstrates the limited significance simply of an intellectual refutation of the Marxian theory of value. Böhm-Bawerk concludes:

> The Marxian system has a past and a present, but no abiding future. Of all sorts of scientific systems those which, like the Marxian system, are based on a hollow dialectic, are most surely doomed. A clever dialectic may make a temporary impression on the human mind, but cannot make a lasting one. In the long run facts and the secure linking of causes and effects win the day. In the domain of natural science such a work as Marx's would even now be impossible. In the very young social sciences it was able to attain influence, great influence, and it will probably only lose it very slowly, and that because it has its most powerful support not in the convinced intellect of its disciples, but in their hearts, their wishes and their desires. . . . Socialism will certainly not be overthrown with the Marxian system—neither practical nor theoretic Socialism. As there was a Socialism before Marx, so there will be one after him. . . . Marx, however, will maintain a permanent place in the history of the social sciences for the same reasons and with the same mixture of positive and negative merits as his prototype Hegel. Both of them were philosophical geniuses. Both of them, each in his own domain, had an enormous influence upon the thought and feeling of whole generations, one might almost say even upon the spirit of the age. The specific theoretical work of each was a most ingeniously conceived structure, built up by a magical power of combination, of numerous storeys of thought, held together by a marvellous mental grasp, but—a house of cards (as translated by A. M. Macdonald, pp. 218–21).

Perhaps it is of interest to ponder how much—(though certainly not all)—of this verdict, might justly and not uncharitably be applied to Böhm-Bawerk's own massive works.

12

Further Developments in Historical and Mathematical Economics in Germany and Austria (*c.* 1900)

1. *Schmoller and his School*

THE younger historical school, or the school of Schmoller (1838–1917), who after service as a government statistician was then Professor at Strasbourg, began to come to the front in Germany about 1870. It had two leading themes: the first, a devotion to current problems of social reform by State action; the second, a much more cautious 'monographic' application of the historical method, avoiding the ambitious attempts at comprehensive laws, and generalizations about 'stages of development', of the earlier historical economists.

There had in Germany been a similar movement of thought in the 1850's and 1860's to that in Britain in the '60's, which saw in the progress and application of science the key to the solution of most or all of man's problems, including social problems. As the philosopher Rudolf Eucken put it: 'In the '50s and '60s the attitude to the world of the speculative philosopher is superseded by that of the natural scientist, with the result that the main objective is no longer the 'inner' culture of the individual through art and literature, but the advancement of society, economically, politically, and socially.'[1] Soon after, the unprecedentedly rapid industrial development in Germany then under way, and the inequalities it brought, as well as the foundation of the Empire, were bound to result in increased attention to the role of the State in economic and social life. The idea that economists should place themselves and their works more immediately in the service of State measures for social and economic reform, found expression in the formation of the *Verein für Sozialpolitik* ('Union for Social Policy'), in 1872. The *Verein* had the support of the older historical economists, Roscher, Hildebrand, and Knies, and included a variety of political beliefs among its members. Among the leaders were conservative-socialist followers of Rodbertus like Adolf Wagner (see

[1] *v.* W. Eucken, 'Wissenschaft im Stile Schmollers', *Weltwirtschaftliches Archiv.* 1949, p. 470.

his *Rede über die Soziale Frage*, 1872) and adherents of the German 'Cameralist' tradition. The members of the *Verein* were not, as such, associated with any particular political party. Nor, of course, did they necessarily agree at all closely with Schmoller on methodological problems. The members of the *Verein* simply agreed in rejecting the more extreme liberalist and socialist policies as being 'Utopian' 'rationalist' over-simplifications. They became known as the 'academic socialists' or 'socialists of the chair' (*Kathedersozialisten*), but it should be emphasized that the brand of liberalism they were opposing, and to which they applied the counter-slogan of 'Manchesterism', was hardly that of Adam Smith or Ricardo, and certainly not that of John Stuart Mill. It followed rather the line of the professors who held that the imposition of an income-tax was the next step to communism, and of the 'liberal' Prussian nationalist Treitschke, who was opposed to any mitigation of economic inequalities as sentimental attempts to deny to the strong the rewards of their superior prowess as compared with the weak.[1] In a spirited reply to Treitschke, in 1874, Schmoller defended himself and the *Verein* against Treitschke's attack on them as 'patrons of socialism'. The *Verein* stood rather for the piecemeal study and preparation of practical immediate measures of reform in relation to hours and conditions of work, social insurance, factory legislation, and the like. It should also be remembered that it was leading members of the *Verein*, such as Schaeffle and Nasse, who were pioneers of what has become the main liberal criticism of socialist economics (*v. below* Ch. 18, sect. 3). The attitude of Schmoller himself was that of a forward-looking but loyal official of the German Empire, a strong supporter, on principle, of the monarchy (he even looked forward to a monarchy in the U.S.A.) because he saw in it a bulwark against the exclusive domination of any single class.

The second main theme of Schmoller related to the historical method. He rejected, like the older historical economists, the English classical conception of the science of political economy, as formulated, for example, by Senior, as a pre-eminently deductive study, 'not avid of facts', concentrating on logical deductions from a very small number of fundamental postulates. He sought to develop, as part of political economy, the study of economic institutions, economic classes, the nature of economic progress, and the wide field of economic sociology generally, rather than to treat these subjects as belonging to a 'given' background. For this purpose he drew extensively, but by no means

[1] *v.* Schmoller, *Über einige Grundfragen de Sozialpolitik u.s.w.*, 2nd ed., 1904, pp. 14 ff.

exclusively, on history, while recognizing that statistics and social psychology were to be other main sources of the necessary material. But Schmoller throughout emphasized his scepticism as to the 'historicism' of Roscher and Hildebrand, their notions of historical laws, and of laws and 'stages' of economic and social development, though he was, of course, not completely untouched by the ideas of Hegel, Comte, and Darwin, and shared with Marshall a solid belief in human progress, more difficult to maintain today. But he steadily resisted the more extravagant manifestations of Hegelian 'historicist' influence:

> By cloaking propositions as 'laws', one gives them an appearance of necessity which they do not possess, or one gives too high an importance to comparatively insignificant truths, thereby misleading those who apply them . . . One may attempt to set out some general formula of economic progress, or even of human progress in general. But one is then in the realm of the philosophy of history, of teleology, prophecy, hopes and forebodings. The broader the basis of knowledge on which such attempts are based, the greater value they will have. Bold syntheses of this kind will always be necessary for the purposes of practical action, and it need not be held against the genuine prophets of the day when they believe they have found 'a law of development'. Herbert Spencer and the theorists of social development Mill and Comte, have attempted such formulae, as have the socialists and the 'Manchester' liberals. This sort of thing will, however, always remain far removed from what the natural scientist calls laws. Nor can they be described as empirical laws. What have been prematurely described as laws of history were either in many cases very doubtful generalisations, or simple age-old psychological truths, by which it was believed that whole series of historical events could be explained. It is more justifiable to doubt whether today we can and ought to speak of historical laws. (*Grundfragen der Sozialpolitik*, 2nd ed., pp. 351 and 356.)

Just as Schmoller rejected *a-priori* Utopian plans of wholesale social reorganization, socialist or liberalist, so he turned away from what he regarded as premature historical generalizations, and the attempt to promulgate laws of historical development. Just as he favoured the detailed study of piecemeal measures of social reform, so he directed his and his students' work to detailed monographs on particular subjects. Schumpeter describes the lessons Schmoller taught as:

> First, the avoidance of comprehensive phrase-making, secondly, a contempt for the general recipe and panacea, thirdly, the need for basing each judgement on a detailed knowledge of the facts of the individual case, fourthly, the need for a sense of responsibility corresponding to that required in a man of action, with a complete understanding of the concrete conditions

> of political action. . . . He inculcated a balanced understanding of all the interests and functions at work at any moment, and that cool appraisal necessary for a quantitative judgement on social conflicts. (Schmoller's *Jahrbuch*, 1926, p. 352. 'Gustav Schmoller und die Probleme von heute.')

As Schumpeter goes on to point out, Schmoller had, in principle, no special preference for historical as against any other kind of empirical material: 'He himself in fact worked primarily with historical material since to master a single type of material, it is necessary to specialise in its methods and peculiar difficulties. That is the only way to achieve anything. But he did not work exclusively on historical material, and his pupils, for example Spiethoff, not even primarily.' (p. 355.) It is quite impossible to justify the charge, either from his precepts or his practice, that Schmoller held that economics should be an exclusively historical study.

It is almost equally difficult to justify from the record the charge that Schmoller stood for a naive unqualified empiricism, which sought to exclude all theoretical analysis. He repeatedly emphasized the inextricable interconnexions between observation and analysis, as in his oft-quoted analogy of how two legs are needed for walking:

> All observation isolates a single occurrence from the chaos of phenomena in order to study it by itself. Observation rests always on abstraction; it analyses a part. The smaller and more isolated this is, the easier the observation. . . . The relative simplicity of the elementary phenomena of nature very much facilitates the observations of the natural scientist. The natural scientist even has it in his power to alter at will the surroundings and the causes at work, that is, he can experiment and look at the object from all sides. Not only is this seldom possible, or only with difficulty, in respect of economic phenomena, but even in their simplest form these are much more complicated, dependent on very different causes, and influenced by a series of cooperating conditions. If we take a rise in the price of wheat, or in wages, a change in the exchange rate, or a trade crisis, an advance in the division of labour, almost every such event is made up of the feelings, motives, and actions of certain groups of men, as well as of the massive facts of nature (e.g. a harvest), or of technology (e.g. new machinery), and is influenced by morals and institutions the origins of which are widely separated. . . . The observation of economic facts is always a difficult operation, the more easily upset by mistakes, the larger, the more extensive, and the more complicated, the individual phenomenon. (*Grundfragen*, p. 299.)

In his chapter in his main work the *Grundriss* (*Outline*), dealing with Value and Price he followed—it is true not with much refined expertize—the orthodox analysis, in particular that of Böhm-Bawerk, and he

recognized that Jevons and the Austrian School with their new theory of value had 'grasped with more empirical precision some of the psychological phenomena of value and markets, and had analysed practical economic life at certain points more correctly'. (*Grundriss*, 1919 ed., p. 121.) But for Schmoller the theory of value and price, and what may today be called micro-economic maximization analysis generally, was simply 'one corner in a great mansion'. Nevertheless, he held that:

> What has been achieved is just as much the result of deductive as of inductive reasoning. Anyone who is thoroughly clear about the two procedures will never maintain that there are sciences explanatory of the real world which rest simply on one of them. (*Grundriss*, p. 110.)

The relative emphasis on observation and analysis, fundamentally inseparable, would vary with the particular problem, and more generally from period to period:

> The Cameralist and Mercantilist economists devoted themselves primarily to the painstaking, but often highly superficial collection of facts . . . ending in a sort of 'polyhistory' devoid of ideas. The 'natural' theory of political economy brought a solution. It represented an interim attempt to master the material theoretically. For a generation, observation and description took second place. But regarding things as more simple than they were, they believed that the key had been found in the general nature of man, which led more directly and effortlessly to valuable knowledge than tedious, time-consuming, empirical methods. The reaction to this one-sidedness came in our epoch. (*Grundfragen*, p. 304.)

Schmoller believed that, as they advanced, sciences generally became more deductive, a generalization which may well have much truth in it, but which seems to require at least some explanation.

Schmoller's main work, his encyclopaedic two-volume *Outline* (*Grundriss*) was first published in 1900, and is, as Schumpeter describes it, a vast 'mosaic'. The main order of subjects it goes through include in Volume I: Land, Population, and Technology: The Social Order and the Economy: The State and the Economy: The Division of Labour: Property: Classes: The Firm or Entrepreneur. And in Volume II: Markets and Exchange: Competition: Money: Value and Price: Capital and Credit: Banking: Labour Conditions, Contracts and Wages: Social Insurance: Trade Unions: The Distribution of Income: Economic Crises: Class Conflicts: The Economic Relations between States: Economic Progress.

Each theme is treated historically, statistically, analytically (to too slight an extent perhaps), and, in addition, practical precepts are usually

added. We would note especially the discussion of the trade cycle and of fluctuations in the economy as a whole. This was the starting-point of Schmoller's assistant Spiethoff. Most books of 'Principles' at this time were not giving this subject much mention or else were treating it as 'a last chapter', which was often not reached.

Schumpeter went so far as to compare Schmoller with Marshall:

> The comparison with Marshall is obvious. Though because of their surroundings and training they turned to different tasks, they belong to the same world. Marshall's procedure also may be summarised as 'facts and inferences'. He, too, though a man of science and a teacher of positive achievement, derived his impulse subjectively from his social sympathies, and saw the significance of his work in its service to society. Both say, though with different emphasis, the same thing. . . . The social attitude of each of them had a very strong national note. For Schmoller the Hohenzollern state was not simply an object of study, nor was England's position for Marshall. This is obvious in the former case. But it is just the same in the latter. (p. 387.[1])

The discredit into which Schmoller's work subsequently fell, in Germany and elsewhere, went farther than was deserved. Partly, it was due to Schmoller's almost official association with the Hohenzollern Empire, the separation of his economic contribution from which apparently required too high a degree of discrimination after the First World War. His work certainly did not provide a firm line for the future development of political economy in Germany, if Schmoller can be blamed for that. His own practice—though not so much his precept—undoubtedly under-emphasized the role of analysis, and the standard of empirical caution he preached is impracticably austere, however admirable the discipline and restraint by which it was said to be motivated. Spiethoff's work on the trade cycle was surely one invaluable offshoot, and to a considerable extent a theoretical one. But Sombart, Schmoller's successor at Berlin, who started as a Marxist and ended as an anti-Marxian nationalist, devoted himself to a vast historical study of capitalism and its stages of development. (*v.* his *Der moderne Kapitalismus*.) It is grossly misleading to class Sombart and Schmoller together as followers of the same historical method.

The reaction against one of the main tenets of Schmoller and the earlier members of the *Verein für Sozialpolitik*, as well as against the

[1] Schumpeter maintained his high praise of Schmoller's work in much later writings and goes out of his way to make favourable comments in his *Business Cycles*, vol. i, pp. 228–9.

political-academic sermons of the liberal nationalist Treitschke, was led by Max Weber (1864–1920). In his influential essays 'On the Objectivity of Sociological and Social-political Knowledge' (1904), and on 'The Meaning of the "Neutrality" (*Wertfreiheit*) of Sociological and Economic Sciences' (1917), Weber was concerned to show how no definite ends for economic policy could emerge from a purely positive study, and in any case to insist that it was the moral duty of the academic teacher, as such, not to use his chair for preaching his own particular ethical and political ideas, however convinced of their rightness he might be. This is especially the theme of his memorable address to his students on 'Science as a Profession' (or 'Calling'—*Wissenschaft als Beruf*).

Weber's other main contribution to methodology lay in his concept of 'ideal types', intended to bridge the gulf between 'generalized' theoretical analysis and the historical study of particular phenomena. As Walter Eucken has pointed out, quite apart from the fact that Weber can hardly be described as the originator of this concept (a misunderstanding for which Weber himself was, of course, not responsible), he does not make clear the distinction between 'ideal' 'pure' types (like Thünen's isolated state, or a Robinson Crusoe economy), which are not constructed as pictures of the actual world or anything in it, and, on the other hand, the 'real' types as used by historical economists like Sombart with the object of capturing, or portraying in summary, a particular stage or cross-section of economic history (for example, Sombart's various 'stages' of capitalism). The former represent legitimate abstractions for purposes of analysis, the latter tend to lend themselves to 'historicist' over-simplifications.[1] Weber's methodological essays, particularly those emphasizing the objectivity of the social sciences, had a wide influence on economists, but his main work on sociology and economic history lies on, or over, the boundaries of economics, even on the widest interpretation, and, great thinker though he was, we can only briefly introduce him on the margin of this review. We shall refer in a subsequent chapter to his notable contribution to the subject of economic accounting in a socialist system.

2. *Launhardt; Auspitz and Lieben; Schumpeter's First Major Work*

(*a*) *W. Launhardt* (1832–1918) might be regarded as the main successor in Germany of Thünen and Mangoldt, and like them as a pioneer

[1] On Weber's theory of types see W. Eucken, *The Foundations of Economics*, pp. 347–8.

of mathematical analysis. His main interests seem to have been in engineering and railways, and he was for a long time Director of the Technical High School at Hanover. He belongs, therefore, with Dupuit, Lardner, and Ellet, all pioneers of mathematical analysis and anticipators, or nearly so, of the marginal concept, who developed this line of thought in an attempt to answer the new problems of the pricing policies of railways and public utilities. Launhardt's work follows primarily that of Walras and Jevons. He knew of Gossen's and Cournot's work, but the former's book was still unobtainable when he wrote (1885). When he at last got a copy of Cournot's *Recherches* from the library of a well-known German university, it was to find that in nearly fifty years it had never been opened. (Apparently economists had been too busy following the battles of Menger and Schmoller even to cut the pages of the *Recherches*.)

Among the features of Launhardt's book (*Mathematische Begründung der Volkswirtschaftslehre*, 1885) are an excellent analysis of capital and interest, based on a distinction between 'single-use' and durable goods which follows Walras closely, and an analysis of the application, and the supply curve, of labour, following, but much more thorough than, Jevons's chapter on the Theory of Labour.

However, Launhardt's most interesting contribution today seems to lie in his remarks on the subject of the pure theory of welfare economics. It is true that he began by trying to show that there is a sense in which exchange, when equilibrium is reached, yields a maximum of total utility for all the exchanging parties together, a very doubtful proposition for which he was criticized by Wicksell.[1] But Wicksell does not go on to mention (and perhaps Launhardt's not apparently consistent formulation of his arguments is to blame) that Launhardt only produced this proposition in order immediately to proceed to attack the conclusion from it that there is some harmony of interests promoting a maximum of utility under free competition which the State should therefore leave alone, a conclusion for which Launhardt, in his turn, criticizes Walras. Launhardt goes on to argue:

> The truth that with exchange at equilibrium prices the two parties obtain an equal gain, is only proved for the case where the utility equations for each are approximately of the form we have assumed. . . . When we showed that with exchange at equilibrium prices the sum of the gains of the two parties is a maximum, and that from the point of view of the general optimum,

[1] Wicksell, *Lectures*, vol. i, p. 81. See also Samuelson, *Foundations of Economic Analysis*, p. 205.

exchange at equilibrium prices is the most favourable, such exchange is by no means necessarily the most profitable for either party individually. (*Begründung*, pp. 31–32.)

Launhardt goes on to argue that if exchange takes place at a price more favourable to the poorer party than the equilibrium price, not only will the gain for the poor man be greater, but there will be a greater total gain, and concludes that the 'principles of *laissez-faire* laid down by "Manchesterism" simply mean handing over the weaker to the mercies of the stronger'. (pp. 38–43.)

Later in the book, after an extensive mathematical exposition of the—since Thünen—mainly 'German' subject of the theory of location, Launhardt pronounces in favour of marginal cost pricing for railways, and therefore, as he argues, for their national ownership, as a pre-condition for the necessary subsidies out of taxation: 'From the economic point of view it is most advantageous if freight is only charged in accordance with running costs (*Betriebskosten*). This proposition holds whatever the form of the demand equation. This proves most emphatically that railways are a concern which should never be left to private enterprise.' (p. 203.) He adds that of course the policy of subsidizing out of general taxes may have overriding fiscal disadvantages, by necessitating an unduly severe level of taxation. But only the State will be able to fix freight rates at the most beneficial level, taking into account general taxation policy.

At the same time as his '*Mathematical Basis*' Launhardt published a small book on Money (*Das Wesen des Geldes und die Wahrungsfrage*, 1885). His main theoretical point is his emphasis on, and analysis of, the concept of velocity of circulation. But he makes some use also of the 'income' approach to the theory of money when he describes how the general level of prices of goods depends on the total of annual incomes, made up of interest, wages, rent, and profits, which in the process of the circular flow go to make up the prices of goods, since the total annual production of consumers' goods, with the producers' goods used up annually, is purchased by the total of annual incomes. (pp. 36 ff.) With regard to both his 'income' approach to the theory of money, and in his analysis of marginal cost pricing, Launhardt may well have stimulated Wicksell, who seems to have studied his work closely, if often critically.

(*b*) *Auspitz and Lieben.* Rudolf Auspitz (1837–1906) and Richard Lieben (1842–1919) were two practical Austrian men of affairs, the former a sugar magnate and Member of Parliament, the latter a banker,

whose work on the pure analysis of price makes them in some ways comparable with Ricardo, financier, M.P., and pioneer pure theorist. Their *Investigations on the Theory of Price* (1889) is a massive and difficult work, the technique of which is much more complicated than that subsequently developed for solving the same problems. But no work in our period, not even Marshall's or Pareto's, contains a greater number of precise and original contributions to the pure analysis of the individual consumer and firm, and to the clarification of the main assumptions on which this analysis has since been seen to rest.

Auspitz and Lieben start with a period ('a year') in which all prices are assumed to be in equilibrium and unchanging, and then abstract the price of a single divisible good for study, all other prices, tastes, and technology remaining unchanged, with all individual units having perfect knowledge and regarding all prices as given and unalterable by their own actions, and finally with the value of money to the individual assumed to be constant. (pp. 3–5.) This was certainly the fullest and most precise statement of the assumptions of price analysis and of partial equilibrium theory which had been made at that time. But for this clear and advanced procedure of abstraction Auspitz and Lieben were severely criticized by the head of the Austrian School, Carl Menger.[1]

After a long introductory analysis of their curves of total utility and cost, individual and market, and of the significance of their shape and continuity, Auspitz and Lieben turn to the analysis of the individual consumer. They begin by underlining their assumption that all other prices remain constant, as does the utility of money to the individual, however much the price of the particular good under examination alters, though they admit that this assumption may violate reality at some points. They clearly describe the case of a commodity which is important, perhaps indispensable, to the poor:

> Such people may believe that at lower prices they would consume much more, but in fact, with a much reduced price, the resulting savings, and the alteration in the individual's valuation of money consequent thereon, may

[1] *v.* O. Weinberger on Auspitz and Lieben, *Zeitschrift für die gesamte Staatswissenschaften*, 1931, p. 457, and also on Menger, *Schweizerische Zeitschrift für Volkswirtschaft und Statistik*, 1948, p. 175. Menger accused Auspitz and Lieben of following 'not the analytical method but the method of Suppositions' (*Suppositionsmethode*), and of putting forward 'untenable theories' based on 'illegitimate and contradictory assumptions'. Menger's comments certainly do not make any easier the understanding of his own 'exact method'.

have such an effect that the quantity of the good with which they are fully satisfied, is smaller than before; because, like better-off people generally, they resort to better qualities of food and drink. (pp. 182–3.)

In an appendix Auspitz and Lieben take the case of variations in the value of money to the individual. This they analyse by means of a three-dimensional figure giving a 'satisfaction-surface' along which run 'curves of constant satisfaction' (*Kurven konstanter Befriedigung*): 'Each such curve tells us by its ordinates how the expenditure or the price must change if satisfaction is to remain constant, while the quantity of the good alters.' (p. 495.) In their introduction Auspitz and Lieben had referred very fully to their various predecessors to whose work they were indebted (including Thünen, Gossen, Mangoldt, Cournot, Dupuit, Walras, Jevons, and the three leading Austrians). They make no mention of Edgeworth or his *Mathematical Psychics*, to some of the inventions of which their own 'satisfaction-surfaces' and 'constant-satisfaction curves' bear a very close resemblance, and they may therefore be considered as independent discoverers of the indifference curve analysis. Their work certainly influenced, probably considerably, both Irving Fisher and Pareto. Like Edgeworth their aim was in no way to dispense with or exclude the utility concept. Edgeworth had been concerned with the analysis of the exchange of two commodities, the marginal utility of one depending on the quantity held of both commodities. Auspitz and Lieben were concerned with analysing the consumer's plan in respect of one commodity, taking into account the effect of changes in its price which alter the value of money to him. Auspitz and Lieben also give a full and clear exposition of competing and complementary relationships between goods, being the first, apparently, to define complementarity with precision, and also, after Dupuit, consumers' rent or surplus.

The section on the individual producer suffers from the difficulties in exposition already mentioned, but the analysis of the holder of stocks contains many interesting 'dynamic' suggestions. It is essentially an analysis of speculation, since they find no distinction can be drawn in practice between speculative and non-speculative holding of, buying for, or selling from stocks. The case of the consumer stock-holder is illustrated from male and female decisions about the size and variety of their wardrobes. The case of the firm's stocks and its decisions about its structure of assets is extensively analysed, and, as one would expect from the qualifications of the authors, the complexity and variety of the decisions facing the entrepreneur are fully faced. The

roles of custom and of expectation about the future are emphasized, and the entrepreneur is not treated as though he were facing a simple problem of whether or not he is to maximize his profits.

In an appendix the consequences are studied of an increase in the quantity of money on the stocks thereof that individuals hold, and it is argued that the primary effect will be a fall in the rate of interest, and then a subsequent rise in prices. (pp. 548–51.)

The last section of Auspitz and Lieben's book studies 'The Influence of the Individual Unit on Price'. After a discussion of pure monopolies and state monopolies there is a study of an intermediate case under the title 'Monopolistic Price Determination under Free Competition'. (pp. 388 ff.) The case is that of a leading firm, larger or more efficient than the rest, adding its supply to the market, which by offering its own output at a lower price will force down the price of all the rest of the supply. Though the complexity of their 'total' diagrams prevents their arriving in so many words (or in so few words) at the precise modern formula of the equality of marginal cost and marginal revenue, they clearly lay down that the costs of the last unit must cover the return from it. (p. 405.)

(*c*) *Schumpeter's early works.* We may add here a very brief reference to the first works of a master of both the mathematical and the historical method, who knew the value of and the right place for both, J. A. Schumpeter (1883–1950). His *Das Wesen und der Hauptinhalt der theoretischen Nationalökonomie* ('The Essence and Main Content of Theoretical Economics') appeared in 1908 when he was 25, and the first edition of his *Theory of Economic Development* four years later. We shall not attempt in this volume to do anything like even relative justice to Schumpeter's work. We have the excuse that his crowning volumes on *Business Cycles* (1938) appeared some time after the close of our period, while a further major work on the history of economic analysis is still unpublished (1951). The full magnitude of his achievements and influence will be the theme of historians of a later period.

Schumpeter opened the foreword of his first book with the proverb 'Tout comprendre c'est tout pardonner'. The author of the most constructive appreciations written of such totally different economists as Walras, Böhm-Bawerk, and Schmoller throughout his writings lived up to this high philosophical motto to a unique degree. He was a pupil in Vienna of Böhm-Bawerk, but found Walras and Wieser to be the authors 'to whom he stood nearest'. His own theoretical analysis he

built mainly on Walras, while the analysis of the historical and sociological background with which he co-ordinated his theoretical system and filled it out, has various points of likeness with that of Wieser, both in the general way in which economic sociology and analysis are combined and mutually illumined, and on some particular points, for example his emphasis on the role of the creative *élite* of innovating leaders as contrasted with the routine-following majority. (Whatever the exact relation between Wieser's and Schumpeter's ideas may have been, the latter had published some of the essential themes of his economic sociology before the appearance of the *Theory of Social Economy* in which Wieser first fully deployed his ideas on this subject.) J. B. Clark's analysis of the static state and of his five elements of dynamics must also have been an early stimulus to Schumpeter's ideas.

Schumpeter's *Wesen und Hauptinhalt* gives a very comprehensive interpretation and restatement of theoretical economics, aimed at reconciling different formulations of the basic concepts and propositions (particularly the Walrasian and the Austrian formulations), and at meeting historical criticisms of marginal theory by marking off clearly and strictly the positive content of its propositions, and the justifiable conclusions that can be drawn from them, from the political and ethical prejudices with which they have so often, implicitly or explicitly, been interwoven and confused. Schumpeter emphasizes, for example, that the positive analysis of the equilibrium position must be completely freed from its associations with the doctrine of the maximum satisfaction from the free play of competition, and, further, that positive marginal productivity analysis must be separated completely from attempts to justify the distribution of income in a competitive society. In regard to both these particular propositions Schumpeter's message has now long been widely accepted, but the keeping separate analytically of positive and normative propositions, and the exposure of that sort of 'double-think' which seeks to draw normative political conclusions from a positive analysis, and tries to buttress political preferences and policies with the prestige of a neutral 'scientific' analysis, this is a perennial task necessary often with every new major development in the subject.

The system of theory which Schumpeter was examining was almost exclusively that of individual 'micro-economic' maximization analysis. He defends 'methodological individualism', or micro-economic studies, as an indispensable procedure which yields many useful answers. But he again emphasizes that there is no logical connexion whatever between methodological individualism and political individualism. He rejects such concepts as 'national income', or 'the national capital' &c., which were being studied by some of the German economists (e.g. Wagner) as unnecessary, and 'full of obscurities and difficulties'. (p. 97.)

Schumpeter makes clear that the system of analysis he is expounding and interpreting is exclusively 'static' or 'comparative static', and that its practical relevance is very slight. Though by comparative statics, or the 'method of variations', as Schumpeter calls it, answers of highly limited significance can be given to certain problems of the effects of tariffs and taxes, he emphasizes the dangers of reading some true 'dynamic' interpretation into a purely comparative static analysis. The most challenging theme in the book is the insistence that interest, like profit, and unlike wages and rent, is a 'dynamic' income, and that the problems of interest cannot be answered within a static analysis. Just as there is neither profit nor loss to the entrepreneur in a static equilibrium system, so there is no net interest to the capitalist, an argument which was the subject of much subsequent controversy. The issues are, of course, principally conceptual and terminological, but it is clear that a mere static maximization theory seems to contribute even less to the explanation of the real problems of interest than it does to those of wages and rent, in view of the greater role of uncertainty in long-term investments.

In that it is concerned mainly with interpretation and evaluation Schumpeter's *Wesen und Hauptinhalt* was a methodological book, but in an exactly opposite manner from that of the participants in the *Methodenstreit*. He, above all, avoided laying down normative generalizations about what are the 'right' methods and what are the 'important' problems and what merely 'auxiliary', and he kept always to the detailed positive analysis and elucidation of particular propositions. Schumpeter is said to have come to dislike his first work, which is a not uncommon thing to come to do. Possibly he saw it as an over-optimistic attempt at a methodological book to end methodological books, which had so long been in excessive supply in Germany and Austria. But it seems today that the progress of economics in those countries could, in very many directions, only have been aided over the next quarter of a century if this book had wielded more influence than it did.

In his much better-known *Theory of Economic Development*, first published three years later (1911), Schumpeter passed from the critical

elucidation of static analysis, to the construction of his own dynamic theory of development. Schumpeter starts by applying the familiar concepts of static analysis to what he describes as 'the circular flow of economic life': that is, where economic life runs on in channels essentially the same year after year, the only changes, if any, being very small and continuous, where the same goods are produced every year in the same way, and where for every supply there awaits somewhere in the economic system a corresponding demand, and for every demand a corresponding supply,—the economic life of a settled and fully adjusted routine. There supervenes on this 'circular flow', as a dominant feature of the actual capitalist world, the processes of economic development, entirely foreign to what may be observed in the circular flow or in the tendency towards equilibrium. It is spontaneous and discontinuous change in the channels of the flow, disturbance of equilibrium, which for ever alters and displaces the equilibrium state previously existing. . . . Add successively as many mail coaches as you please, you will never get a railway thereby.' (*Theory of Economic Development*, p. 64.)[1]

'Development' is essentially the carrying out of new combinations and covers five cases:

> (1) The introduction of a new good . . ., (2) The introduction of a new method of production, that is, one not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially, (3) the opening of a new market . . ., (4) the conquest of a new source of supply of raw materials or half-manufactured goods . . ., and (5) the carrying out of the new organisation of any industry, like the creation of a monopoly position . . . or the breaking up of a monopoly position. (p. 66.)

The activities of entrepreneurs, and also credit, credit institutions, and interest rates would hardly exist, in the routine circular flow of economic life, and belong essentially to 'development'. The function of credit is to enable the entrepreneur to withdraw the producers' goods which he needs for his innovations from their previous employments. The banker, too, is essentially a phenomenon of development though only when no central authority directs the social process. He makes possible the carrying out of new combinations, authorizes people, in the name of society as it were, to form them.

The entrepreneur provides the economic leadership or economic élite of society: 'Carrying out a new plan and acting according to a customary one are things as different as making a road and walking along it', according to Schumpeter—a remark reminiscent of Marshall's epigram that running established routine public utilities bears the same relation to economic enterprise in the genuine sense, that printing a new edition of Shakespeare's plays has to the original writing of those plays.

[1] We are quoting from the English translation by Redvers Opie published in 1934.

Schumpeter's account of the business cycle is fused with his theory of economic development. His first statement of it is in a long article in 1910 (*Zeitschrift für Volkswirtschaft*, pp. 271 ff.). He sees the problem as that of explaining why economic development does not go forward regularly and smoothly, but occurs spasmodically in wave-like movements. Economic processes fall into three classes, those of the static (stationary) economy, those of development, and those which render development disturbed and irregular (op. cit., p. 288). This third class of processes may often be traceable to 'accidental' and non-economic factors. In fact all booms and crises have much that is individual about them. What is essentially and economically common to all is simply that they represent an upset of the regular advancing process of economic development and that they have occurred in a fairly regular wave-like movement.

The basic explanation of this wave-like movement is that innovations come in clusters, because when one leader has overcome the technical, legal, and financial difficulties barring a new path, this new profitable path is then open to a rush of 'routine' followers, and in fact nearly all booms have been associated with one particular new industrial development. The equilibrium of the whole economy is then upset and the economic horizon is unknown and incalculable. Hence static analysis based on the assumption that entrepreneurs have a full and correct knowledge of the economic situation, which will broadly hold in a stationary economy, becomes inapplicable: 'If we ascribe perfect foresight and a perfect calculation of all reactions to the economic plans of entrepreneurs, an essential part of the situation would escape our attention. Most entrepreneurs, if these assumptions corresponded with the facts, would not act at all.' (p. 310.) The explanation of economic development must involve the explanation of errors and miscalculations. The reorganization of the economy made necessary by the new burst of development inevitably involves many individual readjustments and a destruction of old values or losses in the resulting disequilibrium: 'The essence of these losses consists in the fact that economic subjects are forced to revise their systems of values, or, rather the revisions

result from these losses: the valuations of the dynamic (innovating) economic individuals cannot be maintained—the realised returns differ from the expected.' (p. 314.) The depression is essentially a readjustment to a new situation during which everyone has to wait and discover the new relevant facts for their economic calculations. Some readjustment and loss is constructively necessary, but this is to be distinguished from the secondary depression, which may bring much further 'unnecessary' loss before the economy has gradually groped towards its new equilibrium.

This was the main outline of Schumpeter's first statement of his theory of economic development and business cycles, to be built up in subsequent decades into his massive work published in 1938. Schumpeter's system is unique among modern economic theories. Though, of course, fundamentally different in its motivation, since it aims simply at understanding the social world, rather than at rationalizing political appetites and programmes, it is to be compared with the Marxian system in the way in which it comprehends an economic interpretation of the history of capitalism, or of modern economic history, with a sociological analysis of economic leadership and *élites*. We shall refer again to Schumpeter's contribution to the subject of the trade cycle (Ch. 23 below) and to his theories of profit and money (Chs. 20 and 21), but we repeat that his work cannot be treated here in anything approaching its full magnitude.[1]

[1] See R. V. Clemence and F. S. Doody, *The Schumpeterian System*, 1950, also the distinguished symposium in the *Review of Economic Statistics*, May 1951.

13

L. Walras

1. *Léon Walras and French Political Economy*

In earlier chapters, before coming to the leading English, German, and Austrian economists, we tried to describe something of the background of ideas and problems from which they started. The ferment of the seventies and the crumbling of the classical doctrines in England, the historical movement in Germany, and the rise of the Austrian marginal utility school, transcended the intellectual biographies and writings of single economists. We cannot attempt any such introduction, on anything like a similar scale, in the case of the French, Italian, Swedish, and American economists discussed in the following chapters. In any case, these countries, however outstanding one or two of the individual economists they produced, were hardly the scene at this period of any movements in economic thought of the same general significance as those taking place in England, Germany, and Austria. However, a few words must be devoted to the condition of political economy in France (and in a later chapter in America) which was the background to the work of Léon Walras (and to that of Clark, Veblen, and Fisher).

J. B. Say is the last of the great nineteenth-century French theoretical economists whose ideas had any appreciable influence in their own country before the close of the century. Those recognized today as the worthy descendants in the nineteenth century of the great French economists of the eighteenth century, were, in their own lifetimes, almost completely disregarded by the dominant 'orthodox' school of economic thought. This is certainly true of Auguste Walras, Cournot, Dupuit, and Léon Walras. In fact only one of these—Léon Walras—would have been described primarily as an economist by his contemporaries. Auguste Walras was a legal scholar and educational official, Cournot a mathematician, philosopher, and inspector of schools, and Dupuit an engineer. The best work on economic theory in nineteenth-century France, before Léon Walras, was done mainly by non-economists. The lack of recognition of these four great men is all the more striking because they can today easily be seen to lie in a direct line of intellectual descent from their great French predecessors,