

The scope and method of political economy

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Chapter I: Introductory

§ 1. *Nature and importance of the enquiry into the scope and method of political economy.*—In the terms *economy* and *economic* there is an ambiguity that underlies much of the current confusion as to the nature of political economy. Any line of action is commonly termed *economic* when it attains its end with the least possible expenditure of money, time, and effort; and by *economy* is meant the employment of our resources with prudence and discretion, so that we may derive from them the maximum net return of utility.

But the words are also used in a sense not implying any specially reasonable adaptation of means to ends; and in works on political economy the term *economic* is generally employed simply as an adjective corresponding to the substantive *wealth*. By an economic fact, accordingly, is understood any fact relating to the phenomena of wealth. By economic activities are meant those human activities that direct themselves towards the creation, appropriation, and accumulation of wealth; and by economic customs and institutions, the customs and institutions of human society in regard to wealth.

Political economy or *economics* is a body of doctrine relating to economic phenomena in the above sense; and the purpose of the following pages is to discuss the character and scope of this doctrine, and the logical method appropriate to its development. In seeking to define the

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scope of any department of study, the object in view is primarily to determine the distinguishing features of the phenomena with which it deals, and the kind of knowledge that it seeks concerning these phenomena. The enquiry also involves an examination of the relations between the study in question and cognate branches of study. In passing to the consideration of *method*, we are dealing with a branch of applied logic, the object being to determine the nature of the logical processes specially appropriate to the study—that is, the methods of investigation and proof of which it can avail itself—and the logical character of its conclusions as affected thereby.

The discussion that follows belongs, then, to what may be called the philosophy or logic of political economy, and does not directly advance our knowledge of economic phenomena themselves. For this reason, a certain impatience is sometimes felt when any such discussion is proposed. What we want, it is said, is not any more talk about method, but rather useful applications of the right method; let us increase our actual stock of economic truths, instead of indulging in barren disputes about the way in which economic truths are to be attained. To this objection the logician might reply that the enquiry has at any rate a logical, even if it has not an economic, significance. But it has also an economic significance. A moment's consideration will show that, from the point of view of political economy itself, it is of material importance that its scope and method should be rightly understood.

There is, to begin with, a widely current confusion as to the nature of economic laws; and for this reason, amongst others, it is imperative that the economist should seek to define as accurately as possible the nature and limits of his sphere of enquiry. There should be no vagueness on the question whether political economy is concerned with the actual or the ideal, whether it treats merely of what is, or asks further what ought to be, laying down rules for the attainment of those ends that it pronounces desirable. Even if theoretical and practical enquiries are both to be included within its scope, still the distinction between the two, and their mutual relations, need to be clearly and unambiguously set forth. Misunderstanding on these points has led to a misunderstanding of economic truths themselves, and has consequently impaired the influence and authority of economic science.

Next as to method, it is said that instead of arguing about what method of investigation is the right one, it is better to exemplify the right method by employing it in the actual attainment of new economic truths. But are we then to beg the question of its rightness? In the long run, time cannot but be saved by making a preliminary study of the instruments of investigation to be used, the proper way of using them,

and the kind of results that they are capable of yielding. For in so far as methods of reasoning are employed without due regard to the conditions of their validity, the results gained must likewise be of uncertain validity, and the progress of economic knowledge, instead of being advanced, will be retarded.

The process, moreover, whereby a conclusion is reached affects its character and value, and the qualifications and limitations subject to which it is to be accepted. If it is purely empirical, then it will be established only with a more or less high degree of probability, and it cannot be extended far beyond the range of space or time over which the instances on which it is based were collected. If, on the other hand, it is obtained deductively, then it is hypothetical until it has been determined how far, and under what conditions, the assumptions on which it rests are realised in fact. It has been plausibly argued that Ricardo's chief weakness was that he did not clearly appreciate the true nature of his own method. At any rate he did not, in interpreting his results, take the precautions necessary to provide against misconception on the part of many of his readers.

It is true that it is one thing to establish the right method for building up a science, and quite another thing to succeed in building it up. It is also true, as the Austrian economist Menger has remarked, that sciences have been created and revolutionized by those who have not stopped to analyse their own method of enquiry. Still their success must be attributed to their having employed the right method, even if they have employed it unconsciously or without going out of their way to characterize it. Their method must, moreover, be subjected to careful analysis before the value of their contributions to the science can be properly estimated.

Economics is not in any way peculiar in requiring that its method should be discussed. The logic of other sciences is, however, for the most part sufficiently dealt with in general works on logic or methodology. There are special reasons, partly to be found in the nature of the subject itself, and partly due to extrinsic causes, why the logic of political economy needs a more detailed consideration.

In the first place, economic science deals with phenomena that are more complex and less uniform than those with which the natural sciences are concerned; and its conclusions, except in their most abstract form, lack both the certainty and the universality that pertain to physical laws. There is a corresponding difficulty in regard to the proper method of economic study; and the problem of defining the conditions and limits of the validity of economic reasonings becomes one of exceptional complexity. It is, moreover, impossible to establish

the right of any one method to hold the field to the exclusion of others. Different methods are appropriate, according to the material available, the stage of investigation reached, and the object in view; and hence arises the special task of assigning to each its legitimate place and relative importance.

Another reason for discussing the true principles of economic method in some detail is that fallacious reasonings are more common in political economy than in most other studies. This is due only in part to the difficulty and complexity of the subject-matter with which the science is concerned. It deals with phenomena which, while encompassed with difficulties, are matters of every-day observation; and it has few technical terms that are not also terms of every-day discourse. A not unnatural consequence is that people think themselves competent to reason about economic problems, however complex, without any such preparatory scientific training as would be universally considered essential in other departments of enquiry. This temptation to discuss economic questions without adequate scientific preparation is all the greater, because economic conditions exert so powerful an influence upon men's material interests. "Few men," says General Walker, "are presumptuous enough to dispute with the chemist or mechanic upon points connected with the studies and labours of his life; but almost any man who can read and write feels himself at liberty to form and maintain opinions of his own upon trade and money. The economic literature of every succeeding year embraces works conceived in the true scientific spirit, and works exhibiting the most vulgar ignorance of economic history, and the most flagrant contempt for the conditions of economic investigation. It is much as if astrology were being pursued side by side with astronomy, or alchemy with chemistry." Broadly speaking, the general tendency of popular economics is towards rash generalizations and fallacious arguments *post hoc ergo propter hoc*. This is frequently combined with an imperfect analysis of fundamental conceptions, leading to confusion of thought and the selection of false propositions as self-evident postulates; and where deductive reasoning is employed, its results are often applied without regard to the conditions requisite for their valid application.

To this it must be added that the sharp distinctions drawn by opposing schools, and their narrow dogmatism, have unnecessarily complicated the whole problem. The subject has become involved in heated controversies, that have not only made it wearisome to unprejudiced persons, but have also done injury to the credit of political economy itself. Outsiders are naturally suspicious of a science, in the treatment of which a new departure is so often and so loudly proclaimed essential.

So far, it may be inferred, from economists having made progress in their science, they cannot even agree how to set about their work.

The besetting fallacy of writers on economic method has been justly said to be the fallacy of exclusiveness. A single aspect or department of economic study is alone kept in view, and the method appropriate thereto aggrandized, while other methods, of equal importance in their proper place, are neglected or even explicitly rejected. Hence the disputants on both sides, while right positively, are wrong negatively. Their criticisms on rejected methods are, moreover, too often based on misapprehension or misrepresentation. Methods are attacked for not doing what those who advocate their use have never imagined they could do; and the qualifications and limitations, with which each side expounds its own method, are overlooked by the other side. Thus combined with the fallacy of exclusiveness, or rather in consequence of it, there is in these controversies a remarkable prevalence of *ignoratio elenchii*. In the following pages an attempt will be made to do justice to all the different instruments of investigation of which the economist can avail himself; while attention will also be drawn to the limitations to which each in turn is subject.

§ 2. *The conception of political economy as a positive, abstract, and deductive science.*—The main points involved in controversies about economic method may be indicated in outline by briefly contrasting two broadly distinguished schools, one of which describes political economy as positive, abstract, and deductive, while the other describes it as ethical, realistic, and inductive. It should be distinctly understood that this sharp contrast is not to be found in the actual economic writings of the best economists of either school. In the methods that they employ—when they are really discussing the same problems—there is to a great extent substantial agreement. They differ, however, in the relative importance that they attach to different aspects of their work; and in their formal statements about method these differences become exaggerated.

The question of the right method of economic enquiry was not as such discussed by Adam Smith; and his views on the subject have, therefore, to be gathered from his way of dealing with actual economic problems. As a matter of fact, the support of his authority has been claimed on behalf of both schools above referred to. It has been said of him that he first raised political economy to the dignity of a deductive science. But he has also been regarded as the founder of the historical method in political economy.

The reason for this apparent contradiction is not far to seek. It is to be found in Adam Smith's freedom from excess on the side either of *a priori* or of *a posteriori* reasoning. He rejected no method of inquiry

that could in any way assist him in investigating the phenomena of wealth. For argument or illustration he had recourse, as the occasion might arise, either to elementary facts of human nature, or to complex facts of industrial life. He believed in a "natural" order of events, which might be deduced *a priori* from general considerations; but he constantly checked his results by appeals to the actual course of history. He worked up from abstractions to the complex realities of the economic world in which he lived. Thus, if on deductive grounds he lays down a doctrine of the tendency of wages to equality, he combines it with an inductive enquiry into the causes that check or restrict the operation of this tendency. If he sets forth the "natural" progress of opulence, he enters also upon an historical investigation of what the natural progress of opulence has been. If he condemns the doctrine of protection to native industry mainly on abstract grounds, he enforces his views with concrete illustrations and arguments in the greatest variety.

As regards the inductive tendencies noticeable in Adam Smith, his successor is to be found in Malthus; for the continuation and development of the abstract deductive tendencies we turn to Ricardo. Subsequent economists of the English school assimilated what was most characteristic in both these writers; but it was Ricardo, rather than Malthus, who gave to their work a distinctive tone, particularly in their specific analysis of the method to be pursued.

Senior and J. S. Mill were the earliest English economists who definitely formulated principles of economic method. Senior's views are contained in his introductory lectures before the University of Oxford, and in his treatise on *Political Economy*; Mill's views are to be found in his *Essays on some Unsettled Questions of Political Economy*, and in the sixth book of his *Logic*. The problem is discussed in more detail by Cairnes in his *Character and Logical Method of Political Economy*, a work of admirable lucidity, which was long considered the authoritative text-book of English political economy, so far as concerned its logic. Bagehot's essays on the postulates of English political economy and on the preliminaries of political economy, published in his *Economic Studies*, have also in some respects a representative character.

There are minor differences in the principles laid down by these four writers respectively, but fundamentally they are in agreement in regarding political economy as a science that is in its scope positive and distinguished from ethical or practical, and in its method abstract and deductive. The following is a very brief summary of their characteristic doctrines.

In the first place, a sharp line of distinction is drawn between political economy itself and its applications to practice. The function of political

economy is to investigate facts and discover truths about them, not to prescribe rules of life. Economic laws are theorems of fact, not practical precepts. Political economy is, in other words, a science, not an art or a department of ethical enquiry. It is described as standing neutral between competing social schemes. It furnishes information as to the probable consequences of given lines of action, but does not itself pass moral judgments, or pronounce what ought or what ought not to be. At the same time, the greatest value is attached to the practical applications of economic science; and it is agreed that the economist ought himself to turn his attention to them—not, however, in his character as a pure economist, but rather as a social philosopher, who, because he is an economist, is in possession of the necessary theoretical knowledge. It is held that if this distinction is drawn, the social and ethical aspects of practical problems—which may be of vital importance—are less likely to be overlooked or subordinated.

As to its position amongst the sciences, political economy is not regarded as inseparably bound up with social philosophy in general. Economic facts are, it is allowed, influenced by social facts of very various kinds, and in their turn influence them; but it is nevertheless held to be possible up to a certain point to isolate the study of the phenomena of wealth from the study of other phenomena of society. Such isolation is, indeed, said to be necessitated by the requirements of science, which always proceeds by analysing concrete phenomena, so as to deal separately with their different aspects and the different elements of which they are composed. Economic science constitutes, therefore, a distinct, though not entirely independent, department of sociological speculation.

Passing to the means whereby the truths of the science are to be reached, it is held that on account of the variety and complexity of the influences to which economic phenomena are subject, the method of specific experience or direct induction is inadequate to yield more than empirical generalizations of uncertain validity. Experiment is, moreover, a resource from which the economist is debarred. It follows that we ought not to take as our starting point the analysis of concrete industrial facts. The right method of procedure is, on the contrary, deductive, or, as Mill puts it, *a priori*. The ultimate premises upon which the deductive science is based are, moreover, limited in number, so that the more important of them admit of precise enunciation at the outset. For while the circumstances helping in some degree to mould economic phenomena are indefinitely numerous, there are a few whose influence is predominant, far outweighing that of all the rest. These predominating circumstances consist of a few simple and indisputable facts of human nature—as, for example, that in their economic dealings men are influenced by the

desire for wealth—taken in connexion with the physical properties of the soil, and man's physiological constitution.¹

Political economy is accordingly spoken of as, in the main, an abstract science. For in basing its conclusions on a limited number of fundamental assumptions, it has to leave out of account many circumstances, which are of importance in individual cases, but are nevertheless unimportant when instances are taken in the mass. That other motives besides the desire for wealth do operate on various occasions in determining men's economic activities is recognised. They are, however, to be neglected—at any rate in the first instance—since their influence is irregular, uncertain, and capricious. On these grounds, it is argued that the abstraction, whereby the science takes as its principal subject-matter an "economic man," whose activities are determined solely by the desire for wealth, is both legitimate and necessary; and, in further justification thereof, an analogy is drawn from mathematics and physics, which are said to be based upon corresponding abstractions.²

On similar grounds, the science is spoken of by Mill and Cairnes as hypothetical. For inasmuch as its premises do not exhaust all the causes affecting the result, its laws are only true hypothetically, that is, in the absence of counteracting agencies. The same point is expressed by saying that political economy is a science of tendencies only, not of matters of fact, its object being to work out and ascertain the result of certain great forces, as if these alone operated, and nothing else exerted any modifying influence.³

Senior sums up his views in the dictum that political economy "depends more on reasoning than on observation." Mill, Cairnes, and Bagehot, however, all insist that the appeal to observation and experience must come in, before the hypothetical laws of the science can be applied to the interpretation and explanation of concrete industrial facts. For it then has to be ascertained how far, as regards the particular cases under consideration, allowance needs to be made for the operation of disturbing causes—that is, for the peculiar modifications introduced by the minor influences affecting economic phenomena. Comparison with observed facts provides a test for conclusions deductively obtained, and enables the limits of their application to be determined. Accordingly, while the method of specific experience is regarded as altogether inefficacious for the discovery of economic laws, and as incapable of affording independent proof of their validity, it is nevertheless considered to form an indispensable supplement to the deductive reasoning that constitutes the framework of the science.

The above doctrines of economic method, which are those explicitly formulated by the writers referred to, need to be interpreted and in

much humbler part. Moreover, in his *Principles of Political Economy*, Mill avowedly treats, not merely of these principles themselves, but also of "some of their applications to social philosophy." He states in his preface that while he desires to give an exposition of the abstract doctrines of political economy, he also desires to give something more than this; his object is to include "a much wider range of ideas and of topics, than are included in political economy, considered as a branch of abstract speculation." Moral and social considerations, in the widest sense, receive accordingly their due share of attention; and it would be difficult to find a better instance of an ethical treatment of economic problems than is contained in the chapter on "the probable future of the labouring classes."

§ 3. *The conception of political economy as an ethical, realistic, and inductive science.*—The emphasis with which the earlier systematic writers on economic method, especially in England, dwelt upon the abstract side of political economy led to a reaction, which took its rise in Germany, and is especially connected with the names of Roscher, Hildebrand, and Knies. The two schools, thus broadly distinguished, are sometimes spoken of as the English and the German respectively. These designations have the merit of brevity; and, taking into account what was actually written about method by English and German economists respectively during the middle part of the nineteenth century, they are not without justification. They must not, however be interpreted too literally. The doctrine of method set forth in the preceding section does not fairly represent the many-sidedness of English work in economics. In particular, it fails to assign a sufficiently important place the mass of historical and statistical material that the labour of English economists has provided. The doctrine would, moreover, be accepted only in a modified and broadened form by those contemporary economists who avowedly carry on the traditions of the English school. Again, the so-called German doctrines, whatever may have been their origin, are no longer the peculiar possession of any one country. They are, for example, represented by a rising school of economists in the United States, who expressly repudiate the assertion that the new movement is exclusively a German movement. Even in England the spirit of the reaction was manifested long ago by Richard Jones, and in more recent years very forcible expression has been given to it by Cliffe Leslie and others. On the other hand, amongst distinguished economists who have employed a highly abstract method of treating economic problems, several Germans, e.g., von Thünen, are to be included; and more recently there has sprung up in Austria a new school, which insists very emphatically on the necessity of an abstract treatment of the science.⁴

some respects qualified by reference to their actual economic writings. For if, from an examination of the latter, we seek to deduce their views on method, we find that their practice does not precisely correspond with their theory; and we are led to the conclusion that, judged by their own writings, they state their doctrines on method in too absolute a manner, in particular exaggerating the abstractness of political economy taken as a whole. They also speak as if the science had reached the deductive stage in a more definitive manner than is apparent from their own way of dealing with economic problems.

In treating of the production of wealth, for example, as is pointed out by Professor Sidgwick, Mill and other economists of his school have always employed an inductive and analytical method, the deductive element in their reasonings being in this part of their subject essentially subordinate. Mill is even more distinctly an inductive economist in his elaborate discussion of peasant proprietorship in its economic aspects. There is no doubt a deductive element, based on psychological data, in his argument as to the effect of ownership on the cultivator's industry and energy. But even on this point he brings a considerable amount of *a posteriori* evidence to bear; and his general argument depends mainly on an inductive and comparative investigation of the actual working of peasant proprietorship in France, Switzerland, and other countries, in which the operation of the system can be observed on a considerable scale. Cairnes, again, in his work on the *Slave Power*, where he analyses the general economic characteristics of slave labour, establishes some important economic doctrines by a careful inductive study of facts, comparatively little use being made of deductive reasoning.

It is true that the general theory of distribution and exchange, expounded by the school of Mill, is based on reasoning of an abstract character; but even here the writers, to whom reference has been made, tend to exaggerate the characteristics of their own method. They do not hold themselves aloof from the concrete realities of the actual economic world to anything like the extent that their description of the science would lead their readers to anticipate; and it is very far from the truth to say that their doctrines are wholly constructed out of a few elementary laws of human nature. At all events, in order to establish their consistency, a large portion of their best economic work must be regarded as concerned with the practical modifications of the truths of political economy, rather than with those truths themselves.

The contrast is specially marked between Mill's theory of method as contained in the *Essays*, and his practice as manifested in the *Principles*. In the former, the conception of the "economic man" occupies a position of central and all-pervading importance; in the latter, it plays a

Subject to the foregoing explanation, it is convenient to speak of the school of Roscher and Knies as the German school. The explicit teaching of this school in regard to the scope and method of economics is briefly indicated in the following paragraphs.⁵

In the first place, a more extended scope is given to the science than is usual with English economists; for it is avowedly made to treat of what ought to be as well as of what is. The possibility of drawing any clear line of separation between these enquiries is, indeed, practically denied. It is held that there can be no purely positive science of political economy, such as was contemplated by Cairnes.

The school explicitly calls itself ethical; it regards political economy as having a high ethical task, and as concerned with the most important problems of human life. The science is not merely to classify the motives that prompt to economic activity; it must also weigh and compare their moral merit. It must determine a standard of the right production and distribution of wealth, such that the demands of justice and morality may be satisfied. It must set forth an ideal of economic development, having in view the intellectual and moral, as well as the merely material, life; and it must discuss the ways and means—such as the strengthening of right motives, and the spread of sound customs and habits in industrial life, as well as the direct intervention of the State—by which that ideal is to be sought after.⁶

Another characteristic of the German historical school is the manner in which its adherents insist upon the social side of political economy, and the interdependence of economic and other social phenomena. It is held that, because of this interdependence, political economy cannot be treated adequately except in close connexion with other branches of social science. The treatment adopted ought, accordingly, to be realistic. It is maintained that the economist should only very sparingly, if at all, abstract from the complex realities of actual economic life; and should consequently in most of his reasonings deal, not with an abstract "economic man," subject only to a single motive, the desire for wealth, but directly with men as they really are, moved by diverse motives, and influenced by the actual conditions of the age and society in which they live. Closely connected with this characteristic is the insistence upon the relativity of economic doctrines. The economic conditions of life are subject to variation; and subject to like variation are the laws by which men's economic activities are regulated.

As to the method of reasoning by which economic knowledge is to be extended, great stress is laid on the necessity of appealing constantly to specific observation of the actual economic world, and generalizing therefrom. Hence the school is spoken of as inductive and statistical. It

is still more distinctively designated historical, from its special insistence on the importance of historical material in building up the science. Only by reference to the past, it is held, can the present be properly understood; and only by a comparison of the economic conditions of different periods and different countries can the limitations of economic doctrines be adequately realised, and economists saved from one-sided and narrow dogmatism. The importance of studying the course of economic evolution is, accordingly, emphasized.

It should be added that, independently of differences in regard to the scope and method of political economy, the dominant German school is distinguished from the older English economists by a difference of attitude towards *laissez faire* and government interference. This is, however, a point of contrast with which we are not directly concerned in the present treatise.

It will be observed that the above-mentioned characteristics are by no means independent of one another. In some cases the connexion is very close indeed. The more realistic our standpoint, for example, the more obvious becomes the necessity of direct appeals to history and statistics; the historical method leads perforce to the recognition of the relativity of economic doctrines; and the realistic and the social standpoints are also closely connected. In its turn, the ethical conception of the science emphasizes all the other points; and in fact, if it be granted that political economy is directly concerned with what ought to be, then most of the rest may be said logically to follow.⁷ It results from this dependence of characteristics that in discussing the various questions at issue a certain repetition is unavoidable. Accordingly, in the following pages, even when we are treating apparently distinct problems, there will not unfrequently be found a recurrence of the same fundamental points, viewed in different aspects.

Within the new school itself marked differences of tone and attitude are to be observed. The more advanced members of the school are not content with emphasizing the importance of the historical method, but go so far as to reject the aid of any other method except in extreme subordination to it. They are not simple reformers, but revolutionaries; for they advocate a complete reconstruction and transformation of political economy. In their view, the science in the past has been barren of valuable results; only by a radical change of method can it hope to be fruitful in the future. The old doctrines, and the old ways of reaching them, are to be put on one side and seen no more. Professor Schmoller and Dr Ingram may be taken as examples of this advanced wing of the new school. The former would practically identify political economy and economic history, or at any rate resolve political economy into the

philosophy of economic history. The latter whose aim is somewhat different, though he is equally revolutionary in his tendency, would absorb political economy into general sociology.

The position taken by the more moderate adherents of the German school, including Roscher himself, is in marked contrast to the above. They adopt a tone of moderation and an attitude of compromise. While insisting on the importance of historical investigation in political economy, they admit the necessity of employing other methods in conjunction therewith; and while taking a realistic view of the science as a whole, they recognise the value of abstraction, at any rate in certain preparatory stages. They accept many of the most characteristic of the old conclusions, and on the old grounds. According to Professor Adolph Wagner, who may be taken as a leading representative of the more moderate section of the new school, the inductive and deductive methods both have their place in economics. "These, then," he says, "are the two methods: on the one hand, deduction from psychological motives—first and foremost, deduction from the motive of individual advantage, then from other motives; on the other hand, induction from history, from statistics, and from the less exact and less certain, yet indispensable, process of common observation and experience. With both methods we are to approach the various problems of political economy, and to solve them so far as we can. Which method is most to be used depends on the nature of the particular problems; but it depends also on the turn of mind, very likely on the accident of training and education, of the individual investigator."⁸

§ 4. *The method of political economy cannot adequately be described by any single phrase.*—We must not then exaggerate the opposition between what may be called the classical English school and the new science. The former realise more vividly the abstract problems of the science, and in writing on the method keep these problems mainly in view. The latter realise more vividly the concrete problems, and hence lay stress on all the points which the English school have tended to overlook. But the difference is strictly speaking one of degree only; and we find the opposition reduced to a minimum, when we compare the actual procedure in the solution of given problems adopted by the best contemporary economists, whether they profess to belong to the new school or are content to be classed with the old.⁹

As to the doctrine to be expounded in the following pages, it will suffice here to say that while great importance will be attached to the place of the deductive method in economic enquiry, and while a protest will be entered against the unhistorical spirit evinced by those adherents

of the new movement who proclaim the necessity for a complete reorganization of the science, still no attempt will be made to justify the doctrines of the older school in the precise form in which they were laid down by Mill and Cairnes. The method of political economy cannot adequately be described by any single phrase; and accordingly no one method will be advocated to the entire exclusion of other methods. It will, on the contrary, be shown that, according to the special department or aspect of the science under investigation, the appropriate method may be either abstract or realistic, deductive or inductive, mathematical or statistical, hypothetical or historical.

Chapter II: On the relation of political economy to morality and practice

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§ 2. *Political economy and psychology.*—In order to mark off political economy from the physical sciences, it is spoken of sometimes as a moral science, sometimes as a social science. Of these descriptions, the latter is to be preferred. The term moral science is, to begin with, not free from ambiguity. This term is no doubt sometimes used in a broad sense as including all the separate sciences that treat of man in his subjective capacity, that is, as a being who feels, thinks, and wills. But more frequently it is used as a synonym for ethics; and hence to speak of economic science as a moral science is likely to obscure its positive character.¹⁰

But the above is not the only reason why it is better not to describe political economy simply as a moral science. The sciences that relate to man fall into two subdivisions—those that are concerned with man in his purely individual capacity, and those that are concerned with him principally as a member of society. Political economy belongs to the latter of these subdivisions. It is true that some of the problems discussed by the science—those relating, for example, to the functions of capital—would arise in a more or less rudimentary form in relation to an isolated individual; and it is accordingly possible to illustrate certain elementary economic principles by reference to the conduct of a Robinson Crusoe. As soon, however, as we advance beyond the threshold of the science, it becomes necessary to regard human beings, not in isolation, but as members of associated communities including others besides themselves. The most prominent characteristic of actual economic

life is the relation of mutual dependence that subsists between different individuals; and political economy may be said to be essentially concerned with economic life as a special aspect of social life.

Political economy should then be described as a social, rather than as a moral or psychological, science. It presupposes psychology just as it presupposes the physical sciences, and the natural starting point for the economist in his more abstract enquiries is a consideration of the motives by which individuals are usually influenced in their economic relations; but the science is not therefore a branch of psychology. The bare facts that other things being equal men prefer a greater to a smaller gain, that under certain conditions they will forego present for the sake of future gratifications, and the like, are psychological facts of great economic importance. But they are assumed by the economist, not established by him. He does not seek to explain or analyse them; nor does he investigate all the consequences to which they lead. Economic laws in the strict sense are different from the above. They are not simple laws of human nature, but laws of complex social facts resulting from simple laws of human nature. An illustration may be quoted from Cairnes. "Rent," he observes, "is a complex phenomenon, arising from the play of human interests when brought into contact with the actual physical conditions of the soil in relation to the physiological character of vegetable productions. The political economist does not attempt to explain the physical laws on which the qualities of the soil depend; and no more does he undertake to analyse the nature of those feelings of self-interest in the minds of the landlord and tenant which regulate the terms of the bargain. He regards them both as facts, not to be analysed and explained, but to be ascertained and taken account of; not as the subject-matter, but as the basis of his reasonings. If further information be desired, recourse must be had to other sciences: the physical fact he hands over to the chemist or the physiologist; the mental to the psychological or the ethical scholar."¹¹

No doubt the relation of political economy to psychology is more intimate than its relation to the physical sciences, and this is perhaps not sufficiently realised in the passage just quoted from Cairnes. The fact that social, rather than purely psychological, phenomena constitute the subject-matter of political economy is, however, clear if we take any recognised work on the science, such as the *Wealth of Nations*. Adam Smith traces many of the phenomena of wealth to man's mental constitution, but it is not man's mental constitution that it is his purpose to analyse. This is not always sufficiently borne in mind when the *Wealth of Nations* is contrasted with the *Theory of Moral Sentiments*, and spoken of as forming its supplement.

J. S. Mill, indeed, in speaking of political economy uses the phrase "moral or psychological science"; and he goes on to define political economy as "the science relating to the moral or psychological laws of the production and distribution of wealth."¹² Take, however, the following laws as formulated by Mill himself in his *Principles of Political Economy*: rent does not enter into the cost of production of agricultural produce; the value of money depends, *ceteris paribus*, on its quantity together with the rapidity of circulation; a tax on all commodities would fall on profits. Such laws as these ought certainly not to be described as moral or psychological, even if it be granted that they rest ultimately upon a psychological basis.

Moreover, as will be shown in the following chapter, notwithstanding the importance of psychological premisses in certain departments of economic enquiry, the phenomena of the industrial world cannot be explained in their entirety simply by deductive reasoning from a few elementary laws of human nature. To what purpose, and subject to what conditions, political economy uses its psychological data will be considered later on; it need only be said at this point that reasoning from such data requires to be supplemented in various ways by direct observation of the complex social facts which constitute economic life.¹³

Chapter VII: On the deductive method in political economy

§ 1. *Nature of the deductive method.*—In so far as the method of specific experience fails to afford reliable knowledge of economic laws, recourse must be had to a method, whose essence consists in the preliminary determination of the principal forces in operation, and the deduction of their consequences under various conditions. For an *à posteriori* argument depending entirely upon the examination of concrete facts in all the complexity of their actual presentation, is substituted an *à priori* argument depending upon knowledge of the general characteristics displayed by men in their economic dealings one with another. "The problem of the deductive method," says Mill, "is to find the law of an effect from the laws of the different tendencies of which it is the joint result." It is necessary, first, to determine what are the principal forces in operation, and the laws in accordance with which they operate. Next comes the purely deductive stage, in which are inferred the consequences that will ensue from the operation of these forces under given conditions. Lastly, by a comparison of what has been inferred with what can be directly observed to occur, an opportunity is afforded for testing the correctness and practical adequacy of the two

preceding steps, and for the suggestion of necessary qualifications. It will be observed that only one of these three steps—namely, the middle one—is strictly speaking deductive. The so-called deductive method in its complete form is thus seen to be not an exclusively deductive method. It may more accurately be described as a method which, whilst predominantly deductive, is still aided and controlled by induction. This point will be further brought out in what follows, but it seems desirable to call attention to it at the outset.

§ 2. *The application of the term "hypothetical" to economic science.*—Political economy, in having recourse to the deductive method, is usually described as essentially hypothetical in character. This description of the science needs, however, to be carefully explained and guarded, as there is some danger of confusion of thought in regard to the implications contained in it.

All laws of causation may be said to be hypothetical, in so far as they merely assert that given causes will in the absence of counteracting causes produce certain effects. As a matter of fact, in the instances that actually occur of the operation of a given cause, counteracting causes sometimes will and sometimes will not be present; and, therefore, laws of causation are to be regarded as statements of tendencies only. It follows that all sciences of causation, and pre-eminently sciences employing the deductive method—including political economy and astronomy—contain a hypothetical element.

The above may be expressed somewhat differently by saying that the use of the deductive method in economics involves, at a certain stage, a process of abstraction, necessitating a frequent recurrence of the qualification *ceteris paribus*. The abstraction is carried furthest in reasonings where the motive of self-interest is supposed to operate unchecked in a state of economic freedom; that is, in reasonings which involve the conception of the "economic man." But in all cases where the deductive method is used, it is present more or less. For in the deductive investigation of the economic consequences of any particular circumstance or any particular change, the absence of interfering agencies and of concurrent but independent changes is of necessity assumed. So far as other changes themselves result from the one change or the one circumstance specially under consideration, account must of course be taken of them; but the distinguishing characteristic of the deductive method consists in seeking, in the first instance, to effect a mental isolation from the operation of all modifying forces that are not in some way connected causally with the particular subject of enquiry. The distinction between *dependent* and *independent* changes, here indicated, is of fundamental importance, and is in itself simple enough. At the same time, a difficulty is

often found in keeping it clearly in view throughout the course of a complicated argument; the faculty of succeeding in this is essential to sound economic reasoning, and needs special cultivation.

It does not, however, follow that because a law is hypothetical in the above sense, it is therefore unreal or out of relation to the actual course of events. Although laws of causation may from a certain point of view be regarded as hypothetical, they are from another point of view categorical. For they affirm categorically the mode in which given causes operate. Moreover, even though a cause may be in a manner counter-acted in consequence of the operation of more powerful causes acting in the opposite direction, it will still continue to exert its own characteristic influence, and will modify the ultimate result accordingly. No one supposes that the law of gravitation ceases to operate when a balloon rises in the air or water rises in a pump; and this may serve as a simple illustration of what is of constant recurrence in regard to economic phenomena. An intensification, for instance, in the demand for a commodity may take place concurrently with an increase in supply; and hence the absolute effect of the change in demand may not be apparent in any actual change of price. It may even be that the price falls, whereas the change in demand operating alone would have caused it to rise. Were it not for the latter change, however, the price would, in the supposed circumstances, have fallen still more. It remains true, absolutely and without qualification, that every change in demand tends to cause price to be different from what it would otherwise have been.

Take, again, the theory that an increase (or diminution) in the quantity of money in circulation tends *ceteris paribus* to be followed by a general rise (or fall) in prices. This is, in a sense, a hypothetical law: it does not enable us to say that whenever there is an actual increase in the quantity of money in circulation there will actually be a rise in prices; nor does it even enable us to say that if we find an increase in the amount of money in circulation taking place concurrently with a general rise in prices, the latter phenomenon must of necessity be wholly due to the former. For the cause in question is not the only one capable of affecting general prices. Its effects may, therefore, be counteracted by the concurrent operation of more powerful causes acting in the opposite direction, or exaggerated by the concurrent operation of causes acting in the same direction. But while this is true, it is also true that wherever the cause in question is present, it does exert its due influence in accordance with the law laid down, and plays its part in helping to determine (positively or negatively) the actual effect produced. The given law, therefore, notwithstanding the hypothetical element that it contains, still has reference to the actual course of events; it

is an assertion respecting the actual relations of economic phenomena one to another.

But the question may be raised whether deductive political economy is not hypothetical in a more fundamental sense than has yet been indicated. It is clear that whenever conclusions are reached by deductive reasoning, their applicability to actual phenomena must remain hypothetical, until it has been determined how far the premisses which form the basis of the reasoning are realised in fact. May it not accordingly be said that some at least of the conclusions of deductive political economy are hypothetical in the sense that they require, not merely the absence of counteracting causes, but the realisation of certain *positive* conditions, which are not as a matter of fact always realised? If this question is answered in the affirmative, it must not be understood to carry with it the implication that political economy employs arbitrary or fictitious premisses, or premisses whose relation to the actual phenomena of economic life is doubtful. This, however, appears to be what is meant by those who speak of the deductive method disparagingly, on the ground that it yields only hypothetical conclusions—conclusions which are affirmed to be useless for all practical purposes, however much their hypothetical validity may be beyond question.

It is certain that in their use of the deductive method, economists do very frequently work from positive assumptions not universally realised. Indeed their premisses need to be varied in order to meet different cases; and this being so, it is clear that the applicability of their conclusions must depend upon circumstances. For instance, in dealing with problems that relate to rent, certain conditions of land tenure are assumed; and in treating monetary questions, certain regulations as to coinage, legal tender, instruments of credit, and so on, are supposed to be in force. Again, in working out theories of wages, it is a not unusual assumption that each grade of labour, or even the working class as a whole, has its own definite standard of comfort. Even those assumptions that may be summed up under the general head of absence of disturbing causes have a positive side. For the relevancy of the argument, so far as the explanation of actual phenomena is concerned, requires that, as a matter of fact, the causes, whose influence is neglected, shall be strictly "disturbing" causes, and shall not exert an influence so powerful as to reduce that of other agencies to insignificance.

It must, however, always be borne in mind that the deductive method does not consist of the deductive step alone. This appears to be forgotten by those who speak scornfully of the hypothetical character of deductive political economy. Mere deductive reasoning may indeed be symbolized by a hypothetical statement of the form, If *P* and *Q* are

true, *R* is true. But the deductive method is not concerned merely with establishing the connexion between the truth of *P* and *Q* and the truth of *R*. In its complete form, it includes a preliminary investigation of the forces actually in operation, and the various conditions under which they operate; and it also tests the applicability of its results to actual phenomena by appeals to the concrete realities that are open to direct observation. There is sometimes a convenience in taking the deductive stage of economic work more or less by itself; and in the pure theory of economics special prominence is given to it. But still the premisses are not chosen arbitrarily. For while the pure theory assumes the operation of forces under artificially simplified conditions, it still claims that the forces whose effects it investigates are *verae causae* in the sense that they do operate, and indeed operate in a predominating way, in the actual economic world.¹⁴

A brief reference may here be made to laws of normal value, normal wages, &c. In the process of arriving at these laws, account is professedly taken only of the comparatively universal and permanent forces in operation, leaving on one side the varying influence exerted by the local and temporary causes that may happen also to act at any given moment. The laws are, therefore, arrived at by a very deliberate process of abstraction, and they may appear to have an exceptionally hypothetical character. If, however, the forces whose influence is calculated can be shown to be really the predominant and more permanent ones operating in any given economic society, then it may be a legitimate postulate that the modifying forces act in different directions on different occasions, so that in the long run they tend to balance and neutralise one another. In these circumstances, although the conclusions of the deductive reasoning may fail to correspond with the observed facts in any individual instance, they will nevertheless be realised, if instances are taken in the mass and if the general conditions of economic life remain unchanged for a sufficiently long period of time.¹⁵ Laws of normal value &c. are, therefore, not necessarily hypothetical in any sense that implies unreality. They are nearly always not merely of greater scientific importance, but also of greater practical importance, than the ever-varying phenomena observable in individual instances. It is indeed essential that the operation of local and transient influences should not be ultimately overlooked or disregarded. But until knowledge has been gained of general and permanent tendencies, that which is local or transient will in all probability be itself misinterpreted.

The conclusions reached in this section may be briefly summed up by saying that deductive political economy is rightly described as hypothetical, if by this nothing more is meant than that, in the first place, its

laws are statements of *tendencies* only, and are therefore usually subject to the qualifying condition that *other things are equal*; and that, in the second place, many of its conclusions depend upon the realisation of certain *positive* conditions, which are not as a matter of fact always realised. Given the conditions, however, the laws may be stated categorically. The conditions are, moreover, not arbitrarily assumed, but are chosen so as to correspond broadly with the actual facts in the different forms in which economic phenomena manifest themselves. In saying, therefore, that political economy, in so far as it has recourse to the deductive method, is a hypothetical science, it is necessary to guard against the idea that this implies unreality or want of correspondence with the actual order of economic phenomena.¹⁶

§ 3. *Functions of observation in the employment of the deductive method.*—The part played by specific experience in guiding and giving reality to deductive economic reasoning is of the utmost importance. It may be said without qualification that political economy, whether having recourse to the deductive method or not, must both begin with observation and end with observation. As already pointed out, there is a tendency to forget that the deductive method in its complete form consists of three stages, only one of which is actually deductive, the two others being the inductive determination of premisses, and the inductive verification of conclusions. The true character of the deductive method is in particular misapprehended by those of its critics, who reject its aid in political economy on the ground that its employment means closing one's eyes to facts, and trying to think out the laws of the economic world in entire neglect of what is actually taking place.¹⁷

It is true that in working out the pure theory of economics, the part played by specific observation may be subordinated and kept temporarily in the background. It is true also that the intellectual bias of some investigators naturally inclines them to cultivate specially this side of the subject. Again, for purposes of illustration, and with the object of familiarising ourselves with the kind of reasoning requisite in dealing with economic problems, it may sometimes be useful to frame hypotheses that have little relation to actual facts.¹⁸ Still it is only partially and temporarily that the economist can thus remain independent of specific experience. The special functions of observation as supplementary to deductive reasoning are at once suggested by the analysis of the deductive method already given.

In the first place, observation guides the economist in his original choice of premisses. Even in the most abstract treatment of political economy, it is necessary to begin by considering what are the general characteristics actually displayed by men in their economic dealings

with one another, and by investigating the physical and social environment in which their economic activities are exercised. As already implied, however, it is not necessary that the propositions assumed in regard to men's motives or their material and social surroundings should be true universally or without qualification. To attempt any exact correspondence with what has been called the "full empirical actuality" would be to sacrifice generality, and to involve ourselves afresh in those complexities of actual economic life from which it is the special object of the deductive method temporarily to escape. The requirements are, first, that the motives taken into account shall be exceptionally powerful in the economic sphere, and so far uniform in their operation that the kind of conduct deduced from them shall correspond broadly with what actually happens; and, secondly, that the circumstances in which the motives are supposed to operate shall be of a representative character, either as regards economic life in general, or, at any rate, as regards a special aspect of it over a given range.

The observation requisite for the selection of premisses may sometimes involve little more than the reflective contemplation of certain of the most familiar of every-day facts. But it is to be remembered that the economist does not always work from one and the same set of assumptions: and in some cases knowledge of a much more extended character is required in order to determine what the premisses shall be. This remark applies to the working out of the theory of the foreign exchanges, of movements in general prices, of the effects of trade-unions or of machinery on wages, and the like. In dealing with problems of this kind the necessity for a somewhat intimate acquaintance with concrete economic phenomena arises at the very commencement of our enquiries. The general principles that should guide the economist in his selection of premisses will be indicated in rather more detail subsequently.¹⁹

In the second place, observation enables the economist to determine how nearly his assumptions approximate to the actual facts under given economic conditions. He thus learns how far his premisses require to be modified; or to what extent, where no actual modification of premisses is necessary or feasible, allowance must be made for the effects of so-called disturbing causes. The use of observation for the above purpose is one of the principal respects in which the more concrete is distinguished from the more abstract treatment of political economy. Its importance for the adequate understanding of the economic phenomena of any given period is very great. "Nothing but unreality," as Bagehot puts it, "can come of political economy till we know when and how far its first assertions are true in matter of fact and when and how far they are not."²⁰

necessary to have recourse to the deductive method, may also render it difficult to determine whether or not the actual effects of any given agency really correspond with the results of our deductive calculations.²⁴

Again, laws of normal value, wages, &c. are, as we have already pointed out, verifiable only by instances taken in the mass and not by instances taken individually. It follows that, as in framing empirical generalizations, so in verifying from observation the results of deductive reasoning, it is in general necessary to extend our investigations over a wide range of facts, and especially to allow sufficient time for effects fairly to manifest themselves. If these precautions are not taken, misunderstanding may easily ensue and economic theory be unjustly discredited.

The doctrine that taxes on commodities are, under ordinary conditions, paid by the consumers may serve as a simple example; for this doctrine is in no way inconsistent with the fact that a new tax may in the first instance bear very heavily upon the industry that is taxed. The whole reasoning by which the doctrine is established shews that it relates solely to what will happen in the long run. In other words, it relates only to taxes of old standing or to such as have been long anticipated.²⁵

As another simple instance, it may be pointed out that in accordance with the principles of deductive political economy, the repeal of the Corn Laws must have tended to bring about a permanent fall in the price of wheat in England. Yet no such fall occurred immediately. The explanation of the apparent discrepancy is to be found in the interference of such circumstances as the failure of the potato crop, the Crimean War, and especially the depreciation of gold, which contributed to maintain the price up to 1862, notwithstanding free trade. Time, moreover, was required in order to allow the area of cultivation in new countries to be increased, and means of communication to be developed, so as to meet the new demand.

Notes

1. There is, however, some difference of view as to the extent to which the application of the resulting doctrines needs limitation. Bagehot regards the doctrines of English political economy as not applicable to all states of society, but only to those in which commerce has largely developed, and in particular taken the form of development which we find in England at the present time. The relativity of economic investigations is also indicated incidentally by Cairnes. Senior, on the other hand, remarks that those conclusions which relate to the nature and the production of wealth are universally true; and although those which relate to the distribution of

Considering this function of observation from a somewhat different standpoint, it will be seen that observation determines the limits of the positive validity of laws deductively obtained. The economic world is subject to continual changes. Certain assumptions may be realised at one stage of economic progress, and nevertheless be in violent opposition to facts at another stage. Hence without the aid of an extensive knowledge of facts, there is danger of ascribing to economic doctrines a much wider range of application than really belongs to them. This point will be further considered in treating of the relation between economic theory and economic history.

In the third place, the economist has recourse to observation in order to illustrate, test, and confirm his deductive inferences. It is important here to observe that the verification may, and in fact will generally, consist in the satisfactory explanation of actual phenomena, not necessarily in the discovery of phenomena that would justify as direct generalizations the conclusions that have been deductively obtained.²¹

Of course in some cases, instead of any confirmation of theory, there will be revealed a clear discrepancy between the actual course of events and the results of the deductive reasoning, shewing that the latter, if not positively erroneous, are at any rate insufficient to account for the facts. The problem then is to determine the source of the error or incompleteness. It is possible that empirical enquiry may indicate the operation of agencies, exerting an important influence upon the phenomena in question, but of which no account has been taken²², or it may be that whilst the right forces have been taken into account, their relative strength has been wrongly estimated, or the mode of their individual operation miscalculated; or there may have been error in the deductive reasoning itself.

The serious difficulties which sometimes attend the process of verification must not be overlooked. Mill goes so far as to say that "the ground of confidence in any concrete deductive science is not the *a priori* reasoning itself, but the accordance between its results and those of observation *à posteriori*."²³ This statement needs to be slightly qualified. For we may have independent grounds for believing that our premises correspond with the facts, and that the process of deduction is correct; and we may accordingly have confidence in our conclusions, in spite of the fact that there is difficulty in obtaining explicit verification.

There must not of course be a manifest discrepancy between our theoretical conclusions and the actual facts. But we should not hastily draw negative conclusions, or suppose theories overthrown, because instances of their operation are not patent to observation. For the complexity of the actual economic world, which in the first place makes it

wealth are liable to be affected by the particular institutions of particular countries, still the natural state of things can be laid down as the general rule, and the anomalies produced by particular disturbing causes afterwards accounted for. In other words, while Bagehot regards the premises of political economy as relating only to the economic habits and institutions of a particular age and country, Senior regards them as "natural," and, with slight qualifications, as independent of age and country.

2. Mill and Bagehot specially insist upon the high degree of abstraction involved in economic reasonings. Bagehot more than once repeats that "English political economists are not speaking of real men, but of imaginary ones; not of men as we see them, but of men as it is convenient to us to suppose they are" (*Economic Studies*, p. 5).
3. Senior, while affirming that the conclusions of political economy are true only in the absence of disturbing causes, still calls it a positive, as distinguished from a hypothetical, science. By this he means that its premises are not arbitrarily assumed.
4. Professor Carl Menger of Vienna is one of the principal leaders in this later development of German opinion. Compare his *Untersuchungen über die Methode der Socialwissenschaften und der Politischen Oekonomie insbesondere*. He specially insists on the necessity of distinguishing theoretical political economy from economic history and statistics on the one hand, and from the practical sciences of political economy on the other; and he accuses the dominant German school both of misunderstanding the point of view of the abstract method, and of attributing an exaggerated importance to the historical. He further charges them with error in attempting to give an ethical direction to theoretical political economy. He speaks still more strongly in a very controversial series of letters specially directed against Schmoller, and published under the title *Die Irrthümer des Historismus in der Deutschen Nationalökonomie*. Professor Emil Sax of Prague is in agreement with Menger on fundamental points, but presents his views in a less controversial form. He insists strongly on the importance of pure theory. Compare his *Wesen und Aufgaben der Nationalökonomie*.
5. On the points that follow compare Roscher, *Geschichte der Nationalökonomie in Deutschland*, especially pp. 1032-1036; Knies, *Die Politische Oekonomie vom Standpunkte der geschichtlichen Methode*; Schönberg's article on *Die Volkswirtschaft* (in his *Handbuch*), §§ 1-13; and Wagner, *Systematische Nationalökonomie in the Jahrbücher für Nationalökonomie und Statistik*, March, 1886 (translated in the *Quarterly Journal of Economics*, vol. 1., p. 113). A good historical account of the new German political economy of which the foundations were laid in the years 1842-53, principally by Roscher, Hildebrand, and Knies, is given in Cohn's *System der Nationalökonomie, Grundlegung*, §§ 108-122. See also Professor Ashley's article on the *Historical School of Economists* in Mr Palgrave's *Dictionary of Political Economy*.
6. It should be observed that differences in regard to the scope of a science

may be to a considerable extent merely verbal. One writer may include within the science itself enquiries which another writer regards as belonging only to its applications: but it does not follow that the latter neglects these enquiries, or even in the slightest degree attaches less importance to them. It will be shewn, however, that the converse does not hold good; that it is, in other words, possible to adopt a realistic treatment of economic problems without passing ethical judgments.

8. *Quarterly Journal of Economics*, vol. 1., p. 124. In his *Lehr- und Handbuch der politischen Oekonomie*, vol. 1., p. 17, Wagner writes further in the same strain. "It is not," he says, "a question of completely changing the method of deduction, nor of entirely replacing it by the method of induction. It would not be possible to attain the latter aim; and, if it were possible, it would be neither right nor desirable. The problem is to obtain an improvement in deductive procedure, a more refined and deeper psychological foundation and developmental questions, and a more careful application, particularly in concrete practical questions. To this must be added constant attention to the hypotheses from which deductions are being made, and a keener discernment of the necessary limits of the applicability of the method. In short, the true solution of the contest about method is not to be found in the selection of deduction or induction, but in the acceptance of deduction and induction. Each must be employed in the cases where it is specially adapted to the particular nature of the problem to be solved, and as far as possible—for it is not always possible—there must be a combination of both, although in concrete cases one or the other will take precedence." Dr. von Scheel expresses himself similarly. Different methods, he says, are serviceable for the solution of economic problems. "We must use both inductive and deductive methods. The most suitable method will continually vary with the particular nature of the problem to be solved" (Schönberg's *Handbuch, Die politische Oekonomie als Wissenschaft*, § 3). Professor Gustav Cohn may be quoted to the same effect. The idea, he says, that mere collections of historical or statistical material can be made available for science, without deductive aids, is just as much an extravagance, as the opposite idea that out of deduction from elementary hypotheses the whole science can be constructed (*Grundlegung der Nationalökonomie*, p. 35). Dr E. R. A. Seligman, again, writing on behalf of the American supporters of the new movement, remarks that the more extreme of the Germans "have themselves overshoot the mark, have unduly undervalued the work of the English school, and have in their zeal too dogmatically denied the possibility of formulating any general laws" (*Science Economic Discussion*, p. 21).
9. In 1890, when the first edition of this work was published, the controversies referred to in this chapter were gradually becoming less acute; and since 1890 there has been a further advance towards a mutual understanding on the part of economic theorists and economic historians. Compare Professor Ashley, *On the Study of Economic History (Surveys: Historical and Economic*, pp. 1-21).

10. Compare what has been said in the preceding chapter as to the relation of political economy to ethics.
11. *Logical Method of Political Economy*, pp. 37, 8.
12. *Unsettled Questions of Political Economy*, pp. 129, 133.
13. It may be remarked in passing that the description of economics adopted by Jevons in his *Theory of Political Economy* seems to give the science too much of a psychological, and too little of a social, character. The theory of economics is described as "the mechanics of utility and self-interest" (p. 23); it is "entirely based on a calculus of pleasure and pain; and the object of economics is to maximise happiness by purchasing pleasure, as it were, at the lowest cost of pain" (p. 25). A few pages further on the same idea is expanded. "Pleasure and pain are undoubtedly the ultimate objects of the calculus of economics. To satisfy our wants to the utmost with the least effort—to procure the greatest amount of what is desirable at the expense of the least that is undesirable—in other words, to maximise pleasure, is the problem of economics" (p. 40). The outcome of Jevons's conception of a calculus of pleasure and pain is a theory of utility, whose economic importance it would be difficult to exaggerate. Still this theory does not itself constitute the central theory of economics. It should indeed be regarded as an essential datum or basis of economic reasonings, rather than as itself an integral portion of the science at all. It seems more properly to belong to a branch of applied psychology, to which the name hedonics may be given. At the same time, because of its economic importance, the economist must work out the theory for himself, if he does not find it worked out independently. Thus accidentally as it were, it may occupy an important place in economic writings, and yet to be a premiss rather than an ultimate conclusion of the science. Jevons himself, after laying down his theory of utility, goes on to consider its applications to what are economic phenomena in the strictest sense. He thus throws so much light upon these phenomena that his *Theory of Political Economy*, taken as a whole, may rightly be regarded as one of the most suggestive and valuable contributions to the science that have ever been made.
14. It is this point that Senior is anxious to insist upon, when, although holding that political economy "depends more on reasoning than on observation," he yet refuses to speak of it as a hypothetical science.
15. It has to be recognized that the predominant and more permanent forces in operation are themselves liable to variation over long periods, and this undoubtedly, as Professor Marshall points out (*Principles of Economics*, vol. i, 1895, p. 426), increases the difficulties that are met with in applying economic doctrines to practical problems. The question at issue may be made more clear if we explicitly distinguish two points that are involved in the determination of laws of normal value, normal wages, &c. In the first place, we abstract from the operation of local and transient causes; in the second place, we assume that the general conditions of economic life are stationary, so that the predominant forces in operation are themselves con-

- stant. It is only within the limits up to which this second assumption is, as a matter of fact, realised that normal value can be identified with average value, normal wages with average wages, &c.
16. Much of what Cairnes says in his *Logical Method of Political Economy* about the hypothetical character of the science is perfectly sound, and expressed with his usual lucidity and effectiveness. But a few of his statements—as, for instance, when he remarks that an economic law is not an assertion respecting the actual order of economic phenomena (p. 99), and again that an economic law can be established or refuted only by an appeal to some mental or physical principle (p. 107)—are likely to give rise to misunderstanding, even if they admit of justification when carefully explained. Consider, for example, in reference to the above statements, the attempt to refute the doctrine of cost of production as the regulator of value by an appeal to certain social facts, summed up in the phrase—"immobility of labour and capital." If the doctrine is considered purely hypothetical, this objection might be dismissed as simply irrelevant. But we cannot think that Cairnes would have been content so to dismiss it. In his hands, and in those of his school generally, the doctrine means that under existing economic conditions cost of production does actually exert a very material influence upon the price of the great majority of commodities. Consider further the doctrine of the existence of grades of labour between which competition is sluggish and ineffective. This doctrine is indicated by Mill, but is given greater prominence by Cairnes, who bases upon it a modification of the received theory of value. By appeal to what mental or physical principle, however, can it be said to be established? It is rather to be regarded as a modification of premisses, suggested by observation and having for its object to bring economic theories into closer relation with actual facts.
17. Speaking of induction as supplementary to deduction, Wagner observes that "according to our past experience and probably also in the future, we must expect more from induction as a means of control than as an independent method. We shall probably owe to induction not so much new results as corrections, refinements, and enlargements of propositions obtained in the first instance deductively" (*Grundlegung der politischen Oekonomie*, 1892, § 95).
18. On the subject of illustrative hypothesis, compare Venn, *Empirical Logic*, pp. 288, ff.
19. Cairnes observes that "the economist starts with a knowledge of ultimate causes" (*Logical Method*, p. 75); but this statement should at any rate be limited to the pure theory of economics. As remarked by Professor Dunbar in his essay on *The Reaction in Political Economy*, the method to be employed in carrying economic science into regions never penetrated by Ricardo is simple; it is only necessary to draw from the actual observation of affairs fresh premisses relating to forces of the secondary order (*Quarterly Journal of Economics*, October, 1886, p. 10). Professor Marshall's *Principles of Economics* affords numerous striking examples of the fresh

developments of which deductive political economy guided by observation is capable.

20. *Economic Studies*, p. 71. Bagehot himself illustrates this statement by an inductive investigation of the effect of differences in the real wages of labour upon movements of population. An important postulate in regard to the nature of this effect is involved in the ordinary deductive determination of laws of normal wages. See also Mr L. L. Price's *Industrial Peace*, pp. 108, ff.
21. Amongst recent economic treatises, Professor Nicholson's *Money* may be mentioned as affording numerous effective examples of the way in which actual occurrences may serve to illustrate and confirm deductive arguments. If we want examples, however, we cannot do better than go back to the *Wealth of Nations*. As Professor Marshall observes, — "Adam Smith seldom attempted to prove anything by detailed induction or history. The data of his proofs were chiefly facts that were within everyone's knowledge, facts physical, mental, and moral. But he illustrated his proofs by curious and instructive facts; he thus gave them life and force, and made his readers feel that they were dealing with problems of the real world, and not with abstractions."
22. The operation of these agencies having once been suggested by observation, it is not improbable that we may be again aided by deduction in determining the precise nature of their influence.
23. *Logic*, vi. 9, § 1.
24. The problem of the effect exerted on general prices by the quantity of money in circulation is first worked out deductively, and then illustrated and tested by the examination of instances in which changes in the amount in circulation have occurred on a considerable scale. In some cases the confirmation may be very clear and decisive; but sometimes there may be the greatest difficulty in allowing properly for the effects of an increase or diminution in the general volume of trade, for the effects of an expansion or contraction of credit, and so forth, the tendency of which is to counteract or exaggerate the effects proper to the cause specially under investigation.
25. The deductive theory of the incidence of taxes on commodities has been a frequent source of perverse misunderstanding. "The deductive economist's theory of profits and prices," writes Cliffe Leslie, "will be found to claim to be true, under all circumstances, in the case of every individual in trade and of every particular article, and to foretell the exact rates at which goods will be sold. His theory of taxation is an application of his theory of profits and prices; and it proceeds on the assumption that prices will actually conform to the cost of production, so nicely in every particular case, that every special tax on any commodity will be recovered by the producer from the consumer, with a profit on the advance" (*Essays*, 1888, p. 220; compare also p. 64). In so far as isolated passages from the writings of deductive economists may appear to justify such statements as the above, it is only because they have not always been sufficiently careful to emphasize the distinction between the immediate and the ultimate incidence of taxation.