

## The Austrian Economists

Eugen Böhm-Bawerk

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The Editors of this magazine have requested from my pen an account of the work of that group of economists which is popularly called the Austrian School. Since I am myself a member of the group, possibly I shall prove to be no impartial expositor. I will, nevertheless, comply with the request as well as I can, and I will attempt to describe what we Austrians are actually doing and seeking to do.

The province of the Austrian economists is theory in the strict sense of the word. They are of the opinion that the theoretical part of political economy needs to be thoroughly transformed. The most important and most famous doctrines of the classical economists are either no longer tenable at all, or are tenable only after essential alterations and additions. In the conviction of the inadequacy of the classical political economy, the Austrian economists and the adherents of the historical school agree. But in regard to the final cause of the inadequacy, there is a fundamental difference of opinion which has led to a lively contention over methods.

The historical school believes the ultimate source of the errors of the classical economy to be the false method by which it was pursued. It was almost entirely abstract-deductive, and, in their opinion, political economy should be only, or at least chiefly, inductive. In order to accomplish the necessary reform of the science, we must change the method of investigation; we must abandon abstraction and set ourselves to collecting empirical material-devote ourselves to history and statistics.

The Austrians, on the contrary, are of the opinion that the errors of the classical economists were only, so to speak, the ordinary diseases of the childhood of the science. Political economy is even yet one of the youngest sciences, and it was still younger in the time of the classical economy, which, in spite of its name "classical," given, as the event proved, too soon, was only an incipient, embryonic science. It has never happened in any other case that the whole of a science was discovered, at the first attempt, even by the greatest genius; and so it is not surprising that the whole of political economy was not discovered, even by the classical school. Their greatest fault was that they were forerunners; our greatest advantage is that we come after. We who are richer by the fruits of a century's research than were our predecessors, need not work by different methods, but simply work better than they. The historical school are certainly right in holding that our theories should be supported by as abundant empirical material as possible; but they are wrong in giving to the work of collection an abnormal preference, and in wishing either entirely to dispense with, or at least to push into the background, the use of abstract generalization. Without such generalization there can be no science at all.

Numerous works of the Austrian economists are devoted to this strife over methods.(1\*) among them the *Untersuchungen über die Methode der Sozialwissenschaften*, by C. Menger, stands first in deep and exhaustive treatment of the problems involved. It should be noticed in this connection that the "exact," or, as I prefer to call it, the "isolating" method recommended by Menger, together with the "empirico-realistic" method, is by no means purely speculative or unempirical, but, on the contrary, seeks and always finds its foundation in experience. But although the strife of methods, perhaps more than anything else, has drawn attention to the Austrian economists, I prefer to regard it as an unimportant episode of their activity. The matter of importance to them was, and is, the reform of positive theory. It is only because they found themselves disturbed in their peaceful and fruitful labors by the attacks of the historical school, that they, like the farmer on the frontier who holds the plow with one hand and the sword with the other, have been constrained, almost against their will, to spend part of their time and strength in defensive polemics and in the solution of the problems of method forced upon them.

What, now, are the peculiar features which the Austrian school presents in the domain of positive theory?

Their researches take their direction from the theory of value, the corner-stone being the well-known theory of final utility. This theory can be condensed into three unusually simple propositions. The value of goods is measured by the importance of the want whose satisfaction is dependent upon the possession of the goods. Which satisfaction is the dependent one can be determined very simply and infallibly by considering which want would be unsatisfied if the goods whose value is to be determined were not in possession. And again, it is evident that the dependent satisfaction is not that satisfaction for the purpose of which the goods are actually used, but it is the least important of all the satisfactions which the total possessions of the individual can procure. Why? Because, according to very simple and unquestionably established prudential considerations of practical life, we are always careful to shift to the least sensitive point an injury to well-being which comes through loss of property. If we lose property that has been devoted to the satisfaction of a more important want, we do not sacrifice the satisfaction of this want, but simply withdraw other property which had been devoted to a less important satisfaction and put it in place of that which was lost. The loss thus falls upon the lesser utility, or -- since we naturally give up the least important of all our satisfactions -- upon the "final utility." Suppose a peasant have three sacks of corn: the first, a, for his support; the second, b, for seed; the third, c, for fattening poultry. Suppose sack a be destroyed by fire. Will the peasant on that account starve? Certainly not. Or will he leave his field unsown? Certainly not. He will simply shift the loss to the least sensitive point. He will bake his bread from sack c, and consequently fatten no poultry. What is, therefore, really dependent upon the burning or not burning of sack a is only the use of the least important unit which may be substituted for it, or, as we call it, the final utility.

As is well known, the fundamental principle of this theory of the Austrian school is shared by certain other economists. A German economist, Gossen, had enunciated it in a book of his which appeared in 1854, but at that time it attracted not the slightest attention.(2\*) Somewhat later the same principle was almost simultaneously discovered in three different countries, by three economists who knew nothing of one another and nothing of Gossen -- by the Englishman W.S. Jevons,(3\*) by C. Menger, the founder of the Austrian school,(4\*) and by the Swiss Walras.(5\*) Professor J.B. Clark, too, an American investigator, came very near the same idea.(6\*) But the direction in which I believe the Austrians have outstripped their rivals, is the use they have made of the fundamental idea in the subsequent construction of economic theory. The idea of final utility is to the expert the open sesame, as it were, by which he unlocks the most complicated phenomena of economic life and solves the hardest problems of the science. In this art of explication lies, as it seems to me, the peculiar strength and the characteristic significance of the Austrian school.

And here everything turns upon one point: we need only take the trouble to discern the universal validity of the law of final utility throughout the manifold complications in which it is involved in the highly developed and varied economy of modern nations. This will cost us at the outset some trouble, but the effort will be well rewarded. For in the process we shall come upon all the important theoretical questions in their order, and, what is the chief point, we shall approach them from the side from which they appear in their most natural form, and from which we can most easily find a solution for them. I will attempt to make this plain for a few of the most important cases, at least so far as it is possible to do so without entering into details of theory.

The law of final utility rests, as we have seen, upon a peculiar substitution of goods, due to sound prudential considerations. Those goods which can most easily be dispensed with must always stand ready to fill the breach which may at any time be made at a more important point. In the case of our peasant with the sacks of corn, the cause and the consequence of the substitution are very easy to understand. But in highly developed economic relations, important complications take place, since the substitution of goods will extend in various directions beyond the supply of goods of the same species.

The first complication is that due to exchange. If the only winter coat I possess be stolen, I shall certainly not go shivering and endanger my health, but I shall simply buy another winter coat with twenty dollars which I should otherwise have spent for something else. Of course, then, I can buy

only twenty dollars' worth less of other goods, and, of course, I shall make the retrenchment in goods which I think I can most easily dispense with; i.e., whose utility, as in the foregoing example, is the least; in a word, I shall dispense with the final utility. The real thing, therefore, which is dependent upon whether or not I lose my winter coat is the satisfactions that are most easily dispensed with, the satisfactions which, in the given condition of my property and income I could have procured with twenty dollars more; and it is upon those other satisfactions, which may be very different in nature, that, through the workings of substitution by exchange, the loss, and with it the final utility dependent on it, is shifted.(7\*)

If we carefully follow out this complication we shall come upon one of the most important of theoretical problems: viz., upon the relation between the market price of given goods, and the subjective estimate which individuals set upon those goods according to their very various wants and inclinations on the one hand and their property and income on the other. I will merely remark in passing that the complete solution of this problem requires very subtle investigation, which was first undertaken by the Austrian economists, and I will proceed to show the results which they have obtained. According to their conclusions, the price or "objective value" of goods is a sort of resultant of the different subjective estimates of the goods which the buyers and sellers make in accordance with the law of final utility; and, indeed, the price coincides very nearly with the estimate of the "last buyer." It is well known that Jevons and Walras arrived at a similar law of price. Their statement, however, has considerable deficiencies, which were first supplied by the Austrians. It was the latter who first found the right way of escape from the *circulus vitiosus* in which the older theory of price as dependent upon supply and demand was involved. Since it was undeniable that, on the one hand, the price which can be asked in the market is influenced by the estimate which the buyer sets upon the goods, but, on the other hand, it is just as undeniable that in many cases the buyer's estimate is influenced by the state of the market (as, for instance, the final utility of my winter coat is materially less when I can replace it in the market for ten dollars than when it costs me twenty dollars); the theorists who found a more exact psychological explanation necessary for the law of supply and demand in general,(8\*) have usually allowed themselves to be beguiled into reasoning in a circle. They more or less openly explained the price by the estimate of the individual, and, vice versa, the estimate of the individual by the price. Of course, such a solution is not one upon which a science that wishes to deserve the name of a science can rest. An attempt to get to the bottom of the matter was first made by the Austrian economists by means of the subtle investigation of which I have spoken above.(9\*)

A second interesting and difficult complication of the substitution of goods is due to production: viz., given a sufficient time, the goods whose substitution is under consideration could be replaced by production. As in the former case the goods were replaced by the use of money, so in this case they can be replaced directly by the conversion of materials of production. But, of course, there will be less of these materials of production left for other purposes, and just as surely as before the necessary diminution of production will be shifted to that class of goods which can be most easily dispensed with, which is considered least valuable.

Take Wieser's example:(10\*) If a nation finds weapons necessary to the defence of its honor or its existence, it will produce them from the same iron which would otherwise have been used for other necessary, but more or less dispensable utensils. What, therefore, happens to the people through the necessity of procuring weapons is that they can have only somewhat less of the most dispensable utensils which they would have made of the iron; in other words, the loss falls upon the least utility, or the final utility, which could have been derived from the materials of production necessary to the manufacture of the weapons.

From this point, again, the way leads to one of the most important theoretical principles, which under a certain form has long been familiar. This principle is that the value of those goods which can be reproduced at will without hindrance shows a tendency to coincide with the cost of production. This principle comes to light as a special case of the law of final utility, occurring under given actual conditions.

The "cost of production" is nothing else than the sum of all the materials of production by means of which the goods or a substitute for the same can be reproduced. Since, then, as above pointed out, the value of the goods is determined by the final utility of their substitute, it follows that so far as that substitution can be made ad libitum, the value of the product must coincide with the final utility and value of the materials of production, or, as is usually said, with the cost of production.

As to the final cause of this coincidence the Austrians have a theory quite different from the older one. The older theory explained the relation between cost and value to be such that the cost was the cause and final cause, while the value of the product was the effect; it supposed the scientific problem of explaining the value of goods to be satisfactorily solved when it had appealed to cost as the "ultimate regulator of value." The Austrians, on the contrary, believe that herein only half, and by far the easier half, of the explanation is to be found. The cost is identical with the value of the materials of production necessary to the manufacture of the goods. Cost rises when and because the materials of production (fuel, machinery, rent, labor) rise; it falls when and because the value of the materials declines. Hence, it is evident that the value of materials of production must first be explained. And the interesting point is that when the explanation is carefully carried out it leads us to see that the value of the completed product is the cause. For without doubt we place a high estimate upon materials of production only when and because they are capable of furnishing valuable products. The relation of cause and effect is, therefore, exactly the reverse of what the older theory stated. The older theory explained the value of the product as the effect, and the cost—that is, the value of the materials of production -- as the cause, and thought no further explanation necessary. The Austrian economists found: 1st, that the value of the materials of production needs, first of all, to be explained; and, 2d, that after this explanation is made, and after the net of complicated relations is untangled, the value of the materials of production is seen in the end to be the effect, and the value of the product the cause.

I know very well that this thesis will seem strange to many readers at the first glance. I cannot here attempt to demonstrate it or even to guard it against certain misapprehensions to which it is liable. I will call attention to only one circumstance. In the case of certain materials of production, whose true causal connection was for special reasons easy to see, the old theory recognized the principle; as, for instance, in regard to the value of the use of land, which is expressed in rent, Adam Smith observed that the price of the products of the soil is not high or low because rent is high or low; but, vice versa, rent is high or low according as the price of the product is high or low. Or again, no one supposes that copper is dear because the stock of the mining companies is high; but obviously the value of the mines and the stock is high when and because copper is dear. Now, just as well might the water of one river flow up hill while that of the river beside it flows down, as that in the case of different sorts of materials of production the causal connections should run in opposite directions. The law is one and the same for all materials of production. The difference is only that in case of certain materials the true relation of cause and effect is very easy to see, while in others, owing to manifold obscuring complications, it is very hard to see. The establishment of the law for those cases also, when deceptive appearances had led to the opposite explanation, is one of the most important contributions of the Austrian, school.

Perhaps it is the most important of all. Every political economist knows what a vast part cost of production plays in the theory of political economy—in the theory of production no less than in that of value and price, and in this no less than in that of distribution, rent, wages, profit on capital, international trade, etc. It is safe to say that there is not one important phenomenon of economic life for the explanation of which we are not compelled either directly or indirectly to appeal to cost of production. And here rises the question which having once been thrown into the world is no more to be put out of it: What place does this much appealed - to cost properly hold in the system of phenomena and their explanation? Does it play the part of a centre about which as a fixed and absolute middle point all the other phenomena of value turn? Or is cost, the value of materials of production, in spite of all contradictory appearances, the variable part, determined by the value of the product?

That is a question as fundamental for political economy as the question between the Ptolemaic and Copernican systems was for astronomy. The sun and earth turn, as every child knows, but one cannot be much of an astronomer to-day without knowing whether the earth turns about the sun or

the sun about the earth. Between the value of the product and the value of the materials of production there exists a no less obvious and indubitable relation. But whoever wishes to understand this relation and the countless phenomena that depend upon it must know whether the value of the materials of production is derived from the value of the product or the reverse. From the first instant when this alternative comes into view in discussion everyone who wishes to be an economist must have an opinion, and a definite opinion. An eclectic vacillation, such as up to this time has been almost universal, will not do. In a scientific system we cannot have the earth turning about the sun and the sun turning about the earth alternately. Whoever, therefore, to-day wishes to contend that the cost of production is "the ultimate regulator of value" may continue to do so; but he will not find his task so easy as it has been heretofore. We shall justly expect him to attempt to explain to the bottom, with out deficiency or contradiction, in accordance with his principle, the phenomena of value, and especially the value of materials of production. Probably, if he takes his task seriously, he will come upon difficulties. If he does not find them himself he must at least take account of those which others have met in the same path, by which they have finally been compelled to attempt the explanation of phenomena of value according to the opposite principle. At any rate, this part of economic theory will in future be treated with a considerably greater degree of care and scientific profundity than has before now been customary, unless our science wish to deserve the reproach which has both in former and later days been so often cast upon it; that it is more a babbling over economic matters than a real, earnest science.(11\*)

The question of the relation of cost to value is properly only a concrete form of a much more general question -- the question of the regular relations between the values of such goods as in causal interdependence contribute to one and the same utility for our well-being. The utility furnished by a quantity of materials from which a coat can be produced is apparently identical with the utility which the completed coat will furnish. It is thus obvious that goods or groups of goods which derive their importance to our welfare through the medium of one and the same utility must also stand in some fixed, regular relation to one another in respect to their value. The question of this regular relation was first put into clear and comprehensive form by the Austrian economists; it had previously been treated only in a very unsatisfactory manner under the head of "cost of production." There is, however, a corollary to this general and important proposition which is not less important and interesting, but which has hitherto never received the modest degree of attention in economic theory which has been bestowed upon the problem of cost. Very commonly several goods combine simultaneously to the production of one common utility; for example, paper, pen, and ink serve together for writing; needle and thread for sewing; farming utensils, seed, land and labor for the production of grain. Menger has called goods that stand in such relation to one another "complementary goods." Here rises the question, as natural as it is difficult: How much of the common utility is in such cases to be attributed to each of the cooperative complementary factors? and what law determines the proportionate value and price of each?

The fate of this problem hitherto has been very remarkable. The older theory did not rank it as a general problem at all, but was nevertheless compelled to decide a series of concrete cases which depended implicitly upon that problem. The question of the distribution of property especially gave occasion for such decisions. Since several factors of production -- soil, capital, hired labor, and labor of the employer himself -- cooperate in the production of a common product, the question as to what share of value shall be assigned to each of the factors, in compensation for its assistance, is obviously a special case of the general problem.

Now, how were these concrete cases decided? Each one was decided by itself without regard to the others, and hence, eventually, they formed a complete circle. The process was as follows: If rent was to be explained, it was decided that to the soil belonged the remainder of the product after the payment of cost of production, under which term was included the compensation of all the other factors -- capital, labor, and profit of manager. Here the function of all the other factors was regarded as fixed or known and the soil was put off with a remainder varying according to the quantity of the product. If then it was necessary in another chapter to determine the profits of the entrepreneur, it was decided again that to him should be given the overplus left after all the other factors were compensated. In this case the share of the soil, the rent, was reckoned along with labor, capital, etc., as fixed, and the entrepreneur's profit was treated as the variable, rising and falling with the quantity of the product. In just the same manner the share of capital was treated in a third

chapter. The capitalist, says Ricardo, receives what is left from the product after the payment of wages. And as if to satirize all these classical dogmas, last of all, Mr F.A. Walker has completed the circle by stating that the laborer receives what is left over from all the other factors.

It is easy to see that these statements lead in a circle, and to see, also, why they so lead. The reasoners have simply neglected to state the problem in a general form. They had several unknown quantities to determine, and instead of taking the bull by the horns and straightway inquiring after the general principle, according to which a common economic result should be divided into its component factors, they tried to avoid the fundamental question -- that of the general principle. They divided up the investigation, and in this partial investigation allowed themselves each time to treat as unknown that one of the unknown quantities which formed the special object of the investigation, but to treat the others, for the time being, as if known. They thus shut their eyes to the fact that a few pages earlier or later they had reversed the operation and had treated the supposed known quantity as unknown, the unknown as known.

After the classical school came the historical. As often happens, they took the attitude of sceptical superiority and declared altogether insoluble the problem which they were unable to solve. They thought it to be in general impossible to say, for example, what per cent of the value of a statue is due to the sculptor and what per cent to the marble.

Now if the problem be but rightly put, that is, if we wish to separate the economic and not the physical shares, the problem becomes soluble. It is actually solved in practice in all rational enterprises by every agriculturalist or manufacturer; and theory has nothing to do but rightly and carefully to hold up the mirror to practice in order in turn to find the theoretical solution. To this end the theory of final utility helps in the simplest way. It is the old song again. Only observe correctly what the final utility of each complementary factor is, or what utility the presence or absence of the complementary factor would add or subtract, and the calm pursuit of such inquiry will of itself bring to light the solution of the supposed insoluble problem. The Austrians made the first earnest attempt in this direction. Menger and the author of this paper have treated the question under the heading *Theorie der komplementären Güter*; Wieser has treated the same subject under the title *Theorie der Zurechnung* (theory of contribution). The latter, especially, has in an admirable manner shown how the problem should be put, and that it can be solved; Menger has, in the happiest manner, as it seems to me, pointed out the method of solution.(12\*)

I have called the law of complementary goods the counterpart of the law of cost. As the former disentangles the relations of value which result from temporal and causal juxtaposition, from the simultaneous cooperation of several factors toward one common utility. so the law of cost explains the relations of value which result from temporal and causal sequence, from the causal interdependence of successive factors. "By means of the former the meshes of the complicated network represented by the mutual value relations of the cooperating factors are disentangled, so to speak, in their length and breadth; by the latter in their depth; but both processes occur within the all-embracing law of final utility, of which both laws are only special applications to special problems." (13\*)

Thus prepared, the Austrian economists finally proceed to the problems of distribution. These resolve themselves into a series of special applications of the general theoretical laws, the knowledge of which was obtained by a tedious, but scarcely unfruitful, work of preparation. Land, labor, and capital are complementary factors of production. Their price, or what is the same thing, rate of rent, wages, and interest, results simply from a combination of the laws which govern the value of the materials of production on the one hand with the laws of complementary goods on the other hand.

The particular views of the Austrians on these subjects I will here omit. I could not, if I would, give in this paper any proper statement of their conclusions, still less a demonstration of them; I must content myself with giving a passing view of the matters with which they are busied, and, where it is possible, of the spirit in which they work. I only briefly remark, therefore, that they have set forth a new and comprehensive theory of capital(14\*) into which they have woven a new theory of wages,(15\*) besides repeatedly working out the problems of the entrepreneur's profits,(16\*) and of

rent.(17\*) In the light of the theory of final utility, the last-named problem in particular finds an easy and simple solution, which confirms Ricardo's theory in its actual results and corroborates its reasoning in many details.

Of course, all the possible applications of the law of final utility have by no means been made. It is more nearly true that they are scarcely begun. I may mention in passing that certain Austrian economists have attempted a broad application of the law in the field of finance;(18\*) others to certain difficult and interesting questions of jurisprudence.(19\*)

Finally, in connection with the foregoing efforts, much trouble has been taken to improve the implements, so to speak, with which the science has to work, to clear up the most important fundamental conceptions. And, as often happens, the Austrian economists find most to improve and correct in a department which has heretofore passed as so plain and simple that the literature of several nations - the English, for example - has scarcely a word to say about it. I refer to the doctrine of economic goods. Menger has put a logical implement into the hands of science in his conception, as simple as it is suggestive, of the subordination of goods (Güterordnungen),(20\*) a conception which will be useful in all future investigation. The writer of this paper has especially endeavored to analyze a conception which appears to be the simplest of all, but which is most obscure and most misused: the conception of use of goods (Gebrauch der Güter).(21\*)

Questions of practical political economy, on the contrary, have only just begun to be made the subjects of literary work by the Austrian economists.(22\*) This, however, by no means implies that they have no faculty for the practical needs of economic life, and still less, that they do not wish to connect their abstract theory with practice. The contrary is true. But we must build the house before we can set it in order, and so long as we have our hands full with simply raising the framework of our theory, there is little obligation to devote to numerous questions of practical detail that amount of time-absorbing care which their literary elaboration would require. We have our opinions upon them, we teach them from our chairs, but our literary activities have thus far been bestowed almost exclusively upon theoretical problems, for these are not only the fundamental ones, but are those whose long-continued neglect by the other side, the historical school, must be repaired.

What, now, is the short meaning of this long story? What is the significance to the science as a whole of the advent of a set of men who teach this and that in regard to goods, value, cost, capital, and a dozen other subjects? Has it any significance at all? In answering this question I feel the embarrassment of belonging to the group of men whose activity is under discussion. I must, therefore, confine myself to the statement of what the Austrian economists as a body are, trying to effect; others may judge whether or not they are successful.

What they are striving for is a sort of renaissance of economic theory. The old classical theory, admirable as it was for its time, had the character of a collection of fragmentary acquisitions which had been brought into orderly relations neither with one another nor with the fundamental principles of human science. Our knowledge is only patchwork at best, and must always remain so. But of the classical theory this characterization was particularly and emphatically true. With the insight of genius it had discovered a mass of regularities in the whirlpool of economic phenomena, and with no less genius, though hindered by the difficulties that beset beginnings, it commenced the interpretation of these regularities. It usually succeeded, also, in following the thread of explanation to a greater or less distance from the surface toward the depths. But beyond a certain depth it always, without exception, lost the clue. To be sure, the classical economists well knew to what point all their explanations must be traced - to the care of mankind for its own well-being, which, undisturbed by the incursion of altruistic motives, is the ultimate motive-force of all economic action. But owing to a certain circumstance the middle term of the explanation, by means of which the actual conduct of men, in the establishment of prices of goods, of wages, rent, etc., ought to have been joined to the fundamental motive of regard for utility - this middle term was always wrong. That circumstance was the following. A Crusoe has to do only with goods; in modern economic life we have to do with goods and with human beings from whom we obtain the goods we use - by means of exchange, cooperation, and the like. The economy of a Crusoe is explained when we succeed in showing what relation exists between our well-being and material commodities, and what attitude the care for our well-being requires us to take toward such material commodities. To

explain the modern economic order there is, apparently, need of two processes: 1st, just as in Crusoe's economy, we must understand the relation of our interests to external goods; 2d, we must seek to understand the laws, according to which we pursue our interests when they are entangled with the interests of others.

No one has ever been deluded into thinking that this second process is not difficult and involved - not even the classical economists. But, on the other hand, they fatally underrated the difficulties of the first process. They believed that as regards the relation of men to external goods, there was nothing at all to be explained, or, speaking more exactly, determined. Men need goods to supply their wants; men desire them and assign to them in respect of their utility a value in use. That is all the classical economists knew or taught in regard to the relation of men to goods. While value in exchange was discussed and explained in extensive chapters, from the time of Adam Smith to that of Mr Macvane, value in use was commonly dismissed in two lines, and often with the added statement that value in use had nothing to do with value in exchange.

It is a fact, however, that the relation of men to goods is by no means so simple and uniform. The modern theory of final utility in its application to cost of production, complementary goods, etc., shows that the relation between our well-being and goods is capable of countless degrees, and all these degrees exert a force in our efforts to obtain goods by exchange with others. Here yawns the great and fatal chasm in the classical theory; it attempts to show how we pursue our interests in relation to goods in opposition to other men without thoroughly understanding the interest itself. Naturally the attempts at explanation are incoherent. The two processes of explanation must fit together like the two cogwheels of a machine. But as the classical economists had no idea what the shape and cogging of the first wheel should be, of course they could not give to the second wheel a proper constitution. Thus, beyond a certain depth, all their explanations degenerate into a few general commonplaces, and these are fallacious in their generalization.

This is the point at which the renaissance of theory must begin, and, thanks to the efforts of Jevons and his followers, as well as to the Austrian school, it has already begun. In that most general and elementary part of economic theory through which every complicated economic explanation must eventually lead, we must give up dilettanti phrases for real scientific inquiry. We must not weary of studying the microcosm if we wish rightly to understand the macrocosm of a developed economic order. This is the turning-point which is reached at one time or another in all sciences. We universally begin by taking account of the great and striking phenomena, passing unobservant over the world of little every-day phenomena. But there always comes a time when we discover with astonishment that the complications and riddles of the macrocosm occur in still more remarkable manner in the smallest, apparently simplest elements - when we apprehend that we must seek the key to an understanding of the phenomena of great things in the study of the world of small things. The physicists began with the motions and laws of the great heavenly bodies; to-day they are studying nothing more busily than the theory of the molecule and the atom, and from no part of natural science do we expect more important developments for the eventual understanding of the whole than from the minutiae of chemistry. In the organic world the most highly developed and mightiest organisms once roused the greatest interest. To-day that interest is given to the simplest micro-organisms. We study the structure of cells and of amoebae, and look everywhere for bacilli. I am convinced that it will not be otherwise in economic theory. The significance of the theory of final utility does not lie in the fact that it is a more correct theory of value than a dozen other older theories, but in the fact that it marks the approach of that characteristic crisis in the science of economic phenomena. It shows for once that in an apparently simple thing, the relation of man to external goods, there is room for endless complications; that underneath these complications lie fixed laws, the discovery of which demands all the acumen of the investigator; but that in the discovery of those laws is accomplished the greater part of the investigation of the conduct of men in economic intercourse with one another. The candle lighted within sheds its light outside the house.

It may, of course, be to many who call themselves political economists a very inconvenient and unpleasant surprise to find that to the field which they have heretofore ploughed with intellectual toil, another new field is added - a field by no means small, whose tillage is particularly laborious. How convenient it has been heretofore to conclude an explanation of phenomena of price with

reference to the shibboleth of "supply and demand" or "cost". And now, on a sudden, these supposed pillars tremble, and we are forced to build the foundations far deeper, at the cost of great and tedious labor.

Whether inconvenient or not, there is no other course left us than to do the work which past generations have neglected. The classical economists are excusable for having neglected it. In their time, when everything was yet new and undiscovered, investigation per saltum, scientific exploitation, so to speak, might bring rich results. But now it is otherwise. In the first place, we of later times, since we have not the merit of being pioneers of the science, should not lay claim to the advantage of pioneers: the requirements have become higher. If we do not wish to remain behind the other sciences, we too must bring into our science a strict order and discipline, which we are still far from having. Let us not be beguiled into vain self-satisfaction. Mistakes and omissions are, of course, to be expected at any time, in every science; but our "systems" still swarm with the commonplace, superficial faults, whose frequent occurrence is a sure sign of the primitive state of a science. That our expositions end in smoke before essentials are reached; that they evaporate in empty phrases as soon as they begin to be difficult; that the most important problems are not even stated; that we reason in the most undisguised circle; that not only within the same system, but even within the same chapter, contradictory theories of one and the same matter are upheld; that by a disorderly and ambiguous terminology we are led into the most palpable mistakes and misunderstandings - all these failings are of so frequent occurrence in our science that they almost seem to be characteristic of its style. I can easily understand how the representatives of other sciences, which have become amenable to strict discipline, look down with a sort of pity upon many a famous work of political economy, and deny to the latter the character of a true science.

This state of affairs must and shall be changed. The historical school, which for the last forty years has given the keynote to all Germany, has unfortunately done nothing at all to this end. On the contrary, in its blind terror of "abstract" reasoning and through the cheap scepticism with which at almost every important point in the system it declares the given problems "insoluble," and the struggles to discover scientific laws hopeless, it has done its utmost to discourage and obstruct the scanty efforts that have been directed toward the desired end. I do not ignore the fact that in another direction, in the provision of vast empirical stores, they have conferred great benefit; but future time will impartially show how much they have helped in this direction and harmed in the other with their one-sided zeal.

But what both the classical and the historical schools have neglected, the Austrian school is to-day trying to accomplish. Nor are they alone in the struggle. In England, since the days of Jevons, kindred efforts, to which the great thinker gave the impulse, have been carried forward by his worthy associates and followers; and incited partly by Jevons, partly by the Austrian school, a surprisingly great number of investigators, of all nations, have in recent times turned to the new ideas. The great Dutch literature is devoted almost entirely to them; in France, Denmark and Sweden they have gained an entrance. In Italian and American literature they are almost daily propagated; and even in Germany, the stronghold of the historical school, against whose resistance the ground must be fought for almost inch by inch, the new tendency has taken a strong and influential position.

Can it be that the tendency which possesses so great a power of attraction is nothing but error? Does it not in reality spring from a need of our science, and supply a need which has long been repressed by one-sided methods, but which must eventually make itself felt -- the need of real scientific depth?

## Notes

1. Menger, Untersuchungen über die Methode der Sozialwissenschaften, 1883; Die Irrthümer des Historismus in der deutschen Nationalökonomie, 1884; Grundzüge einer Classification der Wirtschaftswissenschaften, in Conrad's Jahrbuch für Nationalökonomie und Statistik, N.F., vol. xix, 1889; Sax, Das Wesen und die Aufgabe der Nationalökonomie, 1884; Philippovich, Ueber Aufgabe und Methode der politischen Oekonomie, 1886; Bohm-Bawerk, Grundzüge der Theorie des wirtschaftlichen Güterwerths, in Conrad's Jahrbuch, N.F., vol. xiii, 1886, pp. 480, et seq.; review of Brentano's Classische Nationalökonomie in the Gottinger Gelehrten Anzeigen, 1-6, 1889; review of Schmoller's Litteraturgeschichte in Conrad's Jahrbuch, N.F., vol. xx, translated in Annals of the American Academy, vol. 1, no. 2, October 1890.
2. Entwicklung der Gesetze des menschlichen Verkehrs.
3. Theory of Political Economy, 1871, 2nd, ed., 1879.
4. Grundsätze der Volkswirtschaftslehre, 1871.
5. *Éléments d'économie politique pure*, 1874.
6. "Philosophy of Value" in the *New Englander*, July, 1881. Professor Clark was not then familiar, as he tells me, with the works of Jevons and Menger.
7. Bohm-Bawerk, Grundzüge, pp. 38 and 49; Wieser, *Der natürliche Werth*, 1889, pp. 46 et seq.
8. As for example in Germany, the highest authority on the theory of price, Hermann; cf. Bohm-Bawerk, Grundzüge, pp. 516, 527.
9. Austrian literature on the subject of price; Menger, Grundsätze der Volkswirtschaftslehre, p. 142, et seq., Bohm-Bawerk, Grundzüge der Theorie des wirtschaftlichen Güterwerths, Part II, Conrad's Jahrbuch, N.F., vol. xiii, p. 477 et seq., and on the point touched upon in the text, especially, p. 516; Wieser, *Der natürliche Werth*, pp. 37 et seq.; Sax, *Grundlegung der theoretischen Staatswirtschaft*, 1887, pp. 276 et seq., Zucherkanndl, *Zur Theorie des Preises*, 1889. I will not lose this opportunity to refer to the excellent account given by Dr James Bonar, some years ago, of the Austrian economists and their views of value in the *Quarterly Journal of Economics*, Oct. 1888.
10. *Der natürliche Werth*, p. 170
11. Austrian literature on the relation of cost and value; Menger, Grundsätze, pp. 123 et seq.; Weiser, Ueber den Ursprung und die Hauptgesetze des wirtschaftlichen Werthes, 1884, pp. 139 et seq.; *Der natürliche Werth*, pp. 164 et seq.; Bohm-Bawerk, Grundzüge, pp. 61 et seq., 534 et seq.; *Positive Theorie des Kapitals*, 1889, pp. 189 et seq., 234 et seq.
12. Menger, Grundsätze, pp. 138 et seq. Bohm-Bawerk, Grundzüge, Part I, pp. 56 et seq., *Positive Theorie*, pp. 178 et seq.; Wieser, *Der natürliche Werth*, pp. 67 et seq.
13. Bohm-Bawerk, *Positive Theorie*, p. 201.
14. Bohm-Bawerk, *Kapital und Kapitalzins: I. Geschichte und Kritik der Kapitalisinstheorien*, 1884. [Translated into English, with a preface by W. Smart, 1890] II. *Positive Theorie des Kapitals*, 1889; differing from the older teaching of Menger's Grundsätze, pp. 143 et seq.
15. Bohm-Bawerk, *Positive Theorie*, passim, and pp. 450-452.
16. Mataja, *Der Unternehmerrgewinn*, 1884; Gross, *Die Lehre vom Unternehmerrgewinn*, 1884.
17. Menger, Grundsätze, pp. 133 et seq.; Wieser, *Der natürliche Werth*, pp. 112 et seq.; Bohm-Bawerk, *Positive Theorie*, pp. 380 et seq.
18. Robert Meyer, *Die Principien der gerechten Besteuerung*, 1884; Sax, *Grundlegung*, 1887; Wieser, *Der natürliche Werth*, pp. 209 et seq.
19. Mataja, *Das Recht des Schadenersatzes*, 1888; Seidler, "Die Geldstrafe vom volkswirtschaftlichen und sozialpolitischen Gesichtspunkt" Conrad's Jahrbuch, N.F., vol. xx, 1890.
20. Menger, Grundsätze, pp. 8 et seq.
21. Bohm-Bawerk, *Rechte und Verhältnisse vom Standpunkt der volkswirtschaftlichen Güterlehre*, 1881, pp. 57 et seq.; *Positive Theorie*, pp. 361 et seq.
22. By Sax, for example, *Die Verkehrsmittel in Volks- und Staatswirtschaft*, 1878-79; Philippovich, *Die Bank von England*, 1885; *Der badische Staatshaushalt*, 1889.