THE PRESENT POSITION OF ECONOMICS.

An Inaugural Lecture

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THE PRESENT POSITION OF ECONOMICS.

§ 1. TWELVE years ago England possessed perhaps the ablest set of economists that there have ever been in a country at one time. But one after another there have been taken from us Mill, Cairnes, Bagehot, Cliffe Leslie, Jevons, Newmarch and Fawcett. And not content with these, death has stricken down also one of the noblest of the rising generation, Arnold Toynbee. Never was there a science more urgently in need of all the work that all her best sons could give her than Economics is now; and few there are to give it.

Different from the rest, and in some respects greater than all the rest, was he in whose place I unworthily stand. He was unique; all history tells

of none who have achieved greatness exactly as he did. His genius showed itself in his character as well as in his thought. His courage and tenderness, his self-devotion and simplicity were as great a source of strength as his marvellous force and clearness of thought. And thus he was able to take a position which no other economist has held; he was able to tell the people unpalatable truths and to earn their hearty thanks for doing so. The working classes saw in him the friend of the weak and the oppressed, the chivalrous pleader for the agricultural labourer and the Indian ryot; and they listened to him with something more than forbearance when he taught the hard doctrine that they must in the main work out their own social salvation by their own efforts. He was leading them as he was leading us all to think seriously and patiently about our economic evils and the remedies for them.

And the teacher was always learning. As successive editions of his *Political Economy* appeared, as one work after another came from his pen, they told of the constant growth of his mind. His latest work was

always his best work, the strongest, the most original, the most suggestive that he had ever done. And yet after reading all, there remained something more: it was to talk with him, and by him to be led to see. That same magic power that almost enabled him to see the things around him when his eyes were dark, enabled him to bring before those to whom he talked the real bearings of practical economic questions, with a vividness such that I at least have never known the like. But he is gone; and we who remain must carry on, as best we may, his work, guided by his clear thoughts and cheered by his brave example.

§ 2. It will be my endeavour to-day to give a short account of the province of the economist as I understand it, and of what it seems to me that Cambridge may best do in it.

It is generally known that Economics has to some extent changed its front during the present generation; but the nature of the change is much misunderstood. It is commonly said that those who set the tone of economic thought in England in the earlier part of the century were theorists who neg-

lected the study of facts, and that this was specially an English fault. Such a charge seems to me baseless. Most of them were practical men with a wide and direct personal knowledge of business affairs. They wrote economic histories that are in their way at least equal to anything that has been done since. They brought about the collection of statistics by public and private agencies and that admirable series of parliamentary inquiries, which have been a model for all other countries, and have inspired the modern German historic school with many of their best thoughts.

And as to their tendency to indulge in excessively abstract reasonings, that, in so far as the charge is true at all, is chiefly due to the influence of one masterful genius, who was not an Englishman, and had very little in common with the English tone of thought. The faults and the virtues of Ricardo's mind are traceable to his Semitic origin; no English economist has had a mind similar to his.

§ 3. The change that has been made in the point of view of Economics by the present generation

is then not due to the discovery of the importance of supplementing and guiding deduction by induction, for that was well known before. It is due to the discovery that man himself is in a great measure a creature of circumstances and changes with them; and the importance of this discovery has been accentuated by the fact that the growth of knowledge and earnestness have recently made and are making deep and rapid changes in human nature.

At the beginning of this century the mathematico-physical group of sciences was in the ascendent. These sciences widely as they differ from one another have this point in common, that their subject-matter is constant and unchanged in all countries and in all ages. The progress of science was familiar to men's minds but the development of the subject-matter of science was strange to them. As the century wore on the biological group of sciences were slowly making way, and people were getting clearer ideas as to the nature of organic growth. They were learning that if the subject-matter of a science passes through different stages of development, the laws

which apply to one stage will seldom apply without modification to others; the laws of the science must have a development corresponding to that of things of which they treat. The influence of this new notion gradually spread to the sciences which relate to man. In different ways Goethe, Hegel, Comte and other writers called attention to the development of the inner character and outward institutions of man, and worked their way towards the notion of tracing and comparing the modes of growth of the different sides of human nature.

At last the speculations of biology made a great stride forwards: its discoveries fascinated the attention of all men as those of physics had done in earlier years. The moral and historical sciences of the day have in consequence changed their tone, and Economics has shared in the general movement. The change is not chiefly attributable to any particular attacks that have been made on economic doctrine, nor to the influence of individual writers whether in England or other countries, though some exception may indeed be made in favour of Liszt. The change

is mainly due to the irresistible forces of the age affecting at once all the rising generation in all parts of the world.

§ 4. The chief fault then in English economists at the beginning of the century was not that they ignored history and statistics, but that Ricardo and his followers neglected a large group of facts and a method of studying facts which we now see to be of primary importance. They regarded man as so to speak a constant quantity, and gave themselves little trouble to study his variations.

The people whom they knew were chiefly city men; and they took it for granted tacitly that other Englishmen were very much like those they knew in the city. They were aware that the inhabitants of other countries had peculiarities of their own; but they regarded such differences, when they thought of them at all, as superficial and sure to be removed as soon as other nations had got to know that better way which Englishmen were ready to teach them. The same bent of mind that led our lawyers to impose English civil law on the Hindoos, led our

economists to work out their theories on the tacit supposition that the world was made up of city men.

§ 5. This did little harm so long as they treated of money and foreign trade, but great harm when they treated of the relations between the different industrial classes. It led them to regard labour simply as a commodity without throwing themselves into the point of view of the workman; without allowing for his human passions, his instincts and habits, his sympathies and antipathies, his class jealousies and class adhesiveness, his want of knowledge and of the opportunities for free and vigorous action. They therefore attributed to the forces of supply and demand a much more mechanical and regular action than they actually have; and laid down laws with regard to profits and wages that did not really hold even for England in their own time.

But their most vital fault was that they did not see how liable to change are the habits and institutions of industry. In particular they did not see

that the poverty of the poor is the chief cause of that weakness and inefficiency which are the cause of their poverty: they had not the faith, that modern economists have, in the possibility of a vast improvement in the condition of the working classes.

§ 6. The perfectibility of man had indeed been asserted by Owen and other socialists. But their views were based on little historic and scientific study; and were expressed with an extravagance that moved the contempt of the business-like economists of the age. The socialists did not attempt to understand the doctrines which they attacked; and there was no difficulty in showing that they had not rightly apprehended the nature and efficiency of the existing economic organization of society. It is therefore not a matter for wonder that the economists, flushed with their victories over a set of much more solid thinkers, did not trouble themselves to examine any of the doctrines of the socialists, and least of all their speculations as to human nature.

But the socialists were men who had felt intensely, and who knew something about the hidden

springs of human action of which the economists took no account. Buried among their wild rhapsodies there were shrewd observations and pregnant suggestions from which philosophers and economists had much to learn. And gradually their influence began to tell. Comte's debts to them were very great; and the crisis of John Stuart Mill's life, as he tells us in his autobiography, came to him from reading them. The influence which they are now exercising on the younger economists in England and Germany is important, and I think for the greater part wholesome; even though the association with fervid philanthropy does perhaps cause some tendency to rapid and unscientific reasoning.

§ 7. Among the bad results of the narrowness of the work of English economists early in the century perhaps the most unfortunate was the opportunity which it gave to sciolists to quote and misapply economic dogmas. These dogmas were taken away from their context and set up as universal and necessary truths; although a little care would often have discovered that they were originally

put forward not at all as independent truths, but as the outcome of particular illustrations of a scientific method of inquiry. Much as Ricardo and his chief followers are to be blamed for what they omitted to do, they have not committed, to the extent that is generally supposed, the fault of claiming universality and necessity for their doctrines. But they did not make their drift obvious. They did not make clear to others, it was not even quite clear to themselves, that what they were building up was not universal truth, but machinery of universal application in the discovery of a certain class of truths. This is the main point on which I wish to insist to-day.

§ 8. Adam Smith is most widely known for his argument, that Government does harm by interfering in trade. While admitting that self-interest often led the individual trader to act injuriously to the community, he thought that Government even with the best intentions nearly always served the public worse than the enterprise of the individual trader, however selfish he might happen to be. This doctrine it is which most German writers have

chiefly in view when they speak of Smithianismus. But it was not his chief work. His chief work was to indicate the manner in which value measures human motive.

Possibly the full drift of what he was doing was not seen by him, certainly it was not perceived by many of his followers who approached economics from the point of view of business rather than of philosophy. But for all that, the best economic work which came after the Wealth of Nations is distinguished from that which went before, by a clearer insight into the balancing and weighing, by means of money, of the desire for the possession of a thing on the one hand, and on the other of all the various efforts and self-denials which directly and indirectly contribute towards making it. Important as had been the steps that others had taken in this direction, the advance made by him was so great that he really opened out this new point of view, and by so doing he made an epoch.

He showed the need of analysing the causes that determine the difficulty of attainment of various

economic results; of inquiring which of them are so far uniform in their mode of action that they can be reduced to law and thus made the basis of scientific measurement. These causes often lie deep below the surface and are likely to be overlooked by the ordinary observer. But he saw that they are in the long run of predominant importance; and since they are in some measure capable of scientific treatment, he rightly judged it best to give them his chief attention. The fitful and irregular incidents of the market cannot for the greater part be reduced to order and brought directly within the grasp of scientific machinery. But when those causes which act with tolerable uniformity are understood, and their effects allowed for, then the residuary effects of other causes stand out prominently. The investigation of the results that can be brought under law[1], thus helps towards the under-

[1] They are now called Normal. Adam Smith called them Natural. But he had not completely freed himself from eighteenth century metaphysical notions as to Nature, and though on this point greatly in advance of his French contemporaries, he does not always distinguish perfectly between the causal laws of

standing of those which cannot; and thus science is able indirectly to lend her aid in unravelling the tangled skein of the events of actual life. Adam Smith's point of view has been gradually developed by Ricardo, Cournot, Hermann, Jevons and others.

§ 9. The outward form of economic theory has been shaped by its connection with material wealth. But it is becoming clear that the true philosophic *raison d'être* of the theory is that it supplies a machinery to aid us in reasoning about those motives of human action which are measurable. In the world in which we live, money as representing general purchasing power, is so much the best measure of motives that no other can compete with it. But this is, so to speak, an accident, and perhaps an accident that is not found in other worlds than ours.

When in this world we want to induce a man to do anything for us, we generally offer him money. It is true that we might appeal to his generosity or

Nature in the indicative mood and her ethical laws in the imperative.

sense of duty; but this would be calling into action latent motives that are already in existence, rather than supplying new motives. If we have to supply a new motive we generally consider how much money will just make it worth his while to do it. Sometimes indeed the gratitude, or esteem, or honour which is held out as an inducement to the actions may appear as a new motive: particularly if it can be crystallised in some definite outward manifestation; as for instance in the right to make use of the letters C.B., or to wear a star or a garter.

In this world such distinctions are comparatively rare and connected with but few transactions; and they would not serve as a measure of the ordinary motives that govern men in the acts of every day life. But even here political services are more frequently rewarded by such honours than in any other way; so we have got into the habit of measuring them not in money but in honours. We say for instance that A's exertions for the benefit of his party or of the State, as the case may be, were fairly

paid for by a knighthood; while knighthood was but shabby pay for B, he had earned a baronetcy.

It is quite possible that in other worlds than ours, there may be no private property in material things, no wealth as it is generally understood; but that public honours are meted out by graduated tables as rewards for every action that is done for another's good: if these honours can be transferred from one to another without the intervention of any external authority, they may serve to measure the strength of motives just as conveniently and exactly as money does with us. In such a world there may be a treatise on economic theory very similar to the present, even though there be very little mention in it of material things, and no mention at all of money.

It may seem almost trivial to insist on this, but it is not so. For a misleading association has grown up in people's minds between that measurement of motives which is the chief task of economic science, and an exclusive regard for material wealth to the neglect of other and higher objects of desire. The

only conditions required for a measure for economic purposes are that it should be something definite and transferable. Its taking a material form is practically convenient in this world, but is not essential.

§ 10. But while attributing this high and transcendent universality to the central scheme of economic reasoning; I do not assign any universality to economic dogmas. For the theory, which is the only part of economic doctrine that has any claim to universality has no dogmas. It is not a body of concrete truth, but an engine for the discovery of concrete truth; similar to, say, the theory of mechanics.

That theory contains no statement of fact as to the greatest strain which bridges will bear. Every bridge has its peculiarities of construction and material. Mechanics supplies a universal engine which will help in determining what strain any bridge will bear. But it has no universal dogmas by which this strain can be determined without observation of the particular facts of the case.

Suppose that all the bridges over the canals of Venice were, as indeed most of them are, very nearly of the same material and general construction; and suppose that there were a number of general dogmas roughly true with regard to all of them; and suppose that Venetian engineers had applied these dogmas to bridges built under different circumstances and in other places. When the breaking down of the new bridges had shown the folly of claiming universality for the practical dogmas of mechanics, impetuous people would have rushed to the conclusion that there was no universal organon of mechanical reasoning. This is exactly the mistake which seems to me to have been made by the extreme wing of the "real" or historical school of German economists. But to this point I shall return.

§ 11. Ultimately part of this organon will no doubt be presented as a perfectly pure or abstract theory[1]. But at present while we are feeling our

[1] The ambition to work out a purely abstract theory in some form or other has probably come to many students of the subject. Mill certainly had it when he wrote (1829) his essay on the

way it seems best to sacrifice generality of form to some extent, and to conform to the modes of expression adopted by the older economists.

For indeed when they spoke of the "economic man" as governed by selfish or rather self-regarding motives, they did not express their meaning exactly. For example Mill says that in economic phenomena

Method of Political Economy. But he had moved very far away from it by the time he came to write his "Principles of Political Economy with some of their applications to Social Philosophy". There remained to the last some inconsistency in his use of the term Political Economy. But his view of the way in which economic matter should be studied was never narrowed to mere abstractions and ultimately became very broad; broader indeed than his own practice though that was not narrow. Much that has been written by the newer schools in England and Germany in favour of treating economic affairs on as wide a basis as possible was anticipated by him (see in particular *Logic*, Bk. VI. and his review of Comte). But he also pointed out difficulties which are often overlooked even now by those writers on method who have not themselves grappled with difficult problems. Mr Walker in his admirable *Political Economy*, § 19, while quoting the full title of Mill's *Principles of Political Economy*, gives a short extract from his essay on method, which may I think have a misleading effect. Mr Walker implies that it is narrower and less philosophic than Cairnes' doctrine; whereas in my opinion it includes Cairnes' doctrine and shows a wider range of philosophic insight.

"the psychological law chiefly concerned is the familiar one that a greater gain is preferred to a smaller[1];" and argues that science gets a better hold in economics than in other social phenomena because it deals with motives that can be compared quantitatively and measured one against another. It is this notion of measurability that he really takes as the basis of his work, though he does not sufficiently emphasize it.

Whenever we get a glimpse of the economic man he is not selfish. On the contrary he is generally hard at work saving capital chiefly for the benefit of others. The fact is that the desire to make provision for one's family acts in a very regular way and is eminently capable of being reduced to law: it is prominent in all economic reasoning, because though unselfish it is measurable. Again if with Cliffe Leslie[2] we analyse all the infinite variety of motives that are commonly grouped together under the term "love of money," we see that they are of all kinds.

[1] *Logic*, Book VI. ch. IX. § 3.

[2] *Essays in Political and Moral Philosophy*, pp. 1—8.

They include many of the highest, the most refined and the most unselfish elements of our nature. The common link that binds them together is that they can be more or less measured; and in this world they are measured by money.

But though in wording our economic organon this idea of measurability should be always present, it should not, I think, be prominent. For practical purposes, and in order to keep the better our touch of real life, it will be best to go on treating it as chiefly concerned with those motives to which a money price can be directly or indirectly assigned. But motives that are selfish or self-regarding have no claim to more consideration than others except in so far as they may be more easily measurable and may more easily have a money-price assigned to them.

§ 12. The organon then must have reference to an analysis of the positive motives of desire for different goods, and of the negative motives of unwillingness to undergo the fatigues and sacrifices involved in producing them.

The analysis is difficult chiefly because both classes of motives act in a great measure indirectly. There are many steps between our demand for the coals that are brought to us by railway, and the demand by other people for the locomotive engines and the engine-drivers that bring them. There are many steps between the sacrifice of a parent who sends his son to an expensive school, and the ultimate production of a carpet from the designs of that son when he is grown up. So difficult is this analysis, so subtle are the processes of reasoning involved in it, so many are the different factors mutually modifying one another of which account must be taken, so numerous are the wheels within wheels in the reasoning involved, that up to the present day the task is but half-mastered.

In popular discussions on economics one event is represented as determining a second, which determines a third, which determines a fourth, and so on. Reasoning of this kind can be followed without effort by anyone; but it does not correspond to the facts of nature and has been the source of

many mischievous fallacies. In human conduct one condition does not control another, but altogether they mutually determine one another. To grasp at one view this manifold mutual action is a task that few can achieve. None can do it save those who have trained habits of scientific thought; and work with the aid of a special organon.

This organon deals with the play of measurable motives for and against one another, balancing one another and being substituted for one another, though the persons concerned may be in classes or even in countries that have little direct intercourse. And it sets out that most complex play of human motives that changes the purchasing power of money, and thus alters the measure of all motives.

Lastly taking account of the fact that the same sum of money measures a greater pleasure for the poor than for the rich, it helps in determining the relations between the money gain that a nation gets from any given social or industrial change and the total increase of happiness arising from it. This task most properly belongs to the economic organon,

though it has been much neglected by economists till recently. If more attention had been paid to it, we should have avoided many of those unintelligent applications of the doctrine of Laisser-faire, which assume that whatever increases wealth must necessarily increase well-being. By a natural reaction many of the social reformers of to-day, in their desire to improve the distribution, are reckless as to the effects of their schemes on the production of wealth. They argue that if the distribution of wealth were somewhat improved, its inequalities being somewhat diminished, the present or even a rather smaller national income would suffice for all the reasonable needs of man. But statistics prove that this is not the case.

There is scarcely any limit to the developments of economic theory which are possible: but of those which are possible only a small part are useful in having a direct relation to practical issues. Ricardo, who added more to the theory than anyone else, was not fortunate in his choice of cases to be worked out in detail. It is true that many problems of his

which seem to us to have little practical bearing, yet corresponded very closely to the actual facts of his time. It requires for instance some effort to remember what a shifting there has been since his time of the causes which govern the prices of agricultural produce in England. But after making every allowance of this kind, we must admit that he did not make a good selection.

Since his time many improvements have been made in the choice and arrangement of cases to be worked out: so that the organon is becoming better fitted to actual conditions. But the work requires a constructive thinker of calibre similar to Ricardo's. Jevons might have done a great part of it, if his life had not been cut short. As it is, a great deal remains yet to be done. There are very few fields which offer so important and rich a harvest to scientific enterprise.

§ 13. Such then is the work to be done by the economic organon. But two closely allied objections have been raised to it. The first finds fault with any attempt to separate the study of economic from

that of other social phenomena. The second urges that we ought to reason direct from facts to facts, without the intervention of any formal theory; that for the solution of modern economic problems we should refer ourselves straight to the teachings of history.

Both of these objections seem to me to turn on a misconception of the nature and province of economic theory. They assume that the reasoning will somehow be simplified by discarding the theory. But it has been well argued by Mill and others that the work which the organon is applied to do, cannot be evaded; it may be done almost unconsciously, but it must be done; and if the aid of the organon is refused, it is done badly. This argument has I think never been fairly grappled with by the objectors, but I will restate it in my own way.

§ 14. The first objection has been chiefly urged by Comte and his followers. One of the chief debts which we owe to Comte's genius, lies in the clearness and vigour with which he showed how complex social phenomena are, how intricately interwoven

with one another, and withal how changeful. Hence he argued against any separate study of one part of them, and was specially vehement in his condemnation of the contemporary English economists.

This was partly to be accounted for by the fact that the Continental followers of the English school exaggerated their dogmatism, as was natural; and Comte's argument is undoubtedly valid as against economic dogmas. But the complexity and intricacy of social phenomena afford no reason for dispensing with the aid of the economic organon in its proper place: on the contrary they increase the necessity for it.

It is vain to speak of the higher authority of a unified social science. No doubt if that existed Economics would gladly find shelter under its wing. But it does not exist; it shows no signs of coming into existence. There is no use in waiting idly for it; we must do what we can with our present resources.

The only resources we have for dealing with social problems as a whole lie in the judgment of

common sense. For the present, and for a long time to come, that must be the final arbiter. Economic theory does not claim to displace it from its supreme authority, nor to interfere with the manner nor even the order of its work, but only to assist it in one part of its work. For common sense does not deal with a complex problem as a whole. Its first step is to break the problem up into its several parts; it then discusses one set of considerations after another, and finally it sums up and gives its conclusions. The fact which Comte seems to have ignored is that the human mind has no other method of inquiry than this; that a complex problem is broken up into its component parts, less methodically indeed but no less completely by common sense than by formal analysis. When it is thus broken up each separate part offers a foot-hold to treatment by a special scientific organon, if there be one ready.

In nearly every important social problem, one of these component parts has to do with those actions and sacrifices which commonly have a money price. This set of considerations is almost always one of the

hardest, one of those in which untutored common sense is most likely to go wrong. But it is fortunately one of those which offer the firmest foot-hold to scientific treatment. The economic organon brings to bear the accumulated strength of much of the best genius of many generations of men. It shows how to analyse the motives at work, how to group them, how to trace their mutual relations. And thus by introducing systematic and organized methods of reasoning, it enables us to deal with this one side of the problem with greater force and certainty than almost any other side; although it would have probably been the most unmanageable side of all without such aid. Having done its work it retires and leaves to common sense the responsibility of the ultimate decision; not standing in the way of, or pushing out any other kind of knowledge, not hampering common sense in the use to which it is able to put any other available knowledge, nor in any way hindering; helping where it could help, and for the rest keeping silence.

Sometimes indeed the economist may give a

practical decision as it were with the authority of his science, but such a decision is almost always merely negative or critical. It is to the effect that a proposed plan will not produce its desired result; just as an engineer might say with authority that a certain kind of canal lock is unsuitable for its purpose. But an economist as such cannot say which is the best course to pursue, any more than an engineer as such can decide which is the best route for the Panama canal.

It is true that an economist, like any other citizen, may give his own judgment as to the best solution of various practical problems; just as an engineer may give his opinion as to the right method of financing the Panama canal. But in such cases the counsel bears only the authority of the individual who gives it: he does not speak with the voice of his science. And the economist has to be specially careful to make this clear; because there is much misunderstanding as to the scope of his science; and undue claims to authority on practical matters have often been put forward on its behalf.

§ 15. The next objection comes from the extreme wing of the modern "real" or historic school of economists.

It would be difficult to overrate the importance of the work that has been done by the great leaders of this school in tracing the history of economic habits and institutions. It is one of the chief achievements of our age, and is an addition of the highest value to the wealth of the world. It has done more than almost anything else to broaden our ideas, to increase our knowledge of ourselves, and to help us to understand the central plan as it were of the Divine government of the world: such studies have led directly to some broad generalisations that have greatly illumined our path with a broad diffused light which has made our notions as to the general bearing of economic problems clearer and truer.

But they do not throw a direct light on particular economic problems of our age. They do not in any way help us to dispense with the use of the economic organon: but rather make use of its aid

at every step. And those whose great achievements have made the school illustrious have never attempted to dispense with the aid of economic theory; though in the writings of some of them an occasional piece of inconsequent reasoning may betray a rather careless study of it.

But unfortunately they have sometimes spoken a little disparagingly of it; and their words have been caught hold of and exaggerated and perverted by hangers-on of the science, in the same way as were the careless sayings of the leaders of the Ricardian school in the last generation. As thirty years ago a number of men who had never done any solid work for Economics, and knew nothing of its real difficulties, were confidently proclaiming the solution of the most intricate problems by a few cut-and-dried formulae; so now men of the same class are advocating another short cut in the opposite direction. They are telling us to discard all theories, and to seek the solution of our economic difficulties in the direct teaching of facts. This then is the second objection.

§ 16. The answer is that facts by themselves are silent. Observation discovers nothing directly of the actions of causes, but only of sequences in time. It may find that an event followed on, or that it coincided with a certain group of other events. But this gives no guidance except for other cases, in which exactly the same set of facts occurs over again, grouped in just the same way. And such repetitions never occur in the life of man; nor indeed anywhere save in physical laboratories. History never repeats itself. In economic or other social problems no event has ever been an exact precedent for another. The conditions of human life are so various: every event is the complex result of so many causes, so closely interwoven that the past can never throw a simple and direct light on the future.

When therefore it is said that a certain event in history teaches this or that, an element of deductive reasoning is introduced, which is the more likely to be fallacious the more persistently it is ignored. For the argument selects a few out of

the group of conditions which were present when the event happened, and tacitly, if not unconsciously, assumes that the rest are irrelevant. The assumptions may be justifiable: but it often turns out otherwise. Wider experience, more careful inquiry, often show that the causes to which the event is attributed could not have produced it without the aid of other causes; perhaps even that they hindered the event, which was brought about in spite of them by other causes that have escaped notice.

It is chiefly for this reason that the same events in economic history are used by different writers to support opposite theories. Both sides may be perfectly honest, both may wish to tell the truth and the whole truth. But by grouping the same facts in different ways, by making different parts of the truth prominent, they suggest opposite conclusions. For instance, in controversies between American Protectionists and Free Traders, the same statistics have been used to prove that raising the tariff increases and that it diminishes general prosperity. On inquiry we find that a chief cause of their

divergence is that they ascribe different lengths to the period which elapses between a change in the tariff and its maximum result[1]. One disputant ascribes to a recent lowering of the tariff a result which another says was part of the effect of a raising of the tariff that occurred some years before. It is difficult for those without special knowledge to be sure what lessons they ought to deduce from these facts, even though both sides are represented by able pleaders: partly because it is possible that both sides have been too intent on the controversy to take account of causes lying outside its scope. And this seems to have been the fact. It is probable that many of the results attributed by both of them to changes in the tariff were chiefly due to causes that had no connection with it.

Again in disputes as to the rates of wages paid in English trades, we find that much turns on allowances for slack time and over time, for the higher earnings and the over pressure of piece-work and so

[1] See in particular Grosvenor's "*Does Protection protect?*" and the corresponding parts of Carey's *Social Science*.

on. We are at the mercy of the narrator unless we can, so to speak, cross-examine the facts; unless we are able to suggest for ourselves causes that he may have overlooked, and to inquire into their action.

Experience in controversies such as these brings out the impossibility of learning anything from facts till they are examined and interpreted by reason; and teaches that the most reckless and treacherous of all theorists is he who professes to let facts and figures speak for themselves, who keeps in the back-ground the part he has played, perhaps unconsciously, in selecting and grouping them, and in suggesting the argument *post hoc ergo propter hoc.*

In order to be able with any safety to interpret economic facts whether of the past or present time, we must know what kind of effects to expect from each cause and how these effects are likely to combine with one another. This is the knowledge which is got by the study of economic science. While on the other hand, the growth of the science is itself chiefly dependent on the careful study of facts by the aid of this knowledge.

For this purpose it is necessary to isolate the action of one cause after another; a difficult task in all cases, and seldom to be done except by one of three familiar scientific methods. The first is to find the same cause working in many different surroundings, and in all producing the same effect. Another is, having already discovered the effects of all causes, save one, at work in any case, to subtract these from the total effect, and by the method of residues to determine the effect of that one. The third is the simplest, but cannot often be applied. It is to find two cases which resemble one another in every respect except that one cause is present in one of them but not in the other. Then by holding the cases up to the light, as it were, against one another, the effect of that cause is made to stand out[1].

§ 17. None of these methods can be safely used without wide knowledge. The thin thread of facts

[1] Compare the short but masterly essay, "Die Kathedersocialisten und die statistischen Congresse. Gedanken zur Begründung einer nationalœkonomischen Statistik und einer statistischen Nationalœkonomie," by Prof. Laspeyres.

told to us by chroniclers, or travellers, is quite insufficient for the purpose. We must have access to a vast mass of facts which we can so to speak cross-examine: balancing them against one another and interpreting them by one another.

It must be admitted that to do this with regard to distant times is difficult if not impossible. For the social and economic history of early times stands on a different footing from their political history. That has some advantages over the political annals of our own age; while in its turn posterity will understand, say, the policy of Prince Bismarck better than we do, because they will know documents that are now secret. But in spite of all the print we shall leave them, posterity will not be able to settle a disputed question as to the economic facts of our time as well as we can. And our information as to the economic facts of times long past is so slight and so contradictory, that if we subject it to the same searching criticism which we apply to disputed statements as to contemporary social facts, much of it crumbles away.

And there is a further difficulty: our present economic conditions are quite unlike any that have existed before. In many kinds of trading the whole world is one market, the chief dealers in every country knowing each day what the dealers in all other countries are doing on that day, and shaping their course accordingly. In some industries bargains between employers and employed are made in one room for many counties together. And—the most important change of all—many of the leaders of the working classes have the knowledge, resource, self-control and dignity which are necessary for carrying through a broad and far-seeing policy. The best parallel that we can find to this state of things in earlier times, though it is very imperfect, is in those trading cities of mediæval Europe where all were free, and where it was possible to do by word of mouth what is now done by printing press and telegraph.

§ 18. The study of economic history has done good service in destroying some of the narrower tenets of the older schools; in proving that habits

and institutions which had been assumed to be inherent in human nature are comparatively of modern growth: and it has thrown a strong light on the modern problems of oriental countries. But on the other hand economic science has done much and I believe will do a great deal more in applying contemporary observations of the East to explain the economic past. In particular I think it will break up and explain what are called economic customs, very much as the telescope breaks up a nebula.

To say that any arrangement is due to custom, is really little more than to say that we do not know its cause. I believe that very many economic customs could be traced, if we only had knowledge enough, to the slow equilibration of measurable motives: that even in such a country as India no custom retains its hold long after the relative positions of the motives of demand and supply have so changed, that the values, which would bring them into stable equilibrium, are far removed from those which the custom sanctions.

Where economic conditions change but little in one generation, the relative values of different things may keep very near what modern economists would call their normal position, and yet appear scarcely to move at all: just as, if one looks only for a short time at the hour hand of a watch, it seems not to move. But if the preponderance of economic motive is strong in one direction, the custom, even while retaining its form, will change its substance, and really give way.

For instance I believe that rents seldom diverge much for a long time from their Ricardian level in the East, except when there really is a divided ownership of the land[1]. They often appear to do so, but on inquiry it will generally be found that they are really brought back near to it by the adjustment of quasi-feudal dues, or *abwabs*. In other cases the

[1] Divided ownership is as much within the scope of Ricardian reasoning as single ownership. It is often said that our chief mistake in dealing with the land of Celtic and Indian peoples has been the applying to it the Ricardian theory of rent. No doubt we did make a mistake in this direction, but I believe our chief error has been legal rather than economic, and has consisted in our refusing to recognize the facts of divided ownership.

adjustment is effected by slightly altering the character of the commodity without changing its name. In fact after examining in detail the prices of chief purchases made by the peasants in some parts of India, I have come to the conclusion that fixed custom has less to do with them than is the case with the agricultural labourer in the south of England. It is frequently said that economists have assigned too much influence to the action of competition (or as I prefer to call it the equilibration of measurable motives) in backward countries. I am gradually drifting to the opinion that in many cases too little force has been attributed to it; but that a mistake has been made in assuming that it would take the same outward form as with us, and that our own methods of dealing with it could be applied unaltered to backward countries.

We are able to cross-examine the facts of modern India; and I believe that our science working on those facts will gradually produce a solvent, which will explain much that is now unintelligible in mediæval economic history.

Greedy then as the economist must be for facts, he must not be content with mere facts. Boundless as must be his gratitude to the great thinkers of the historic school, he must be suspicious of any direct light that the past is said to throw on problems of the present. He must stand fast by the more laborious plan of interrogating facts in order to learn the manner of action of causes singly and in combination; applying this knowledge to build up the organon of economic theory, and then making use of the aid of the organon in dealing with the economic side of social problems. He will thus work in the light of facts, but the light will not be thrown directly, it will be reflected and concentrated by science.

§ 19. Such then is the work that lies before economic science: let us consider the relation in which Cambridge stands to it. There is wanted wider and more scientific knowledge of facts: an organon stronger and more complete, more able to analyse and help in the solution of the economic problems of the age. To develop and apply the organon rightly is our most urgent need: and this

requires all the faculties of a trained scientific mind. Eloquence and erudition have been lavishly spent in the service of Economics. They are good in their way; but what is most wanted now is the power of keeping the head cool and clear in tracing and analysing the combined action of many combined causes. Exceptional genius being left out of account, this power is rarely found save among those who have gone through a severe course of work in the more advanced sciences. Cambridge has more such men than any other University in the world. But, alas! few of them turn to the task.

Partly this is because the only curriculum in which Economics has a very important part to play, is that of the Moral Sciences Tripos. And many of those who are fitted for the highest and hardest economic work are not attracted by the metaphysical studies that lie at the threshold of that Tripos. Economics is a science of human motives, and since some grouping is necessary, it could not be better grouped than with the other Moral Sciences. Tested by its fruits the Tripos is an excellent one. It may claim a

share very much larger than in proportion to its numbers, of those who have increased the fame of Cambridge and her power in the world; and what it has done for Economics has certainly not been the least of its achievements. But may I not appeal to some of those who have not the taste or the time for the whole of the Moral Sciences, but who have the trained scientific minds which Economics is so urgently craving? May I not ask them to bring to bear some of their stored up force; to add a knowledge of the economic organon to their general training, and thus to take part in the great work of inquiring how far it is possible to remedy the economic evils of the present day?

§ 20. For indeed the work is urgent. Material wealth has ever had but slight charms for the Academic mind. Our best men both young and old have found their joy in doing the best work of which they are capable, and have cared but little whether its money gain would be great or small. Secure themselves of being able to live a refined and cultured life, and with a just and noble scorn of those

who hunt after superfluous riches, they have often drifted into an attitude of philosophic indifference to wealth and all its concerns. But this has been a great and disastrous mistake.

For why are so many lives draggled on through dirt and squalor and misery? Why are there so many haggard faces and stunted minds? Chiefly because there is not wealth enough; and what there is, is not well distributed, and well used. Much has been said of the physical suffering and ill-health caused by over-crowded dwellings, but the mental and moral ill-health due to them are greater evils still. With better house-room and better food, with less hard work and more leisure, the great mass of our people would have the power of leading a life quite unlike that which they must lead now, a life far higher and far more noble.

§ 21. It has often been observed that one cause of the marvellous achievements of the Greeks was the directness with which they addressed themselves to the problems of their own time. Never was there an age so full of great social problems as ours; surely

they are not unworthy of the best efforts of the best minds among us. Think of the force that University men might bring to bear by their personal influence, if great numbers of them had learnt to think clearly and had studied the subject-matter of the age in which they live. They might then take a wise and active part in relieving misery without making pauperism; in helping the people to educate themselves and rise to a higher level; to become not only more efficient producers but also wiser consumers, with greater knowledge of all that is beautiful, and more care for it.

And lastly if more University men looked upon their life here as preparing them for the higher posts of business, what a change they might make in the tone of business! Just and noble sentiments might be introduced into counting-house and factory and workshop, without the dangers which weak benevolence runs of turning sentiment into sentimentality, of courting ruin and increasing the common prejudice that a pleasant looking house of business is likely to be financially unsound. If our Universities

were more in sympathy with business, charitable England would not have left to other countries so much of the work of pioneering the way towards making factory life pleasant and beautiful[1].

Why should it be left for impetuous socialists and ignorant orators to cry aloud that none ought to be shut out by the want of material means from the opportunity of leading a life that is worthy of man? Of those who throw their whole souls into the discussion of this problem, the greater part put forth hastily conceived plans which would often increase the evils that they desire to remedy: because they have not had a training in thinking out hard and intricate problems, a training which is most rare in the world and plentiful only in Cambridge. The great scientific strength of Cambridge is not indeed indifferent to social problems; but is content to treat them in an amateur fashion, not with the same weighty seriousness that it gives to other studies.

Partly this may be because Economics is yet so

[1] Comp. *Old World Questions and New World Answers* by D. Pidgeon.

much in its infancy that it has but little to teach. But then those who are already masters of scientific method can learn that little quickly; and when they have learnt it, they will wonder how much insight they have got with but a little labour into the real nature of the problems that have to be solved.

It will be my most cherished ambition, my highest endeavour to do what with my poor ability and my limited strength I may, to increase the numbers of those, whom Cambridge, the great mother of strong men, sends out into the world with cool heads but warm hearts, willing to give some at least of their best powers to grappling with the social suffering around them; resolved not to rest content till they have done what in them lies to discover how far it is possible to open up to all the material means of a refined and noble life.

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