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THE OLD GENERATION OF ECONOMISTS
AND THE NEW.*

ON accepting the invitation with which the new Cambridge Economic Club has honored me to address its first meeting, it seemed that, perhaps, my most appropriate subject would be the relation in which the work of the older generation of economists, which is drawing near the close of its activity, stands to the work which appears to lie before that coming generation, to which most of the members of the club belong. I propose therefore to lay before you some estimate of the preparation which has been made by the nineteenth century and the old generation of economists for the new generation of economists and the twentieth century. The estimate must be fragmentary and incomplete. The subject is large, and its treatment to-night must suffer from the shortness of the time at our disposal; but it will suffer yet more sorely from the limitations imposed by my own subjectivity. For it is never more difficult to free one's self from the shackles imposed by one's own bias than when endeavor-

* An address delivered in Cambridge, England, October 29, 1896.

ing to take a survey of the present and to forecast the future.

Economic science as I first knew it, just thirty years ago, was more confident than now: partly because it was less active. Its general propositions and general principles were bold and peremptory: at all events so long as they kept on this side of the water. Some of them flourished elsewhere, especially in France. But most of them were bad sailors; and, if they were met with in other lands, they generally had a languishing air as though they had not recovered from sea-sickness. And even in England they were becoming less robust. Their decadence was no doubt hastened by academic criticisms, the ultimate source of which was to be sought in the new German school of history. But, probably, these criticisms had less influence than the rapid changes which were taking place throughout the whole Western World in the economic structure of society, and in the tone and temper of political thought: while, so far as England herself was concerned, the experiences of administrators and business men in Asia and Africa as well as in America had long been suggesting broader views of the action of economic and other social forces. It is consistent with the general history of English thought and action to believe that Englishmen were more influenced by their own experiences than by the scientific studies of foreigners.

These experiences bore fruit early in the writings of Richard Jones. It is noticeable that he was addressing Indian cadets when he said in 1833, "We must get comprehensive views of facts, that we may arrive at principles that are truly comprehensive. If we take a different method, if we snatch at general principles, and content ourselves with confined observations, two things will happen to us. First, what we shall call general principles, will be found to have no generality; we shall set out with declaring propositions to be universally true which, at every

step of our further progress we shall be obliged to confess are frequently false; and secondly we shall miss a mass of useful knowledge, which those who advance to principles by a comprehensive observation of facts, necessarily meet with on their road." Richard Jones had not fully grasped the modern distinction between generality of doctrines, or dogmas, and generality of analytical conceptions and ideas; and his own position has its defects. But he said just what was wanted at the time: and his influence, though little heard of in the outer world, largely dominated the minds of those Englishmen who came to the serious study of economics after his works had been published by Dr. Whewell in 1859.

Thus general economic principles had to justify their existence before a court which no longer had any bias in their favor, and perhaps had some little bias against them. Consequently they became less dictatorial, and more willing to admit their own limitations. Never again will a Mrs. Trimmer, a Mrs. Marcet, or a Miss Martineau earn a goodly reputation by throwing them into the form of a catechism or of simple tales, by aid of which any intelligent governess might make clear to the children nestling around her where lies economic truth, and might send them forth ready to instruct statesmen and merchants how to choose the right path in economic policy, and to avoid the wrong. It is now patent even to those who are in a hurry, that no practical problems can be settled off-hand by appeal to general doctrines; for the things of which account must be taken are so diverse, and our knowledge of many of them is so slight, that they yield no firm hold for formal proof. Much must be taken on conjecture; much must be decided by common sense rather than by reasoning on strictly logical lines.

Thus the growing perfection of scientific machinery in economics, so far from lessening the responsibilities of common sense increases those responsibilities: for it

widens and deepens the issues with which the economist has to deal, and for the ultimate decision of which he must, after all, rely mainly on his practical instincts. And on the other hand the retiring disposition of general principles and general propositions has been accompanied not by a diminution but by an increase of their real authority. They no longer wield the big battle-axe and sound the loud war cry like a *Cœur de Lion*; they keep in the background like a modern general: but they control larger forces than before. They exert a more far-reaching and more powerful influence on ideas: and ideas fashion the course of the world ever more and more.

For indeed the progress of knowledge in economics as elsewhere has shown that nature's facts are more diverse and more complex than used to be thought; and hence some have inferred that the more we know of the fundamental forces of economic and social life the more diverse will they appear. But to reason thus is to ignore the experiences of physical science which have gone over the same ground a little ahead of social science. Physical science has learnt that an increasing knowledge of the variety and complexity of the phenomena of nature has often been accompanied by a diminution in the number of principles required to explain them. It has learnt that a few simple causes can produce an endless variety of results; and that a small variation in the strength of any one of the forces, or in its method of combination with others, may change the result beyond recognition. The discovery of intimate true affinities between things which appear wholly different to the hasty observer has long been recognized as one of the chief tasks of physical science.

Hence it follows that we cannot predict results from a mere knowledge of fundamental forces, without making a full investigation of the particular circumstances under which they act: a small change in those circumstances may alter the action of the fundamental forces almost

beyond recognition. And hence it follows also that increased knowledge of these forces is more likely to stimulate than to check the study of particular facts. And this is what has actually occurred. Newton's law of gravitation stimulated the work of astronomical observatories. Darwin's development of the laws of struggle and survival gave perhaps a greater impetus to the careful and exact study of particular facts than any other event that has ever occurred. Nor is this all. For when simple and elementary principles have already a fairly strong hold in any body of knowledge, every new fact has a greater opportunity of suggestiveness than before the knowledge was organized. Röntgen's rays are all the more stimulating to thought and to further observation, because of their tendency to modify general principles that have already won their spurs.

As the nineteenth century has worn on, there has been a growing readiness among economists, as among students of physical science, to recognize that the infinite variety and complexity of nature's forms is compatible with a marvellous latent simplicity of her governing principles. The pursuit of particulars has become ever more eager; but what little tendency there once was to dissociate it from the study of general principles has now almost died away. It is now generally recognized that every inference from one set of facts to another, whether it be performed by instinctive or by formal reasoning, involves not one process but two. It involves a passage upwards from particulars to general propositions and ideas; and a passage downwards from them to other particulars. We can seldom infer particulars from other particulars without passing through generals, however simple be the subject-matter of our study; and we can never do so in the complex problems of social life.

Parallel with this advance is an increase in our skill in interpreting the partial thoughts of economists of earlier

times, and distilling from them ideas fraught with instruction for ourselves. We have learnt that most of them were true seers, with careful habits of observation; and that what they meant to say was for the greater part true within its limits; but yet that what they said does not always fully suggest to us what was in their own minds until we have supplied the latent premises which they instinctively took for granted. We no longer look to them for quite the same sort of instruction as before; but that which we now seek, we are getting from them.

A further advance is the recognition that in economics we deal with the whole of man's nature, though we lay chief stress on certain special aspects of it. From this it follows that in so far as we base ourselves upon the history of past times at all, it must be history as a whole. We need more than economic history, more than a history of economic institutions and customs, wages and prices, of trade and finance: we want a history of man himself, and economic history as contributing to that. To take one instance: the history of Socialism has great value, but not of the kind which is commonly ascribed to it. It is of little service as a record of particular events from which specific inferences can be drawn to modern problems. For the socialistic problems of to-day are quite different from those of earlier times: the forces of reform and of resistance to change, the relations between different trades and classes in the same nation and the economic relations between nations are all different. The substance of the problem of social reform has changed, the machinery with which it has to be handled has wholly changed; and the success or failure of one particular social experiment long ago is not likely to throw a very strong special light on any experiment that may be tried now. But every such experiment in the past throws light upon human nature. And the history of such experiments throws light on the dynamics as well as on the statics of human nature: it

tends to show not only what human nature was at any time, but also how it has developed. It offers us therefore indispensable aid towards estimating the direction and the rate of growth of human nature in the future, and specially of that side of human nature which it is most important for us to understand, when considering daring modern schemes for social reform.

Social science or the reasoned history of man, for the two things are the same, is working its way towards a fundamental unity; just as is being done by physical science, or which is the same thing, by the reasoned history of natural phenomena. Physical science is seeking her hidden unity in the forces that govern molecular movement: social science is seeking her unity in the forces of human character. To that all history tends; from that proceeds all prediction, all guidance for the future.

It is not for us to complain that the name of history has been sometimes usurped by what is but a fragment of history. Out of that tangled complex which constitutes the history of man, a few prominent threads have been selected and traced out: and much progress has been made towards the correlation of political institutions, and political events. The political branch of history has advanced far ahead of all other branches, because it is important on its own account; because it is definite, picturesque, of general interest, and richly supplied with records specially belonging to it. It throws also incidentally a bright light on the development of human nature; and in this way, as well as through the particular events which it records, it affords great help in tracing the thread of economic history. So great progress has political history made during the nineteenth century, that for this cause alone the economists of the twentieth century will have a much greater command over their work than had the "classical" economists. And they will owe a great debt also to ideas that

have done good service for physical science, and are being adapted to some limited and partial aspects of social science.

We should be drawn too far into technical subtleties, if we were to examine minutely changes in the methods of thought and expression which have been introduced into economics from contact with the various branches of physical science. But it may be said briefly that the latter half of the nineteenth century has thoroughly overhauled the doctrines of the earlier economists as to *tendencies*; and while pruning away much, has set the remainder in order and established them on a firm scientific basis. It has shown, what was perhaps not fully recognized by the older economists themselves, that in their predilection for a study of tendencies, they were really working to obtain just that mastery of knowledge which has laid the foundation of the successive triumphs of physical science. For, when studying particular facts with the purpose of inferring tendencies, they were conforming to the great canon already noticed that in passing from particulars to particulars we must go not directly but by way of generals; and also to a second great canon, that the main importance of the particular facts of nature lies in the light which they throw upon the processes of nature; or in other words that from what *is* we have to learn what *is becoming*; from *das Sein* we have to learn *das Werden*.

And, in the latter half of the century, economists have gone one step further and come more into line with physical science by borrowing from it some of those terse and powerful phrases by which it has been long able to describe and explain nature's tendencies more easily and more precisely than is possible in ordinary language. They are facing the fact that at the basis of nearly all modern knowledge there lies a study of tendencies, in the form more or less disguised of a study of the relations between the infinitesimal variations of different things.

This is what the shrewd ordinary man does, though he may not know it, any more perhaps than he knows that he is talking prose. The man of science does it, and knows that he does it: though before he addresses a popular audience he may fitly wrap up what he has done in language that is less terse and clear, but more familiar.

This work of the new methods is far from finished: much remains for your generation to do. But the start has been made; and it will be no hindrance to you, but rather some assistance, that many still look with suspicion on the movement. Their criticisms will help you to be careful not to outrun your positive knowledge and observation, and not to forget the differences in character between the facts and the forces of the physical world and those of the moral world.

To pass then to a rather less technical aspect of analysis:—Speaking generally, the nineteenth century has in great measure achieved *qualitative* analysis in economics; but it has not gone farther. It has felt the necessity for *quantitative* analysis, and has made some rough preliminary surveys of the way in which it is to be achieved: but the achievement itself stands over for you. “Qualitative” and “quantitative analysis” are terms borrowed from chemistry—a science which deals with things as they are, and not with their growth; and therefore the terms are not exactly what we want. But they must serve. Qualitative analysis tells the iron-master that there is *some* sulphur in his ore, but it does not enable him to decide whether it is worth while to smelt the ore at all, and, if it is, then by what process. For that purpose he needs quantitative analysis, which will tell him *how much* sulphur there is in the ore. And so it is also in economics. Every event has many effects; some work good, others evil. Some are permanent, others will quickly pass away. Some affect many, others only a few. Some grow

cumulatively, others invite a reaction. Mere qualitative analysis, then, will not show the resultant drift of economic forces. It may show gain here and loss there; but it will not show whether the gain is sufficient to over-balance the loss; whether the gain should be pursued in spite of the loss. And yet, for the purposes of practical action, this decision must be made. It is useless to say that various gains and losses are incommensurable, and cannot be weighed against one another. For they must be, and in fact they are, weighed against one another before any deliberate decision is or can be reached on any issue.

Of course the laws of duty impose boundaries that are not to be passed: just as at chess when a king is already at the right-hand end of the board he cannot move to the right. But the fact that the laws of chess rule some moves out altogether, does not prevent chess from consisting mainly of a balancing of the advantages of one programme of legitimate moves against another, and often weighing the value of a piece against that of an improved position. A piece and a position are logically quite heterogeneous; but he would be no chess-player at all who could not weigh the one against the other. And, though there are some things which no statesman may do, no economist may recommend, yet the action of the statesman and the advice of the economist must be based upon as exact an estimate as may be got of the relative importance of different sets of advantages, each made up of many things that are logically heterogeneous.

Here a distinction must be made between the relative weights which people do in fact assign to the various things which concern their physical, their mental and their moral well-being, and the relative weights which, as philosophers and moralists, we may think they ought to assign to those things. Ethical instincts and philosophy are the supreme authority in deciding what aims are fit to

be pursued. But in studying the facts of the past and in devising schemes for the future our first concern is with the things that people have wished and do wish for; and at a later stage we may consider what things they probably can be induced to wish for in the future. No doubt their weighing is often foolish and shortsighted, sometimes ignoble and even wicked. Philosophers as we may strive to be, we surely afford no exception to this rule. We may wish that the ways of all were different; we may exhort ourselves and others to better ways: but we have to study mankind as they are. We must not picture to ourselves an unreal world as it might, or ought to be; and make schemes for it. That way lies social madness, leading to a failure of hot aspirations and thence to cold reaction. Our first duty as economists is to make a reasoned catalogue of the world as it is; and never to allow our estimates as to what forces will prove the strongest in any social contingency to be biassed by our opinion as to what forms ought to prove the strongest. A chief part of the work which lies before the economists of the twentieth century is to make that estimate — not well, for that is impossible, but — somewhat less badly than it has been made hitherto.

The older economists were really driving at quantitative analysis, when they took it as their special duty to make things stand out in true perspective, in true proportion. They set themselves to lay stress on “that which is not seen” because it is remote or obscure, in opposition to the popular tendency to care chiefly for “that which is seen,” because a bright light happens to fall on it, because it is simple and near at hand: and they set themselves to defend the interests of the silent and patient many against the claims of the pushing and clamorous few. For indeed, as Fortrey said more than two centuries ago, “Private advantages are often impediments of public profit; for, in what a single person shall be a loser, there endeavours

will be made to hinder the public gain; from whence proceeds the ill success that commonly attends the endeavours for public good: for commonly it is but coldly prosecuted, because the benefit may possibly be something remote from them that promote it, but the mischief known and certain to them that oppose it; and interest more than reason commonly sways most men's affections." The pushing and clamorous few in an economic controversy are often a group of producers who can put their case well, and who show great energy and resource in making themselves heard. Hence has arisen the tradition that the economist is generally on the side of the consumer as against the producer: he aims at protecting the unvoiced many, who consume the products of a particular trade, against the vocal few who speak on behalf of the trade.

A good instance of the difficulty of getting your quantities right is found in the inverse claim which is sometimes put forward nowadays that the interests of consumers are really less important than those of producers; because the producers are many and the consumers few; the terms consumer and producer being taken again in a forced sense; but in a different one from that of the old. Of course every one is a consumer, and every one is a producer (or the dependent of a producer); for income can only be derived from labor that takes part in production, or from the ownership of something that takes part in production. But when the consumers are said to be few and the producers many, the consumers are taken to be those whose incomes enable them to consume largely; and the producers are generally taken to be those who work for a wage. The claim so interpreted is one which the economist must treat seriously and sympathetically. An instance is offered by the story, which seems to be not entirely without some basis in fact, of the vendor of Oriental tapestry, who excused the high

price which he asked for it by the assertion that the stitch was so fine that ten people had lost their eyesight, and many more had been seriously injured, by working on that single piece. The whim or the artistic lust of the rich consumer had outweighed the welfare of the producers in this instance, and other instances nearer home might be obtained from some trades in which the hours of labor are excessive or its conditions unwholesome. Such instances of social discord are facts which the economist must admit: they are the result of natural laws which it is his business to help to counteract.

But they are exceptional instances; and I believe that the statement that the interests of workingmen are those of producers rather than those of consumers is very seldom true even in the limited and artificial sense in which the words are used. The question is one of relative quantities; and it is misconceived partly because people do not know the right directions in which to look for their quantities.

For instance, when workingmen think of themselves as consumers, they seldom look in the right directions. They know that they are consumers of food and clothing. But they do not think of themselves as consumers of such things as iron. They look upon the price of iron as the concern mainly of railway and ship companies, and other capitalists who purchase it. But, in fact, a low price of iron is at least as great a benefit to the workingman as to any one else. It is a chief cause of the increase of that purchasing power of his wages which results from the fall in the prices of his food and clothing, while the price of his labor has been maintained. Everyone is apt to take as a matter of course the great benefits which economic progress brings him, and to regard any slight injury that results from it as an unendurable grievance; and thus to see things in a wrong proportion. But progress is *not* a matter of course: it is the result

of effort. If there had been no improvement in steam-engines and the manufacture of iron during the last fifty years, the purchasing power of Englishmen's wages would be much less than it is now: I do not know how much less; but I guess thirty or forty per cent less. Some of the quantities in the problem must always remain more or less conjectural; but others could be taken with tolerable certainty.

Such work as this belongs to the academic economist. For he has no class or personal interests to make him afraid of any conclusion which the figures, when carefully interpreted, may indicate; he accepts the premises of the working classes that the well being of the many is more important than that of the few. He is specially trained to detect the falsity of the mirage which is caused by the fact that the comfort of the few rich sometimes has a higher bidding power in the market than more urgent needs of many poor, and will outbid them in the market. Being thus fortified by the consciousness of his own rectitude, the economist, in the coming generation even more than in the past, must dare when occasion arises to oppose the multitude for their own good. He must for instance analyse the methods which people are tempted to take for securing a high minimum wage, falsely called a living wage, in a particular trade; and must show which of them will have indirect effects that will cause to workmen as a whole a loss greater than the benefit.

Cries for a living wage have the shouts of the marketplace on its side just now: they are raised by dockers and coal miners; by cotton spinners and glass blowers, and by capitalist booksellers. They appear to strengthen one another; because ordinary people do not see that the means most commonly advocated are such as, if generally pursued, would impoverish all. It is true that a great and important principle lies at the root of this movement for a living wage. Economists have fought for it in the past,

and your successors may need to fight for it again. But just as you are entering on your work the movement for a living wage has become so popular, that there is less need to dwell on its merits, than to analyse its latent assumptions as to the relative quantities of losses and gains. "There is money in this branch of discovery," said the professor of pure science, "and we will leave it for those who seek money": you may parody this and say: "there is popularity in the doctrine of a living wage; so we had better leave politicians to praise it and set ourselves to criticise it."

Again, while taking an attitude of reserve towards movements that are already popular, you will incline to be critical of prophecies that are fashionable. For instance, it is getting to be asserted commonly that collective bargaining is about to displace bargaining between individuals as the main arbiter of distribution and exchange. It may be so; but predictions of this kind have been made much more often than they have been fulfilled. You will need to examine how far the large and obtrusive surface, which collective bargaining presents, rests on a solid foundation; and how far it is hollow. You will not think lightly of the old social discords which it tends to lessen: but you will set against them those new discords which it may introduce. For clearly it tends to make a man work, or sell, not up to that margin at which there is a balance of gain and loss to him, but up to a margin which if not arbitrary, yet fails of any close adaptation to his individual case. You will need to look at history and see how often collective bargaining, when most elaborately contrived and strong in outward appearance, was honey-combed and weak; you will need to watch the vast network of by-paths by which when one person is willing to sell a thing at a price which another is willing to pay for it, the two manage to come together in spite of prohibitions of King or Parliament, or of the officials of a

Trust or Trade-union. No doubt you may live to see collective bargaining a greater force than I expect, and working in ways which I do not guess. The experience of the past does not foretell the future; but it justifies some scepticism as to the solidity of those forms of collective bargaining which are most ostentatious.

These last remarks illustrate the difficulty of forecasting the nature of the problems which will chiefly occupy the coming generation. But I will take another illustration of this difficulty, the chief interest of which lies in the guesses which past experience prompts us to hazard as to a mode of action of the healing force of nature. For, in social as in physical life, nature modifies old remedies to meet new developments of old evils. And I will venture on a surmise of one way in which your generation may perhaps see this healing force more active than heretofore.

Every one is aware of the tendency to an increase in the size of individual businesses, with the consequent transference of authority and responsibility from the owners of each business to its salaried managers and officials. This would have been impossible had there not been a great improvement in the morality and uprightness of the average man: for even as late as the seventeenth and eighteenth centuries we find the great trading companies breaking down largely in consequence of the corruption and selfishness of their officials. But men who are above such gross iniquity as was common then relatively to the few opportunities for it, are yet likely to succumb to subtler temptations, and especially to the temptation to consult their own ease by jogging along quietly in accustomed routes, and avoiding the trouble and worry of new initiative.

And indeed this tendency to an increase in the size of businesses introduces an ever growing discord into indus-

try. The owner of a business, when contemplating any change, is led by his own interest to weigh the whole gain that it would probably bring to the business, against the whole loss; but the private interest of the salaried manager or official draws him in quite another direction. For the trouble of a new experiment will come largely on him. If it fails, he will have to bear much of the blame; and if it succeeds, only a very small part of the consequent gain will accrue to him. So the path of least resistance, of greatest comfort and least risk to himself is generally that of not striving for improvement himself, and of finding plausible excuses for not trying an improvement suggested by others, until its success is established beyond question.

If this were the whole of the case, then every new advantage that modern changes confer on large businesses in their contests with small would be a source of danger to social progress. For the economies of the large business as against the small are mostly a matter of private concern and bear no further fruit: but the improvement of methods spreads from its first home all over the country, all over the world; and the private gain which results from it to the inventor is seldom a hundredth part, sometimes not a millionth part of the social gain. A strong tendency to ossification of the social organism might therefore be feared as the result of bureaucratic habits of shirking troublesome initiative, the main benefits of which would accrue to those who had not borne the burden. But this tendency is being counteracted, partially at least, by several forces. The increase in the size of industries goes with the substitution of scientific methods for empirical: and the basis of scientific technique is largely provided by laboratory work to which an ever increasing number of elastic and enterprising minds are rising from among the people, being stimulated a little by the hope of gain, and much by intellectual ambition, and

the sympathy of other students of science. And in addition to this general energizing force, a special force somewhat similar to it is coming into play to preserve from stagnation the more exclusively practical side of business management. For business experts are getting more and more into the habit of writing and reading specialist journals, of holding congresses, and in other ways coming under the judgment of one another. The old thankless task of attempting an improvement which may after all turn out badly, and to which a man's official superiors and the public at large may be indifferent, assumes a new shape when it is likely to be judged by a critical and appreciative audience who know the technical difficulties of the problem. The most important improvements often remain for years just short of yielding financial profit: but such an audience applauds the clever and bold endeavor even though its financial fruit is not ripe; even though the interest of a manufacturer in charge of his own business would not impel him to use it. Thus the modern intercourse of expert officials with one another is bringing into the business world some part of that great progressive force which pure science long derived from the approbation which successful research receives from audiences fit though few. Such approbation is a reward; and like every other reward, present or deferred, appeals to elements of our nature that are not the very highest of all: and partly for that reason it may be trusted to act steadfastly. But it is not only a reward: it is also a sympathy; and sympathy is the one solid and strong force acting steadfastly throughout the whole of human nature, which has in it nothing sordid. The coming generation of economists will have no more urgent, and perhaps no more pleasant task, than to inquire, with as close an estimate of quantities as may be, how far this class of forces may take the place of the cruder force of the pursuit of private material gain, which is being in some directions weakened

by the growth of large businesses, and especially those under public control.

I have trespassed too long upon your patience and must conclude, though I have touched on only the outer fringe of the issue to which I have ventured to address myself. To sum up then:—During the generation that is now passing away it has been made clear beyond doubt by many workers in many lands that the true inductive study of economics is the search for and arrangement of facts with a view to discovering the ideas, some temporary and local, others universal and eternal, which underlie them: and that the true analytical study of economics is the search for ideas latent in the facts which have been thus brought together and arranged by the historian and the observer of contemporary life. Each study supplements the other: there is no rivalry or opposition between them; every genuine student of economics sometimes uses the inductive method and sometimes the analytical, and nearly always both of them together. There is a difference in proportion between different students; as one may eat more solid food and another may drink more fluid: but every one must both eat and drink under pain of starving or dying of thirst.

The generation of economists which is now passing away has worked through controversy as to method, to the extinction of that controversy. It has established the harmony between the study of facts and of ideas; it has shown the need of a catholic spirit in the interpretation of men as well as of facts. It has done much towards completing the main lines of qualitative analysis; but it has not grappled at close quarters with the difficulties of quantitative analysis. The time has not yet come for taking stock of the value of its constructive work. But it has at all events cleared the field for the constructive work of the larger and stronger strain of economists that

are to follow: and perhaps when people look back a century hence they may speak kindly of it, not so much for what it achieved itself, as for the far greater work which it prepared the way for you to achieve.

The problem of social aims takes on new forms in every age; but underlying all forms there is the one fundamental principle, that progress mainly depends on the extent to which the strongest, and not merely the highest, forces of human nature can be utilized for the increase of social good. There are some doubts as to what social good really is; but they do not reach far enough to impair the foundations of our fundamental principle. For there has always been a substratum of agreement that social good lies mainly in that healthful exercise and development of faculties which yields happiness without pall, because it sustains self-respect and is sustained by hope. No utilization of waste gases in the blast furnace can compare with the triumph of making work for the public good pleasurable in itself, and of stimulating men of all classes to great endeavors by other means than that evidence of power which manifests itself by lavish expenditure. We need to foster fine work and fresh initiative by the warming breath of the sympathy and appreciation of those who truly understand it; we need to turn consumption into paths that strengthen the consumer and call forth the best qualities of those who provide for consumption.

Other generations, in the heyday of art and literature in the ancient and mediæval world, have hit upon methods of doing this more or less successfully; but their aims have had a narrow horizon, limited to the welfare of a fortunate few. The generation of students of social science which is now passing away has striven to deal with the problem on a broader basis; and your generation is called on to continue that work with greater knowledge and with greater resources. You are called on to apply your knowledge of history, and especially of contemporary

history, your powers of analysis and of quantitative measurement, your fancy and your intuition, your instincts and your sympathies towards the great task of utilizing the present waste products of human effort for the production of human lives that are joys in themselves and the sources of joy. For the future, as for the past, the chief lever of all is hope, hope for a man's self and hope for those dear to him. And your generation will stand out beyond that which has gone before, as that has stood out beyond its predecessors, in an increasing power and opportunity of bringing the energizing influence of hope to the homes of what once at the beginning of this century were called the lower orders of the people.

Your generation beyond all that has gone before is called on to inquire in a sanguine, but yet in a critical and analytical temper how far that force of association and sympathy, which we have just noticed as beginning to act powerfully among the expert officials in large businesses, may extend to people generally; how it may *draw* them on to high endeavors, as the good shepherd leads his sheep, without requiring the compulsive force of want to *drive* them forward with cruel blows: how far it may be possible to obliterate the old doctrine that the many must pine in order that the few may pioneer. Your generation will recognize that men are not equal by nature and cannot be made equal by art. It will recognize that some work must be done that is not ennobling. But it will seek to apply the growing knowledge and material resources of the world, to reduce such work within narrow limits, and to extirpate all conditions of life which are in themselves debasing. It will expect no sudden improvement in man's conditions of life: because he forms them as much as they form him; and he himself cannot change fast. But it will press on steadfastly towards the distant goal where the opportunities of a noble life may be accessible to all.

ALFRED MARSHALL.