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WHY IS ECONOMICS NOT AN EVOLUTIONARY
SCIENCE?

M. G. DE LAPOUGE recently said, "Anthropology is destined to revolutionize the political and the social sciences as radically as bacteriology has revolutionized the science of medicine."* In so far as he speaks of economics, the eminent anthropologist is not alone in his conviction that the science stands in need of rehabilitation. His words convey a rebuke and an admonition, and in both respects he speaks the sense of many scientists in his own and related lines of inquiry. It may be taken as the consensus of those men who are doing the serious work of modern anthropology, ethnology, and psychology, as well as of those in the biological sciences proper, that economics is helplessly behind the times, and unable to handle its subject-matter in a way to entitle it to standing as a modern science. The other political and social sci-

* "The Fundamental Laws of Anthro-sociology," *Journal of Political Economy*, December, 1897, p. 54. The same paper, in substance, appears in the *Rivista Italiana di Sociologia* for November, 1897.

ences come in for their share of this obloquy, and perhaps on equally cogent grounds. Nor are the economists themselves buoyantly indifferent to the rebuke. Probably no economist to-day has either the hardihood or the inclination to say that the science has now reached a definitive formulation, either in the detail of results or as regards the fundamental features of theory. The nearest recent approach to such a position on the part of an economist of accredited standing is perhaps to be found in Professor Marshall's Cambridge address of a year and a half ago.* But these utterances are so far from the jaunty confidence shown by the classical economists of half a century ago that what most forcibly strikes the reader of Professor Marshall's address is the exceeding modesty and the un-called-for humility of the spokesman for the "old generation." With the economists who are most attentively looked to for guidance, uncertainty as to the definitive value of what has been and is being done, and as to what we may, with effect, take to next, is so common as to suggest that indecision is a meritorious work. Even the Historical School, who made their innovation with so much of home-grown applause some time back, have been unable to settle down contentedly to the pace which they set themselves.

The men of the sciences that are proud to own themselves "modern" find fault with the economists for being still content to occupy themselves with repairing a structure and doctrines and maxims resting on natural rights, utilitarianism, and administrative expediency. This aspersion is not altogether merited, but is near enough to the mark to carry a sting. These modern sciences are evolutionary sciences, and their adepts contemplate that characteristic of their work with some complacency. Economics is not an evolutionary science — by the confession of its

* "The Old Generation of Economists and the New," in this Journal for January, 1897, p. 133.

spokesman; and the economists turn their eyes with something of envy and some sense of baffled emulation to these rivals that make broad their phylacteries with the legend, "Up to date."

Precisely wherein the social and political sciences, including economics, fall short of being evolutionary sciences, is not so plain. At least, it has not been satisfactorily pointed out by their critics. Their successful rivals in this matter—the sciences that deal with human nature among the rest—claim as their substantial distinction that they are realistic: they deal with facts. But economics, too, is realistic in this sense: it deals with facts, often in the most painstaking way, and latterly with an increasingly strenuous insistence on the sole efficacy of data. But this "realism" does not make economics an evolutionary science. The insistence on data could scarcely be carried to a higher pitch than it was carried by the first generation of the Historical School; and yet no economics is farther from being an evolutionary science than the received economics of the Historical School. The whole broad range of erudition and research that engaged the energies of that school commonly falls short of being science, in that, when consistent, they have contented themselves with an enumeration of data and a narrative account of industrial development, and have not presumed to offer a theory of anything or to elaborate their results into a consistent body of knowledge.

Any evolutionary science, on the other hand, is a close-knit body of theory. It is a theory of a process, of an unfolding sequence. But here, again, economics seems to meet the test in a fair measure, without satisfying its critics that its credentials are good. It must be admitted, *e.g.*, that J. S. Mill's doctrines of production, distribution, and exchange, are a theory of certain economic processes, and that he deals in a consistent and effective fashion with the sequences of fact that make up his subject-matter. So,

also, Cairnes's discussion of normal value, of the rate of wages, and of international trade, are excellent instances of a theoretical handling of economic processes of sequence and the orderly unfolding development of fact. But an attempt to cite Mill and Cairnes as exponents of an evolutionary economics will produce no better effect than perplexity, and not a great deal of that. Very much of monetary theory might be cited to the same purpose and with the like effect. Something similar is true even of late writers who have avowed some penchant for the evolutionary point of view; as, *e.g.*, Professor Hadley,—to cite a work of unquestioned merit and unusual reach. Measurably, he keeps the word of promise to the ear; but any one who may cite his *Economics* as having brought political economy into line as an evolutionary science will convince neither himself nor his interlocutor. Something to the like effect may fairly be said of the published work of that later English strain of economists represented by Professors Cunningham and Ashley, and Mr. Cannan, to name but a few of the more eminent figures in the group.

Of the achievements of the classical economists, recent and living, the science may justly be proud; but they fall short of the evolutionist's standard of adequacy, not in failing to offer a theory of a process or of a developmental relation, but through conceiving their theory in terms alien to the evolutionist's habits of thought. The difference between the evolutionary and the pre-evolutionary sciences lies not in the insistence on facts. There was a great and fruitful activity in the natural sciences in collecting and collating facts before these sciences took on the character which marks them as evolutionary. Nor does the difference lie in the absence of efforts to formulate and explain schemes of process, sequence, growth, and development in the pre-evolutionary days. Efforts of this kind abounded, in number and diversity; and many schemes of development, of great subtlety and beauty,

gained a vogue both as theories of organic and inorganic development and as schemes of the life history of nations and societies. It will not even hold true that our elders overlooked the presence of cause and effect in formulating their theories and reducing their data to a body of knowledge. But the terms which were accepted as the definitive terms of knowledge were in some degree different in the early days from what they are now. The terms of thought in which the investigators of some two or three generations back definitively formulated their knowledge of facts, in their last analyses, were different in kind from the terms in which the modern evolutionist is content to formulate his results. The analysis does not run back to the same ground, or appeal to the same standard of finality or adequacy, in the one case as in the other.

The difference is a difference of spiritual attitude or point of view in the two contrasted generations of scientists. To put the matter in other words, it is a difference in the basis of valuation of the facts for the scientific purpose, or in the interest from which the facts are appreciated. With the earlier as with the later generation the basis of valuation of the facts handled is, in matters of detail, the causal relation which is apprehended to subsist between them. This is true to the greatest extent for the natural sciences. But in their handling of the more comprehensive schemes of sequence and relation—in their definitive formulation of the results—the two generations differ. The modern scientist is unwilling to depart from the test of causal relation or quantitative sequence. When he asks the question, *Why?* he insists on an answer in terms of cause and effect. He wants to reduce his solution of all problems to terms of the conservation of energy or the persistence of quantity. This is his last recourse. And this last recourse has in our time been made available for the handling of schemes of development and theories of a comprehensive process by the

notion of a cumulative causation. The great deserts of the evolutionist leaders—if they have great deserts as leaders—lie, on the one hand, in their refusal to go back of the colorless sequence of phenomena and seek higher ground for their ultimate syntheses, and, on the other hand, in their having shown how this colorless impersonal sequence of cause and effect can be made use of for theory proper, by virtue of its cumulative character.

For the earlier natural scientists, as for the classical economists, this ground of cause and effect is not definitive. Their sense of truth and substantiality is not satisfied with a formulation of mechanical sequence. The ultimate term in their systematization of knowledge is a “natural law.” This natural law is felt to exercise some sort of a coercive surveillance over the sequence of events, and to give a spiritual stability and consistence to the causal relation at any given juncture. To meet the high classical requirement, a sequence—and a developmental process especially—must be apprehended in terms of a consistent propensity tending to some spiritually legitimate end. When facts and events have been reduced to these terms of fundamental truth and have been made to square with the requirements of definitive normality, the investigator rests content. Any causal sequence which is apprehended to traverse the imputed propensity in events is a “disturbing factor.” Logical congruity with the apprehended propensity is, in this view, adequate ground of procedure in building up a scheme of knowledge or of development. The objective point of the efforts of the scientists working under the guidance of this classical tradition, is to formulate knowledge in terms of absolute truth; and this absolute truth is a spiritual fact. It means a coincidence of facts with the deliverances of an enlightened and deliberate common sense.

The development and the attenuation of this preconception of normality or of a propensity in events might be

traced in detail from primitive animism down through the elaborate discipline of faith and metaphysics, overruling Providence, order of nature, natural rights, natural law, underlying principles. But all that may be necessary here is to point out that, by descent and by psychological content, this constraining normality is of a spiritual kind. It is for the scientific purpose an imputation of spiritual coherence to the facts dealt with. The question of interest is how this preconception of normality has fared at the hands of modern science, and how it has come to be superseded in the intellectual primacy by the latter-day preconception of a non-spiritual sequence. This question is of interest because its answer may throw light on the question as to what chance there is for the indefinite persistence of this archaic habit of thought in the methods of economic science.

Under primitive conditions, men stand in immediate personal contact with the material facts of the environment; and the force and discretion of the individual in shaping the facts of the environment count obviously, and to all appearance solely, in working out the conditions of life. There is little of impersonal or mechanical sequence visible to primitive men in their every-day life; and what there is of this kind in the processes of brute nature about them is in large part inexplicable and passes for inscrutable. It is accepted as malignant or beneficent, and is construed in the terms of personality that are familiar to all men at first hand,—the terms known to all men by first-hand knowledge of their own acts. The inscrutable movements of the seasons and of the natural forces are apprehended as actions guided by discretion, will power, or propensity looking to an end, much as human actions are. The processes of inanimate nature are agencies whose habits of life are to be learned, and who are to be coerced, outwitted, circumvented, and turned to account,

much as the beasts are. At the same time the community is small, and the human contact of the individual is not wide. Neither the industrial life nor the non-industrial social life forces upon men's attention the ruthless impersonal sweep of events that no man can withstand or deflect, such as becomes visible in the more complex and comprehensive life process of the larger community of a later day. There is nothing decisive to hinder men's knowledge of facts and events being formulated in terms of personality — in terms of habit and propensity and will power.

As time goes on and as the situation departs from this archaic character,—where it does depart from it,—the circumstances which condition men's systematization of facts change in such a way as to throw the impersonal character of the sequence of events more and more into the foreground. The penalties for failure to apprehend facts in dispassionate terms fall surer and swifter. The sweep of events is forced home more consistently on men's minds. The guiding hand of a spiritual agency or a propensity in events becomes less readily traceable as men's knowledge of things grows ampler and more searching. In modern times, and particularly in the industrial countries, this coercive guidance of men's habits of thought in the realistic direction has been especially pronounced; and the effect shows itself in a somewhat reluctant but cumulative departure from the archaic point of view. The departure is most visible and has gone farthest in those homely branches of knowledge that have to do immediately with modern mechanical processes, such as engineering designs and technological contrivances generally. Of the sciences, those have wandered farthest on this way (of integration or disintegration, according as one may choose to view it) that have to do with mechanical sequence and process; and those have best and longest retained the archaic point of view intact which — like the

moral, social, or spiritual sciences — have to do with process and sequence that is less tangible, less traceable by the use of the senses, and that therefore less immediately forces upon the attention the phenomenon of sequence as contrasted with that of propensity.

There is no abrupt transition from the pre-evolutionary to the post-evolutionary standpoint. Even in those natural sciences which deal with the processes of life and the evolutionary sequence of events the concept of dispassionate cumulative causation has often and effectively been helped out by the notion that there is in all this some sort of a meliorative trend that exercises a constraining guidance over the course of causes and effects. The faith in this meliorative trend as a concept useful to the science has gradually weakened, and it has repeatedly been disavowed ; but it can scarcely be said to have yet disappeared from the field.

The process of change in the point of view, or in the terms of definitive formulation of knowledge, is a gradual one ; and all the sciences have shared, though in an unequal degree, in the change that is going forward. Economics is not an exception to the rule, but it still shows too many reminiscences of the “natural” and the “normal,” of “verities” and “tendencies,” of “controlling principles” and “disturbing causes,” to be classed as an evolutionary science. The history of the science shows a long and devious course of disintegrating animism,—from the days of the scholastic writers, who discussed usury from the point of view of its relation to the divine suzerainty, to the Physiocrats, who rested their case on an “*ordre naturel*” and a “*loi naturelle*” that decides what is substantially true and, in a general way, guides the course of events by the constraint of logical congruence. There has been something of a change from Adam Smith, whose recourse in perplexity was to the guidance of “an unseen hand,” to Mill and Cairnes, who formulated the

laws of "natural" wages and "normal" value, and the former of whom was so well content with his work as to say, "Happily, there is nothing in the laws of Value which remains for the present or any future writer to clear up: the theory of the subject is complete."* But the difference between the earlier and the later point of view is a difference of degree rather than of kind.

The standpoint of the classical economists, in their higher or definitive syntheses and generalizations, may not inaptly be called the standpoint of ceremonial adequacy. The ultimate laws and principles which they formulated were laws of the normal or the natural, according to a preconception regarding the ends to which, in the nature of things, all things tend. In effect, this preconception imputes to things a tendency to work out what the instructed common sense of the time accepts as the adequate or worthy end of human effort. It is a projection of the accepted ideal of conduct. This ideal of conduct is made to serve as a canon of truth, to the extent that the investigator contents himself with an appeal to its legitimation for premises that run back of the facts with which he is immediately dealing, for the "controlling principles" that are conceived intangibly to underlie the process discussed, and for the "tendencies" that run beyond the situation as it lies before him. As instances of the use of this ceremonial canon of knowledge may be cited the "conjectural history" that plays so large a part in the classical treatment of economic institutions, such as the normalized accounts of the beginnings of barter in the transactions of the putative hunter, fisherman, and boat-builder, or the man with the plane and the two planks, or the two men with the basket of apples and the basket of nuts.† Of a similar import is the characterization of money as "the great wheel of circulation" ‡ or as "the medium of ex-

* *Political Economy*, Book III. chap. i.

† Marshall, *Principles of Economics* (2d ed.), Book V. chap. ii. p. 395, note.

‡ Adam Smith, *Wealth of Nations* (Bohn ed.), Book II. chap. ii. p. 289.

change." Money is here discussed in terms of the end which, "in the normal case," it should work out according to the given writer's ideal of economic life, rather than in terms of causal relation.

With later writers especially, this terminology is no doubt to be commonly taken as a convenient use of metaphor, in which the concept of normality and propensity to an end has reached an extreme attenuation. But it is precisely in this use of figurative terms for the formulation of theory that the classical normality still lives its attenuated life in modern economics; and it is this facile recourse to inscrutable figures of speech as the ultimate terms of theory that has saved the economists from being dragooned into the ranks of modern science. The metaphors are effective, both in their homiletical use and as a labor-saving device,—more effective than their user designs them to be. By their use the theorist is enabled serenely to enjoin himself from following out an elusive train of causal sequence. He is also enabled, without misgivings, to construct a theory of such an institution as money or wages or land-ownership without descending to a consideration of the living items concerned, except for convenient corroboration of his normalized scheme of symptoms. By this method the theory of an institution or a phase of life may be stated in conventionalized terms of the apparatus whereby life is carried on, the apparatus being invested with a tendency to an equilibrium at the normal, and the theory being a formulation of the conditions under which this putative equilibrium supervenes. In this way we have come into the usufruct of a cost-of-production theory of value which is pungently reminiscent of the time when Nature abhorred a vacuum. The ways and means and the mechanical structure of industry are formulated in a conventionalized nomenclature, and the observed motions of this mechanical apparatus are then reduced to a normalized scheme of relations. The scheme so arrived at is spirit-

ually binding on the behavior of the phenomena contemplated. With this normalized scheme as a guide, the permutations of a given segment of the apparatus are worked out according to the values assigned the several items and features comprised in the calculation; and a ceremonially consistent formula is constructed to cover that much of the industrial field. This is the deductive method. The formula is then tested by comparison with observed permutations, by the polariscopic use of the "normal case"; and the results arrived at are thus authenticated by induction. Features of the process that do not lend themselves to interpretation in the terms of the formula are abnormal cases and are due to disturbing causes. In all this the agencies or forces causally at work in the economic life process are neatly avoided. The outcome of the method, at its best, is a body of logically consistent propositions concerning the normal relations of things — a system of economic taxonomy. At its worst, it is a body of maxims for the conduct of business and a polemical discussion of disputed points of policy.

In all this, economic science is living over again in its turn the experiences which the natural sciences passed through some time back. In the natural sciences the work of the taxonomist was and continues to be of great value, but the scientists grew restless under the régime of symmetry and system-making. They took to asking why, and so shifted their inquiries from the structure of the coral reefs to the structure and habits of life of the polyp that lives in and by them. In the science of plants, systematic botany has not ceased to be of service; but the stress of investigation and discussion among the botanists to-day falls on the biological value of any given feature of structure, function, or tissue rather than on its taxonomic bearing. All the talk about cytoplasm, centrosomes, and karyokinetic process, means that the inquiry now looks consistently to the life process, and aims to explain it in terms of cumulative causation.

What may be done in economic science of the taxonomic kind is shown at its best in Cairnes's work, where the method is well conceived and the results effectively formulated and applied. Cairnes handles the theory of the normal case in economic life with a master hand. In his discussion the metaphysics of propensity and tendencies no longer avowedly rules the formulation of theory, nor is the inscrutable meliorative trend of a harmony of interests confidently appealed to as an engine of definitive use in giving legitimacy to the economic situation at a given time. There is less of an exercise of faith in Cairnes's economic discussions than in those of the writers that went before him. The definitive terms of the formulation are still the terms of normality and natural law, but the metaphysics underlying this appeal to normality is so far removed from the ancient ground of the beneficent "order of nature" as to have become at least nominally impersonal and to proceed without a constant regard to the humanitarian bearing of the "tendencies" which it formulates. The metaphysics has been attenuated to something approaching in colorlessness the naturalist's conception of natural law. It is a natural law which, in the guise of "controlling principles," exercises a constraining surveillance over the trend of things; but it is no longer conceived to exercise its constraint in the interest of certain ulterior human purposes. The element of beneficence has been well-nigh eliminated, and the system is formulated in terms of the system itself. Economics as it left Cairnes's hand, so far as his theoretical work is concerned, comes near being taxonomy for taxonomy's sake.

No equally capable writer has come as near making economics the ideal "dismal" science as Cairnes in his discussion of pure theory. In the days of the early classical writers economics had a vital interest for the laymen of the time, because it formulated the common sense metaphysics of the time in its application to a department

of human life. But in the hands of the later classical writers the science lost much of its charm in this regard. It was no longer a definition and authentication of the deliverances of current common sense as to what ought to come to pass; and it, therefore, in large measure lost the support of the people out of doors, who were unable to take an interest in what did not concern them; and it was also out of touch with that realistic or evolutionary habit of mind which got under way about the middle of the century in the natural sciences. It was neither vitally metaphysical nor matter-of-fact, and it found comfort with very few outside of its own ranks. Only for those who by the fortunate accident of birth or education have been able to conserve the taxonomic animus has the science during the last third of a century continued to be of absorbing interest. The result has been that from the time when the taxonomic structure stood forth as a completed whole in its symmetry and stability the economists themselves, beginning with Cairnes, have been growing restive under its discipline of stability, and have made many efforts, more or less sustained, to galvanize it into movement. At the hands of the writers of the classical line these excursions have chiefly aimed at a more complete and comprehensive taxonomic scheme of permutations; while the historical departure threw away the taxonomic ideal without getting rid of the preconceptions on which it is based; and the later Austrian group struck out on a theory of process, but presently came to a full stop because the process about which they busied themselves was not, in their apprehension of it, a cumulative or unfolding sequence.

But what does all this signify? If we are getting restless under the taxonomy of a monocotyledonous wage doctrine and a cryptogamic theory of interest, with involute, loculicidal, tomentous, and moniliform variants,

what is the cytoplasm, centrosome, or karyokinetic process to which we may turn, and in which we may find surcease from the metaphysics of normality and controlling principles? What are we going to do about it? The question is rather, What are we doing about it? There is the economic life process still in great measure awaiting theoretical formulation. The active material in which the economic process goes on is the human material of the industrial community. For the purpose of economic science the process of cumulative change that is to be accounted for is the sequence of change in the methods of doing things,—the methods of dealing with the material means of life.

What has been done in the way of inquiry into this economic life process? The ways and means of turning material objects and circumstances to account lie before the investigator at any given point of time in the form of mechanical contrivances and arrangements for compassing certain mechanical ends. It has therefore been easy to accept these ways and means as items of inert matter having a given mechanical structure and thereby serving the material ends of man. As such, they have been scheduled and graded by the economists under the head of capital, this capital being conceived as a mass of material objects serviceable for human use. This is well enough for the purposes of taxonomy; but it is not an effective method of conceiving the matter for the purpose of a theory of the developmental process. For the latter purpose, when taken as items in a process of cumulative change or as items in the scheme of life, these productive goods are facts of human knowledge, skill, and predilection; that is to say, they are, substantially, prevalent habits of thought, and it is as such that they enter into the process of industrial development. The physical properties of the materials accessible to man are constants: it is the human agent that changes,—his insight

and his appreciation of what these things can be used for is what develops. The accumulation of goods already on hand conditions his handling and utilization of the materials offered, but even on this side—the “limitation of industry by capital”—the limitation imposed is on what men can do and on the methods of doing it. The changes that take place in the mechanical contrivances are an expression of changes in the human factor. Changes in the material facts breed further change only through the human factor. It is in the human material that the continuity of development is to be looked for; and it is here, therefore, that the motor forces of the process of economic development must be studied if they are to be studied in action at all. Economic action must be the subject-matter of the science if the science is to fall into line as an evolutionary science.

Nothing new has been said in all this. But the fact is all the more significant for being a familiar fact. It is a fact recognized by common consent throughout much of the later economic discussion, and this current recognition of the fact is a long step towards centering discussion and inquiry upon it. If economics is to follow the lead or the analogy of the other sciences that have to do with a life process, the way is plain so far as regards the general direction in which the move will be made.

The economists of the classical trend have made no serious attempt to depart from the standpoint of taxonomy and make their science a genetic account of the economic life process. As has just been said, much the same is true for the Historical School. The latter have attempted an account of developmental sequence, but they have followed the lines of pre-Darwinian speculations on development rather than lines which modern science would recognize as evolutionary. They have given a narrative survey of phenomena, not a genetic account of an unfolding process. In this work they have, no doubt, achieved

results of permanent value; but the results achieved are scarcely to be classed as economic theory. On the other hand, the Austrians and their precursors and their coadjutors in the value discussion have taken up a detached portion of economic theory, and have inquired with great nicety into the process by which the phenomena within their limited field are worked out. The entire discussion of marginal utility and subjective value as the outcome of a valuation process must be taken as a genetic study of this range of facts. But here, again, nothing further has come of the inquiry, so far as regards a rehabilitation of economic theory as a whole. Accepting Menger as their spokesman on this head, it must be said that the Austrians have on the whole showed themselves unable to break with the classical tradition that economics is a taxonomic science.

The reason for the Austrian failure seems to lie in a faulty conception of human nature,—faulty for the present purpose, however adequate it may be for any other. In all the received formulations of economic theory, whether at the hands of English economists or those of the Continent, the human material with which the inquiry is concerned is conceived in hedonistic terms; that is to say, in terms of a passive and substantially inert and immutably given human nature. The psychological and anthropological preconceptions of the economists have been those which were accepted by the psychological and social sciences some generations ago. The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogeneous globe of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact. He has neither antecedent nor consequent. He is an isolated, definitive human datum, in stable equilibrium except for the buffets of the impinging forces that displace him in one direction or another. Self-poised in elemental space,

he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before. Spiritually, the hedonistic man is not a prime mover. He is not the seat of a process of living, except in the sense that he is subject to a series of permutations enforced upon him by circumstances external and alien to him.

The later psychology, re-enforced by modern anthropological research, gives a different conception of human nature. According to this conception, it is the characteristic of man to do something, not simply to suffer pleasures and pains through the impact of suitable forces. He is not simply a bundle of desires that are to be saturated by being placed in the path of the forces of the environment, but rather a coherent structure of propensities and habits which seeks realization and expression in an unfolding activity. According to this view, human activity, and economic activity among the rest, is not apprehended as something incidental to the process of saturating given desires. The activity is itself the substantial fact of the process, and the desires under whose guidance the action takes place are circumstances of temperament which determine the specific direction in which the activity will unfold itself in the given case. These circumstances of temperament are ultimate and definitive for the individual who acts under them, so far as regards his attitude as agent in the particular action in which he is engaged. But, in the view of the science, they are elements of the existing frame of mind of the agent, and are the outcome of his antecedents and his life up to the point at which he stands. They are the products of his hereditary traits and his past experience, cumulatively wrought out under a given body of traditions, conventionalities, and material circumstances; and they afford the point of departure for

the next step in the process. The economic life history of the individual is a cumulative process of adaptation of means to ends that cumulatively change as the process goes on, both the agent and his environment being at any point the outcome of the past process. His methods of life to-day are enforced upon him by his habits of life carried over from yesterday and by the circumstances left as the mechanical residue of the life of yesterday.

What is true of the individual in this respect is true of the group in which he lives. All economic change is a change in the economic community,—a change in the community's methods of turning material things to account. The change is always in the last resort a change in habits of thought. This is true even of changes in the mechanical processes of industry. A given contrivance for effecting certain material ends becomes a circumstance which affects the further growth of habits of thought—habitual methods of procedure—and so becomes a point of departure for further development of the methods of compassing the ends sought and for the further variation of ends that are sought to be compassed. In all this flux there is no definitively adequate method of life and no definitive or absolutely worthy end of action, so far as concerns the science which sets out to formulate a theory of the process of economic life. What remains as a hard and fast residue is the fact of activity directed to an objective end. Economic action is teleological, in the sense that men always and everywhere seek to do something. What, in specific detail, they seek, is not to be answered except by a scrutiny of the details of their activity; but, so long as we have to do with their life as members of the economic community, there remains the generic fact that their life is an unfolding activity of a teleological kind.

It may or may not be a teleological process in the sense that it tends or should tend to any end that is conceived to be worthy or adequate by the inquirer or by the con-

sensus of inquirers. Whether it is or is not is a question with which the present inquiry is not concerned; and it is also a question of which an evolutionary economics need take no account. The question of a tendency in events can evidently not come up except on the ground of some preconception or prepossession on the part of the person looking for the tendency. In order to search for a tendency, we must be possessed of some notion of a definitive end to be sought, or some notion as to what is the legitimate trend of events. The notion of a legitimate trend in a course of events is an extra-evolutionary preconception, and lies outside the scope of an inquiry into the causal sequence in any process. The evolutionary point of view, therefore, leaves no place for a formulation of natural laws in terms of definitive normality, whether in economics or in any other branch of inquiry. Neither does it leave room for that other question of normality, What should be the end of the developmental process under discussion?

The economic life history of any community is its life history in so far as it is shaped by men's interest in the material means of life. This economic interest has counted for much in shaping the cultural growth of all communities. Primarily and most obviously, it has guided the formation, the cumulative growth, of that range of conventionalities and methods of life that are currently recognized as economic institutions; but the same interest has also pervaded the community's life and its cultural growth at points where the resulting structural features are not chiefly and most immediately of an economic bearing. The economic interest goes with men through life, and it goes with the race throughout its process of cultural development. It affects the cultural structure at all points, so that all institutions may be said to be in some measure economic institutions. This is necessarily the case, since the base of action — the point of departure — at any step

in the process is the entire organic complex of habits of thought that have been shaped by the past process. The economic interest does not act in isolation, for it is but one of several vaguely isolable interests on which the complex of teleological activity carried out by the individual proceeds. The individual is but a single agent in each case; and he enters into each successive action as a whole, although the specific end sought in a given action may be sought avowedly on the basis of a particular interest; as *e. g.*, the economic, æsthetic, sexual, humanitarian, devotional interests. Since each of these passably isolable interests is a propensity of the organic agent man, with his complex of habits of thought, the expression of each is affected by habits of life formed under the guidance of all the rest. There is, therefore, no neatly isolable range of cultural phenomena that can be rigorously set apart under the head of economic institutions, although a category of "economic institutions" may be of service as a convenient caption, comprising those institutions in which the economic interest most immediately and consistently finds expression, and which most immediately and with the least limitation are of an economic bearing.

From what has been said it appears that an evolutionary economics must be the theory of a process of cultural growth as determined by the economic interest, a theory of a cumulative sequence of economic institutions stated in terms of the process itself. Except for the want of space to do here what should be done in some detail if it is done at all, many efforts by the later economists in this direction might be cited to show the trend of economic discussion in this direction. There is not a little evidence to this effect, and much of the work done must be rated as effective work for this purpose. Much of the work of the Historical School, for instance, and that of its later exponents especially, is too noteworthy to be passed over in silence, even with all due regard to the limitations of space.

We are now ready to return to the question why economics is not an evolutionary science. It is necessarily the aim of such an economics to trace the cumulative working out of the economic interest in the cultural sequence. It must be a theory of the economic life process of the race or the community. The economists have accepted the hedonistic preconceptions concerning human nature and human action, and the conception of the economic interest which a hedonistic psychology gives does not afford material for a theory of the development of human nature. Under hedonism the economic interest is not conceived in terms of action. It is therefore not readily apprehended or appreciated in terms of a cumulative growth of habits of thought, and does not provoke, even if it did lend itself to, treatment by the evolutionary method. At the same time the anthropological preconceptions current in that common-sense apprehension of human nature to which economists have habitually turned has not enforced the formulation of human nature in terms of a cumulative growth of habits of life. These received anthropological preconceptions are such as have made possible the normalized conjectural accounts of primitive barter with which all economic readers are familiar, and the no less normalized conventional derivation of landed property and its rent, or the sociologico-philosophical discussions of the "function" of this or that class in the life of society or of the nation.

The premises and the point of view required for an evolutionary economics have been wanting. The economists have not had the materials for such a science ready to their hand, and the provocation to strike out in such a direction has been absent. Even if it has been possible at any time to turn to the evolutionary line of speculation in economics, the possibility of a departure is not enough to bring it about. So long as the habitual view taken of a given range of facts is of the taxonomic kind and the

material lends itself to treatment by that method, the taxonomic method is the easiest, gives the most gratifying immediate results, and best fits into the accepted body of knowledge of the range of facts in question. This has been the situation in economics. The other sciences of its group have likewise been a body of taxonomic discipline, and departures from the accredited method have lain under the odium of being meretricious innovations. The well-worn paths are easy to follow and lead into good company. Advance along them visibly furthers the accredited work which the science has in hand. Divergence from the paths means tentative work, which is necessarily slow and fragmentary and of uncertain value.

It is only when the methods of the science and the syntheses resulting from their use come to be out of line with habits of thought that prevail in other matters that the scientist grows restive under the guidance of the received methods and standpoints, and seeks a way out. Like other men, the economist is an individual with but one intelligence. He is a creature of habits and propensities given through the antecedents, hereditary and cultural, of which he is an outcome; and the habits of thought formed in any one line of experience affect his thinking in any other. Methods of observation and of handling facts that are familiar through habitual use in the general range of knowledge, gradually assert themselves in any given special range of knowledge. They may be accepted slowly and with reluctance where their acceptance involves innovation; but, if they have the continued backing of the general body of experience, it is only a question of time when they shall come into dominance in the special field. The intellectual attitude and the method of correlation enforced upon us in the apprehension and assimilation of facts in the more elementary ranges of knowledge that have to do with brute facts assert themselves also when the attention is directed to those phenomena of the life

process with which economics has to do; and the range of facts which are habitually handled by other methods than that in traditional vogue in economics has now become so large and so insistently present at every turn that we are left restless, if the new body of facts cannot be handled according to the method of mental procedure which is in this way becoming habitual.

In the general body of knowledge in modern times the facts are apprehended in terms of causal sequence. This is especially true of that knowledge of brute facts which is shaped by the exigencies of the modern mechanical industry. To men thoroughly imbued with this matter-of-fact habit of mind the laws and theorems of economics, and of the other sciences that treat of the normal course of things, have a character of "unreality" and futility that bars out any serious interest in their discussion. The laws and theorems are "unreal" to them because they are not to be apprehended in the terms which these men make use of in handling the facts with which they are perforce habitually occupied. The same matter-of-fact spiritual attitude and mode of procedure have now made their way well up into the higher levels of scientific knowledge, even in the sciences which deal in a more elementary way with the same human material that makes the subject-matter of economics, and the economists themselves are beginning to feel the unreality of their theorems about "normal" cases. Provided the practical exigencies of modern industrial life continue of the same character as they now are, and so continue to enforce the impersonal method of knowledge, it is only a question of time when that (substantially animistic) habit of mind which proceeds on the notion of a definitive normality shall be displaced in the field of economic inquiry by that (substantially materialistic) habit of mind which seeks a comprehension of facts in terms of a cumulative sequence.

The later method of apprehending and assimilating

facts and handling them for the purposes of knowledge may be better or worse, more or less worthy or adequate, than the earlier; it may be of greater or less ceremonial or æsthetic effect; we may be moved to regret the incursion of underbred habits of thought into the scholar's domain. But all that is beside the present point. Under the stress of modern technological exigencies, men's every-day habits of thought are falling into the lines that in the sciences constitute the evolutionary method; and knowledge which proceeds on a higher, more archaic plane is becoming alien and meaningless to them. The social and political sciences must follow the drift, for they are already caught in it.

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