

ALPHABET OF
ECONOMIC SCIENCE

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THE ALPHABET
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THE ALPHABET
OF
ECONOMIC SCIENCE

BY
PHILIP H. WICKSTEED

PART I
ELEMENTS OF THE THEORY OF VALUE OR WORTH

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TO
HENRY RAMIÉ AND ELIZABETH BEETON
AND TO THE FRIENDS WHO,
IN THE ENJOYMENT OF THEIR GENIAL HOSPITALITY, HAVE MET
TO DISCUSS THE PRINCIPLES SET FORTH IN THESE PAGES
I WISH, IF THEY WILL ACCEPT THEM

To Dedicate

THESE FIRST-FRUITS OF THEIR COUNSEL AND
ASSISTANCE

P. H. W.

“Est ergo sciendum, quod quædam sunt, quæ nostræ potestati minime subjacentia, speculari tantummodo possumus, operari autem non, velut Mathematica, Physica, et Divina. Quædam vero sunt quæ nostræ potestati subjacentia, non solum speculari, sed et operari possumus; et in iis non operatio propter speculationem, sed hæc propter illam adsumitur, quoniam in talibus operatio est finis. Cum ergo materia præsens politica sit, imo fons atque principium rectorum politiarum; et omne politicum nostræ potestati subjaceat; manifestum est, quod materia præsens non ad speculationem per prius, sed ad operationem ordinatur. Rursus, cum in operabilibus principium et causa omnium sit ultimus Finis (mover enim primo agentem), consequens est, ut omnis ratio eorum quæ sunt ad Finem, ab ipso Fine sumatur: nam alia erit ratio incidendi lignum propter domum construendam, et alia propter navim. Illud igitur, si quid est, quod sit Finis ultimus Civilitatis humani Generis, erit hoc principium, per quod omnia quæ inferius probanda sunt, erunt manifesta sufficienter.”—DANTE.

Be it known, then, that there are certain things, in no degree subject to our power, which we can make the objects of speculation, but not of action. Such are mathematics, physics and theology. But there are some which are subject to our power, and to which we can direct not only our speculations but our actions. And in the case of these, action does not exist for the sake of speculation, but we speculate with a view to action ; for in such matters action is the goal. Since the material of the present treatise, then, is political, nay, is the very fount and starting-point of right politics, and since all that is political is subject to our power, it is obvious that this treatise ultimately concerns conduct rather than speculation. Again, since in all things that can be done the final goal is the general determining principle and cause (for this it is that first stimulates the agent), it follows that the whole rationale of the actions directed to the goal depends upon that goal itself. For the method of cutting wood to build a house is one, to build a ship another. Therefore that thing (and surely there is such a thing) which is the final goal of human society will be the principle by reference to which all that shall be set forth below must be made clear.

PREFACE

DEAR READER—I venture to discard the more stately forms of preface which alone are considered suitable for a serious work, and to address a few words of direct appeal to you.

An enthusiastic but candid friend, to whom I showed these pages in proof, dwelt in glowing terms on the pleasure and profit that my reader would derive from them, “if only he survived the first cold plunge into ‘functions.’” Another equally candid friend to whom I reported the remark exclaimed, “*Survive* it indeed! Why, what on earth is to induce him to *take* it?”

Much counsel was offered me as to the best method of inducing him to take this “cold plunge,” the substance of which counsel may be found at the beginning of the poems of Lucretius and Tasso, who have given such exquisite expression to the theory of “sugaring the pill” which their works illustrate. But I am no Lucretius, and have no power, even had I the desire to disguise the fact that a firm grasp of the elementary truths of Political Economy cannot be got without the same kind of severe and sustained mental application which is necessary in all other serious studies.

At the same time I am aware that forty pages of almost unbroken mathematics may seem to many readers a most unnecessary introduction to Economics, and it is impossible that the beginner should see their bearing upon the subject until he has mastered and applied

them. Some impatience, therefore, may naturally be expected. To remove this impatience, I can but express my own profound conviction that the beginner who has mastered this mathematical introduction will have solved, before he knows that he has even met them, some of the most crucial problems of Political Economy on which the foremost Economists have disputed unavailingly for generations for lack of applying the mathematical method. A glance at the "Index of Illustrations" will show that my object is to bring Economics down from the clouds and make the study throw light on our daily doings and experiences, as well as on the great commercial and industrial machinery of the world. But in order to get this light some mathematical knowledge is needed, which it would be difficult to pick out of the standard treatises as it is wanted. This knowledge I have tried to collect and render accessible to those who dropped their mathematics when they left school, but are still willing to take the trouble to master a plain statement, even if it involves the use of mathematical symbols.

The portions of the book printed in the smaller type should be omitted on a first reading. They generally deal either with difficult portions of the subject that are best postponed till the reader has some idea of the general drift of what he is doing, or else with objections that will probably not present themselves at first, and are better not dealt with till they rise naturally.

The student is strongly recommended to consult the Summary of Definitions and Propositions on pp. 139, 140 at frequent intervals while reading the text.

P. H. W.

INTRODUCTION

ON 1st June 1860 Stanley Jevons wrote to his brother Herbert, "During the last session I have worked a good deal at political economy; in the last few months I have fortunately struck out what I have no doubt is *the true Theory of Economy*, so thoroughgoing and consistent, that I cannot now read other books on the subject without indignation."

Jevons was a student at University College at this time, and his new theory failed even to gain him the modest distinction of a class-prize at the summer examination. He was placed third or fourth in the list, and, though much disappointed, comforted himself with the prospect of his certain success when in a few months he should bring out his work and "re-establish the science on a sensible basis." Meanwhile he perceived more and more clearly how fruitful his discovery must prove, and "how the want of knowledge of this determining principle throws the more complicated discussions of economists into confusion."

It was not till 1862 that Jevons threw the main outlines of his theory into the form of a paper, to be read before the British Association. He was fully and most justly conscious of its importance. "Although I know pretty well the paper is perhaps worth all the others that will be read there put together, I cannot pretend to say how it will be received." When the year had but five minutes more to live he wrote of it, "It has seen my theory of economy offered to a learned society (!)

and received without a word of interest or belief. It has convinced me that success in my line of endeavour is even a slower achievement than I had thought."

In 1871, having already secured the respectful attention of students and practical men by several important essays, Jevons at last brought out his *Theory of Political Economy* as a substantive work. It was received in England much as his examination papers at college and his communication to the British Association had been received; but in Italy and in Holland it excited some interest and made converts. Presently it appeared that Professor Walras of Lausanne had been working on the very same lines, and had arrived independently at conclusions similar to those of Jevons. Attention being now well roused, a variety of neglected essays of a like tendency were re-discovered, and served to show that many independent minds had from time to time reached the principle for which Jevons and Walras were contending; and we may now add, what Jevons never knew, that in the very year 1871 the Viennese Professor Menger was bringing out a work which, in complete independence of Jevons and his predecessors, and by a wholly different approach, established the identical theory at which the English and Swiss scholars were likewise labouring.

In 1879 appeared the second edition of Jevons's *Theory of Political Economy*, and now it could no longer be ignored or ridiculed. Whether or not his guiding principle is to win its way to general acceptance and to "re-establish the science on a sensible basis," it has at least to be seriously considered and seriously dealt with.

It is this guiding principle that I have sought to illustrate and enforce in this elementary treatise on the Theory of Value or Worth. Should it be found to meet a want amongst students of economics, I shall hope to follow it by similar introductions to other branches of the science.

I lay no claim to originality of any kind. Those

who are acquainted with the works of Jevons, Walras, Marshall, and Launhardt, will see that I have not only accepted their views, but often made use of their terminology and adopted their illustrations without specific acknowledgment. But I think they will also see that I have copied nothing mechanically, and have made every proposition my own before enunciating it.

I have to express my sincere thanks to Mr. John Bridge, of Hampstead, for valuable advice and assistance in the mathematical portions of my work.

I need hardly add that while unable to claim credit for any truth or novelty there may be in the opinions advocated in these pages, I must accept the undivided responsibility for them.

* * * Beginners will probably find it conducive to the comprehension of the argument to omit the small print in the first reading.

N.B.—I have frequently given the formulas of the curves used in illustration. Not because I attach any value or importance to the special forms of the curves, but because I have found by experience that it would often be convenient to the student to be able to calculate for himself any point on the actual curve given in the figures which he may wish to determine for the purpose of checking and varying the hypotheses of the text.

As a rule I have written with a view to readers guiltless of mathematical knowledge (see Preface). But I have sometimes given information in footnotes, without explanation, which is intended only for those who have an elementary knowledge of the higher mathematics.

In conclusion I must apologise to any mathematicians into whose hands this primer may fall for the evidences which they will find on every page of my own want of systematic mathematical training, but I trust they will detect no errors of reasoning or positive blunders.

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