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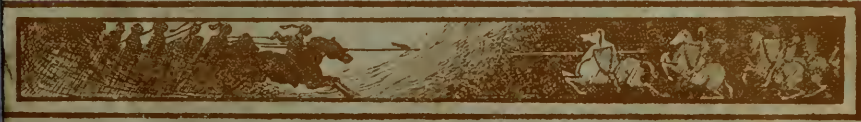
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III



The Round Table Series

John Ruskin



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For out of olde felles as men seith
Cometh al this newe countrie year to year
And out of olde booke in good feith
Cometh al this newe science that men here

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The Round Table Series

III.

JOHN RUSKIN

ECONOMIST

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EDINBURGH: WILLIAM BROWN

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*O*ld sang Chaucer of the Flower and Leaf :
The mirthful singer of a golden time ;
And sweet birds' song throughout his daisied rhyme
Rang fearless ; for our cities held no grief
Dumb in their blackened hearts beneath the grime
Of factory and furnace, and the sheaf
Was borne in gladness at the harvest-time.
So now the Seer would quicken our belief :
' Life the green leaf,' saith he, ' and Art the flower.
Blow winds of heaven about the hearts of men,
Come love, and hope, and helpfulness, as when
On fainting vineyard falls the freshening shower :
Fear not that life may blossom yet again,
A nobler beauty from a purer power !'

JOHN RUSKIN.

THE surprise, perplexity, and sometimes indeed exasperation with which so many of even the more sympathetic of Mr. Ruskin's earlier readers and critics have received his recent works must be frankly admitted, and as far as possible accounted for. To most people, ordinary difficulties, such as are exhibited by other authors, whether of unconventionality of thought, profundity of learning, or intricacy of style, are far exceeded by the personal one—of interpreting what seems an unreasonable and violent change of career. They hear of a veteran art teacher, critic, and man of letters suddenly casting aside his hard-won laurels, resuming the weapons with which in his youth he had hardly slain the small art-critics of the magazines, dashing off into apparently the most remote of all possible fields, that of political economy, casting down his glove in challenge among its sturdy and sober cultivators, loudly proclaiming their patiently-gathered harvest mere tares and darnel, hurling blazing pamphlets into the overflowing granaries of their science, and charging with fiery impetuosity against its massive logic mills.

It is not, then, to be wondered at, if the bystanders, mostly plain common-sense people, who think that art and political economy are no doubt all very well,

but will get on best, as they themselves have done, by minding their own business and letting that of other folks alone, see in this would-be-delivering knight only the latest avatar of the truly immortal hero of Cervantes, and so either join merrily in the hooting, or pass by in sorrow, as their own moral temper happens to incline. Even from those who love progress so warmly as not to be deterred by the strange appearance of the new reformer, and who seek the out-of-the-way village where costly books are published for poor men, we gather tidings of the establishment for the hundredth time of a new Utopia,—surely at most an ominous sign that the leaven of economic heresy, which is spreading so fast on the Continent and in America, and with such grim results of Socialism and Communism, of Nihilism and Anarchy, is in our quiet industrial community too, and will henceforth work. The student, indeed, who has learned from Bismarck, Hildebrand, or Lassalle, statesman, professor, and radical alike, that our German neighbours are bent upon giving Socialism a trial, and are only delayed by the discussion of comparative details, may read on in hopes of some luminous suggestions; but what is to be learned or hoped from a man who speaks contemptuously of all the highest practical achievements of the nineteenth century? For him is not its science either of mere mechanism or evolutionary nonsense; its physics and mathematics mere aids to railroad and telegraph making; its chemistry and biology mere disgusting curiosity about stinks and bones;—its splendid development of modern commerce and finance is little better than complex thieving; the steam engine is a filthy nuisance, never to set wheel on St. George's lands; our vast and prosperous

industrial cities are so many working models of hell ; nay, even our hard-won system of education with its clear practical aims is to make way for schools with a curriculum of Latin, and botany, and the history of Florence ! Here, surely, we have a clue to the right critical estimate. Our would-be economist is but an artist born out of his proper mediæval time ; his mournful jeremiads, nay, whole books of lamentations, with their wailing retrospects of the good old times, and their bitterly pessimist prophecies, far out-Carlyling Carlyle, are perhaps natural for him, but clearly useless for us ; so let us either take what amuses us in the art books, say the scenery in "Modern Painters," to which considerable merit of style is undeniable, or if we find even that as well done in novels now-a-days, let him alone altogether.

Such is, probably, a fair statement of the opinions to which a very large number of the reading public have steadily settled down : a minority, however, still dissent more or less completely from this estimate, and appeal for a new reading, apparently in confident hope of ultimately obtaining a less unfavourable judgment. Deceived though the latter class may be by mere rhetorical finish and sentimental glow, we cannot, in the interest of fair play, refuse to give them a new hearing, or to briefly re-examine for ourselves the economic position of Mr. Ruskin, and that of the orthodox English economist, who is the more especial object of his attacks. But let it be clearly understood that the writer is no grateful art-student, if such there be ; still less any enthusiastic Guildsman of St. George, eager to do battle for his master ; but a quiet student of science and economics, one of those scholars of Huxley and Darwin, of Spencer and Comte, of whom

Mr. Ruskin has so often spoken other than smooth things. One aim, however, is clearly avowed—an aim characteristic of all the essays of the present series—that of attempting to substitute the scientific for the literary method of criticism. The ordinary journalistic method of criticising a book like Mr. Ruskin's "*Fors Clavigera*," namely, that of quoting only some web of paradox or burst of passion, is at once dishonest to the author and misleading to the reader. The scientific attitude should be the precise reverse of this. The student, if genuinely trained at all, soon lays aside the slim text-book which incompletely summarizes the facts of his science from one author's own narrow standpoint, and learns to work his way dispassionately through the vast literature which lies behind it; often wearily wading through shallow seas of verbiage, or toiling patiently through deserts of details, useless and numberless as the sand; now silently evading some dismal swamp of error, often crushing a whole stony volume for a few grains of genuine gold. Nuggets indeed there are, but never gold-beds nor Aladdin palaces, and even the traveller's own hard-won treasure will need refining and re-refining by his intellectual heirs. So then if we agree to take up the scientific attitude, if, instead of collecting curiosities of apparent or real error leaving the truth behind, we seek to gather out of these masses of new and strange thought whatever we find, on fair analysis, to be true metal, we are ready to begin gold washing.

But, before making any further analysis of our heretical economist, we must obtain some basis of comparison and ascertain something of the orthodox ones, whom (disregarding of course their many minor differences), we may take as fairly represented in the

domain of practical life by statesmen like Lord Sherbrooke, John Bright, or the Duke of Argyll; or again, by the majority of the economic professoriate of Britain, among whom it is hardly necessary to recall such distinguished names as Stanley Jevons or Sidgwick, Bonamy Price or Hodgson, Fawcett or Levi. Here, surely, is a school of thinkers of whom our country may be justly proud, men of high education and honourable aims, who have not only brought to the investigation of their subject an intellectual subtlety and force unsurpassed by the students of any science, and to its exposition a calm logical clearness and precision which their colleagues in university or senate might, for the most part, well envy, but, when opportunity for practical action has been given them, have often seemed to unite the best qualities of industrialist and theorician, of statesman and philanthropist.

This, then, we may surely regard as an ideal scientific school, that may well claim to take rank with those of geology or biology, medicine or engineering, which have been doing such splendid work during the last generation. Many fully allow this claim, many perhaps ignore; yet to its full recognition one difficulty alone arises, which, though seemingly of small importance alike to the economist and to the public, is serious enough from our present scientific standpoint to need brief examination.

Without going over all the stages by which the place of economics among the sciences has been defined by philosophers, the reader may be reminded that logic and mathematics, dealing with the abstract relations of quality and quantity, underlie and precede the physical, natural, and social sciences; that of these physics and chemistry are antecedent to the strictly

biological group (which includes zoology, botany, physiology, etc), while the social sciences, having for their subject the phenomena presented by those organisms, which, like bees and ants, beavers and men, live in communities, are obviously founded upon the whole preceding mass of knowledge, which is accordingly grouped under the convenient title of "Preliminary Sciences." In other words, the successful treatment of the social science requires not merely a discipline in mathematics, as some suppose, still less mere training in academic metaphysic and dialectic—which is all that so many bring to the task—but some sound knowledge of living beings and of the physical laws to which they are subject.

While the details of this classification of the sciences are, among philosophers, the subject of a dispute—happily of no consequence here,—it is accepted for all essential practical purposes, alike in the organisation of learned societies and in the scientific curriculum of universities, that is to say, in the actual teaching and learning of the world. Now the difficulty in fully recognising the British economists as scientific lies in the existence, during the past generation, if not indeed during the entire century, of the most complete state of war between the economists on the one hand, and the cultivators of the preliminary sciences on the other. This is evidenced not merely by the almost complete suspension of relations between the two camps, or by the fact that only here and there a scientific society accepts economic communications, but also by the frequent occurrence of positive battle. A convenient recent instance of this is afforded by the history of what is after all our most representative scientific parliament—the British Association. This

body divides its labours broadly in accordance with the classification of the sciences above referred to into sections, respectively entitled—(a) Mathematics and physics; (b) chemistry; (c) geology; (d) biology (including anthropology); (e) economics and statistics, together with (f) geography, and (g) mechanical science; the former being separated from geology for convenience sake, and the latter being exclusively concerned with the practical applications of science.

The scientific sections of the British Association are well known to be much less sternly scientific than the respective special societies, while the economic section, on the other hand, bears a decidedly more serious and thorough character than kindred bodies, such as the Social Science Congress. Yet so little have the students of the preliminary sciences respected the discussions of their economic brethren, that their dissatisfaction culminated, in 1876, in an active attempt to excommunicate the latter, to cut off the Economic Section, root and branch, as no better than a disgrace to a scientific association. (This almost total failure of the section to accomplish any scientific work was avowed with the most startling frankness by its president, Mr. Grant Duff, in an opening address at the jubilee meeting of the Association in 1881, which is worth reading, as being pretty certainly the least jubilant historical retrospect ever made by any learned body whatever). To avert an expulsion, which would have so grievously discredited political economy in the public eye, the section sought an apologist, and wisely selected Mr. Ingram of Dublin as its president for 1878. Mr. Ingram delivered a masterly address, which, in Mr. Grant Duff's retrospect, is rightly described as "the most elaborate and brilliant to

which the section had ever listened." In this essay, soon widely circulated throughout Europe, "On the Present Position and Prospects of Political Economy," although appointed to bless his economic brethren, he well-nigh cursed them altogether, at once pleading guilty for them to all the accusations of their scientific assailants, and delivering a destructive criticism of the past and present of British economics—a criticism exceeding anything of that kind ever attempted by Mr. Ruskin, as much in completeness as in calm. By as ably vindicating, however, the claims of sociology to its supreme place among the sciences, as by proposing complete reforms, the attack upon the Economic Section was skilfully averted, and it remains yet awhile in hope of better fruit. Finally, three years later, at the mournful jubilee above referred to, Mr. Grant Duff, from the presidential chair, repeated, extended, and enforced, all the criticisms and proposals of Ingram, without a word of protest or even deprecation. If, then, we can ascertain precisely what the defects of our orthodox economists, as now exposed and admitted, really are, we shall immediately be able to examine not only Mr. Ruskin's heresies, but all other cases of dissent, from a new stand-point, and by clearer light.

Political economy has often been popularly nicknamed "the dismal science," but nothing can really be more striking than the cheerful optimism of our orthodox economist, who often gives, as Cairnes puts it, "a handsome ratification of the existing state of society as approximately perfect," for is it not determined by "immutable law"? and has not Adam Smith established the harmony of a community under "enlightened self-interest?" What could be more modern and scientific

than this conception of harmonious law? Yet not so; German economists have clearly shewn how the "Wealth of Nations" is no pure economic treatise, but subtly permeated, though the matter-of-fact British reader may not notice it, with all the philosophy of its author's day. This beautiful harmony of interests, in short, has nothing in common with our grim modern doctrine of the "Struggle for Existence;" it is identical with the early teleological view which Darwin has expelled from biology; it is the modern survival of Leibnitz's "Pre-established Harmony," and the exponent of this as the "best of all possible worlds" turns out to be the Dr. Pangloss, of "Candide." But the worthy theologian has suffered so sorely at the hands of all his critics that he dares only venture to assert "this is the best of all possible worlds" from the economic rostrum.

This certainly is not encouraging, but we must not let a trifling criticism of this sort prejudice us against the economist; we shall surely find him sound and scientific in the main points of his science. What, then, is its fundamental conception? "Utility," answers Mr. Jevons; "wealth," says Mr. Mill; and these two definitions come to the same thing, for wealth consists of "utilities fixed and embodied in permanent objects." What surely can seem more practical and more scientific than this conception of utility? What trace of obsolete philosophy can linger here? Alas! strange as it may seem, the whole spirit of mediæval metaphysics. This utility, this central idea of the economic "science," has nothing whatever to do with science, and, whether in the hands of Bentham or Mill, Jevons or Sherbrooke, it matters not, is essentially a figment of antique scholasticism for all!

For, observe, the conception of utility corresponds

exactly to that of vitality in biology ; just as wealth is utility fixed or embodied in permanent objects, so of course organisms were long defined as vitalities fixed and embodied in permanent objects. But the biologist without any more doubting that organisms are alive than that wealth is useful has long utterly scorned, and, what is better, utterly abandoned the attempt to make his science the study of vitality. While his grandfather, the last century physician, commenced with definitions of vitality, and talked much of animal spirits, of humours and the like, he observes each organism in its past and present relations in actual space and time, analyses its structures, and inquires how they work, generalises his observations, and then is done. The old apothecary, too, explained that opium made one sleep in virtue of its inherent dormitiveness (*"virtus dormitiva"*), but, thanks to Molière, the profession has since learned that the fixture and embodiment of an entity called dormitiveness into the permanent object opium does not explain anything, much less form the basis of a science of therapeutics : the physician now simply observes and applies the fact, and when asked why application of this curious mixture of alkaloids should have this particular effect frankly avows his ignorance, and sets about experimenting.

So, too, the physicist, when he observes that water only rises thirty-two feet in his pump, no longer appeals to the "natural law" by which "nature abhors a vacuum;" he no longer explains the regular movements of a watch by reference to its "horology" or of a jack by help of "an inherent meat-roasting principle." The physicist and naturalist may well be surprised to learn that the dormitiveness of opium and

the horology of clocks, so far from having wholly disappeared from modern thought into the history of its emancipation, have actually been generalised into a new entity—"utility," and thus form the subject of an inquiry, which its cultivators, indeed, describe as a "hypothetical" or as an "abstract science," but which, we see, requires the addition of the prefix "pseudo—," or the affix "falsely so called," for its more accurate definition.

If space allowed, it would be easy to show how this vicious tendency to invent abstractions instead of working out generalisations, runs through the whole subject. Thus the quantity of anything which happens to be demanded, and the supply which happens to be forthcoming, at a given place and time, are legitimate and profitable objects for statistical and historical research. These, the two real aspects of the subject, however, are generally neglected, and by the simpler process of spelling with capitals, "Supply and Demand" become raised into the mysterious regulators of society by means of "inexorable laws," and are thus, since things which are equal to the same thing are equal to one another, practically identical with the "Fate," "Kismet," and "Providence" of Pagan, Mohammedan, and Christian philosophers. Nor is the logic less quaintly interesting than the metaphysics. The endless initial squabbles about definitions, the old disputes whether the inductive or deductive method alone is to be used, as reasonable as if naturalists were to quarrel at the outset of their studies whether eyes were to be bandaged or hands tied, might all detain us. One favourite practice we may conveniently describe as "generalisation of the incongruous." The absurdity of the jumbling of material things *A B C*, with immaterial

things $x y z$,—intentional in such well-known lines as “Brimful of wrath and cabbage,” “They sought it with forks and hope,”—is concealed alike from author and readers, by first uniting them under some vague general term of common language, such as Capital, and then subjecting this to an elaborate analysis, setting up a new series of abstract entities $L M N$, such as fixed capital, circulating capital, and what not, in which the original realities are all hopelessly confused; finally treating this by an apparatus of metaphor, which, because far more elaborate and recondite—but, it must be confessed, considerably less imaginative—than that of poetry, requires a deceptive resemblance to scientific comparison in sober prose. The quaint and comparatively intelligible phrases of the newspapers, such as “tallow is firm,” “pig iron lively,” are not taken for anything more than the poetry of 'Change: Mr. Fawcett, however, apparently supposes himself to have enunciated a scientific conception, when he explains that “the remuneration of capital is the reward of abstinence.” The expression “clotted nonsense” has been thought scarcely admissible in literary criticism, but the definition of capital as “thickly curdled working time,” has appeared to some economists profoundly scientific.

If we now enter upon the actual examination of economic literature, we find our apparently homogeneous science breaking up into innumerable discordant schools. While the legal and literary economists, like those of the school of Ricardo, imagine that by adroitly spinning and weaving definitions and syllogisms in their logic mills, they manufacture a body of “natural laws” thereafter rigid and universal as those of mathematics, the economist of mathematical

turn, like Gabaglio or Jevons, proclaims the potency of the "statistical method," or maintains that algebra and the calculus furnish the true means of economic investigation. To such minds, the theory of exchange seems of course fundamental, but the economist of more practical and physical turn devotes himself especially to the study of "material wealth, its production, distribution, and consumption," while both classes often stoutly refuse consideration to the nature and wants of the community for and by whom this wealth is produced and consumed. The majority of economists, however, having had their attention drawn to the rate of reproduction in organic beings by Malthus, become in so far biologists. Yet nothing more effectually demonstrates the extraordinary slenderness of their scientific pretensions than that their physical discussions are heedless of the very existence of the modern doctrine of energy (if indeed they do not involve some contradiction of its fundamental law), or that "competition" and the "laws of population" are discussed without an apparent suspicion that Malthus' own clue has led, in the hands of Darwin, to the construction of a vast theory which has revolutionised not only modern biology, and with it our views of the origin, nature, and destiny of man, but shed brilliant light on all the other sciences which concern him. Lawyer and theologian, even poet and romancer, have been carried far by this tidal wave of thought, strong as that of the Revolution or the Renaissance; the economist alone remains behind, and though here, by exception, provided with some genuine though fragmentary scientific conceptions of evolution and the struggle for existence, he delays to modernise them by the aid of the new learning, supposing, doubtless,

that even these—"progress," "competition," "co-operation," and the like, are sacred metaphysical abstractions too.

It is needless for the economist to reply with Mr. Fawcett, that "these do not come within his province," or with Mr. Bonamy Price, that "he cannot hope to become a specialist." The naturalist has long ago discerned and proclaimed that the phenomena of human society are as dependent upon biology as those of ant or bee society, and the orthodox economist must either straightway follow the example of the students of mind and language, whose (then unreformed) studies not so long ago seemed equally remote from those humble microscopic inquiries to which they likewise supposed the biologist to be confined, and either adopt and apply the conceptions of modern physics and biology, or disappear in the unavailing struggle for existence against them. For ever since the constitution of sociology upon the preliminary sciences by Comte half a century ago, the result has been certain. Spencer and his school have continued the siege, and signs of all kinds from both sides that the war is well nigh over are not wanting. On the side of the besieged economists, the more far-sighted leaders, like Mr. Ingram and Mr. Grant Duff, are unconditionally surrendering the citadel, and indeed taking arms on the side of the invaders; while among the latter, Huxley or Hæckel or Vogt can hardly write a zoological text-book without some jubilant prediction of the speedy conquest of the social sciences.

Is it attempted to stop the breach by appeal to mental or moral science? Archaic psychological and ethical conceptions—frequently of course of fundamental importance—are dragged up from the dusty

academic crypts, where they have escaped contact with the ideas of the century, to be hurled at us, for have they not supported the temple of economic orthodoxy ever since Adam Smith (who had of course to work with the crude notions of human nature and conduct current in his day) sought to found economic and moral sciences upon the irreconcilable and mutually destructive assumptions of pure egoism and pure altruism respectively, saying, let us found economics on the notion of unrestrained self-interest, morals on that of universal sympathy. In such "hypothetical sciences," the hypothetical element is more evident than the scientific; and these illusory simplifications of the problem by denying the unity of nature and of science need not detain us here, save that they are of interest in accounting for those moving appeals against emotion, and contemptuous dismissals of "sentiment"—themselves choice examples of emotion and sentiment, of course of the strictly egoistic or economic sort—with which every reader of orthodox economic literature is familiar. Nor, passing to the conceptions which have so long done duty for social science, need even the central myth of "Freedom of Contract," unrelated as it is to anything known in modern sociology, detain us farther than as it enables us to congratulate the projectors of the approaching centenary celebration of the French Revolution, that five years hence some orthodox economist will probably still survive to acknowledge his indebtedness for the all important social assumption of his hypothetical science, the "*Contrat Social*," to its illustrious author, that ingenious metaphysician whom economists have never yet sufficiently honoured, M. Jean Jacques Rousseau.

Enough, then, has probably been said to shew that

these economists, even in so far as they claim to apply scientific conceptions at all, are unfortunately provided with curiously archaic and erroneous ones, and that their intellectual apparatus consists largely of broken down heirlooms, with which the attempt to work is what anthropologists call a "survival in culture."

If space allowed, it would be interesting to trace how, along with this preservation of false conceptions destroyed by science, and ignorance of true conceptions established by science, there is associated a marked scarcity of scientific observation and classification of phenomena, and a presence of that confusion of fact and hypothesis, of opinion and anecdote, of controversial trifling, and practical recipes of doubtful efficacy, which one only finds elsewhere in equal abundance in the scientific library of the middle ages. But the reader can easily go on tracing the close analogy between an orthodox "system of political economy" and a mediæval work on natural history, astrology, or alchemy, into its curious details; we have given perhaps too much time to this pursuit of intellectual palæontology. It would appear, then, that Mr. Ruskin (however he has come by it), has really had some considerable insight into this state of things, but unfortunately denounces it with the heat of an eager reformer instead of appreciating its high scientific interest, and describing it with the minuteness it deserves. For when every year are swarming down these hungry and all-devouring hordes of scientific invaders, whom neither spiritual nor temporal resistance can repel, whom neither the flapping of theologian's robes nor the wagging of lawyer's wigs can frighten from beginning to meddle with even their special business, and to whom the medical

profession has deserted in a body, what is to become of the poor defenceless handful of metaphysicians who have so long had economics in their keeping? What is to become of optimism and pre-established harmony? The new-comers believe in what is a good deal like the reverse. What will become of the sacred entities? Providence - Supply - and - Demand will be blasphemed; utility and what not will go the way of *virtus dormitiva* and *vitality*; the "elementary conceptions of wealth, capital, labour," will be analysed as ruthlessly as the elements fire, air, earth, and water; that historic keystone of social order, the "Contrat Social" itself, will be exploded; every chapter of the hypothetical science will be punctured,—who—who will save us?

An as yet unknown aspect of "inexorable law" providentially interferes, which among the invaders will one day be known as Natural Selection. This goddess, more powerful and more beneficent than Supply-and-Demand, says:—

Alas, my children, against the theologians you could indeed survive, and among the lawyers, the politicians, and the journalists, you were in the very camp of brethren, but these scientists are too strong for you; your doctrines and yourselves are doomed to inevitable extinction! Yet take courage, I will prolong your days many years: here is the secret! Acquire as fast as you can a deceptive external resemblance to the invaders; do not name your sacred dogmas as of old, but conceal the old matter under their newer manner; its aridity and difficulty will at once keep off the public, and impress them with profound reverence, while its superficial resemblance to science will long satisfy even the scientists, who have plenty to do yet awhile among their telescopes and balances, their fossils and their flowers. This do and live; you and your children shall go in and out under their very noses in safety; nay, you shall have 'scientific' societies of your own, even a whole department of the British Association all to yourselves, and though here and there

some impassioned socialist or quick-eyed art-critic may detect your true nature, nobody will believe them, it will be 1878 before you are properly dissected and classified, and I know not how long before you are finally extirpated. Fear not, therefore, this all-devouring march of science, become mimetic organisms in its ranks, and all shall long be well.

Now, behold, all these things have come to pass; and should any non-biological reader, or any orthodox economist, hitherto all unconscious of his ancient pedigree and modern family fortunes, desire to learn more of this gentle dispensation by which merciful nature often works such marvellous outward transformations, so softening the swift and stern extermination of an ancient species into its slow and painless euthanasia, is it not written by the naturalist Grant Allen, in the article "Mimicry" of the *Encyclopædia Britannica*, vol. xvi., Edinburgh, 1883?

But the reader must by this time be objecting, does not the preceding criticism overshoot its aim? Is it not too destructive and intolerant? Even if economists be unscientific, surely this comparison of political economy to alchemy is undeserved, else why were so many merits granted at the beginning? Now, however, our qualifications must be made. It would ill become the student of modern science to forget that to Roger Bacon the alchemist, and Kepler the astrologer, we owe priceless discoveries; it is only the persistence of alchemy or astrology as modern systems of doctrine that he would deprecate. So the scientific invaders of political economy must never forget in the excitement of victory that, while of its orthodox system hardly one stone can be left upon another, for new foundations have to be laid, the materials of the edifice and the treasures which its multifarious store-

houses contained are abundant and precious enough to ransom the economists from any risk of disgrace or oblivion. Even in the ranks of the preliminary sciences advance is never simultaneous; one subject starts forward while another is lagging far behind; the mineralogist and chemist, the botanist and zoologist can never keep fairly abreast, even the new sociological economists are no whit exempt from the risk of fossilizing like their predecessors. What has been said, however, will clear the reader's mind of the error still common in England that our economists of Glasgow and Manchester, Edinburgh and London, have been erecting during the past century a vast scientific system of infallible dogma, around whose impregnable walls only our single "Oxford Graduate" wastes his arrows.

We have seen how the fortress is being stormed from a quite different side, nay, is already being sacked, for the scientific invaders are not respecters of persons, and will treat all who are not members of their own army with but scanty reverence, unceremoniously looting everything that will serve as materials for their new construction, whether they belonged to skilful financier or subtle logician, popular tribune or patrician senator, nay, will pay as little regard to the professor of political economy, robed in the spotless orthodoxy of the intellectual pharisee, as for his heterodox and despised publican of a colleague, the professor of fine art. The question for all is simply—What ideas have you that will serve as material for our purpose?

We saw at the outset how unfavourable a first impression of Mr. Ruskin's economic writings one was apt to acquire. The collapse of our plausible orthodox friends on closer examination, however, may warn us to

be cautious in adhering to a prejudice which they or rather their exponents in the newspapers have done most to diffuse, and which he naturally incurred by loudly proclaiming, for so many years past, in season and out of season, the hollowness of their pseudo-science; so that whatever may turn out to be the value of the new doctrines he may offer us, his destructive criticisms, which have so long anticipated any scientific ones, such as that of Mr. Ingram or the present one, must accordingly on the whole be straightway transferred from the debit to the credit side of his account. Can any similar value be given to his criticisms of society? An explanation on the one side and a reservation on the other, both important, are first needed. Let us then read a complete typical passage:—

“What may be the real dignity of mechanical art itself? I cannot express the amazed awe, the crushed humility, with which I sometimes watch a locomotive take its breath at a railway station, and think what work there is in its bars and wheels, and what manner of men they must be who dig brown ironstone out of the ground, and forge it into that. What assemblage of accurate and mighty faculties in them, more than fleshly power over melting crag and coiling fire, fettered and finessed at last into the precision of watchmaking; Titanian hammer-strokes beating out of lava these glittering cylinders and timely respondent valves, and fine ribbed rods, which touch each other as a serpent writhes in noiseless gliding, and omnipotence of grasp; infinitely complex anatomy of active steel, compared with which the skeleton of a living creature would seem, to the careless observer, clumsy and vile. What would the men who thought out this, who beat it out, who touched it with its polished calm of power, who set it to its appointed task, and triumphantly saw it fulfil the task to the utmost of their will, feel or think about this weak hand of mine, timidly leading a little stain of water colour which I cannot manage, into an imperfect shadow of something else—mere failure in every motion and endless disappointment; what I repeat, would these iron-dominant genii think of me? and what ought I to think of them?

“But as I reach this point of reverence, the unreasonable thing is sure to give a shriek as of a thousand unanimous vultures, which leaves me shuddering in real physical pain for some half minute following; and assures me during slow recovery, that a people which can endure such fluting and piping among them is not likely soon to have its modest ear pleased by aught of oaten stop or pastoral song.”

The requisite correction, then, as afforded by the first paragraph of the present passage, is that the popular impression that our author abhors all machinery and recommends its disuse, and that he criticises all the material results and appliances of our modern civilisation in a similar spirit, is simply the reverse of true. For it will not be easy to find any panegyric of machines and their makers, though the age is rich in such literature, to match this, combining, as it does, the scientific appreciation of Babbage's classic “*Economy of Machines and Manufactures*,” with the artistic appreciation which we find in the Surfaceman's “*Songs of the Rail*.” In the second half of the passage, however, we find the grounds for the needful reservation; we discover that our prose poet of Utilitarianism suffers from acute hyperæsthesia, is, in other words, a man of excessively nervous organisation and evidently fragile health, upon whom those minor blessings of peculiar sights and sounds and smells, which do undoubtedly accompany and flow from our advanced mechanical civilisation, produce an effect serious in the extreme—he cannot become case-hardened to them like most of us.

Thus then arises the popular impression of Ruskin, quite analogous to that of the enraged musician in Hogarth's famous engraving. The young schoolboy in the picture naturally thinks “what fun to see the old boy so wild!” the disturbing crowd, offended at such interference, and all following their lawful callings,

are equally astonished and naturally reply to all remonstrances with an indignant "what's your business!" and similarly the able editor, who has of course comfortably grown up in the orthodox economic faith, makes the most of this opportunity to damage its opponent, neatly snips out the proper fragment of a passage, exhibits our author in some attitude more passionate than dignified, and expounds the combined opinions of schoolboy and populace with due accustomed diluteness and detail.

Without in the least denying a certain justice to these criticisms, on the contrary bearing the personal equation with its results of misunderstanding, impatience, sometimes even positive ill-nature, henceforth in mind, may we not get beyond them? When we have had our laugh at the enraged musician, may we not stand quiet for a little to hear him play? All these noisy callings are lawful indeed, yet not perhaps expedient: some of them have disappeared since Hogarth's day, and we call it progress; in any case the musician's bitter outcry is not without its pathos and its truth. What worker in our dull towns, whether of country birth and breeding, or only accustomed to rare glimpses of hill and sea, is so completely acclimated, so wholly dulled in vision, as never to suffer anything from the noise and darkness, the filth and grime around him? Surely, too, we must in the same measure feel how this sadness of ours over the eclipse of beauty may rise to literally maddening sorrow in this man, whose pre-eminence in art and literature has been chiefly gained by his expression of that passion for the external aspects of nature, which is one of the most marked movements of our age.

Whether in rhythmic language like our splendid

succession of naturalistic poets, or in colour like the landscape painters, the fundamental idea is the same, and not in art only but in science—it is not by hazard that Darwin is countryman and contemporary of Wordsworth and Turner, and Lyell of Scott, their differences in product are determined by details of character or circumstances of youth—all naturalism is akin.

Yet this is more than an age of naturalism, a change is in progress upon this at first almost exclusively dominant purpose. The pre-Raphaelites commence indeed with exquisite delineation of fern and pool, but one soon passes into sacred art, or the next into modern portraiture; and in the life and works of the poets we find the same transformation. For Scott the historic drama, for Wordsworth the problems of individual life, for Byron or Victor Hugo political aspirations more and more supersede the enthusiasm for nature with which all alike commenced in youth. The scientists have done absolutely the same. Darwin's "Naturalist's Voyage" in youth, his "Origin of Species" in middle life, and his "Descent of Man" in later years, mark the stages of a similar evolution in which his lesser contemporaries, Lyell and Virchow, Huxley and Hæckel, all alike fully share. This, too, explains the passage from natural science to economics, which is the main idea of the present essay; it is identical too with the passage from biology, to sociology, proclaimed and investigated by Comte or Spencer; in all cases minds opened and disciplined by contact with this or that aspect of nature are betaking themselves to some kindred aspect of the supreme study of man. And thus the two economic reformers we have been discussing, Mr. Ingram and Mr. Ruskin,

widely different though they may at first seem to us and to each other, are both closely akin. Both may well be unintelligible and useless to minds like those of the orthodox economist, the average journalist, and the "practical man," a trio wont to suppose themselves in permanent possession of the science. These latter are, as we have seen, provided with metaphysical conceptions of nature, of man, and of society, inherited from the Revolutionary and earlier periods, and "modern" by mere misadventure; the two former (the one consciously, the other perhaps in many respects unconsciously) having rid themselves of these, and possessed themselves of some scientific ones, are in a state to attempt genuine construction.

In our search for ideas, which will serve towards the construction of scientific economics, we have to ask, and with greater scepticism, what ideas can Mr. Ruskin offer? Destructive criticisms are not enough; can this man of art and letters really have any science, any genuine knowledge of fact and nature whereon to build? However much the quiet evangelical London home, and the antique university where our author spent his early years, may have prepared him for work in literature and art, it is evident that they did not furnish much training in science; it is indeed not unlikely that poor Thomas Edward in Banff, with many shoes indeed to make and mend, but with a museum to keep and fill, is, so far as pure science is concerned, no more of "a self-made man" than our author; for even now one sometimes feels tempted to say to an Oxford graduate of much newer brand: "Thou wast altogether born in sin, and dost thou teach us?" Yet evidencing some mathematical discipline, we have a text-book of perspective; in geology some

research, and in mineralogy the only English attempt at its popularisation; in botany and zoology several books, disappointing indeed, yet with exquisite figures and flashes of observation, keen, loving, and reflective as that of the naturalist of Selborne. As concerns the needful preliminary science, then, our author, considering drawbacks, has done wonders; so much grasp of facts and of their order in nature, such consummate power of observation and description, together with wide knowledge of literature and language, history and art, constitute more preparation alike in preliminary and social sciences than most of us can show. Often, indeed, in some perplexing mixture of commentary with text, the complex sentences come thick and fast like snow-flakes, broken and soiled by the storm-beaten and soot-stained atmosphere where they have had to form, too often only to melt and disappear in turbid rivulets amid the labyrinthine crevices of mind, yet still we need no lens of loving critic, but only open eyes, to find many a thought, clear and perfect as an ice-crystal.

But to our long-delayed construction. Logic we shall not chop, and definitions we shall not concoct at starting; of mathematics even we need little, for statistics is only a highly-developed counting of fingers, and the "laws of supply and demand," derived as they must be from the observed fact that m units of the commodity A are, at given place and time, exchanging for n units of the commodity B , are expressed only by the scanty changes which can be rung on the very simple equation $m A = n B$. These well diluted, the orthodox economist is wont to skip across to what does duty with him for psychology; to the hypothetical, self-interested, purely egoistic, economic "man," and his simple wants and

desires—all of “wealth”; prefacing this with copious explanations that “there is no such thing as intrinsic value,” that “value does not reside in commodities themselves, and is no more to be found in a loaf of bread than in a diamond, in water, or in air,” and so on. Mr. Ruskin, on the other hand, claims it as the highest merit of his leading treatise that it “gives at the outset, and maintains as the foundation of all subsequent reasoning, a definition of Intrinsic Value and intrinsic Contrary-of-Value.”

How are we to reconcile this discrepancy? As in the world-old dispute of the gold and silver shield both interpretations are partially true. To say that no value exists in loaf or diamond by itself is to state for particular phenomena the idealistic aspect of phenomena in general; it is a mere commonplace of idealism which neither Mr. Ruskin nor anybody else can dispute. But the economist, continuing to explain that things have no other value, *i.e.*, that phenomena have no other aspect, merely expresses the indisputable fact that they have no other aspect for him; that the question of what loaf and diamond may mean to physicist and physiologist has not occurred to him: these studies, being alike extra-academic and extra-commercial, have indeed “not come within his province;” and assuredly, without much preparation, “he cannot hope to become a specialist.” Let us however leave the inmates of the academic cloister; walk out into the world, look about us, try to express loaf and diamond from the objective side in terms of actual fact, and we find that physical and physiological properties or “values” can indeed indefinitely be assigned: the one is so much fuel, its heat-giving power measurable in calorimeter, or in actual units of work, the

other a definite sensory stimulus, varying according to Fechner's law. This is precisely what our author means in such a passage as the following, which however absurd to the orthodox, is now intelligible enough to us :—

“Intrinsic value is the absolute power of anything to support life. A sheaf of wheat of given quality and weight has in it a measurable power of sustaining the substance of the body ; a cubic foot of pure air, a fixed power of sustaining its warmth ; and a cluster of flowers of given beauty, a fixed power of enlivening or animating the senses and heart.”

It is among the chief claims to honourable memory of the late Mr. Stanley Jevons, whose intellectual stature, head and shoulders above most of his contemporaries and survivors, gave him many a glimpse of fact denied to them, that he called attention to the wasting coal supplies of Britain, and demanded their economization, thus gripping the essential fact that our coal is not merely an object of subjective value and therefore exchange, but the fixture and embodiment of a definite quantity of stored energy, within which our modern industrial activities find a stern and calculable limit. The question of coal economy is then not in any wise the maximising of the wealth of individual coal masters and coal percentagers as Mr. Ricardo would have explained ; neither the increasing of miners' wages, as their official economists (not so common certainly in this country) would say ; but in the relation of actual supply to existing and future demand : in detailed criticism of the nature and purposes of such demand, and the taking definite action against that waste (of ninety-nine per cent. or so) in diffused heat, and still better diffused soot, amid which the economist of market-place and academe

complacently preaches "*laissez-faire*," and Mr. Ruskin the reverse.

Again, since the activities of a community are the sum of the separate activities of its units, and since production exists for and is determined by consumption, political economy is from the present physical point of view, the generalised aspect of domestic economy, a proposition which Mr. Ruskin, following the Greek economists, has traced into valuable detail, but which ordinary writers are wont comparatively to ignore.

But let us work out our physical economics more closely. From the point of view of matter and energy our society is a vast clock being wound up and running down; the mechanical equivalent of heat holds everywhere; between machines and the automata who mind them there is no physical difference. The ideal of practice must be expressed not in terms of the process or the automata which take part in it, but in that of the result; evidently then it is of maximum production per unit time. Thus machines, men, women and children alike are to be worked to the full: "Wages are what maintain the labourer," says Mr. Ricardo, for once no metaphysician, but a physicist—since they are all mechanisms alike, no fuel is to be wasted upon them. To maximise production we need simply "Bastilles for Labour built by Capital," and of course freedom of contract, so that the worker may be free to contract between work there and starvation anywhere else. As well interfere with a man's machinery as between him and the women and children he employs. Factory acts have no justification here, no ground but "sentiment," and so even Mr. Bright, kindly-hearted, but orthodox and logical, must stoutly oppose them. For once then the orthodox economist appears to

have science on his side, but let us pass to the consideration not only of the quantity but of the quality of production. What is production for? Even from our present point of view the only possible answer is for consumption, that is for the maintenance of society. Necessities of life, say the economists, "are indefinable." But the maintenance of organisms, like machines, is really under perfectly definable physical conditions; so much fuel or food, *i.e.*, such and such proteids, amyloids, fats and water: so much non-conducting covering and shelter from climate, and all is done. These requirements vary only with latitude; why, then, as Mr. Mulhall's "Balance-Sheet of the World" tells us, do Russian, Norseman and Scot, living on the same latitude, consume per head per annum in round numbers to the extent of £7, £18, and £30, respectively? Since the Russian succeeds in living, he evidently gets his necessaries: the balance then of the wealth of three Russians is at the Scotsman's credit; how is this consumed? In more complex food, in finer raiment, and in costlier dwelling; not in necessities but in plus-necessities, not in the primary function of mere maintenance, but in the secondary, yet far vaster function of nervous stimulus: it is spent in giving every product around us its costly "*æsthetic sub-function.*" But the reader may object that this is not obvious in the things around us? Certainly not. He will find that even with an art-critic to help him, little enough is visible: the author, however, prides himself greatly upon the scientific acumen which has enabled him to detect it in the articles of ordinary Edinburgh consumption, such as ashlar housefronts with iron railings, furniture and "decorations," cookery and dress. Of course it is not denied that their æsthetic

element is practically latent, but the requisite three-fourths of "productive" toil no less remain.

In short, then, production, while primarily for maintenance is mainly for *æsthesis*, and the vulgar cry for so-called "utility," and the orthodox contempt and popular indifference to things beautiful, alike usually mean either a demand for the gratification of the lower senses in preference to that of the higher, or a mere habitual adherence to routine consumption without any sensory gratification at all.

Even then on the most strictly physical hypothesis, though man-days are only as horse-power, the consumption of "plus-necessaries" is three times more important than that of necessaries; a penny saved is as good as a penny gained; criticism of the *æsthetic* consumption thus becomes the most needful of all conceivable contributions to production; and it is therefore for the economist to become an art-critic, or, failing him, the art-critic must supply his place and become an economist. Art-criticism, in short, is a special province of the practical economics of production and consumption,—belongs to it as food-analysis does.

It is true the orthodox economist says this does not come within his province, but we must remember that he cannot hope to become a specialist.

This economic character of art-criticism is however everywhere clearly appreciated by our author. Not only must a student of the Oxford School of Art learn by drawing facts from nature or facts from history, copying of South Kensington "ornament" not being allowed, but we are constantly told that the function of art is "either to state a true thing or adorn a serviceable one," and before even attempting so much we must "clean our cities, clothe the poor, organise

the idle, paint and fiddle to them afterwards." This, at any rate, is not æsthetes' twaddle of "art for art's sake" but utilitarianism pure and simple; were the solid Bentham, or the stern and inartistic Carlyle, were any soldier or engineer our professor of fine art, he could not say more. And what practical suggestions? Not disuse of machinery, as the newspaper hearsay goes, but, after an emphatic reiteration of Mill's terrible dictum—that it is doubtful whether the use of machinery has yet lightened the day's toil of a single human being, we have not only proposals for the ordered use of all natural forces, but a veritable Utopia of engineering like that of Lesseps or Da Vinci—"suggestions for the use of machinery on a colossal scale for accomplishing mighty and useful works hitherto unthought of," proposals for the embankment and irrigation of Northern Italy and the like, which may or may not be practicable of course, but to which in the latter case the exact reverse of the popularly received criticism has to be applied.

But let us pass to consider what our rival economists have to offer us from the biological standpoint—what they think of the actual population. Is not Mr. Ruskin, like a born romanticist, instead of soberly speaking of the economic units as labourers and capitalists, producers and consumers, ever fain to foist mediæval notions of rank and nobleness of blood upon us; instead of recognising "the equality of all men and the equal productiveness of all non-criminal work," is he not for ever quoting Plato or Xenophon to enforce his horror of what he is pleased to call base industry, and especially of those very mechanical and metallurgical crafts whereby we have our wealth—an outspoken heresy after which loud outcry is little to

be wondered at. Not only is such work vile and debasing, not only are such Britons no better than perpetual slaves, but that unexampled progress of our modern cities which we owe to these very industries and their prosecutors, only serves to bring his denunciations to a climax. Their factories, railways, or dwellings are all alike accursed; and the revolt against the nineteenth century culminates in some sardonic exhortation to the folk of Glasgow to "burn their city," or some grim desire to "destroy without rebuilding, the new town of Edinburgh, and the city of New York." To indulgent readers this seems merely hyperæsthetic fuss, to graver and more practical minds it sounds like the scream of an hysterical petroleuse: both alike will gladly turn to the orthodox economist. Of laws of population—of the "iron law of competition" he has much to tell us—and as space presses he must have full credit for it without scrutiny. But this is all. What has biology to say? This views the community not as productive automata, but as organisms which have reached ascendancy after long struggle for existence, through survival of the fittest, and in virtue of peculiarly high evolution of nervous system, and of it alone. This is "man's place in nature," whether Mr. Ruskin like it or no; and his economic positions, like any others, have now to be judged by this evolutionary standard.

Our labourers first are not the flying shuttlecocks of a hypothetical abstract science, but the actual concrete *Homo* of natural and civil history: and the economic unit is no longer "Plato's" but Darwin's man. To see the result of this mode of study of worker, work, and surroundings, "organism, function, and environment," as it is technically termed, we may first

briefly quote from a recent "Analysis of the Principles of Economics"* from this very biological point of view :—

"Just as the operations of heredity upon man and other organisms are not merely analogous but identical, so also are those of function. Division of labour has specialised the polymorphic castes of the ant-hill; so the same specialisation of function develops the same polymorphic changes among men. Every one is more or less conscious of this: it is never difficult to distinguish a soldier from a joiner, or a ploughman from a weaver, while the physician reaches almost incredible skill in reading the finer results of occupation on bodily structures, normal and pathological alike. . . . Without the slightest postulation of morals, it is a biological fact, that as 'function makes the organ,' it also shapes the organism, and modifies it either for evolution or for degeneration, moreover other things equal, it determines its quantity of health, and limits its length of life. Ploughmen and weavers, joiners or soldiers then are incipient castes; as surely as Brahmin and Pariah, queen, worker, and drone are formed ones; and the disadvantages of the division of labour, slowly forced into prominence (as, little to the credit of biologists, they have been) through the sufferings of the many, and the moral enthusiasm of the unscientific few, demand study and classification among the 'Variations of Animals and Plants under Domestication.' The influences of the ordinary environment probably exceed those of heredity or function in importance. The importance of food and of the quality of the atmosphere is becoming recognised, so also with light; the gardener blanches his celery, the zoologist stops the development of the tadpole by withdrawing light, the sphygmograph shows how the pulse bounds at every gleam of sunshine, and the physiologist and physician are not hesitating to generalise and apply these results to the development of human life in towns.

It has been assumed by past economists that the 'necessities of life' were simply food, shelter, etc., and that these subtler factors of the environment need not be included. This pre-biological ignorance need not be argued with, for the economic problem of the maintenance of men is but one special case of the vast problem of the modification of organism by environment, exactly as the descent of man is a special case of the origin of species."

* Proceedings of the Roy. Soc. Edin. 1884.

The same analysis goes on to the "mode of modification of organisms by environment" along its two main lines of evolution or degeneration, and discusses the factors of these in some detail. It suffices to note in the second place, that it is pointed out that "while no definition of production is possible from the physical point of view since it involves a knowledge of the organism to which production is adapted, now, however, it is definable as the adaptation of the environment to the functions of the organism, every productive action thus tending towards evolution or the reverse," and that practical economics thus involves a criticism of production and consumption from the present biological standpoint. Practical economics, in short, finds its supreme end and aim in the maintenance and evolution of humanity.

Production and occupation, then, are judged, not by their immediate material result to particular individuals, whether queens or drones of the social hive; but by the aggregate result in better or worse adapted environment. Again, "not only must the factors of modification of the organism be observed and discussed, but their modifiability must be discussed and acted upon; thus in the case when any given environment or function, however apparently productive, is really fraught with disastrous influence to the organism, its modification must be attempted, and, failing that, its abandonment faced."

Without going so far as to suggest that the writer of this learned analysis might almost be making his elaborate biological paper on the somewhat simple principle of translating Mr. Ruskin into his peculiar dialect of Scientific, the general correspondence in principle and detail between biological principles on

the one hand, and Mr. Ruskin's most "unpractical" teaching on the other, is most remarkable. For it is to be observed if these Darwinians are indeed to draw full consequences from their greatest law—that organism is made by function and environment, then man, if he is to remain healthy and become civilised, must not only aim at the highest standard of cerebral as well as non-cerebral excellence, and so at function healthy and delightful, but must take especial heed of his environment; not only at his peril keeping the natural factors of air, water, and light at their purest, but caring only for "production of wealth" at all, in so far as it shapes the artificial factors, the material surroundings of domestic and civic life, into forms more completely serviceable for the Ascent of Man.

And since the belly and members are dominated by a brain developed and maintained through the constant and varied stimulus of the senses, the practical ideal changes wholly. Our community, where some are so empty and weary, others so idle and full, yet all alike degenerating in their dismal cities with their long unlovely streets, their darkened and fetid air, instead of merely furnishing themes for hymns of progress and occasion for *laissez-faire*, shows clear necessity for criticism more searching, and action more systematic than that of Mr. Ruskin. And, moreover, not only do factory acts and many other "sentimental interferences with competition and freedom of contract" become at once scientific and practical, but our theory of production culminates in the Rehabilitation of Beauty, and our productive action for country and city in the restoration of nature, and the organisation of art.

It is interesting then to note that the shout of "Sentiment *versus* Science," with which Mr. Ruskin

has been for so many years turned out of court, did after all accurately enough describe the controversy : science and sentiment have assuredly been on opposite sides. In one respect only the public and the orthodox defendants have been generally mistaken; the inductive logic and statistics, the physics and chemistry, the biology and medicine, the psychology and education, were all essentially on the side of Mr. Ruskin; while on the other were too often sheer blindness to the actual facts of human and social life—organism, function and environment alike—concealed by illusory abstractions, baseless assumptions, and feeble metaphors stuck together with scholastic logic (“science” only in the metaphysician’s sense, well nigh as technical as the pugilist’s), and frozen into dismal and repellent form by a theory of moral sentiments which assumed moral temperature at its absolute zero.

But our economist was very much excited, was he, good practical friends? You still think he was incoherent, hyperæsthetic, and even hysterical, that he seemed only to rave and curse? That indeed was a pity; our new generation of economists and physiologists, hygienists and physicians, art-workmen, architects, and engineers are tame and quiet enough, as a generation bred in such subduing environment of light, atmosphere, and civic magnificence, must needs be; and none of that unbecoming energy of out-door exposition in which prophets of the old dispensation were addicted to indulge, is to be expected from them, —yet assuredly teaching and practice essentially the same, towards ideals wholly identical.

For the present state of production is by no means good enough. A modern city, however stupendous its wealth—on paper—has after all hardly any ultimate

products to show save a sorry aggregate of ill-constructed houses, mean without, and unhealthy within, and containing but little of permanent value; for the rest, hideous dirt and darkness, smoke and sewage everywhere, as if its inhabitants had absolutely framed an ideal of a short life and a dismal one, with which they are dull enough to rest contented. Men are everywhere awaking to see that this is no longer to be endured, and it is the central merit of our author to have at once inaugurated that criticism of production, and that practical action for its improvement which has been setting in so hopefully of recent years. The so-called "æsthetic revival," with its outcomes like the Kyrle and other "Environment Societies," represent in fact the small beginnings of the Industrial Reformation, of that re-organisation of production—of products and processes, of environment and function, which is the nearest task of the united art and science of the immediate future.

Again, a demand for commodities is a command of labour; it determines function, and therefore quality of organism. Hence Mr. Ruskin's continued insistence upon the primary duty of regulating expenditure with studied reference to its effect upon the mind and body of the labourer, so at once seeking the minimum service from the lower occupations, and maximising that from the higher ones; and his criticism of "the kinds of work which are severally best accomplished by hand or by machine; together with the effect of machinery in gathering and multiplying population and its effect upon the minds and bodies of such population." Such teaching equals or exceeds at once in clear biological insight and in social wisdom anything else in the entire literature of practical econ-

onics; since it clearly indicates the line of evolution towards the future city of healthy and happy artists, surrounded by imperishable treasure, from our modern city of weary and sickly drudges, immersed in dirt for their pains.

It would be easy to go on gathering such scientific and practical suggestions, to show, for instance, how "pieces of sentimental nonsense" about "purity of race," or that about "bachelors and rosières" in "Time and Tide," at once analyse the conditions and attack the problem of the evolution of society by heredity and sexual selection. But any reader can follow these out for himself, see how the "sentimental political economy" contained at once the germs of systematic science and of its noblest applications, and find more and more as he reads that our despised and rejected author, however noteworthy and memorable for theoretic work in art, is yet more so for his practical applications of the knowledge to the art of life; that our disciple of Plato and scholar of Turner has also become the highest practical exponent of Darwin.

But the St. George's Company? The writer has no personal knowledge of them (save that they do at least succeed in making sterling cloth, which not only bears scrutiny by experts, but—archaic spinning-wheel and loom notwithstanding—is among the cheapest in the market); but so far as he can make out, their main ideas may be simply stated thus,—seeing, they say, that some occupations are pleasanter and healthier than others, and notably agricultural rather than mechanical ones, we intend having these; you, if you will, "fill your lungs with cotton-fur, your hearts with rage and mutiny, become gnomes of Europe, slaves of the lamp!" We mean to have the best environment

that is going, and the healthiest functions we can find ; and not sacrificing ourselves to production, but subordinating it to us, we shall produce an increasing store of real wealth, of permanent ultimate products. Finally, paying much attention to the quality of the organism, its good breeding and education, we and our children shall accordingly survive in the struggle for existence, while you mechanical townfolk and your economists become extinct. Hence, as the latter are nothing if not "practical," the St. George's Guild must be hopelessly "unpractical," in the technical sense in which we have uniformly been finding the terms employed.

But the Sheffield museum : who ever heard of such a place ? At the top of a hill, and almost in the country—so that with such trouble, pulse must quicken and breath freshen and brain awaken before one sees the strange new sights—how much better the spacious, easily accessible galleries of Kensington, how much more inviting, how much more suitable—for loafers ! And, after all, only a few objects to compare with the multifarious wealth of the endless cases of a great museum. Merely the teaching by a series of carefully selected types—exactly parallel to the small and compact selections which are now replacing for teaching purposes, the vast museums (henceforth store-houses for reference) in every modern scientific school. No wonder, again, some "common-sense" people cannot cease to deplore the old-fashioned impracticability of Mr. Ruskin !

But let us pass to education. What is to be said of a teacher who speaks lightly of the three R's, and who threatens to make even the first of them optional ? Here surely is reaction to ignorance with a vengeance.

Let the reader make what deduction he pleases for personal idiosyncrasy, for passion and paradox ; but let him also take some note of existing facts, and consider whether he would not do well also to place his protest—if forceful and stormy, perhaps all the better—against the miserable mixture of pseudo-literary and pseudo-commercial cram, “classical” and “modern” by courtesy or irony, miscalled “education :” that jumbled compromise into which academic fossil and commercial Philistine everywhere settle down for the supposed maintenance of their supposed interests, and the actual stupefaction of their children’s lives. But what would he give us instead ? Of this twice clerkly lore there would perhaps not be enough ? The craft of parsing would indeed be in danger ; the names of French departments and the tables of obsolete weights and measures might come less pat upon the tongue ; yet for all we should be immeasurably nearer in method and result that noble discipline of complete soul in perfected body, which the wise men of all ages have had for their noblest ideal, calling it Education.

For two distinct tendencies are at work in our modern universities and schools, the dominant one deliberately preferring memory of mere words for observation of facts and reasoning therefrom, which should be supplied by *discipline* in science, and more memory of words for that co-ordination of hand and eye which is supplied by practice in the arts, and substituting verbal test of competitive examination for practical test in life. One is the school of Cram, evolving towards a Chinese, the other the school of Culture, evolving towards a Greek ideal, or more accurately towards Tartarean and Olympian ideals respectively. Between the representatives of the former, portly word-fog-giants,

bearing the awful names of Professor, Head-master, Inspector, and what not, swinging the mighty mace of authority, crusted in triple mail of hood and gown, and bearing many a magic amulet of diplomas, and the scattered knight-errants like Comte or Spencer, like Pestalozzi or Ruskin, who now and then attack them, the battle must indeed be long : yet when each colossus of intellectual fat has fallen before the strokes of intellectual muscle, when our orthodox educationists have gone the way of the orthodox economists, and when schools at once really classical and modern have arisen to give that genuine knowledge of nature and of literature which make alike scientist and scholar, that genuine discipline in arts coarse and fine which makes the worker, and that factual grip of history and society which makes the citizen, we shall after all only be having in more systematic form the essential curriculum of a St. George's School.

Leaving the reader to continue such defensive criticisms, it is time, briefly to summarise. We have found that while on one hand the stronghold of orthodox political economy turns out to be little better than an air-castle of mediæval metaphysics, collapsing at the slightest breath of scientific criticism, Mr. Ruskin furnishes much solid material to the required new construction. Little attempt can however yet be made at assigning his place in economic literature and history. His destructive criticisms have undoubtedly been of considerable service to many readers in this country, but it must be remembered that these were mainly necessary because of the popular ignorance of Germany. For there the defects of the Manchester school had long ago been exposed by the historical and socialistic schools alike, in France its lingering survivors

have lately been receiving the *coup de grace* from M. de Laveleye, while the criticisms of Cliffe Leslie, Ingram, and even Jevons, were in this country producing the same result. His chief services then are constructive. Exceeding all other economists in clear vision of physical realities, in insight and criticism of the quality of production and of life, he is more than any other writer the legitimate continuator of the Physiocratic school, and the forerunner of its complete re-systematisation by the aid of physical and biological science ; while his statement of the aims of practical economics in terms of quality of life, his treatment of criticism of art and other aspects of production from this point of view, and his clear enunciation of the essential unity of economics and morals in opposition to the discord assumed as a deductive artifice, will remain especially and permanently classic.

His filiation to Carlyle and others might have been traced, while some of the results of his teaching, not only in modern art-criticism, and consequently improved production, but upon more strictly economic studies and practical effort might have been outlined. Yet even if space allowed, this would be premature ; for his influence cannot be measured until the younger generation whom he has educated to active social sympathy, has brought forth its manifold results of economic research and practical application. Everywhere, too, organic filaments are spinning ; reform in the production of wealth, and economy in its consumption are alike in progress ; more slowly indeed, yet surely, views of its distribution at once more rational and more generous are gaining ground : the health and culture of the worker, the ennoblement of function, the purification of environment have at last won clear

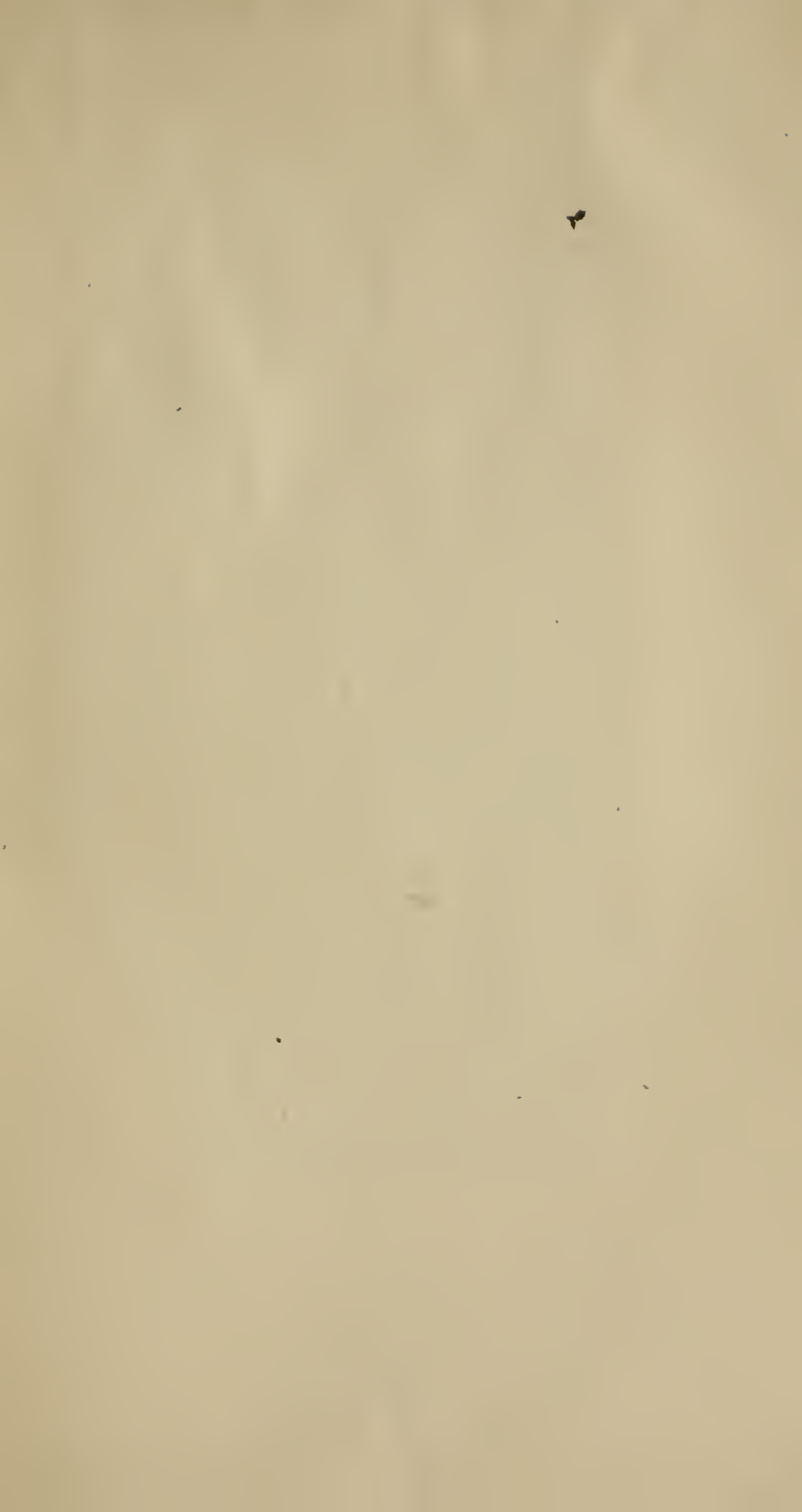
recognition as truly practical. Nor is the corresponding effort far off.

For as once men's hearts burned within them as they went forth under antique priestly guidance to win back the Holy City, and again, in dim philosophic light, at the Revolution to win their freedom, so once again throughout Europe a new enthusiasm is arising, deeper and wider than of old. Though foreseen with varying clearness, and sought with yet more varying success, the ideal has ever been fundamentally the same; the kingdom of God upon earth, the achievement of fraternity, the evolution of humanity are but the changing names for the unending struggle after that union of material and moral order which is the task and problem of life. In our day, both task and problem are far vaster than of old; and though a corresponding wealth of material resource has been in our hands, there has been little light to guide its application, and that mainly from dying lamps. The coming time is more hopeful; the sorely needed knowledge, both of the natural and the social order, is approaching maturity; the long-delayed renaissance of art has begun, and the prolonged discord of these is changing into harmony: so, with these for guidance, men shall no longer grind on in slavery to a false image of their lowest selves, miscalled Self-interest, but at length, as freemen, live in the Sympathy and labour in the Synergy of the Race.

And for this, the last Crusade, herald, knight, and preacher are not wanting, yet in our land and day there has been no clearer herald, nobler preacher, nor truer knight than John Ruskin, Economist.

“*GIVE to barrows, trays, and pans
Grace and glimmer of romance ;
Bring the moonlight into noon
Hid in gleaming piles of stone ;
On the city's paved street
Plant gardens lined with lilacs sweet ;
Let spouting fountains cool the air,
Singing in the sun-baked square ;
Let statue, picture, park, and hall,
Ballad, flag, and festival,
The past restore, the day adorn,
And make to-morrow a new morn.
So shall the drudge in dusty frock
Spy behind the city clock
Retinues of airy kings,
Skirts of angels, starry wings,
His fathers shining in bright fables,
His children fed at heavenly tables.
'Tis the privilege of Art
Thus to play its cheerful part,
Man on earth to acclimate,
And bend the exile to his fate,
And moulded of one element
With the days and firmament,
Teach him on these as stairs to climb,
And live on even terms with Time ;
Whilst upper life the slender rill
Of human sense doth overflow.*”

EMERSON.



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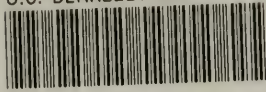
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