**Truth in extremis : a plea against the murder of science by the gold-poison / by a searcher.**

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## A PLEA

AGAINST

## THE MURDER OF SCIENCE

BY

## THE GOLD-POISON.

BY A SEARCHER.

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*Price Sixpence.*

# TRUTH IN EXTREMES.

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## A PLEA

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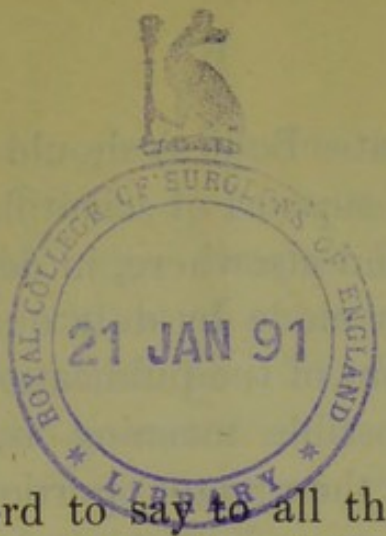
"And I say again, in like manner, do not compel us to assign to the guardians a sort of happiness which will make them anything but guardians; for we should also have no difficulty in clothing our husbandmen in fine linen, and setting crowns of gold on their heads, bidding them till the ground no more than they like. Neither is ignorance the reason why we do not allow our potters to repose on couches, and feast by the fireside, passing round the glittering bowl, while their wheel is conveniently at hand, and working as much as they like and no more; or why we do not make any other class happy in this way? . . . . But do not suggest this, for if we listen to you the husbandman will be no longer a husbandman, the potter will cease to be a potter, and nobody will have any distinct character." (*Plato's Republic: Jowett.*)




I HAVE a word to say to all those who are now, in so far as in them lies, filling the length and breadth of this land with their somewhat inarticulate cries for what they are pleased to call the Endowment of Research. Vague as these words are, I do them the justice to imagine that they have a definite meaning concealed within them. The only common doctrine which I can extract from their utterances is one which I believe to be a deadly heresy against truth. I pray every man who loveth truth in Oxford, or elsewhere, to judge between them and me this day.

To you, gentlemen, who cry for gold for yourselves or others, I will speak plainly, and with no rounding off of sharp terms, or concealment of the thought that is in me. I will treat of your doctrines and hopes merely as they appear in your writings on the present question, knowing full well that many, probably all, of you are nobler than these your words, but knowing also that your personal worth will merely render your false doctrine the more dangerous.

Let us agree, first, as to the meaning of your Shibboleth. It seems to me that the "Endowment of Research" may mean any one of three things, or it may mean any two of them, or all three together. First, it may mean that large sums of public money (or of money taken from the Colleges

and other Corporate Bodies) should be used in the establishment and support of scientific laboratories in the Universities and elsewhere, in defraying the cost of all experiments made by duly qualified students, and, if need be, that of the publication of books.

The second possible meaning is, that a considerable (probably the greater) portion of this money should be used in providing "suitable" incomes for a number of "Scientific Researchers" during the period of their investigations.

The third is, that prizes, pensions, and other rewards should be given to successful Researchers when the value of their discoveries is duly ascertained.

The first of these schemes I believe to be eminently desirable.

The second eminently detestable.

The third unobjectionable, if kept within narrow limits, but comparatively unimportant.

I imagine that, as far as you have any definite and common meaning, you desire the combination of these three schemes, but that your heartstrings are chiefly knit round the second.

With that, then, I have specially to deal in my arraignment against you. And, first, I would say that a little more clearness of statement on this head might have been desirable — I had almost said honest. Who are the Scientific Researchers, and how are they to be discovered? It is all very well to say that such details are a matter for subsequent consideration, and that the all-important thing at present is to get the principle acknowledged; but in this case the whole value of the principle depends upon the possibility of adjusting to it working details—a possibility which, as you

needs must know, your opponents absolutely deny. The principle of Charity is a noble one; but if a man obtained a large cheque from me, vaguely stating that he wanted it for charity, and I afterwards discovered that he had divided it between himself and a few chosen friends, I should be very likely to deliver him over to the tender mercies of the Police Magistrate.

Imagine, then, if you will, a hundred or a thousand "Research Places" vacant; how would you proceed to fill them up? They would first, doubtless, have to be divided amongst the different Sciences; but we in Oxford have already seen that for the purposes of making places a Science is capable of infinite subdivision, and I should hope to see within a week after the announcement of the number of vacancies a list of exactly double that number of absolutely essential departments of Science. With your constant practice in scientific nomenclature, and your unlimited powers of combining hap-hazard the Greek, Latin, and English Lexicons, you would have no difficulty in finding names for them all. We should begin, then, with a pretty little fight between you scientific gentlemen as to the number of Sciences and their relative needs, and Government or the University, both of which are equally and supremely ignorant of the value of your respective claims, would have to step in and arbitrate between you—unless, indeed, like the wise Gallio, they drave you from the judgment-seat.

But suppose this dignified contest at last settled, and the honourable and lucrative posts duly numbered and labelled, who then are to elect our investigators? Surely not the University, for Con-

vocation is a wide and scattered body, the majority whereof will not even know the names of your Scienticulæ, still less of the persons who are proficient therein. We all know that in exact proportion to the distance by which the subject of a Professorship is removed from the ordinary curriculum of the University is the danger of a "transaction" increased. We none of us know about Oudenology; but Mr. Smith, who says he knows something about it, is a very good fellow, whereas we have never met Mr. Jones. Mr. Smith has an appalling majority of votes. In voting for the elections of the real teaching Professors, who have to handle subjects about which at least a considerable number of the members of the University are instructed, we all have opportunities of judging ourselves, or of getting trustworthy information as to the merits of the candidates, and I doubt not that we do, all of us, conscientiously vote for the men whom we believe to be best.

One of the most moderate of your party, in a recent letter to a daily newspaper, defends some such scheme as that which I am criticising, on the ground that jobbery already exists in the present system of University elections. It is just because I sorrowfully believe that this is so, and because I feel certain that any extension of University patronage into the remote corners of Science would necessarily increase this jobbery in a ratio far greater than that of the new places created, that I should look upon the adoption of any such plan as the death-knell not only of Science, but even of political morality in the University.

Yet, if the University is not to elect your Re-

searchers, with whom is the nomination to lie? There seem to me to be only two possible answers, which, on analysis, are reducible to one. The appointment must be made either directly by Government, or by Boards of Professors and Scientific men, who are capable of appreciating the relative merits of the candidates. If Government take the appointment into its own hands, it is of course not to be expected the Prime Minister, or President of the Council for the time being, will have either leisure or scientific capacity for weighing the proficiency or promise of fledgling experimenters, and the selection would, therefore, in all cases be delegated to some Professor or knot of Professors, who would give their advice free from all checks of responsibility, and sheltered from the faintest breath of public opinion, since their names would necessarily be unknown. Better than this would be that direct and public cooptation by the different departments, which I believe to be the only remaining method of election which is in any way practicable, and which we have now to discuss.

On this scheme then each separate Science, or section of Science, would be handed over to the fostering care of an organized Coopting Society, whose members (or at all events a portion of them) would be supported by the public monies. Now, we have several instances of such Societies already in existence, and we have therefore ample material upon which to form a judgment. In the majority of cases the members are not paid, so that an incentive to jobbery is absent, which in your snug little groups would be unpleasantly prominent. But, ignoring for the moment this objection, and taking as our examples two of the most respectable of such

Societies, the Academy of France and the Royal Academy in England, what presage may we draw as to the work which you are likely to perform for a confiding nation? The Academy of France has chiefly distinguised itself by the sufficiently leisurely evolution of a Lexicon, which perhaps more than any one single book has tended to corrupt and emasculate the French language; further, it has been renowned for its touching fidelity to one political party, and the amount of external pressure it required to induce it to admit into its ranks any distinguished men of letters whose political flag showed any other shade of colour. Of the shortcomings of the English Academy, we have heard only too lately; yet I readily admit that both these great institutions are to a wide extent successes; but the admission will profit you nothing. The force which constantly purifies these is that public opinion which their members detest, but cannot afford to ignore. There are thousands in England who yearly form an opinion as to who are our fairest painters. There are millions perhaps in France who would draw up a list of their most distinguished literary men, and the opinion of the million is always honest, and is rarely far astray. For you, the general public neither knows your names, nor cares for your results. It believes in a misty way that Science is a great thing, and is good-natured enough to think that, if there is a good deal of money disposable, for which there are no very definite claimants, it may as well go to you who ask for it on the ground that you represent Science, as to any other equally respectable and uninteresting object. When you have divided the spoils, it will leave you alone for years, content if

occasionally you produce a treatise with a name and form equally repellant. No doubt the scientific reviews (if any independent reviewers survive) will estimate your work at its proper worth ; but the public will shrug its shoulders, and suppose the article was written by a man who did not get one of your places, and turn yawning to the political articles. You will then constitute a cluster of small and extremely close trades-unions, differing from other societies of the same class in that whereas they have earned their wage in fair stand-up fight with their masters, you will have cajoled it out of the credulity of the British public; and that whereas they do but a short day's work for a full day's wage, your work will in most cases be yet more scanty, and the value of the results far more problematical. Doubtless, sooner or later, some young and energetic M.P. will get up your iniquities, and sweep you away from the face of the earth ; but the time needed for your gradual corruption and subsequent stagnation, until you reach the point of unbearable rottenness, is an epoch in the history of English Science, which no lover of truth can look forward to without shivering horror.

All that I have said about the difficulties of electing your Researchers applies with at least equal force to the supervision of their work. Here, as before, you would be doubly independent of the healthy action of public opinion ; first, because of the greater part of your "*work*" the public would be given no opportunity of judging ; secondly, because that modicum which you yearly put forth in the form of " Reports" or " Proceedings," would appear only on the bookshelves of public libraries, or in the houses of those good-natured millionaires who were anxious

to fill their cases with grave-looking tomes, and to give themselves the least possible trouble in their selection.

Mr. Sayce, in the letter to which I have already referred, protests hotly against those who bring "the stock objections" of impracticability against his favourite scheme. I must confess that, to me at least, a "stock objection" seems a good one, until it has been satisfactorily answered; and for anything approaching a rational answer to these objections from any member of the party of Research, we have yet to look. The nearest approach to an argument I have yet come across is an Essay of Dr. Appleton's, where he points out that although confessedly almost all the good work of the world has been done by unassisted individual effort, yet in a few instances great things have been achieved by individuals who were in some way or other aided or supported by public monies. It would seem a strange argument for endowing a class of professional shoemakers, if one said that past experience showed that endowed shoemakers made not so very much worse, nor so very much fewer, shoes than ordinary unendowed individuals.

Hitherto I have treated only of the practical difficulties of your scheme, assuming that your object was a worthy one, if it could only be carried out; but to me at least the theoretical objections to your whole plan seem far more grave than any which can be raised against its probable working, serious although I believe those latter to be.

In the name of common sense, gentlemen, what is it that you want, or what evil do you wish to remove? Science is imperfect, you say, in many

points. And do you really either hope or desire to perfect her? Is she not a living and growing thing, and would not her perfection (were it conceivable) be her death? But she might be made to advance more quickly. Have you, who claim to be men of science, fallen into the vulgarest of modern heresies, that work is to be measured by quickness of production? Cologne Cathedral has been many hundred years a-building, and is not yet finished; but does any one of you really believe that the cause of architecture would be advanced, if the work were given over to a lath-and-plaster contractor, who should turn on a multitude of second, third, and fourth-rate workmen, and get the job completed in some fashion or other, careful only of "keeping his time?" Temples of science should only be reared by the pure hands of enthusiasts, and such temples must be built slowly. I should hardly err in saying that their majesty was in proportion to the slowness of their growth, provided that growth is never absolutely interrupted. You, methinks, care not to build temples, but rather "commodious residences for immediate occupation;" and for that purpose, of course, you must take whatever workmen you can get, and you must allure them by whatsoever bait, gilded or otherwise, is most likely to attract. I fear me that your brick-courses may be hurriedly laid, and your mortar ill-tempered. Moreover, if you pay your hirelings of Science by practically in-terminable annuities, I fear that even then your house-building, after the first burst of fictitious energy, will speedily slacken, and the trade will become permanently sluggish, though happily in your case there is no danger of the usual consequence of the sluggishness of trade, to wit, the starvation of the workmen.

"Every good gift and every perfect gift is from above:" there is a truth here wider and deeper than that evolved by the theologians. All good work of whatsoever nature is the result of that pure and single-minded enthusiasm, which counts no cost, which giveth its all and asketh nought, and which in its very nature is divine. Such work can be done by but few in each generation.

Yes, but these true lovers of Science must yet have the means of living, and it is precisely these whom we wish to endow. Do we mean quite the same thing by "*the means of living*?" The income required to sustain a man in decency is not a large one, probably considerably less than the ordinary College Fellowship, and I hope and believe that the number of the elect who are without such an income, or who could not if they would attain to it, is truly small. Of this at least I am certain, that these are quite the last people upon whom your fertilising streams of gold are likely to flow. Such, if there are such, must and will work on humbly and happily, supporting themselves at their trade or profession, whatsoever it may be, and giving their joyous everings and nights to their beloved mistress. Something no doubt will be lost of valuable work, but much will be gained of pure enthusiasm and glorious example.

But I fancy, gentlemen, that this is not exactly what you mean by the Endowment of Research. Nay, your soaring fancy will halt at nothing smaller than snug sinecure professorships of from six hundred to a thousand a year. Would you even be content with these? Dr. Appleton for a moment lifts the veil which covers your designs at the end of the second of his two Essays: we have a glorious

vision of princely palaces, and the men of Science living therein, the careless life of the Epicurean gods. No, worthy Doctor, the British public is eminently gullible, but it has common sense at the bottom, and your princely palace is likely to remain a dream for the present.

That the true student would pursue his investigations none the less eagerly if he were subsidised by the State, I readily grant to Mr. Sayce or any other Research-advocate. I even admit that a certain number of such students would joyfully accept all they could get from the State; for the love of truth, although it is always superior in such to the love of gold, doth not always expel it altogether. Doubtless Francis Bacon was an earnest searcher; we have heard none the less the history of his proceedings as Chancellor. Yet who believes that Bacon's zeal for research would have been stimulated one whit by the allotment to him of a princely pension, exempt from all conditions save that of exploring truth? By endowing your true student, you will render him considerably more comfortable and luxurious, and probably a little more lazy; but you will neither render him a more efficient instrument, nor will you create *one* more such student, nor prevent *one* such from being seduced away to more profitable and tempting fields. God maketh this sort, not man; neither of them hath any one yet been hindered from his appointed work by aught else than absolute starvation — a hindrance, which, as we have seen, you can in no wise remedy by your schemes.

All you can do for pure Science is to bring into her temple a crowd of money-changers and money-

getters, hirelings who, like the Platonic smith, marry by force or fraud their master's daughter, and beget a bastard progeny.

"All very fine, but the pursuit of Science deserves reward and encouragement?" Deserves it! Does it not receive it? Is your love of your mistress so cold that her constant presence is not its own and all-sufficient reward? Aristotle was hardly of an enthusiastic temperament, yet hath he words which might put such half-hearted devotees as you to the blush: he is true to his Master when he tells you that the Search of Truth affords pleasures marvellous in their security and stability. As that Master himself said, such pleasures drag no repentance after them.

One qualification I am willing to make of my general condemnation of individual endowment, but it is one which in no way affects the main principle. Cases frequently occur in which, in order to pursue work of acknowledged value, the enquirer is put to a very considerable expense beyond the bare cost of living; as, for instance, when he has to travel from place to place in order to compare manuscripts, or to take up his residence in some favoured spot for the purpose of scientific observation. In all these cases, which after all would be but few, (since the work proposed must be not only good in itself, but also of a kind which could either not be done at all or not so well later, and so could not afford to await the chance of a qualified enquirer of sufficient means,) a grant might be made from public monies, either by the University, or directly by Government: (precedents for both proceedings have occurred already.) But in all such cases the grant should be strictly

limited to the amount of the necessary extra expenditure beyond the ordinary expenses of the searcher, and, if possible, a strict account should be rendered. By these precautions the grant might be brought under my first sense of "Endowment of Research," and, but for the danger of jobbery which it would give rise to if frequently allowed, would be not only unobjectionable, but eminently useful.

A volume has been sent forth to the world with considerable flourish of trumpets which we are bade to accept as the manifesto of the Research party. The most puzzling question with regard to this curious joint-stock production is that of the connection between at least half of the Essays which appear therein and the title outside. The Rector of Lincoln has a somewhat thin and querelous review of the situation of the Universities, but carefully abstains from any further committal of himself to the principle of the Endowment of Research than that which may be supposed to arise from his acceptation of the title-page, which however is carefully qualified in the preliminary notice. Mr. Sayce has a very valuable article on the Examination System, with almost every word of which I fully agree, but which I can in no way connect with the avowed object of the book. Dr. Appleton in his first Essay inveighs against subsidies to education; and here again I am inclined to shake hands. The President of the Microscopical Society tells us at some length that in Science, as in everything else, a man can do much better work if he gives up his whole time to it,—a statement which I should have thought no one would have desired to dispute. Of the Essays proper there remain only two. We have

an example of Sophistic by Mr. Cotton, in which he attempts to prove that because the object of the Founders of most Colleges was to form a Society of Students of Theology, we should be fully carrying out their intentions by endowing with the revenues which they have provided some pupil of Huxley or Darwin, who might devote his time to the establishment of some theory of the evolution of the animal kingdom, which certainly would not be that of Genesis. If an eminent temperance advocate presented a large sum to the public for the purpose of the erection of water-fountains, I fancy he would hardly be satisfied if the income was used in defraying the expense of an annual distribution of brandy,—and yet both brandy and water are liquids. Dr. Appleton's second Essay is peculiar, in that it really attempts to deal with the subject; but I cannot think he seriously sets himself to meet any of its difficulties. The Essay culminates with that magnificent dream to which I have already alluded. I am, however, indebted to Dr. Appleton for a very valuable distinction between a Science and an Industry, which he himself borrows from a German writer: "Science springs from the need of the intellect to understand the causes of the phenomena by which man is surrounded, and will have done its work when we can banish the words 'why' and 'wherefore' from our vocabulary. Industry springs from the needs of the body, and will have done its work when it has supplied the means of satisfying those needs down to the slightest and least perceptible of them." My accusation against the Research party is precisely thus, that they are degrading Science into an Industry.

Besides these six Essays the book contains several

"Illustrations" which supply much valuable matter, but which all proceed on the common, and, as I believe, absolutely false, assumption, that it is our duty to fill up all the chinks in Science as speedily as may be. The book I consider is likely to produce less harm than one could possibly have expected from the joint effort of so many distinguished men.

I will add yet this over-word. There are two forces which from the generation of the world until now have given rise to unselfish action—Religion and the Love of Truth. Were you to succeed in carrying out even a fraction of your scheme, you would attract to the pursuit of Science as an indifferently good speculation all those who, having a certain modicum of brains and a considerable aptitude for pretentious trifling, were willing to pursue their researches within the exact lines and in the precise light which was in vogue at the moment with the knot of Professors who had either directly or indirectly to give away the places, and if the patience of the English nation were sufficiently enduring, you might be able to formulate in course of time a vast body of doctrine which no one who had the least desire for a "Research Situation" would dare to question, and which might be handed down unimpaired and unaltered from generation to generation of master and "pupil"—(I beg your pardon, "imitator,") for your Researchers must, of course, not teach. Meanwhile, the young enthusiasm of the country, which so long as there is life in the nation can never fail, will for the moment find its only vent in Religion. The search of truth for Truth's sake—and she shall come to none who seek her otherwise—will be carried on

in healthier and poorer lands. But Truth is greater than you, or the sort of you. Neither shall she be banished for long from any land where there are vigorous human hearts to cherish her; but she will return not to your well-paid clubs of learned dilettantes, fast verging into imbecility; not to your sleek "Researcher," rising languidly from his champagne and sweet-bread to peer for a moment through his silver-mounted lenses at a butterfly's wing; but to some out-cast Spinoza, grinding those same lenses to support himself in the pursuit of philosophy, or to some crack-brained enthusiast at whom your orthodox professors gently shrug their shoulders, who seeketh Truth with a single heart, looking only and ever for that great and all-sufficient reward—to find her.