

**AS REGARDS
PROTOPLASM,
PART II**

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As Regards Protoplasm, Part II by James Hutchison Stirling

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JAMES HUTCHISON STIRLING

**AS REGARDS
PROTOPLASM,
PART II**

AS REGARDS PROTOPLASM.

BY



JAMES HUTCHISON STIRLING,
F.R.C.S., AND LL.D., EDIN.

New and Improved Edition,

COMPLETED BY ADDITION OF

PART II.,

IN REFERENCE TO MR HUXLEY'S *SECOND ISSUE,*

AND OF

PREFACE,

IN REPLY TO MR HUXLEY IN "*YEAST.*"

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1872.

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PREFACE.

WHEN this Essay was first published, the following was the prefatory note (October 1869):—

“The substance of the greater part of this paper, which has been in the present form for some time, was delivered, as a lecture, at a *Conversazione* of the Royal College of Physicians of Edinburgh, in the Hall of the College, on the evening of Friday, the 30th of April last.

It will be found to support itself, so far as the facts are concerned, on the most recent German physiological literature, as represented by Rindfleisch, Kühne, and especially Stricker, with which last, for the production of his ‘Handbuch,’ there is associated every great histological name in Germany.”

Q. 5-37 2/2.1

I may now state, without any more particular reference to the motives, whether general or special, which gave rise to it, that this essay of mine had but one thing to do,—to protest, namely, against the thoughtless extinction of certain essential *differences* in a supposed *common identity*. I may illustrate this by a remark in a letter to me on the subject by the late lamented Professor Ueberweg, which (the letter itself is dated Jan. 16, 1870) is as follows:—“As I am neither a physiologist nor a zoologist, I cannot be expected to follow your argument into its details, but I am vividly interested by its logical or dialectical leading thought—the contention, namely, for the right of the logical category of Difference, as against that of Identity one-sidedly accentuated, as it seems, by Huxley.” My reply to this was, “that he (Ueberweg) had hit the mark—that I had been simply laughing all through, and holding up to the category of identity, the *equally authentic* category of difference—but that it had taken a German to find me out.”

In the same letter, Ueberweg proceeded to say that the question, in the first place, therefore, was evidently a *logical* one. Now this, doubtless, is true; but this, nevertheless, is not

Met

enough. If the question involves at bottom logical issues, it has been really addressed by Mr Huxley to physiological ones; and it is only in the interest of scientific accuracy to point out that the inference to a physiological identity has been attempted to be made good by Mr Huxley, solely through means of an unwarrantable trampling out of (perhaps, for the moment, involuntary blindness to) the most essential physiological differences. For example, if you *identify* all life in protoplasm, the counter-reminder is only fair that you must equally *differentiate* all life in protoplasms; for of no one living thing, and of the organs of no one living thing, is the protoplasm interchangeable with that of another; and this involves, instead of Mr Huxley's universal *identity* in power, in form, and in substance, infinite *difference* in all these respects.

In the statement of this difference—which is really a veritable scientific interest—I was led into a variety of expositions, and, among these, into an historical one. So far, now, as it was *history* that was concerned in this, I could not, of course, in one way, take any credit to myself; still it was precisely here that, in another way, I did think I might take some little credit to myself. If in the course of the essay, indeed, there was anything else that seemed to me similarly situated, it was the summaries—the summaries of Mr Huxley's views, namely, with which I always prefaced my criticism of these. I confess that I thought them *exact*—short, that is, to the shortest, but full to the fullest, and certainly fair to the fairest, if not also clear to the clearest. It has pleased Mr Huxley, however, rudely to shock my not immoderate complacency in both respects. Neither history nor summaries, it seems, can he regard with satisfaction. That is, it was alone for what was not mine in the whole essay that I allowed myself to take any credit *as mine*, and this Mr Huxley denies me. In the reply, namely, to which, after two years' interval, he has at length brought himself, it has pleased Mr Huxley—in those few sour-humoured words of his in the *Contemporary Review* for December 1871—to call the history a “travesty,” and (by implication) the summaries “utter misrepresentations.” That Mr Huxley, fairly looking at either history or summaries, should yet feel himself free to speak so, throws me back—I confess it—on thoughts of *him*.

If, as I say, the summaries could not, as wholly referring to the matter of another, be called my own, so neither could the

history be called my own, and for a like reason. Nevertheless, as I also say, I had such consciousness of *honest work* in either respect, that I could not help allowing myself a certain satisfaction in both. The grounds, more especially for this as regards the history—the summaries I dismiss for the present—lay as well in the *pains* that still throbbed before consciousness, as in the fact that the narrative involved was known to me to be then only for the first time presented in English.* I fancied, indeed, that Mr Huxley himself would applaud here, for I believed him partial to a scientific historiette. Had I but known that he had *in petto* a rival history! I confess I had no anticipations of this; and, as to that indeed, perhaps he had it not *in petto*. Perhaps Mr Huxley has only benevolently got it up since—for my correction—by example of him? There at least it is—my historiette is a “travesty,” it seems, and Mr Huxley, in the pages of the *Contemporary Review*, replaces it by *his*. Loudly! Ay, Mr Huxley, I venture to say, is not less loud here than the legitimate blind beggar whom Mr Home represents to abuse the interloping one thus:—

“ I am the genuine blind man,
That villain seeks to grind one,
And posh one's field;
But I'll not yield,—
What! leave old rights behind one!

“ I am the real blind man,
The genuine real blind man!
As for that thief
With eyes, may grief
Consume him! I am the blind man!”

But it will be only fair to Mr Huxley that the readers of the present essay should see his objections to it in his own words. The yeast-organism affording him an exceedingly eligible starting-ground for his lively representative ways, Mr Huxley begins with it, and is thereby enabled to give a little, not unwelcome, additional show of bulk to—after all—the somewhat *scanty* historical forces he has only desperately driven together. With these skilful preliminary dispositions, the attack itself—and in its entirety—is this:—

“ Dr Stirling, for example, made my essay the subject of a

* By way of *indirect* testimony here, let me refer to an eminent physiological Professor who, on a late occasion, speaking of protoplasm, before the British Association, displayed this severe impartiality between us that, while he gave my account of protoplasm, it was Mr Huxley alone he named!

special critical lecture, which I have read with much interest, though, I confess, the meaning of much of it remains as dark to me as does the 'Secret of Hegel,' after Dr Stirling's elaborate revelation of it. Dr Stirling's method of dealing with the subject is peculiar. 'Protoplasm' is a question of history, so far as it is a name; of fact, so far as it is a thing. Dr Stirling has not taken the trouble to refer to the original authorities for his history, which is consequently a travesty; and, still less, has he concerned himself with looking at the facts, but contents himself with taking them also at second hand. A most amusing example of this fashion of dealing with scientific statements is furnished by Dr Stirling's remarks upon my account of the protoplasm of the nettle hair. That account was drawn up from careful and often-repeated observation of the facts. Dr Stirling thinks he is offering a valid criticism, when he says that my valued friend, Professor Stricker, gives a somewhat different statement about protoplasm. But why in the world did not this distinguished Hegelian look at a nettle hair for himself, before venturing to speak about the matter at all? Why trouble himself about what either Stricker or I say, when any tyro can see the facts for himself, if he is provided with those not rare articles—a nettle and a microscope? But I suppose this would have been '*Aufklärung*'—a recurrence to the base common-sense philosophy of the eighteenth century, which liked to see before it believed, and to understand before it criticised. Dr Stirling winds up his paper with the following paragraph:—"In short, the whole position of Mr Huxley, (1) that all organisms consist alike of the same life-matter, (2) which life-matter is, for its part, due only to chemistry, must be pronounced untenable—nor less untenable (3) the materialism he would found on it."

"The paragraph contains three distinct assertions concerning my views, and just the same number of utter misrepresentations of them. That which I have numbered (1) turns on the ambiguity of the word 'same,' for a discussion of which I would refer Dr Stirling to a great hero of '*Aufklärung*,' Archbishop Whately; statement number (2) is, in my judgment, absurd; and certainly I have never said anything resembling it; while, as to number (3), one great object of my essay was to show that what is called 'materialism' has no sound philosophical basis!"

Now this, so far as it is anything, is, as one sees, clever; but it

is not an answer: it is only *business*. "My flock will expect a word from me, and will probably not be the worse of one: it will be, so far, a satisfaction to them, and convenient in use, perhaps!"

Be the nature of the cleverity what it may, then, one must pity the necessity of the shift; and, but for Mr Huxley's authority with the public—an authority quite just in its place, doubtless—the record, so far as I am concerned, might very well close here. That authority considered, however, perhaps it would be only duly respectful to the public—and even to Mr Huxley himself—that I should examine his observations in reply to my essay *seriatim* and at full. This, then, I shall now do.

To begin at the end, and travel *gradually* upwards, I must avow that it is certainly clever to take the three short clauses of the short concluding sentence of my essay as together representative of the whole, and so, in destroying them, destroy it! There is management in this—especially in view of Dr Beale's quotation of the sentence; but the question remains—has Mr Huxley destroyed, not my essay, but even this its short last sentence?

His answer to my proposition that assumes him to hold "that all organisms consist alike of the same life-matter," is only that it turns on the ambiguity of the word "same." Will it be possible to make this good, however? Does Mr Huxley try it? Or is the reference to Whately enough for that? As for the word "same," I do not believe it to occur more than twice or thrice throughout the whole essay: identity is the term I use for the most part. I have no objection to the word, however, and think it perfectly justifiable: identity itself is certainly sameness. But more—I shall accept Mr Huxley's reference to the authority of Archbishop Whately in regard to it, and the ambiguity of its *two* senses. Of these, the primary one is that of numerical sameness, "applicable," says Whately, "to a single object;" as, I wore to-day the same boots I wore yesterday, meaning, of course, the same individual boots. In reference to the secondary one, again, the Archbishop's words are these:—"When several objects are undistinguishably alike, *one single description* will apply equally to any of them; and thence they are said to be all of *one and the same* nature, appearance, etc.: as *e.g.* when we say, this house is built of the *same* stone with such another, we only mean that the stones are undistinguishable in their qualities; not that the one building was pulled