

Transcription, January 2015:

New York Times Saturday Review of Books and Art 53(16) (26 Dec. 1903): 974c-974d (John White Chadwick).

[p. 974c]

‘The Universe. The Rev. John White Chadwick Reviews Prof. Wallace’s New Book of Astronomical Theories.’¹

Prof. Wallace in a revised edition of his book, “The Wonderful Century,” wrote four new chapters, and in the course of the studies which he made for those chapters he found that almost all writers on general astronomy, from Herschell to Newcomb, stated as an indisputable fact that our sun is situated in the plane of the Milky Way and very nearly in the centre of that ring. He also found that there was little or no proof of there being any stars or nebulae very far beyond the Milky Way, which thus seemed to be the limit in that direction of the stellar universe. Turning to the earth and other planets of the solar system, he found that the more recent researches led to the conclusion that no other planet was likely to be the seat of organic life, unless perhaps of a very low type. At this point the investigation fell into close relation with his special studies which for many years had attended carefully to questions of geologic time, and which now confirmed him in the impression derived from other sources that our planet is possibly and probably the only inhabited planet in the universe. In explication of these two conclusions, that the stellar universe is limited, and that we occupy its only inhabitable room, Mr. Wallace wrote an article for *The Fortnightly Review*, which was printed simultaneously in this country, and his present volume is a wide amplification of that article.

Conclusive or not, it is argued very seriously and powerfully and in an extremely interesting manner. A good many persons who know that Mr. Wallace has two sides, like the moon, both of which, unlike the moon, he turns to us from time to time, will imagine that what we are here invited to look upon is not his scientific but his spiritualistic side. So doing, they will make a great mistake. We have the scientific Wallace speaking here, and yet not quite the Wallace who so nearly anticipated Darwin’s publication of his theory of Natural Selection in 1859. For there we had the specialist, the biologist “to his native centre fast.” He is not by first intention an astronomer. He pleads the fact as favorable to the soundness of his argument. He thinks he takes a safer course, keeping the path blazed by the great astronomers, than trying to hew out a fresh one for himself. In this particular his readers will be unequally convinced. Some of them will prefer to be taught astronomy by an astronomer. Yet Wallace’s astronomical studies, though having a secondary character, have been apparently very extensive, and discriminative of degrees of astronomical authority. If there is any bias from the side of his spiritualist interests it has escaped our observation. This book in its entirety may have been invested as a spring board of whose immense resilience the writer will before long avail himself to vault into the middle of some theory of man’s spiritual survival beyond death, but nothing of this kind strikes an obvious note. It would not have been a violent intrusion on the part of Mr. Wallace if he had contended that such stupendous preparation and accompaniment as our earth has had suggests the ridiculous inadequacy of the accomplishment if we are to have our be-all and our end-all here; in due time the earth and all that it inherits falling into the jaws of utter nothingness. But there are two different impressions which Mr. Wallace’s conclusions will make on different readers. Some will be flattered by them that we are a very select party. Others will incline to the opinion that if our planet is the only habitable spot in the wide universe, human life is a miserable freak; the game not worth the candle; the mountain laboring and bringing forth a “ridiculous mus.”

And, in all sincerity, Mr. Wallace's book is one of the saddest ever written. In the degree to which its teachings are accepted the heavens will no longer declare the glory of God, but his lamentable inefficiency. To the eye of sense the evening pomp of stars may be as beautiful as ever. But how hard it is to see through one's eyes only without any involution of the mind. And the mind, looking through the eyes on such a stellar universe as Mr. Wallace has unveiled beholds a spectacle so ghastly that he may well shrink, horror-stricken, from the sight.

We must confess our wonder that, however convinced of the truth of his opinion, he had the heart to enter on the public advocacy of a doctrine that so hangs the heavens with black. Unspeakable the horror of our loneliness in the vast spaces of the wide unpeopled world.

But we are doing less than justice to the course of Mr. Wallace's discussion. His first six chapters are devoted to an elaborate account of "The New Astronomy." The third chapter bears this title and brings out the nature of the change that has taken place in astronomy since the middle of the nineteenth century, when the only hope of further knowledge of the heavens seemed to be in the improvement of the telescope. Spectrum analysis relieved us from this miserable "impasse." Astronomic photography and other appliances and methods have joined their strength to spectrum analysis, and our knowledge has been extended to a multitude of invisible stars and their imperceptible motions. In his concluding chapter Mr. Wallace furnishes the reader with both an excellent summary of his argument and a list of the conclusions to which he has been brought.

The argument extends through nine chapters, from the seventh to the sixteenth. The steps by which it proceeds are as follows: Firstly, the unity of the stellar universe; second, the converging lines of evidence to prove that the stars are not unlimited in number; third, the consensus of expert opinion to the effect that our solar system is central to the universe; fourth, the uniformity of matter and of physical and chemical laws throughout the universe; fifth and sixth, a consideration of living organisms is convincing that no heavenly body but our own furnishes the right conditions for the development of vegetation and animal life. There are further steps, but they do not take us much beyond this point, which is the most significant in the entire body of the matter presented to our view. The six conclusions specified, as that the stellar universe forms one whole; that the solar system is situated in the plane of the Milky Way, so that the earth is very nearly in the centre of the stellar universe; that the same kind of matter is pervasive through this universe, with the same laws; less certainly, but probably, that our earth is the only planet of the solar system that is inhabited or habitable; that no other sun has habitable planets; that the central position of our sun is permanent and has been specially favorable, perhaps absolutely essential, to life on our planet.

It is a far cry from "the fairy dells of Jupiter" and that sort of thing to this view, as of the universe seen through an inverted telescope of the highest power. If these things are so, we must still blunder on as best we can. But it will be to very different music from that which has inspired us heretofore. It should, perhaps, be said that Mr. Wallace's limited universe is like the good woman's limited future punishment, "better than nothing." There are, for example, one hundred million visible stars. And, besides, Mr. Wallace does not conceive it to be impossible that there are "other universes"; beyond the awful voids in which our furthest stars thin out to vacancy another universe taking up the parable, and beyond that another, and so on. A clergyman seeking a text from which to preach on this subject might not improperly choose "And still there is room." Besides, we may hear further of this matter. The astronomical

conclusions of fifty years have been put utterly to shame by those of later date. Some one may come after Mr. Wallace who will be preferred before him by the experts of fifty years hence.

John White Chadwick.

¹*Man's Place in the Universe: A Study of the Results of Scientific Research in Relation to the Unity or Plurality of Worlds.* By Alfred R. Wallace, LL.D., D.C.L., F.R.S. Pp. viii-328. Cloth. Royal Svo. New York: McClure, Phillips & Co.

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The Alfred Russel Wallace Page, Charles H. Smith, 2015.