

**FREEDOM IN SCIENCE
AND TEACHING;
FROM THE GERMAN
OF ERNST HAECKEL**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649131211

Freedom in science and teaching: from the German of Ernst Haeckel by Ernst Haeckel & T. H. Huxley

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

ERNST HAECKEL & T. H. HUXLEY

**FREEDOM IN SCIENCE
AND TEACHING;
FROM THE GERMAN
OF ERNST HAECKEL**

F
/

FREEDOM IN SCIENCE AND TEACHING.

FROM THE GERMAN OF ERNST HÆCKEL.
///

WITH

A PREFATORY NOTE BY T. H. HUXLEY, F.R.S.

DER THEOLOG.

" Welche Verehrung verdient der Weltenschöpfer, der gützig.
Als er den Korkbaum schuf, gleich auch die Stöpfel erfand."

XENIX.



EdT
H
363265

22. 2. 39.

LONDON:

C. KEGAN PAUL & Co., 1 PATERNOSTER SQUARE.

1879.

The rights of translation and of reproduction are reserved.

PREFATORY NOTE.

IN complying with the wish of the publishers of Professor Haeckel's reply to Professor Virchow, that I should furnish a prefatory note expressing my own opinion in respect of the subject-matter of the controversy, Gay's homely lines, prophetic of the fate of those "who in quarrels interpose," emerge from some brain-cupboard in which they have been hidden since my childish days. In fact, the hard-hitting with which both the attack and the defence abound, makes me think with a shudder upon the probable sufferings of the unhappy man whose intervention should lead two such gladiators to turn their weapons from one another upon him. In my youth, I once attempted to stop a street fight, and I have never forgotten the brief but impressive lesson on the value of the policy of non-intervention which I then received.

But there is, happily, no need for me to place myself in a position which, besides being fraught with danger, would savour of presumption. Careful study

of both the attack and the reply leaves me without the inclination to become either a partisan or a peacemaker: not a partisan, for there is a great deal with which I fully agree said on both sides; not a peacemaker, because I think it is highly desirable that the important questions which underlie the discussion, apart from the more personal phases of the dispute, should be thoroughly discussed. And if it were possible to have controversy without bitterness in human affairs, I should be disposed, for the general good, to use to both of the eminent antagonists the famous phrase of a late President of the French Chamber—“*Tape dessus.*”

No profound acquaintance with the history of science is needed to produce the conviction, that the advancement of natural knowledge has been effected by the successive or concurrent efforts of men, whose minds are characterised by tendencies so opposite that they are forced into conflict with one another. The one intellect is imaginative and synthetic; its chief aim is to arrive at a broad and coherent conception of the relations of phenomena; the other is positive, critical, analytic, and sets the highest value upon the exact determination and statement of the phenomena themselves.

If the man of the critical school takes the pithy aphorism “*Melius autem est naturam secare quam*

abstrahere"¹ for his motto, the champion of free speculation may retort with another from the same hand, "Citius enim emergit veritas e falsitate quam e confusione;"² and each may adduce abundant historical proof that his method has contributed as much to the progress of knowledge as that of his rival. Every science has been largely indebted to bold, nay, even to wild hypotheses, for the power of ordering and grasping the endless details of natural fact which they confer; for the moral stimulus which arises out of the desire to confirm or to confute them; and last, but not least, for the suggestion of paths of fruitful inquiry, which, without them, would never have been followed. From the days of Columbus and Kepler to those of Oken, Lamarck, and Boucher de Perthes, Saul, who, seeking his father's asses, found a kingdom, is the prototype of many a renowned discoverer who has lighted upon verities while following illusions, which, had they deluded lesser men, might possibly have been considered more or less asinine.

On the other hand, there is no branch of science which does not owe at least an equal obligation to those cool heads, which are not to be seduced into the acceptance of symmetrical formulæ and bold generalisations for solid truths because of their brilliancy

¹ *Novum Organon*, li.

² *Partis instaurationis secundæ delineatio*.

and grandeur ; to the men who cannot overlook those small exceptions and insignificant residual phenomena which, when tracked to their causes, are so often the death of brilliant hypotheses ; to the men, finally, who, by demonstrating the limits to human knowledge which are set by the very conditions of thought, have warned mankind against fruitless efforts to overstep those limits.

Neither of the eminent men of science, whose opinions are at present under consideration, can be said to be a one-sided representative either of the synthetic or of the analytic school. Haeckel, no less than Virchow, is distinguished by the number, variety, and laborious accuracy of his contributions to positive knowledge ; while Virchow, no less than Haeckel, has dealt in wide generalisations, and, until the obscurantists thought they could turn his recent utterances to account, no one was better abused by them as a typical free-thinker and materialist. But, as happened to the two women grinding at the same mill, one has been taken and the other left. Since the publication of his famous oration, Virchow has been received into the bosom of orthodoxy and respectability, while Haeckel remains an outcast !

To those who pay attention to the actual facts of the case, this is a very surprising event ; and I confess that nothing has ever perplexed me more than the reception

which Professor Virchow's oration has met with, in his own and in this country ; for it owes that reception, not to the undoubted literary and scientific merits which it possesses, but to an imputed righteousness for which, so far as I can discern, it offers no foundation. It is supposed to be a recantation ; I can find no word in it which, if strictly construed, is inconsistent with the most extreme of those opinions which are commonly attributed to its author. It is supposed to be a deadly blow to the doctrine of evolution ; but, though I certainly hold by that doctrine with some tenacity, I am able, *ex animo*, to subscribe to every important general proposition which its author lays down.

In commencing his address, Virchow adverts to the complete freedom of investigation and publication in regard to scientific questions which obtains in Germany ; he points out the obligation which lies upon men of science, even if for no better reason than the maintenance of this state of things, to exhibit a due sense of the responsibility which attaches to their speaking and writing, and he dwells on the necessity of drawing a clear line of demarcation between those propositions which they have a fair right to regard as established truths, and those which they know to be only more or less well-founded speculations. Is any one prepared to deny that this is the first great commandment of the