

**ORGAN AND
FUNCTION: A STUDY
OF EVOLUTION**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649119202

Organ and function: a study of evolution by B. D. Hahn

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

B. D. HAHN

**ORGAN AND
FUNCTION: A STUDY
OF EVOLUTION**

7
ORGAN AND FUNCTION

A STUDY OF EVOLUTION

BY

B. D. HAHN



LIBRARY
KNOX COLLEGE
TORONTO, CAN.

BOSTON
SHERMAN, FRENCH & COMPANY

1911

TO
MY WIFE
HARRIET CHAPMAN HAHN

PREFACE

DEFINITION is important and needs illustration. Automatic evolution is the production of form and order in nature by the action of force upon inert matter. One virtue this definition of the subject has in common with all others is that it has no content. Apparently we have the sides of a box without top or bottom. What is matter? and what is nature? Also there is mental action without ascertained conditions. It is the train not the landscape which rushes along at sixty miles an hour.

Automatic evolution is the hope of research. One grand dynamic movement throughout the one visible universe and one principle for the understanding, involving as well the action of the mind, prepossesses the imagination. Research is bound to find the immediate, material cause of each event. Each unexplained item is set aside in the hope that further inquiry may solve the remaining difficulty. The practice of setting aside becomes a habit. The distinction between facts which are incompatible with a hypothesis and facts which are distinctly hostile to it is overlooked until a body

PREFACE

of evidence has accumulated which overbalances the top-heavy supposition. The doctrine of the development of nature by resident forces is at that point. Mutation has many advocates, but mutation is fractional creationism. A cord of wood is a cord of wood whether it be cord-wood or kindling-wood. To split an event is not to explain it. Acquired characters cannot be inherited, therefore, the germ-plasm hypotheses. The critical moment of evolutionary changes is to be found in a mysterious, unexplored, infinitesimal world. The question is appealed from the realm of observation to that of conjecture. This change of venue puts the issue beyond the range of observation. And there, unless one is prepared to adopt the notion that a chemical formula is a sufficient definition of life, only a miracle can produce life. This conclusion is usually obscured and evaded by the phrase "unknown factor of evolution." At some moment and in many particulars, in the exposition of evolution, natural characters must be regarded as potencies instead of actualities, that is, as pure conceptions of the understanding. All the threads of connection must be carried around through the regions of metaphysics to connect with the next event. And the whole fabric is founded upon the proposition that order is a form of accident and the lower has the same

PREFACE

content as the higher. The one argument offered to maintain this absurdity is the persistence of force. The influence of this presumption in favor of automatic evolution is too well illustrated by the confession of the chief authority in embryology, Prof. Haeckel. He admits that he tampered with the evidence. The apology is worse than the offence. He puts in a pound of accusation with an ounce of acknowledgment. He says in effect, "I may have been bad, but I have plenty of company." But in that region of investigation, where resemblances are at best vague and inconstant, it is not surprising if men too high-minded to manipulate the facts should find some reflection of a favorite doctrine in an obscure field of research. N rays were discovered immediately after the discovery of X rays.

The achievements of naturalists have been stupendous. They have immensely increased our knowledge of material facts and principles. More than a generation has passed since they abandoned all accepted doctrines and proceeded to build up a science of the world by a rigorous induction of observed facts. In pursuit of that object they have been thrust into metaphysics. Evolution is now both a creed and a tradition. The facts which they have found are so subtle and complex in relation and often obviously arranged for predeter-

PREFACE

mined results that the principle of explanation must be sought in the world of mind and purpose. In the effort to avoid such a conclusion conjecture has been taxed to absurdity until the student is tempted to say, "what a wonderful deal of speculation to a pennyworth of material facts."

A preface is customary, usually unnecessary and always an annoyance. In conclusion, then, let me say, if I were to express my admiration for those naturalists whose views I have ventured to criticise I must write another chapter, and if I acknowledged my indebtedness to them I should be bankrupt of thanks.

B. D. II.

CONTENTS

CHAPTER	PAGE
ORGAN AND FUNCTION	1
I. BEAUTY AND DESIGN	4
II. UTILITY AND NATURAL SELECTION	22
III. ORGAN AND FUNCTION	44
IV. ORGANISM AND ENVIRONMENT .	57
V. VARIATION AND CHANCE	59
VI. VARIATION AND HEREDITY	69
VII. REPRODUCTION AND THE GENETIC	
BOND	102
VIII. REPRODUCTION AND REMINISCENCE	128
IX. BRAIN AND THOUGHT	145
X. PROGRAM AND PLATFORM	156
XI. REPLIES	179