

# FIRST PRINCIPLES

BY

HERBERT SPENCER



NEW YORK  
P. F. COLLIER & SON

MCMII

10

BY

HERBERT SPENCER



NEW YORK

M C M I I

10



## FIRST PRINCIPLES



## PREFACE TO THE FOURTH EDITION

TO THE first edition of this work there should have been prefixed a definite indication of its origin; and the misapprehensions that have arisen in the absence of such indication ought before now to have shown me the need of supplying it.

Though reference was made, in a note on the first page of the original preface, to certain Essays entitled "Progress: its Law and Cause," and "Transcendental Physiology," as containing generalizations which were to be elaborated in the "System of Philosophy" there set forth in programme, yet the dates of these Essays were not given; nor was there any indication of their cardinal importance as containing, in a brief form, the general Theory of Evolution. No clear evidence to the contrary standing in the way, there has been very generally uttered and accepted the belief that this work, and the works following it, originated after, and resulted from, the special doctrine contained in Mr. Darwin's "Origin of Species."

The Essay on "Progress: its Law and Cause," coextensive in the theory it contains with Chapters XV., XVI., XVII. and XX., in Part II. of this work, was first published in the "Westminster Review" for April, 1857; and the Essay in which is briefly set forth the general truth elaborated in Chapter XIX. originally appeared, under the title of "The Ultimate Laws of Physiology," in the "National Review" for October, 1857. Further I may point out that in the first edition of "The Principles of Psychology," published in July, 1855, mental phenomena are interpreted entirely from the evolution point of view; and the words used in the titles of sundry chapters imply the presence, at

## PREFACE TO THE FOURTH EDITION

hat date, of ideas more widely applied in the Essays just named. As the first edition of "The Origin of Species"

not make its appearance till October, 1859, it is manifest at the theory set forth in this work and its successors had origin independent of, and prior to, that which is commonly assumed to have initiated it.

The distinctness of origin might, indeed, have been inferred from the work itself, which deals with Evolution

large—Inorganic, Organic, and Super-organic—in terms

Matter and Motion; and touches but briefly on those

articular processes so luminously exhibited by Mr. Dar-

in. In § 159 only (p. 447), when illustrating the law of

The Multiplication of Effects," as universally displayed,

ave I had occasion to refer to the doctrine set forth in the

Origin of Species": pointing out that the general cause

had previously assigned for the production of divergent

arieties of organisms would not suffice to account for all

e facts without that special cause disclosed by Mr. Dar-

in. The absence of this passage would, of course, leave

serious gap in the general argument; but the remainder

f the work would stand exactly as it now does.

I do not make this explanation in the belief that the

revailing misapprehension will thereby soon be rectified;

r I am conscious that, once having become current, wrong

eliefs of this kind long persist—all disproofs notwithstanding.

Nevertheless, I yield to the suggestion that, unless

state the facts as they stand, I shall continue to counte-

ance the misapprehension, and cannot expect it to cease.

With the exception of unimportant changes in one of the

otes, and some typographical corrections, the text of this

dition is identical with that of the last. I have, however,

added an Appendix dealing with certain criticisms that

ave been passed upon the general formula of Evolution,

d upon the philosophical doctrine which precedes it.

*May, 1880.*

## PREFACE TO THE AMERICAN EDITION

THE present volume is the first of a series designed to unfold the principles of a new philosophy. It is divided into two parts: the aim of the first being to determine the true sphere of all rational investigation, and of the second, to elucidate those fundamental and universal principles which science has established within that sphere, and which are to constitute the basis of the system. The scheme of truth developed in these *First Principles* is complete in itself, and has its independent value; but it is designed by the author to serve for guidance and verification in the construction of the succeeding and larger portions of his philosophic plan.

Having presented in his introductory volume so much of the general principles of Physics as is essential to the development of his method, Mr. Spencer enters upon the subject of Organic Nature. The second work of the series is to be the *Principles of Biology*—a systematic statement of the facts and laws which constitute the Science of Life. It is not to be an encyclopedic and exhaustive treatise upon this vast subject, but such a compendious presentation of its data and general principles as shall interpret the method of nature, afford a clear understanding of the question involved, and prepare for further inquiries. This work is now published in quarterly numbers, of from 80 to 96 pages. Four of these parts have already appeared, and some idea of the course and character of the discussion may be formed by observing the titles to the chapters, which are as follows:

PART FIRST: I. Organic Matter; II. The Actions of Forces on Organic Matter; III. The Reactions of Organic



Matter on Forces; IV. Proximate Definition of Life; V. The Correspondence between Life and its Circumstances; VI. The Degree of Life varies with the Degree of Correspondence; VII. Scope of Biology. PART SECOND: I. Growth; II. Development; III. Function; IV. Waste and Repair; V. Adaptation; VI. Individuality; VII. Genesis; VIII. Heredity; IX. Variation; X. Genesis, Heredity, and Variation; XI. Classification; XII. Distribution.

The Principles of Biology will be followed by the Principles of Psychology; that is, Mr. Spencer will pass from the consideration of Life to the study of Mind. This subject will be regarded in the light of the great truths of Biology previously established; the connections of life and mind will be traced; the evolution of the intellectual faculties in their due succession, and in correspondence with the conditions of the environment, will be unfolded, and the whole subject of mind will be treated, not by the narrow metaphysical methods, but in its broadest aspect, as a phase of nature's order which can only be comprehended in the light of her universal plan.

The fourth work of the series is Sociology, or the science of human relations. As a multitude is but an assemblage of units, and as the characteristics of a multitude result from the properties of its units, so social phenomena are consequences of the natures of individual men. Biology and Psychology are the two great keys to the knowledge of human nature; and hence from these Mr. Spencer naturally passes to the subject of Social Science. The growth of society, the conditions of its intellectual and moral progress, the development of its various activities and organizations, will be here described, and a statement made of those principles which are essential to the successful regulation of social affairs.

Lastly, in Part Fifth, Mr. Spencer proposes to consider the principles of Morality. The truths furnished by Biology, Psychology, and Sociology will be here brought to bear, to determine correct rules of human action, the prin-

ciples of private and public justice, and to form a true theory of right living.

The reader will obtain a more just idea of the extent and proportions of Mr. Spencer's philosophic plan, by consulting his prospectus at the close of the volume. It will be seen to embrace a wide range of topics, but in the present work, and in his profound and original volumes on the "Principles of Psychology" and "Social Statics," as also throughout his numerous *Essays and Discussions*, we discover that he has already traversed almost the entire field, while to elaborate the whole into one connected and organized philosophical scheme is a work well suited to his bold and comprehensive genius. With a metaphysical acuteness equalled only by his immense grasp of the results of physical science—alike remarkable for his profound analysis, constructive ability, and power of lucid and forcible statement, Mr. Spencer has rare endowments for the task he has undertaken, and can hardly fail to embody in his system the largest scientific and philosophical tendencies of the age.

As the present volume is a working-out of universal principles to be subsequently applied, it is probably of a more abstract character than will be the subsequent works of the series. The discussions strike down to the profoundest basis of human thought, and involve the deepest questions upon which the intellect of man has entered. Those unaccustomed to close metaphysical reasoning may therefore find parts of the argument not easy to follow, although it is here presented with a distinctness and a vigor to be found perhaps in no other author. Still, the chief portions of the book may be read by all with ease and pleasure, while no one can fail to be repaid for the persistent effort that may be required to master the entire argument. All who have sufficient earnestness of nature to take interest in those transcendent questions which are now occupying the most advanced minds of the age will find them here considered with unsurpassed clearness, originality, and power.

The invigorating influence of philosophical studies upon

the mind, and their consequent educational value, have been long recognized. In this point of view the system here presented has high claims upon the young men of our country—embodying as it does the latest and largest results of positive science; organizing its facts and principles upon a natural method, which places them most perfectly in command of memory; and converging all its lines of inquiry to the end of a high practical beneficence—the unfolding of those laws of nature and human nature which determine personal welfare and the social polity. Earnest and reverent in temper, cautious in statement, severely logical and yet presenting his views in a transparent and attractive style which combines the precision of science with many of the graces of light composition, it is believed that the thorough study of Spencer's philosophical scheme would combine, in an unrivalled degree, those prime requisites of the highest education, a knowledge of the truths which it is most important for man to know, and that salutary discipline of the mental faculties which results from their systematic acquisition.

We say the young men of *our country*, for, if we are not mistaken, it is here that Mr. Spencer is to find his largest and fittest audience. There is something in the bold handling of his questions, in his earnest and fearless appeal to first principles, and in the practical availability of his conclusions, which is eminently suited to the genius of our people. It has been so in a marked sense with his work on Education, and there is no reason why it should not be so in an equal degree with his other writings. They betray a profound sympathy with the best spirit of our institutions, and that noble aspiration for the welfare and improvement of society which can hardly fail to commend them to the more liberal and enlightened portions of the American public.

## PREFACE TO THE SECOND EDITION

WHEN the First Edition of this work was published, I supposed that the general theory set forth in its Second Part was presented in something like a finished form; but subsequent thought led me to further developments of much importance, and disclosed the fact that the component parts of the theory had been wrongly put together. Even in the absence of a more special reason, I had decided that, on the completion of the "Principles of Biology," it would be proper to suspend for a few months the series I am issuing, that I might make the required reorganization. And when the time had arrived, there had arisen a more special reason, which forbade hesitation. Translations into the French and Russian languages were about to be made—had, in fact, been commenced; and had I deferred the reorganization the work would have been reproduced with all its original imperfections. This will be a sufficient explanation to those who have complained of the delay in the issue of the "Principles of Psychology."

The First Part remains almost untouched: two verbal alterations only, on pp. 43 and 99, having been made to prevent misconceptions. Part II., however, is wholly transformed. Its first chapter, on "Laws in General," is omitted, with a view to the inclusion of it in one of the later volumes of the series. Two minor chapters disappear. Most of the rest are transposed, in groups or singly. And there are nine new chapters embodying the further developments, and serving to combine the pre-existing chapters into a

changed whole. The following scheme, in which the new chapters are marked by italics, will give an idea of the transformation:

FIRST EDITION.	SECOND EDITION.
Laws in General.	<i>Philosophy Defined.</i>
The Law of Evolution.	<i>The Data of Philosophy.</i>
The Law of Evolution (continued).	
The Causes of Evolution.	
Space, Time, Matter, Motion, and Force.	Space, Time, Matter, Motion, and Force.
The Indestructibility of Matter.	The Indestructibility of Matter.
The Continuity of Motion.	The Continuity of Motion.
The Persistence of Force.	The Persistence of Force.
	<i>The Persistence of Relations among Forces.</i>
The Correlation and Equivalence of Forces.	The Transformation and Equivalence of Forces.
The Direction of Motion.	The Direction of Motion.
The Rhythm of Motion.	The Rhythm of Motion.
	<i>Recapitulation, Criticism, and Recommendation.</i>
The Conditions essential to Evolution.	<i>Evolution and Dissolution.</i>
	<i>Simple and Compound Evolution.</i>
	The Law of Evolution.
	The Law of Evolution (con- tinued).
	The Law of Evolution (con- tinued).
	<i>The Law of Evolution concluded.</i>
	<i>The Interpretation of Evolution.</i>
The Instability of the Homogeneous.	The Instability of the Homogeneous.
The Multiplication of Effects.	The Multiplication of Effects.
Differentiation and Integration.	Segregation.
Equilibration.	Equilibration.
	<i>Dissolution.</i>
Summary and Conclusion.	Summary and Conclusion (Rewritten).

Of course throughout this reorganized Second Part the numbers of the sections have been changed, and hence those who possess the "Principles of Biology," in which many references are made to passages in "First Principles,"

would be inconvenienced by the want of correspondence between the numbers of the sections in the original edition and in the new edition, were they without any means of identifying the sections as now numbered. The annexed list, showing which section answers to which in the two editions, will meet the requirement:

First Edit.	Second Edit.	First Edit.	Second Edit.	First Edit.	Second Edit.	First Edit.	Second Edit.	First Edit.	Second Edit.
§43	§119	§56	107	§72	§58	§92	§81	§121	§161
44	117		108	73	59	93	82	122	162
45	118		109	74	60	94	83	123	163
46	120		110	75	61	95	84	124	164
47	121		111	76	62	96	85	125	165
48	122		112	77	66	97	86	126	166
49	123		113	78	67	98	87	127	167
50	124	61	114	79	68	99	88	128	168
51	125		115	80	69	109	149	129	169
52	126		46	81	70	110	150	130	170
53	128		47	82	71	111	151	131	171
54	129		48	83	72	112	152	132	172
55	130		49	84	73	113	153	133	173
	131		50	85	74	114	154	134	174
	132		52	86	75	115	155	135	175
	133		53	87	76	116	156	136	176
	134		54	88	77	117	157	137	177
	135		55	89	78	118	158		183
	136		56	90	79	119	159	144	193
	137	71	57	91	80	120	160	145	194

The original stereotype plates have been used wherever it was possible: and hence the exact correspondence between the two editions in many places, even where adjacent pages are altered.<sup>1</sup>

*London, November, 1867.*

---

<sup>1</sup> This refers to the London editions only.—EDITOR.



# CONTENTS

---

## PART I.—THE UNKNOWNABLE

CHAPTER	PAGE
I.—RELIGION AND SCIENCE . . . . .	17
II.—ULTIMATE RELIGIOUS IDEAS . . . . .	38
III.—ULTIMATE SCIENTIFIC IDEAS . . . . .	60
IV.—THE RELATIVITY OF ALL KNOWLEDGE . . . . .	80
V.—THE RECONCILIATION . . . . .	108

---

## PART II.—THE KNOWABLE

I.—PHILOSOPHY DEFINED . . . . .	134
II.—THE DATA OF PHILOSOPHY . . . . .	141
III.—SPACE, TIME, MATTER, MOTION, AND FORCE . . . . .	163
IV.—THE INDESTRUCTIBILITY OF MATTER . . . . .	177
V.—THE CONTINUITY OF MOTION . . . . .	184
VI.—THE PERSISTENCE OF FORCE . . . . .	194
VII.—THE PERSISTENCE OF RELATIONS AMONG FORCES . . . . .	200
VIII.—THE TRANSFORMATION AND EQUIVALENCE OF FORCES . . . . .	203
IX.—THE DIRECTION OF MOTION . . . . .	228
X.—THE RHYTHM OF MOTION . . . . .	254
XI.—RECAPITULATION, CRITICISM, AND RECOMMENCEMENT . . . . .	276
XII.—EVOLUTION AND DISSOLUTION . . . . .	281
XIII.—SIMPLE AND COMPOUND EVOLUTION . . . . .	289
XIV.—THE LAW OF EVOLUTION . . . . .	308



CHAPTER	PAGE
XV.—THE LAW OF EVOLUTION CONTINUED . . . .	329
XVI.—THE LAW OF EVOLUTION CONTINUED . . . .	360
XVII.—THE LAW OF EVOLUTION CONCLUDED . . . .	379
XVIII.—THE INTERPRETATION OF EVOLUTION . . . .	394
XIX.—THE INSTABILITY OF THE HOMOGENEOUS . . . .	398
XX.—THE MULTIPLICATION OF EFFECTS . . . .	427
XXI.—SEGREGATION . . . . .	454
XXII.—EQUILIBRATION . . . . .	477
XXIII.—DISSOLUTION . . . . .	511
XXIV.—SUMMARY AND CONCLUSION . . . . .	530
APPENDIX . . . . .	551
INDEX . . . . .	595