

A Popular Epitome

6^d.

AN INTRODUCTION TO THE
PHILOSOPHY OF
HERBERT SPENCER



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PREFACE

IN the preface (dated Stanford University, California, April, 1894) to the first edition of this little book, I described it as "an outgrowth of lectures delivered from time to time on various aspects of the subject with which it deals," and explained that the writing of it had been undertaken "to meet what seems to me to be a very healthy popular demand." I went on to speak of the growth of public interest in the theory of Evolution in general, and in the writings of Herbert Spencer in particular, and of "the desire, often of late expressed to me by thoughtful and inquiring persons of broad outlook but limited leisure, to know more of Mr. Spencer and his work, of the relative and historic relations of his philosophy, and especially of its significance in connection with those questions with which we are all of us directly concerned—the questions of conduct, society, and religion."

I then described the purpose of my book in the paragraphs which I here reproduce:—

"But here arises a difficulty. Mr. Spencer's writings are and must be repel-

lent to many would-be readers on account of their vast range and encyclopedic character. The comparatively unpractised and totally unguided student, set face to face with a whole shelf full of ponderous volumes, covering with great minuteness of detail an immense area of speculation and research, and couched in a singularly condensed and not very attractive style, is apt to pause before committing himself to a long and perilous journey over untried country—a journey probably fraught with unforeseen dangers, and for which he may well feel himself imperfectly prepared. Did he but possess some outline-map, however scanty, of the region to be traversed; did he but know something, to begin with, of the principal natural features likely to be encountered on the way, the whole undertaking would appear to him in a far more favourable light. He would then at least realise to some extent the direction he was to take, and feel the better equipped to grapple with whatever adventures might await him in his long and arduous course.

"In the hope of furnishing some such

outline-map or hand-guide the following pages are written. My object is, therefore, a very unambitious one. I do not propose to trace over the arguments or summarise the conclusions of the Spencerian philosophy. Still less do I feel called upon to enter into any discussion of its more debatable aspects. Nor, beyond all things, is it my intention to offer a substitute for the Synthetic System itself. Those who would really understand Mr. Spencer's ideas must themselves go to his writings; no short cut can be pointed out that can be other than unsatisfactory; no patent method can be devised that will relieve the student of the need for a first-hand study of Mr. Spencer's own arguments, or even render such first-hand study a very light and easy task. But experience on the platform and in private conversations has shown me that something may be done to smooth the way for the untrained and unwary feet. The sympathetic inquirer may be put into direct contact with the vital germ, or essential principle, of Mr. Spencer's thought; he may be led to realise how that thought took shape; he may be introduced to its genetic history; he may be placed in the position to understand its relation to modern tendencies in science and philosophy, and to appreciate the direction of its influence upon the practical problems of the every-day world. Guidance may thus be furnished of a helpful character,

and the approach to the *Synthetic Philosophy* made much less thorny and toilsome than it would otherwise be.

"If the present introduction succeeds to any extent in this humble labour of usefulness—if it serves to bring others under the more immediate influence of a teacher to whom my own personal debt is so great—its existence will be amply justified."

I have good reason to believe that, in the ten years which have passed since its publication, its existence *has* been justified in the ways suggested; and it is in the hope of still further widening its field of usefulness that I have gladly consented to the present cheap edition.

I am anxious to have it understood, however, that this is not by any means a mere reprint of the original work. I have revised it carefully throughout; I have endeavoured in several places, by additions and changes, to make my exposition fuller and completer than it was; and I have brought the whole book up to date. The greatest alterations have been made in the first half. The biographical chapter has been entirely re-written; and in this I have dealt with Spencer's life and personality more freely than I felt it proper to do while he was still alive. Chapters II. and III. have also been much changed; a good deal of fresh matter has been introduced; and several sections have been written quite anew. I hope, and believe, that in

this way I have made the book at once more interesting and more helpful.

At the same time, it must be distinctly borne in mind that I have in no wise changed its plan or enlarged its scope, as set forth in the paragraphs quoted from the original preface. I was a very thorough-going Spencerian when the volume was first written. That was, as I have said, ten years ago; and my attitude, in various respects, is far less discipular now. Yet I think, considering the purpose I had in view in writing it, it would be undesirable to confuse

my work by blending criticism with exposition. My aim is still, therefore, to set forth and illustrate Spencer's thought, not to pass judgment upon it, though in places (as notably in the closing chapter) I have not hesitated to travel beyond Spencer himself, and to point out what seem to me to be some of the natural implications of his teaching. As an Introduction, in the most modest sense of the word, the book was first published. As an Introduction, in that same most modest sense, it must still be regarded.

WILLIAM HENRY HUDSON.

Hampstead, August, 1904.

An Introduction to the Philosophy of Herbert Spencer

CHAPTER I.

HERBERT SPENCER: A BIOGRAPHICAL SKETCH

"It has seemed to me that a natural history of myself would be a useful accompaniment to the books which it has been the chief occupation of my life to write." In this opening sentence of the preface to his *Autobiography*, Herbert Spencer explained and justified the publication of the two massive volumes in which, with admirable frankness and extraordinary wealth of detail, he traced his career, analysed his character, and set forth the dominating purposes of his work. As I pointed out at the time of the appearance of this remarkable piece of self-portraiture,¹ Spencer was entirely right in emphasising its practical utility for the student of his philosophy, who will, indeed, find it beyond question the best possible introduction to the Synthetic System itself. Here we shall merely be adopting his own view of the intimacy and significance of the connection between the man and his work if, on the threshold of our examination of his writings, we pause to take a brief survey of his life. From the purely personal standpoint, it is true, such a

record may very probably seem deficient in those more dramatic elements of interest for which we are accustomed to look in the history of any man who has left a profound impress upon the civilisation of his age. Spencer's biography is, in fact, essentially the biography of the thinker; it is little more than the story of his preparation for his great life-work, of the growth and consolidation of his ideas, of the inception of his philosophic system, and of the gradual progress of this, through difficulties all but insuperable, stage by stage, to its long-delayed completion. But, apart from the fact that it may serve to some extent to satisfy a natural curiosity concerning the life and character of a man whose writings have marked an epoch in the development of the world's thought, our sketch should prove of special value in one important respect. By relating the *Synthetic Philosophy* directly to the career and personality of its author, it should enable us to appreciate a feature of it which otherwise we should be very likely to overlook—the grandeur of that colossal achievement upon the moral side.

¹ *Independent Review*, July, 1904.

I.

Born in Derby, on April 27th, 1820, and the only child of his parents to survive infancy, Herbert Spencer came of a stock long marked by intellectual integrity, fearlessness, and independence; what he himself calls his "ingrained non-conformity" of nature being, as ancestral records show, a well-defined and persistent family trait, which, clearly exhibited in several lines of progenitors, was extremely pronounced among the Spencers in the generation immediately preceding his own. His father, William George Spencer, was a man of strong individuality, great inventive powers, and an unconventionality of habit so decided that "he would never take off his hat to anyone, no matter of what rank," or "address anyone as *Esquire* or *Reverend*."¹ He was by profession a teacher, holding views, however, of the aims and methods of education greatly in advance of the average scholastic theories of his time. In opposition to the then common practice of burdening the childish memory with large numbers of unconnected facts, he maintained that the first business of education was rather to train the faculties of observation and reason in such manner that the unfolding mind should learn not only to acquire, but also to organise, knowledge for itself. Hence he regarded it as of more importance to foster originality and the free play of thought, to excite interest, and to strengthen the reflective powers, than to store the memories of his pupils with any quantity of merely bookish erudition. These points are particularly worthy of attention, since it was under the immediate influence of the elder Spencer that

the boy's mind began to develop. Unlike most men of genius, the Philosopher of Evolution appears to have owed little or nothing, either through inheritance or by training, to his mother; while in countless ways, in both intellect and character, he showed himself his father's son. There can, I think, be no question that his own early environment, and the power of his father's teaching and example, had not a little to do with the formulation of some of his own well-known views on education.

It has been frequently said that it was owing very largely to the child's precarious health that he was permitted to grow into boyhood without subjection to the mental coercion and cramming then so much in vogue. The truth of the matter is that he was not specially delicate in early years, and that his father's course of procedure was dictated wholly by fear of the physical and mental consequences which might result from application of the forcing system, to which he was totally opposed. So little pressure was, indeed, brought to bear upon him that, measured by the standard of mere acquisition, he was a very backward child. He was seven years old before he could read; and after that he does not seem to have exhibited much of that inherent fondness for books which is a common characteristic of the alert and thoughtful boy. It is not unamusing to find that the first volume which prompted him to read of his own accord was good, moral, prosy old *Sandford and Merton*—a work which, I suspect, has now quite outgrown its popularity, but which for a long time contrived, in some most unaccountable way, to hold the affections of large portions of the English-speaking youth; and that when, somewhat later, he began to seek gratification for his

¹ *Autobiography*, i., 47.

awakening taste for fiction—by stealth, for his father did not approve of novels—*The Castle of Otranto* and the romances of Mrs. Radcliffe were among the books which he read secretly, after being sent to bed. But already, as always, his chief interest lay in the world of nature rather than in that of literature. To watch the growth of a plant or the habits of an insect gave him greater pleasure, even then, than could be yielded by any printed page. “Most children,” he remarks, “are instinctively naturalists,”¹ though their enthusiasm too often wanes from lack of opportunity or encouragement. The elder Spencer, wiser than most parents in such matters, was careful to cultivate his son’s early-shown love of natural history.

Though between the ages of seven and thirteen Herbert was sent pretty regularly to day-school (where, it is suggestive to learn, his insubordination of temper led to “chronic disobedience”), his real education was undoubtedly that which he received from his father at home. There, apart from direct instruction given—which, while in many respects exceedingly narrow, was, on the whole, of a kind calculated to feed and strengthen such a mind—the general conditions were distinctly favourable to mental and moral growth. Into the house came regularly, week by week and month by month, the more advanced of the medical, scientific, and literary periodicals, and into these the boy was permitted to delve at his will. More important than his varied and somewhat capricious reading, however, were the table conversations to which he early became an attentive listener, and in which he was presently allowed to bear his part. George Spencer

and his brothers—all men of powerful intellects and pronounced views, and all Radicals in politics and broad-minded in their theology—were accustomed, during their family gatherings, to discuss, with absolute freedom of thought and expression, all the paramount issues of the day, scientific and social, ethical and religious; and young Spencer was thus habituated from his earliest boyhood to the treatment as open questions of the grave matters which were then uppermost in the minds of thoughtful people. At a time when most children are being taught, beyond all things else, the value of authority and the sanctity of tradition, he was already inured to the freest and keenest atmosphere of discussion, and to the bold and direct criticism, in face of the settled opinions of the majority, of even the most time-honoured beliefs. This inevitably strengthened his natural self-reliance, still further quickened his critical powers, stimulated his tendency towards independent inquiry into things, and increased his hatred of having opinions imposed upon him ready-made and from the outside.

During this period his religious experiences were curious enough to call for passing remark. Both his father and his mother had been brought up Methodists; but while the latter remained an adherent of her old faith, the former, urged by a constantly growing dislike of much in the Methodist system and teaching, had forsaken that body to become a regular attendant at the Friends’ Meeting House, drawn to the Society, not by any sympathy with its tenets, but by its individualism and complete freedom from ecclesiastical government. As he did not care to assume such control of the child’s spiritual interests as would ignore the

¹ *Autobiography*, i., 71.

mother's claim, a compromise was tacitly agreed to, and for some three years, Sunday after Sunday, Herbert went in the morning to the Meeting and in the evening to the Methodist Chapel. "I do not know that any marked effect on me followed," Spencer writes in comment, "further, perhaps, than that the alternation tended to enlarge my views by presenting me with differences of opinion and usage."¹ We may surmise, however, that the indirect tendency of such an experience would be towards the undermining of the authority of theological dogma in every form.

It would be interesting, did space permit, to pause here to consider the striking contrast presented by the early trainings of the two most acute and original thinkers in the domain of philosophy produced by England during the past century—the subject of this sketch and John Stuart Mill. Mill, it will be remembered, was also educated under his father's immediate supervision; was also surrounded in childhood by men of strong character and independent thought; and early learned to disregard tradition and to turn the lens of criticism upon the world's most cherished creeds. But here the analogy practically ends. Mill's mind was forced as in a hothouse; Spencer's was allowed to develop in the open air, and with the least possible pressure from without. Mill, precocious in all the learning of the schools, read Latin and Greek at an age when Spencer could scarcely spell out his own language. Mill was brought up to regard the whole vast system of popular theology as a mere congeries of idle and ridiculous fables; while Spencer grew up in personal relationship with Evan-

gelical Christianity in two of its most diverse forms. And, finally, Mill was taught to look upon all the problems of social and political science in a doctrinaire spirit, and as susceptible of rapid and entire resettlement; while Spencer was rather encouraged to regard every possible question on every possible subject as an open one, to be approached from many points of view, and investigated under many different lights. The contrast thus presented might be elaborated in detail, with results which, to those interested in pedagogy, could hardly fail to be instructive; but it would lead us too far out of our proper way to do more than touch upon it here. One special difference may, however, be accentuated. Mill's early training, unlike Spencer's, was almost exclusively in books. The regret which he expressed in his *Autobiography*, that he had never known the discipline of any practical scientific work, has certainly deep significance, coming from such a source.

II.

At the age of thirteen, a complete change in the course of his education seeming desirable, Herbert was sent from home and placed under the charge of his uncle, the Rev. Thomas Spencer, at that time perpetual curate of Hinton Charterhouse, near Bath. Thomas, like the rest of the Spencer family, was a man of strongly-marked individuality, and, though an adherent of the Evangelical school, was so strange a specimen of his class that he was commonly regarded as hopelessly eccentric, if not indeed a trifle mad. A Radical at a period when nearly the whole Established Church was in bondage to the High Tory party; a teetotaller when the temperance

¹ *Autobiography*, i., 83, 84.

movement was condemned by the religious world at large as a subtle form of Atheism; a Chartist, an avowed Free Trader, and (with a single exception) "the only clergyman out of fifteen thousand who contended that the people of England, mostly poor, should not be compelled to buy corn at artificially enhanced prices to enrich English landlords";¹ a vigorous and indefatigable lecturer and writer upon all matters touching the physical, moral, and social welfare of the people; he was certainly a man marked out with sufficient clearness from the rank and file of the ecclesiastics of his day. My own father, who knew him well in the forties, often in my hearing bore testimony to his great earnestness and devotion—qualities which, indeed, led him into such excesses of labour for the causes he had at heart that, never of robust constitution, he broke down ultimately from overwork, and died at the comparatively early age of fifty-seven.

At Hinton, Herbert now spent three quiet, but, from the point of view of intellectual and moral development, by no means uneventful, years; for the course of study pursued was more regular and systematic, and the discipline more rigorous, than had been the case at home. His successes and his failures in the subjects taken up continued to be alike significant. To get a lesson by heart was still almost intolerable, and he rarely recited anything correctly which had been learned by rote; but, on the other hand, he soon exhibited astonishing quickness and grasp in all matters demanding observation, thought, and reasoning power. In Greek, Latin, and French, to which a portion of his

time was daily given, very little progress was made; a chief cause of his dislike of languages being his "aversion to everything purely dogmatic."² But where the constructive and co-ordinating faculties were called into play—as in mathematics and mechanics—his advance was rapid and continuous. An incident which he himself has placed on record, and which occurred when he was between thirteen and fourteen, well illustrates the salient qualities of his mind and character—his penetration, fearless self-confidence, and disregard of all commonly-accepted authority, whether of book or teacher. While reading Arnott's *Physics* with his uncle, he boldly challenged the doctrine of inertia, as there expounded; and when his uncle came to Arnott's rescue, the objection was firmly adhered to in the teeth of an official opposition which would have reduced most boys to silence. With a mind so clear, alert, and independent, it is not surprising that he should have taken a keen delight in breaking away from the travelled roads to strike out new mathematical problems for himself, and elaborate original solutions for old ones.

The design for a time entertained by Thomas Spencer, himself an academic honours man, and to a certain extent an advocate of classical culture, of sending Herbert to Cambridge was gradually relinquished, as the uncle came to realise the lad's unfitness for a university career; and Spencer thus adds another to the long list of English leaders of thought who owe nothing directly to either of our ancient institutions of learning. That by foregoing a university

¹ *Autobiography*, i., 30.

² *Autobiography*, i., 108, 109.

curriculum he sacrificed something, more especially perhaps upon the social side, will be generally conceded; but it may, I think, fairly be urged that what he lost was, on the whole, trifling and unimportant in comparison with what he gained. The Cambridge of sixty years ago was an antique, aristocratic, exclusive, and highly conservative seat of humanistic learning; saturated by the intellectual traditions of the renaissance; dominated by ancient methods and ideals; and wholly out of touch with the conditions and requirements of the modern world. A few years spent in such a place in enforced attention to certain prescribed studies which, as then and there pursued, would have been totally deficient in seminal power, and to which, for his part, he would have brought no fertilising enthusiasm, could have contributed nothing to the growth of his mind or character; and while the influence of an environment steeped in the dogmatism of obsolete schools of thought could hardly have turned him aside permanently from his natural course of development, it would almost certainly have made more difficult his line of approach to the great work to which his life was to be devoted. That Spencer suffered, and in some directions very seriously, from want of what is specifically called "culture," I should be one of the first to admit; and Mr. Macpherson is doubtless right in suggesting that, in a practical way, his road would have been smoothed for him by academic standing and connections, since he would not then have been obliged to live down "the insidious opposition of university cliques, who could not bear to see a new thinker of commanding power step forward into the intellectual arena without the hall-

mark of university culture."¹ Yet, considering all the conditions, and realising how disastrous it would have been had he, on entering manhood, been hampered, to how slight an extent soever, by hereditary leading-strings, theological or pedantic, we can hardly be too thankful that Spencer remained a free lance. This much must at least be added. Not only did Spencer himself never see any reason to regret the course pursued, but even his uncle, the strongest advocate of the benefits of a Cambridge training, lived to acknowledge that that course was probably the wise one.²

III.

Be this as it may, however, to Cambridge he did not go, but on leaving Hinton returned instead to his father's house, where he spent what was to all appearances an idle and profitless year. Yet, while little in the way of regular study was accomplished, the mind was by no means lying fallow, for the old pastime of independent research in the field of mathematics and mechanics was resumed; one result of which was the striking out of a curious original theorem in descriptive geometry, afterwards published, along with his own demonstration,

¹ *Herbert Spencer: The Man and his Work*, p. 13.

² Spencer's pronounced opposition to the ordinary classical curriculum is one of the most widely-known characteristics of his general teaching. Systematically expressed in his *Education*, it will be found cropping up in unexpected forms and places in almost all his other writings. It should be noted that it is largely based upon his belief that the common scholastic routine, with its superstitious veneration of the past, and entire devotion to merely bookish learning, inevitably leads to intellectual subjection; and that it is, therefore, one aspect of his general revolt against the tyranny of authority.

in the *Civil Engineer and Architect's Journal*. Then came his first experiment in practical work, as assistant in a school in which he had spent some little time as a boy. Mr. Spencer senior had a very high idea of the duties, responsibilities, and inherent dignity of his calling; at a time when there was still point in the popular saying that a man who had failed in everything else could buy a birch and turn schoolmaster, he realised to the full the teacher's vast importance in moulding the destinies of the coming generation; and, in face of a public opinion which persisted in treating the educator as belonging as naturally to the lower grades as the warrior to the upper grades of society, he felt strongly (as Carlyle afterwards phrased it) that there is a deeper and truer glory in training men's minds than in blowing their bodies to pieces with gunpowder. Holding these views, he would naturally have been well satisfied to see his son adopt his own profession; and the measure of success which attended this early and brief trial was sufficient to prove that Herbert possessed the required qualifications. With a rare faculty for luminous exposition, he combined the power—the importance of which every practical teacher will recognise—of stimulating interest in the subjects dealt with; while his moral qualities showed to no less advantage. As a boy it had been remarked of him that, though he strongly resented any act of tyranny on the part of a master, and rose impatiently against anything in the shape of bullying from his older school-mates, he was always a favourite with the younger children, because his behaviour towards them was marked by the same respect as he himself demanded from those above him. In his new position he was quick to

recognise and careful to make the fullest allowance for the individualities of his pupils; and thus went far to realise that fine ideal of the relations between teacher and taught which he afterwards so strenuously insisted upon in the book on education.

But, all this notwithstanding, the experiment came to nothing—not apparently from any particular objection on young Spencer's part to the career of a teacher, but simply because his attention was unexpectedly taken off in another direction. In the autumn of 1837 an offer came from the resident engineer of the London division of the London and Birmingham Railway then in process of construction, which was at once accepted; the bias of his interests and the line of his studies alike pointing to the profession of civil engineering as one in which he would have good chances of success. He now passed nearly a year in the ordinary routine of engineering work—partly in carrying on surveys, partly in making drawings; and at the end of that time transferred himself to the Birmingham and Gloucester Railway, where a further period of eighteen months was spent in a fairly satisfactory way. During the latter engagement his progress in practical engineering was indicated by various papers on technical subjects in the *Civil Engineer and Architect's Journal*; while the invention of a little instrument, which he called the velocimeter, for calculating the speed of locomotive engines, bore testimony to the continued activity of his mind, more especially, as usual, in the direction of original work.

It now seemed, indeed, as if his course in life had at length been marked out for him. From that time onward, for the space of some ten years, he continued

to be intermittently engaged in engineering pursuits—periods of considerable activity alternating, however, with lengthy intervals, during which professional work remained at an almost entire standstill. But by-and-bye, after several premonitory recessions in the tide of commercial prosperity, the railway mania ebbed away, leaving Spencer, along with countless other young men, stranded high and dry upon the shore. The crisis was a serious one; for those—and their name was legion—who had been attracted to the work during the season of temporary excitement now found themselves committed to a profession which offered but little outlook as a career, and was seriously overstocked. Thus, at the age of twenty-eight, Spencer found himself but little advanced towards a practical settlement in life, for, from any merely worldly point of view, the labours of the past few years had been almost thrown away. In no very hopeful frame of mind, therefore, as may well be imagined, he had now once more to beat a retreat to his family home in Derby, there to cast about him with a view to deciding upon his next step.

Regarded in the light of the man's later work, however, these years had not been altogether fruitless. In his not infrequent intervals of leisure, he had done a good deal of miscellaneous reading, and not a little thinking, and the result was that the expansion of his mind, which was presently to be so rapid, had already well begun. Science of all kinds continued to occupy the largest share of his attention; one book, in particular, deserving to be singled out for the marked, though indirect, influence which it exerted upon his thought. This was Sir Charles Lyell's then recently published *Principles of*

Geology. It was in this volume, which he read with deep interest at the age of twenty, that—though the idea was not altogether new to him—he first found a clear statement of that general doctrine of the “progressive development of organic structure,”¹ which in those pre-Darwinian days went somewhat vaguely by the name of the “Development Hypothesis.” It is a matter of common knowledge that, with a courage and candour rare even among scientific men, Lyell in after years yielded to the arguments of the evolutionists, and, as he himself phrased it, “read his recantation.” But in the original form of the work, then in Spencer's hands, the writer made common cause with the uniformitarians against the theory of “innate progressive development” expounded by Lamarck and his disciples; and thus it happened that Spencer's first real acquaintance with the conception of Evolution was made in a volume in which it was examined in detail, and thrown aside as valueless. Spencer, none the less, was more struck by the doctrine than by the arguments directed against it, and—by no means the first convert who has been made by the attacks of the enemy—accepted the Lamarckian view so far as to believe in the evolution of species, while rejecting all the great Frenchman's accompanying theories save that of the adaptation of organisms to their environment by the transmission of acquired characters. From that time on he has to be reckoned an ardent supporter of the general idea of organic development. There can be no doubt that the ready acceptance on his part of a theory which was then held to be so radical and

¹ Prof. Sedgwick's *Anniversary Address to the Geological Society*; 1831.

startling, and which, as we now see clearly enough, rested in those days upon foundations altogether too uncertain to satisfy the rigidly scientific inquirer, was mainly due to the singularly well-prepared condition of his own mind. His own statement, indeed, puts the matter beyond question—the theory, he says, was in harmony “with that general idea of the order of nature towards which I had, throughout life, been growing. Supernaturalism, in whatever form, had never commended itself. From boyhood there was in me a need to see, in a more or less distinct way, how phenomena, no matter of what kind, are to be naturally explained. Hence, when my attention was drawn to the question whether organic forms have been specially created, or whether they have arisen by progressive modifications, physically caused and inherited, I adopted the last supposition, inadequate as was the evidence, and great as were the difficulties in the way. Its congruity with the course of procedure throughout things at large gave it an irresistible attraction; and my belief in it never afterwards wavered, much as I was in after years ridiculed for entertaining it. The incident,” Spencer adds, with his characteristic fondness for interpreting individual case in the light of comprehensive principle, “illustrates the general truth that the acceptance of this or that particular belief is in part a question of the type of mind.”

By reference to the same consideration we may doubtless explain the further fact that, with the maturing and consolidation of his thought about this time, there went the gradual dropping of the current creed. The whole case on this head has probably been summed up when we say that the miraculous element upon which that creed then laid the

principal stress was fatally out of keeping with the entire character of his mind. There are many men (and, owing to what Mr. Lecky called the “declining sense of the miraculous,” their number is daily growing greater) to whom the so-called supernatural basis of all popular theologies is just as immediately repugnant as it was immediately attractive to even the most acute and thoughtful minds during the ages of faith. Where they naturally and instinctively sought a metaphysical interpretation for all phenomena, we just as naturally and instinctively recoil from such an interpretation. By the operation, generation after generation, of a thousand subtle influences the whole atmosphere of life has been altered; the measures of judgment and the standards of probability have alike been changed; and the result is that the supernaturalism which held sway in the past is rapidly dying, not under stress of argument, but simply from inanition; not because it has been disproved, but because the thoughts of men have passed on whither it cannot follow. Without, therefore, attempting to settle the whole question of miracles on purely *à priori* grounds—than which no course could well be more unsatisfactory—many a man born and nurtured in the secular and sceptical environment of the present day necessarily finds that question resolve itself into one of relative antecedent probability, as between two possible explanations—a temporary aberration from that which verified experience has revealed to us as the undeviating course of nature, and an error in human testimony or interpretation; and since, first, we do not personally know anything of that disturbance in the normal order of things which is called miracle, and, secondly, the constant tendency of all

historic and scientific interpretation is to bring every such supposed disturbance into the category of law; while, on the other hand, every passing day yields abundant examples of the untrustworthy character of even the best-intentioned and most carefully-styled evidence; it is clear that the balance of probability must in every case be as infinity to one against the alleged miracle.

I am not, let me insist, undertaking to support the popular thesis that a miracle—by which we may mean with Locke an occurrence “contrary to the established course of nature,” or, more correctly, one not to be accounted for by our limited knowledge of that course—could not conceivably happen, and therefore never has happened. As Professor Huxley once pointed out, such a proposition, however attractive it might have looked in the days of Hume, would not now commend itself to any mind trained in scientific methods of investigation. What I do maintain is that, in any circumstances, the occurrence of a miracle, and still more, therefore, of a long series of miracles, must be held as antecedently so improbable that the fullest, clearest, and most unmistakably detailed evidence must be required in its favour to counterbalance the enormous presumption against it furnished by the generalised experiences of mankind. The question, therefore, assumes the form as to whether, from the very nature of the case, such evidence is or can be forthcoming in regard to any miracle alleged to have been performed under such conditions as those existing, for instance, in the early days of Christianity. Here the principle of relative probability must be allowed its fullest weight; and the greater the antecedent improbability, the stronger must be the argument

advanced to overthrow it. A body of evidence which might suffice to convince us that a sick man made a most astonishing recovery from an illness need not, therefore, be held to justify a belief that a dead man was raised from the grave.

But to return to the attitude which Spencer, about this time it would seem, took up towards the orthodox creed. That attitude was simply the result of a gradual development of thought, the religious ideas in which he had been bred slowly and almost insensibly losing their hold upon him. He never passed the current theology under systematic examination; never undertook any regular inquiry into the evidence for and against it; never formally rejected it. To his nature, emotional and intellectual, it had been alien from the very first.¹ It had never become absorbed into his thought, because there was nothing in his mental constitution with which it could cohere, no place in which it would fit without upsetting and destroying the whole system of his belief. Thus, with the consolidation of such belief, it was merely dropped.

But Spencer, during this period of practical failure and rapid mental expansion, had done more than by study and thought to lay up a store of material for future use. He had delivered himself of his first message to the world. At twenty we find him writing, with all a youth's engaging self-confidence, of his desire “to make public some of my ideas upon the state of the world and religion, together with a few remarks on education.” Two years later—in the summer of 1842—he began the publication, in a paper called the *Nonconformist*,

¹ *Autobiography*, i., 151.

of a series of letters on "The Proper Sphere of Government." These were subsequently revised, and made their appearance in pamphlet form in the course of the following year. Merely noting that, in this first discussion of a question on which he was to have so much to say by-and-by, Spencer already insists on "the limitation of State action to the maintenance of equitable relations among citizens," we will postpone to another chapter any discussion of the relations of this little work to the order of the writer's thought. Here our concern is only with its place in his life; and in this respect it has its importance. Teaching had been abandoned for civil engineering, and this in its turn had abandoned him; and the outlook, in consequence, seemed gloomy enough. But one thing his little adventure into the world of literature had done for him—it had suggested the possibility, now that other careers had failed and the question of what to do next had become an urgent one, of turning his pen to account. Some five years after the publication of the "Letters," he paid a visit to London, partly on business connected with financial losses sustained by his uncle Thomas, but chiefly with the view of looking about for something to do; and out of this ultimately came the opportunity of a fresh start in life. At the end of 1848 he was appointed sub-editor of the *Economist*, and immediately established himself in the metropolis. The position, which he held till 1853, was by no means an ideal one for him; but it possessed two considerable advantages. It yielded a regular income, which, though small, was sufficient to meet his modest bachelor needs; and it allowed him a rather unusual margin of leisure for private study and work.

IV.

It was during such leisure hours, in the course of the next two years, that Spencer wrote his first important work, *Social Statics: The Conditions Essential to Human Happiness Specified, and the First of them Developed*. Published in 1850, when he was just thirty, this volume contained an extremely fresh and original treatment of social problems upon the fundamental principle that "Every man is free to do whatsoever he wills, provided he does not infringe the equal freedom of any other man"; was startling enough in many of the inferences drawn from this principle; and, as will be gleaned, pronouncedly individualistic in its whole tone and tendency; but, as is sufficiently well known, Spencer afterwards grew dissatisfied both with its metaphysical implications, and with some of its conclusions, and at one time made an effort to withdraw it from circulation. At the period of publication, however, it aroused some little interest, and, while of course never appealing to a very wide circle of readers, was on the whole well received by the critics—more favourably, indeed, than any of his later books; a fact which he notes as illustrative of the worthlessness of ordinary criticism.¹ That which it did for him personally was to bring him rather prominently into public notice, and to introduce him, as a rising author, to the literary and scientific world of the time. It was then that he formed his intimate friendship with the Brays and the Hennells, of Coventry; with the versatile George Henry Lewes, currently known as the ugliest man and the best talker in London; and with that wonderful

¹ *Autobiography*, i., 365.

woman who was then sub-editing the *Westminster Review*, and had obtained a certain standing as "the translator of Strauss," but who was a few years later to take England by storm with the *Scenes of Clerical Life* and *Adam Bede*. When, in September, 1851, George Eliot wrote to Mr. Bray that she had recently met "a Mr. Herbert Spencer, who has just brought out a large work on *Social Statics*, which Lewes pronounces the best he has ever seen on the subject," she described the beginning of an association, full of mutual reverence and esteem, which was to last till death ended it by the removal of the great novelist herself. More than this, however: *Social Statics* gave Spencer himself a practical and unmistakable revelation of his own powers, and pointed out to him more clearly than anything had done before the lines which his subsequent reading and thinking might most profitably pursue. It is surprising, therefore, to learn that, notwithstanding the success he had won, his misgivings concerning the future continued to be so great that he still more or less seriously entertained the idea of emigrating to New Zealand. His method of dealing with this project was highly characteristic. "Averse to unmethodic ways of judging," he drew up "a rough numerical valuation of the several ends in life which might be respectively better achieved, these by staying at home, and those by emigrating"; and then, "adding up the numbers on each side," arrived at totals which he regarded as yielding "more trustworthy ideas of the relative advantages than mere unaided contemplation." The result came out in a way to set all doubts at rest—advantages on the side of England, 110; on the side of New

Zealand, 301!¹ We all know what happens when we undertake to decide upon a course of action by tossing a penny; and Spencer, fortunately for the world, disregarded his unimpeachable calculation and stayed at home.

The most practical result of *Social Statics* was the connection which through it he now formed with the *Westminster Review*, a magazine of many years' standing, then recently purchased and established on a new basis for the promulgation of advanced views of social, scientific, and religious questions, by an enterprising publisher named John Chapman. It was in the pages of this review that he began the publication of those elaborate essays which, though now mainly interesting as auxiliary to his great work, and as marking out the lines of his approach to and preparation for it, were enough at the time to call attention to the rise of a new force in the philosophic world. Here, as we have to deal with these essays from the outside only—as events in the man's life—it will be sufficient if we say of them that their success enabled him after a while to drift out of the semi-journalistic and routine work in which he had been engaged on the *Economist*, and to devote his whole time and energy to what was now beginning slowly to assume the character of a chosen undertaking.

For some seven years after this, with an interval of eighteen months of enforced idleness—of which more anon—he continued to be pretty regularly engaged with magazine work of this kind, and, in addition, produced, in 1855, a bulky volume on psychology, afterwards incorporated into his more extended treatise on the same subject in the *Synthetic*

¹ *Autobiography*, i., 370.

System. In this work the problems of mind were throughout approached and discussed from the evolutionary point of view, which was, indeed, the point of view from which, as the essays show us, every question, of whatever class, was now regarded. All this kept him busy till 1860. But in the meantime a change, destined to be fraught with results of a permanently disastrous character, had come into his life. Overwork upon the *Psychology* had brought on a nervous breakdown so serious that, for fully a year and a half, he was forced to lay aside the pen and suspend his labours altogether. Partial restoration followed this prolonged rest; but it was partial restoration only. From that time onward to the end he was a martyr to dyspepsia and insomnia, and to the hypochondria which was the distressing, though quite natural, result of a shattered nervous system.

The year 1860, to the verge of which we have now followed him, marks the great crisis in Spencer's life; and, beyond this, is for ever memorable in the history of modern thought, for it was this year which witnessed the publication of the prospectus of his philosophic system. In the light of this new and enormous enterprise, on the threshold of which he now stood, all his previous output, remarkable as in itself that had been, dwindles to the proportions of mere experiment and preparation. The time had now come for achievement. A full outline-plan of the proposed work was given to the public, and Spencer laid his hand to a task which he knew would mean the production of ten stout volumes, close-packed with thought, and of no very saleable character, and which he calculated would occupy twenty years of regular and unremitting toil.

Let us turn for a moment to his circumstances and general outlook at the time, that we may be in a position the more fully to appreciate all that was implied by self-committal to such an undertaking. Marvellous in itself, that undertaking grows still more marvellous when we come to realise the conditions of its inception and execution. In the first place, Spencer's financial prospects were not in any way satisfactory. Possessed at the outset of but small personal resources, he had frittered away the greater part of these in devotion to studies which had brought him but little practical recompense. He had, indeed, derived something of an income from his pen; but his articles had demanded too much thought and labour to make their production remunerative. A small sum of money which had been left him by his uncle, the clergyman, now dead, had been wholly or largely swallowed up by the publication of two volumes which had so little to commend them in the popular market that their value as an investment had been worse than nothing at all; while a further drain of no inconsiderable kind had been made upon his purse by eighteen months of idleness, and all the added expenses consequent upon deranged health. Beyond, and worse than all this, there was the fact that his breakdown had left him in so impaired a condition that three hours a day was all that he could safely rely upon for the carrying forward of his work. Finally, as a commercial enterprise, the proposed undertaking offered nothing of an encouraging character. Few enough could, in the very nature of things, be induced to lend it their support, for the public to which appeal was to be made was necessarily very limited; while, among those who looked on with

partial interest or half-aroused sympathy, there were many who deprecated the self-imposed task as too vast, comprehensive, and ambitious for adequate accomplishment within the limits of a single life, and as even foolhardy in the uncertain state of his health. Such obstacles might well have proved enough to deter the most courageous and indomitable of men, and one cannot be astonished that, when at length the concluding division of his vast scheme was reached, Spencer himself, looking back over his six-and-thirty years of toil, should have been surprised at his "audacity in undertaking it, and still more surprised by its completion."¹ Whatever may be said about the *Synthetic Philosophy* as a coherent body of doctrine, however much we may individually disagree with its central principles and their application in his hands to the solution of the fundamental problems of life, there is thus a personal grandeur about the gigantic work upon which it is a pleasure and an inspiration to dwell. As a monument of quiet courage and perseverance, of self-sacrifice and entire consecration to the pursuit of a great ideal, it stands almost without rival in the history of the world's grandest achievements. Spencer's place is for all time among those heroes of moral effort, struggle, and conquest whose memory more and more, it is to be hoped, men will delight to honour.

V.

From this time on the history of the man is, for the outside world, practically merged in the history of his work; the dates of importance are those of the publication of the various instalments of

¹ Preface to *The Principles of Sociology*, vol. iii.

the projected series; all else in his life assumes something of an episodic character. He had estimated, as I have said, that, allowing two years for each volume, the completion of his system would take twenty years. Reckoning from the issue of the first part of *First Principles*, in October, 1860, to that of the last division of the *Sociology* in the autumn of 1896, it actually occupied just thirty-six years. Difficulties of many kinds he had anticipated at the outset; but the event proved that he had not made sufficient allowance for them. For a time the practical support yielded to him by the reading public was so small that he came within measurable distance of abandoning his labours altogether;² a course he would almost certainly have taken had not the sudden death of his father added something unexpectedly to his means. After this interruption occurred with increasing frequency in various unlooked-for ways. He was forced to pause in the methodical unfolding of his plan to explain, re-state, clear up misconceptions, and unfortunately

² It is a pleasure to recall the service rendered and the sympathy shown at this period of discouragement by friends and well-wishers. On the other side of the Atlantic, Professor Youmans, one of his most devoted adherents, succeeded in raising among Spencer's admirers a sum of \$7,000, which was invested in his name in American securities; and brought to England, together with the certificates of the shares, a gold watch, which he presented to him as a tribute of their gratitude and admiration. The money Spencer accepted as a public trust to be applied to the purposes of the *Descriptive Sociology*; the watch he valued to the end as one of his most cherished possessions. At home, John Stuart Mill, with rare public spirit and generosity, offered to assume the financial responsibility of the undertaking by guaranteeing the publishers against loss—a proposal which Spencer could not indeed entertain, but which touched him deeply (*Autobiography*, ii., 133-136).

(for in this always distracting and generally unprofitable way he consumed much valuable time) to reply to adverse criticisms. His energies were drawn off into other, though in most cases directly subsidiary, lines of work. The supervision of the compilation of the *Descriptive Sociology*, itself an immense task; the writing for the "International Scientific Series" of his book on *The Study of Sociology*; the publication of a number of timely essays (such as those composing *The Man versus the State*), rendered necessary, as he felt very strongly, by the political conditions and tendencies of the hour; all these things—valuable as in themselves they were—delayed the prosecution of the larger design. And, worse than all, his physical powers, as years went on, continued steadily to decline. His calculation of a working-day of three hours, moderate as to most men this would have seemed, presently turned out to be altogether extravagant. Only by the most careful husbanding of his energies was sustained labour possible to him at all. During the later years of his work absolute inaction was often forced upon him as the sole means of recuperating his over-taxed strength; while through many a prolonged period of sleeplessness and utter prostration the dictation of a paragraph or two each morning represented the extreme reach of his productive capacity. That in such circumstances the *Synthetic Philosophy*—with its grand total of 6,000 closely-printed pages—should ever have been pushed to completion must be regarded as a fact not easily paralleled in the history of philosophy or letters.

During these years his outer life was quiet and uneventful. Never married, and, after the death of his mother in 1867, without near relatives, he lived till

1886 in boarding-houses in London, thus, under medical advice, escaping the evils of a solitary domestic existence. His home for nearly a quarter of a century was at 37 and 38, Queen's Gardens, Lancaster Gate, where I myself first knew him; though at the same time he had, at 2, Leinster Place, near by, an independent room, which he used as a library and study. It was there that, during the first year of my secretarial association with him, most of his work was done; his habit being to walk over about half-past nine, dictate as long as he felt able—in order to economise his strength, he had made it a practice to dictate everything, even his letters—and then leave for the day. At that period he spent several hours of the afternoon and evening pretty regularly at the Athenæum Club, returning to Queen's Gardens, however, in time to listen to some music, of which he was always extremely fond, and in which he found his principal solace as increasing ill-health made other distractions impossible. Into general society he never went much, and less and less as years passed on; his abstention being prompted, not by any natural fondness for seclusion, but by the nervous evils—often real, sometimes imaginary—which social excitement entailed, and the consequent interruption of his work. Of external events, during this long period, the most important was his visit to the United States in 1882.¹

In the summer of 1886 he went for a long visit to Brighton (always a favourite place of resort with him), and, after various experiments (including a home of his own in London), finally took a house there on the East Cliff, facing the

¹ See *The Americans* (Essays, vol. iii.).

sea, "with the intention," as he wrote me at the time, "of living here for the rest of my life." This intention was fulfilled. Little by little he lapsed into complete invalidism, and, with the completion of the work for which he had practically lived, ceased to have much desire for the continuance of an existence the great purpose of which was accomplished, and which now was year by year becoming an increasing burden. Yet the end, to which he had long calmly looked forward, came very slowly; for, despite his half a century of nervous trouble, his constitution was still marked by wonderful resisting power. When it did come it was very peaceful. During the afternoon of December 7th, 1903, he fell gradually into unconsciousness, and so passed quietly away in the early morning of the following day.

In accordance with his directions, his remains were cremated at Golder's Hill Crematorium, where Mr. Leonard Courtney delivered a brief but impressive address. As my friend, Mr. Hector Macpherson, and I walked away together afterwards, with the last words of the orator's tender farewell lingering in our ears, that sense of the utter indifference of cosmic things to our human losses and sorrows, which seldom fails to affect one at such a time, came upon us with singular force. The sun was shining brightly over the placid winter landscape; the air was crisp and clear.

"Nothing in Nature's aspect intimated
That a great man was dead!"

The last time I saw Spencer was in his bedroom at Brighton, and amid the details of our conversation, every one of which is naturally fresh in my memory, there is one that I specially recall. Just back from America, I told him of the deep interest I found everywhere taken

there in his work, and spoke of the immense range of his influence upon the world's thought.¹ His reply was: "I am satisfied; I am satisfied!" Yet his satisfaction was offset by disappointment. The completion of his *Philosophy* had been so long delayed that it brought him but little of the exhilaration that might have been anticipated; his chief pleasure was in the simple sense of emancipation from long-continued toil.² And worse than weariness and this apathy of disillusion was the realisation of the fact that precisely that part of his gospel upon which he himself set the greatest value had apparently been preached in vain. His practical teachings on one important matter were commonly unheeded, even where they were not openly flouted; the socialism which he had made it one of his chief purposes to resist was, in spite of all his efforts, yearly gaining ground; signs of reaction were everywhere manifest in religion, politics, and society; militarism and imperialism were rampant; and the great nations of the world, dominated by

¹ No other philosophic works have, I suppose, been translated into so many languages as his. Versions of at any rate a great part of the *Synthetic Philosophy* exist in French, German, Italian, and Russian. But of all his writings, the book on education has apparently been most widely influential. It has appeared in—among other tongues—modern Greek, Sanskrit, and Arabic; and education in Mexico and the South American States has been greatly moulded by it. In 1901 Spencer wrote me that he had learned some time before this from the Chinese Ambassador that two translations of his writings were in progress in China—one into the Northern and the other into the Southern dialect. I once saw it stated, on the authority of a missionary, that the influence of the Spencerian philosophy was the chief obstacle to the spread of evangelical Christianity among the cultured classes of Japan.

² Preface to *Principles of Sociology*, vol. iii.

a sordid and materialistic spirit, were moving further and further away from what he had always proclaimed to be the true principles of sanity and righteousness. All these things filled him with sorrow and alarm. In earlier life he would doubtless have found encouragement in the thought that, deplorable as such reactionary tendencies are, they will not permanently interrupt the world's true progress. But it is hard for a man of eighty to derive much comfort from reading "what the centuries say against the hours."

VI.

Spencer's was a simple and transparent nature, and the salient features of his character may be easily marked out.

A man of absolute independence of thought and judgment, and defiant of authority and tradition in every form, he was a born nonconformist in the extremest sense of the word. A maker of many books, yet in no sense a bookman, with a range of knowledge often described as encyclopædic, yet always impatient as a reader even on subjects directly connected with his own lines of work; he cared little—too little, as he afterwards came to acknowledge¹—for what others had thought and done; and, heedless of great names and established doctrines, pushed his own way resolutely along the paths of investigation in which he is now recognised to have been a pioneer. This trait was associated on the moral side with splendid fearlessness and courage. Throughout life he spoke out what he thought without calculation of consequences. He never once paused to consider the expediency of

any view; he readily espoused the most unpopular causes; was wholly indifferent to the obloquy called forth by his heretical opinions of men and things; held tenaciously to what he believed to be true and right; and did not flinch even if, as a result, he found himself in a minority of one.

His fertility of mind was as astonishing as his independence. This is shown by almost every page of his *Synthetic Philosophy*, but remains equally clear if we leave that work entirely out of consideration. For, in all sorts of matters lying wholly outside the range of his more special interests, his originality and inventiveness were constantly revealed. We have seen how, as a boy, he made his own solutions of problems in geometry. In early life he devised all kinds of contrivances for all kinds of purposes—for rationalising writing, for example, for a philosophic language; for a new nomenclature of colours, based on the plan of the mariner's compass; and the list of his inventions—which includes a scheme for aerial locomotion, a binding pin for loose music, a fishing-rod joint, an invalid bed, a new escapement for watches, and improvements in planing machinery, in dressing artificial flies, and in the printing press—is too long to be reproduced in detail. These are simply illustrations of a "constructive imagination" of enormous power, which worked with almost equal ease in many directions. Of that "constructive imagination" the *Synthetic Philosophy* is merely the greatest product.

In personal life Spencer impressed most people who met him but casually as rather cold, remote, and difficult of access; and it was only as one came to know him well that one succeeded in

¹ *Autobiography*, ii., 441, 442.

breaking through his reserve, and came to see and appreciate the more sympathetic aspects of his character. He was never, indeed, very easy to get on with. What he himself calls his "abnormal tendency to criticism" was too much in the ascendant; sleeplessness and nervous dyspepsia, with the hypochondria which these engendered, made him occasionally irritable and sharp of tongue; and, having little tolerance for the prejudices and conventions of everyday life, he often seemed harsh in his judgments, and sometimes even needlessly censorious. Moreover, his emotional nature was kept under undue restraint by an intellect which sat in perpetual judgment upon it; the free play of feeling was repressed; and a certain consequent dryness and want of flexibility made one regret that among the sacrifices forced upon him by his life-work was that of those normal human relationships and responsibilities which would have done much to expand his feelings and give warmth and colour to the daily routine. But these limitations must never be allowed to blind us to his splendid positive qualities. His uprightness, purity, and scrupulous honesty, even in the pettiest

details, his conscientiousness, integrity, and single-hearted devotion to truth, filled all who knew him with admiration; and it is hardly too much to say that his moral greatness did not fall short of his intellectual greatness. Justice, as I have often said elsewhere, and as Spencer himself declares in the *Autobiography*, was the predominant sentiment with him, as it is the predominant note of his ethical system; and if in his strict adherence to this supreme principle he might sometimes have seemed exacting in the demands which he made upon others, it has always to be remembered that, unlike many professed teachers, he did not lower his standards when he came to apply them to himself. In our study of the writings of any great master it is always a satisfaction to feel assured that he strove, consistently and courageously, to live by his own creed. This was emphatically the case with Herbert Spencer.¹

¹ For a more detailed account of Spencer's personality and character I may refer the reader to two articles of my own—"Herbert Spencer: A Character Study" (*Fortnightly Review*, January, 1904), and "Herbert Spencer's *Autobiography*" (*Independent Review*, July, 1904).

CHAPTER II.

SPENCER'S EARLIER WORK—PREPARATION FOR
THE SYNTHETIC PHILOSOPHY—SPENCER AND
THE DOCTRINE OF EVOLUTION

THERE is no safer or more satisfactory approach to the study of any system of philosophy than by way of its evolution. If we want to put ourselves into a position to understand the attitude taken up by any great thinker towards the world and its problems—if we want to catch the personal note in his utterances, and to appreciate the relation of his own ideas to the intellectual movements of his time—we cannot do better than to make ourselves acquainted with the history of the development and consolidation of the great foundation principles of his thought. The general question, What was the nature of his teaching? may thus properly be preceded by one still more general, How came it to be what it was? To consider this latter question in relation to the *System of Synthetic Philosophy* is the purpose of the present chapter; in fulfilling which we shall not only lead up, by a kind of easy gradation, to that system itself, but shall also be able to reach some definite conclusions respecting Spencer's historic connection with the modern doctrine of evolution at large—a matter, as we shall see, of no small interest and importance.

I.

In the first place, then, we have to review the growth and solidification of

Spencer's thought—or, in other words, to trace the growth, as exhibited in his earlier writings, of that conception of evolution which was to constitute the foundation and backbone of the *Synthetic Philosophy*. Let us begin by making ourselves acquainted with the starting-point of his mental development—that is, with the general theory of things which was current during his early years, and under the influence of which, in common with all his contemporaries, he grew to maturity.

The period of Spencer's youth and ripening manhood was a period of transition in scientific and philosophic thought. On the ushering in of the century the old cosmology still held sway with unabated vigour, along with all those time-worn dogmas concerning human life and destiny which had grown up with it during ages of ignorance and superstition, and with which its own existence was now inextricably bound up. What that cosmology and what those dogmas meant is a matter of such common history that we need not linger over them here. Suffice it to say that the almost unquestioned doctrines of special creation, fixed types, and a recent origin of the universe lay at the bottom of them all, and that it was in the light of those doctrines that the world, man, and society were all interpreted.

But before the century had got far upon its way signs began to manifest themselves of an approaching change in the higher regions of thought. The special-creation hypothesis and the postulate of the world's recent origin and rapid manufacture had served well enough so long as their field had remained uninvaded by the results of investigation—so long as they had not been confronted with definite facts. In perfect keeping with what little had been known of the universe in the darkness of the Middle Ages, they now required that nothing should be added to that knowledge to hold their place secure. But this could no longer be. The time came when investigation grew active, and definite facts, which could not be ignored, and which yet were irreverent enough to refuse to fit into the most sacred and deeply-cherished theories, began to accumulate with almost bewildering rapidity. The result was that the old conception of things began, little by little, to fall into disrepute, and the theological edifice of ages was shaken at its very foundations. Science showed, with a conclusiveness which remained untouched by all the special pleading with which her arguments and revelations were assailed, that the popular assumptions about the age of the world were absolutely untenable; that the commencement of life, and even of human life, upon our globe, so far from taking us back only a few paltry thousands of years, lay millions of ages behind us; and that such vague memorials of our race as have survived to us in sacred book and popular legend are as nothing compared with that tremendous mass of human experiences which will never find their historian. Worse than all, turning full upon the doctrine of special manufac-

ture, she opened up the grand geologic record, and read thence, as from the pages of a mighty volume, the long, stupendous story of those vast cosmic changes which, through æons of unreckoned time, have slowly moulded and fashioned the world into the condition in which we find it to-day.

That these revelations were of the most vital interest to all thinking men need hardly be said; nor is it necessary now to dwell on the feverish panic of the theologians, who hurried into the field with all their heavy artillery, prominent amid which was the great-gun argument, which had already done tremendous service on many another such occasion, that the very existence of Christianity was bound up with the story of the creation as narrated in the first chapters of the Hebrew Scriptures.¹ What is here of moment is to notice the general effect of the new discoveries upon the scientific mind. That effect was at the outset almost entirely negative. The old theories had been destroyed, but as yet there was nothing to take their place; the theological interpretation of the world's history was seen to be absurdly insufficient and unreasonable, but for the time being no scientific

¹ How fierce and obstinate was the opposition offered to the doctrine of evolution from this standpoint we of the present day find it no easy matter to imagine. Even such a man as Hugh Miller imported theological considerations into his scientific discussions, and, when other reasoning failed him, fell back upon the declaration that acceptance of evolution meant nullification of the central truths of Christianity. It has been reserved for a later generation, passing into a fresh phase in the history of evolutionary thought, to find out that there is, after all, no conflict between the old ideas and the new—a convenient discovery now that the new ideas can no longer be rejected.

interpretation to take its place appeared to be forthcoming. Hence followed a kind of intellectual interregnum, during which everything was vague, shifting, tentative. Meanwhile, however, things were by no means standing still. The unceasing activity of investigators in the special sciences resulted in vast accumulations of well-established facts, and thus yielded the materials in the absence of which nothing of real or permanent value could have been accomplished. And at the same time (largely, indeed, as a consequence of this extension upon all sides of the scientific domain) there was ever growing and deepening a conception of unbroken causation in cosmic changes, of the universality of law, and the unity of Nature and of natural processes—a conception in no small degree led up to by such discoveries as those of the undulatory theory of light and heat, and of the correlation of all the forces known to exact science.¹ Thus, in spite of the temporary suspense and hesitation, no time was being lost. As we can now see, the way was being slowly prepared for a great scientific generalisation—a generalisation which,

¹ This tendency towards unification was, indeed, an outgrowth from the philosophy of the eighteenth century, and was at bottom merely one expression of that general simplification of life and thought which, as Mr. Morley has pointed out, "was the keynote of the revolutionary time." (See his *Rousseau*, vol. i., pp. 4, 5; and *Introduction to the Poetical Works of Wordsworth*, p. lxi.) It was the widespread desire for synthesis, indeed, which gave rise to the systematic work of Buffon and Linnæus, and even to the great *Encyclopædia* itself. It is interesting to notice what Goldsmith, voicing the average conservative layman's opinion of his day, has to say about Montesquieu, one of the early leaders of this particular movement in speculation (*Inquiry into the Present State of Polite Learning*, chapter vi.).

overthrowing all the old positions once and for all, was in the sequel to alter fundamentally the whole current of thought, as regards not only the outer organic world and its phenomena, but also the practical problems of life and society, of morality and religion.

II.

Such, in the briefest possible summary, was the general intellectual character of the period at which Spencer was preparing himself for the labours of his life. Even this sketch, imperfect as it necessarily is, will help us to understand the growth of his own ideas, and their relation to the changing thought of the day.

We have to go back to the year 1842, and to the series of letters on *The Proper Sphere of Government*, with which, then hardly more than a boy, he entered, as we have seen, upon his literary career.

With the pronounced individualism of this little work, which was doubtless the natural result of his home environment, though he may have owed something indirectly to the teachings of Humboldt, we have here no immediate concern. The pamphlet is significant for us from quite another point of view. In the attempt which is made in it to establish the nature, scope, and limits—that is, the fundamental principles—of civil government, there is everywhere implied a belief in the ultimate dependence of social organisation upon natural causes and natural laws. In other words, society is from first to last regarded not as a manufacture, but as a growth—a view which, though familiar enough in our own day, at all events in its theoretic aspects, was then little known, even as a matter of mere speculation. Throughout

the entire argument there run the conceptions of gradual changes naturally necessitated, and of the possibility of a better and better adjustment of man, physically, intellectually, and morally, to the needs imposed by the conditions of social life. As Spencer himself wrote, many years later, "In these letters will be found, along with many crude ideas," a "belief in the conformity of social phenomena to invariable laws," and "in human progression as determined by such laws."¹ All this revealed, even at so early a stage of mental growth, a well-defined tendency to regard the complicated and entangled phenomena of society from a strictly scientific point of view as phenomena exhibiting relations of cause and effect, and thus to be included in the realm of natural law. But it meant something more than this. The distinct and conscious acceptance of the doctrine that society is a thing not artificially pieced together, but of slow and natural growth, implied dissatisfaction with the current ideas of progress as an irregular and fortuitous process, and bore testimony to at least a vague germinal belief in a social development or evolution.

The questions thus raised and briefly dealt with came in for more thorough and extended treatment a few years later in Spencer's first considerable work, *Social Statics*. The conception of this volume had entered his mind not long after the appearance of the *Letters* in pamphlet form; for, owing to the rapid growth of his ideas, he soon became aware of the inadequacy of his handling of the vast problems there opened up. "The writing of *Social Statics*," he afterwards said, "arose from a dissatisfaction with the

¹ *Reasons for Dissenting from the Philosophy of M. Comte* (Essays, ii., 137, note).

basis on which the doctrines set forth in those letters were placed."¹ Even the briefest comparison of the two books is sufficient to show the enormous strides which his mind had taken during the seven critical years which divide them. In *Social Statics* almost everything is made to turn upon the doctrine—previously hardly more than hinted at—that from the very beginning of social life down to the present time there has been going on, and that still there is going on, a process of slow, but none the less certain, adjustment of the natures of men to society, and of the social organisation to the natures of its constituent units; this adjustment being the result of a perpetual interaction between units and aggregate which ever tends to bring them into more perfect adaptation the one to the other. Such adaptation, it is further contended, is produced by the direct action of circumstances upon the natures of men, and by the preservation and accumulation by inheritance from generation to generation of the modifications thus initiated; though another process comes in for passing recognition—the process of the dying out of those individuals who fail to adapt themselves to the changing conditions of their environment; which process may be conversely stated as the survival of those only who so far change as to fit themselves to the necessities imposed upon them by the totality of their surroundings. Here, it will be seen, is a faint and partial adumbration of the doctrine of the survival of the fittest in the struggle for existence. Moreover, another important point is emphasised—that all our social evils

¹ *Reasons for Dissenting from the Philosophy of M. Comte*.

and imperfections are due to want of complete adjustment between men and the conditions of social life—are, indeed, nothing more than the temporary jarrings and wrenchings of a machine the parts of which are not yet brought into thorough working order. Yet, as the process of adaptation is still continuing, and is in the nature of things tending ever to produce between units and aggregate a state of more perfect equilibrium, the inevitable if optimistic corollary is, that the evil which we deplore will in the end work itself out altogether, and that eventually all friction will entirely disappear: a prophecy which seems to point to a realisation of the gorgeous dreams of revolutionary speculators like Condorcet and Godwin, far as the arguments upon which it is based differ from their own. Finally, all these special changes in man and in society are regarded as phases only of a process of universal development or unfolding, which is everywhere conducting, in obedience to an inherent metaphysical tendency, to the production in man, as throughout the whole of the animate creation, of more complete individuation and higher and higher types.

We thus see that, unlike Darwin and Wallace, Spencer approached the question of general evolution not from the organic, but from the super-organic point of view—by the way of ethical and sociological investigations. His first conception of development was in the limited shape of progress—of development, that is, of man individually and in society; though this whole question of progress was from the outset regarded from the side of natural law. But his was not the mind to rest content with these vague and

partial glimpses of a stupendous truth. Before long he began to work his way round, through researches of quite a different character, towards the affiliation of these special and disjointed facts and inferences upon other facts and inferences of wider sweep and meaning.

His labours upon *Social Statics* had led him to a realisation of the important truth that beneath all the much-debated questions of morality and society lie the fundamental facts of biology and psychology; and that any really scientific or efficient treatment of man as a moral being or social unit must depend upon a thorough exploration of the problems of life and mind. Full of these ideas, he turned with increased enthusiasm to biological and psychological studies; and to the prosecution of various lines of research in connection with these two subjects, a large part, though by no means the whole, of his energies was for some time devoted.

The ten years which followed—the years between 1850 and 1860 (it is well to notice the dates, because, as we shall presently see, they have their own importance)—were years of great activity—an activity to be measured not so much by their productiveness, though that was sufficiently remarkable, as by the amazing growth and organisation of ideas which took place in them. During this period some twenty-five exhaustive articles from Spencer's pen were published in the leading organs of liberal thought; and in these articles, if we take them in the order of their appearance, we can trace a gradual closing in from all sides upon the great generalisations which were by-and-bye to fall into their places as integral parts of a coherent system of thought. As a matter of fact, these years may be regarded, from the

point of view of the *Synthetic Philosophy* itself, as years of special and methodical training; and these essays, diverse as they are in form and matter, as separate and tentative contributions towards the treatment of various isolated phenomena which were ultimately to be taken up in their inter-relations and dealt with in the mass. It would be impossible here to subject these essays one by one to anything like close analysis, even if it would materially further our present purpose to do so. But a few words must be devoted to their general drift and character; and, should one or two of them be made the subjects of special mention, it will not be because these are to be considered the most significant in themselves, but simply because they are the most important for the object which at the moment I have in view.

Probably the points which would most strike anyone reading these essays for the first time would be their strong grasp upon deep-lying principles and their extraordinary originality. On every page they reveal, be the subject what it may, an astonishing independence of thought and an absolute freedom from all trace of traditional methods and ideas. It was this freshness of treatment and firmness of touch which perhaps most attracted the attention of thoughtful readers when they were first published—for the most part anonymously—in the pages of the various English magazines and reviews. But, turning back to them to-day and re-reading them in their mutual relations, we must be impressed by something beyond the depth, clearness, and vigour of mind to which they everywhere bear witness; and that something is the essential unity of their thought, the oneness of idea which is throughout seen to underlie and inform

the extraordinary diversity of materials with which they deal. It matters not whether the author is concerned with the moot questions of physiology and psychology; or with the intrinsic principles of a correct literary style; or with the changes of the sidereal system; or with ill-timed and hasty political panaceas; or with curiosities of social manners and behaviour: all these subjects are systematically approached from one point of view; all are made to cluster about and find interpretation in one dominant hypothesis. And what is this hypothesis? What is this great cardinal doctrine which is thus made to weld together subjects so diverse that on any merely superficial examination they would never be supposed to possess anything in common? It need hardly be said that it is the doctrine of development or evolution—a doctrine which manifests itself in every succeeding essay with continually increasing distinctness, and which is thus shown to be taking year after year a stronger and stronger hold upon the author's mind and a deeper and deeper place in all his speculations.

As early as 1852 he had published in a periodical called the *Leader* a short paper on "The Development Hypothesis," which was afterwards referred to by Darwin, in the historical sketch prefixed to *The Origin of Species*, as presenting the general argument for the developmental as against the special-creation interpretation of the universe with remarkable cogency and skill. But, while reasons were here briefly but clearly stated for a belief in the gradual development of all organisms, not excluding man, it must be remembered that the essay does not contain any indication of factors adequate to the production of the alleged effects. One

process only is recognised—that of direct modification by the conditions of life; and as with this process alone it is obviously impossible to account for all the facts of the organic world, the way was left open for supporters of the older doctrine to make good a temporary escape.

But this noteworthy little paper, though it contained a kind of systematised profession of faith, was only, after all, a starting-point for a long and thorough investigation of various aspects of the subject with which it was concerned. Its leading ideas, as I have said, came little by little to suffuse all his work, and in the years that followed they underwent consolidation and reached an expression at once more definite and more complete. Was it a question of deducing a theory of population from the general law of animal fertility? Then we find distinct recognition of an advance from lower to higher brought about by excessive reproduction and the continual pressure of rapidly-multiplying organisms upon the slowly-increasing means of support. Did the discussion turn upon the elaboration on a scientific basis of a true philosophy of style? Then, along with the application to the special phenomena of expression of the general law of “the line of least resistance,” there is further reached the generalisation—set down as applying to all products both of man and of Nature—of the two fundamental processes of evolution, the process of differentiation and the process of integration; since it is shown that a highly-developed style “will be not a series of like parts simply placed in juxtaposition, but one whole made up of unlike parts that are mutually dependent.”¹ Are the

right and wrong objects and methods of education brought up for consideration? Then the answer given is firmly established upon the doctrine of a gradual unfolding of the mental faculties in obedience to natural law; such unfolding taking the form of a double-sided change from the simple to the complex, and from the indefinite to the definite. So is it with all other subjects whatsoever. In the essay on *Manners and Fashion*, for example, emphasis is laid upon the truths that the various forms of restraint exercised by society as an aggregate over its individual members—such restraints being now clearly differentiated into ecclesiastical, political, and ceremonial—are all natural developments from one primordial form; and that the divergence of each from the others and of all from such primordial form takes place “in conformity with the laws of evolution of all organised bodies.” And once again a similar line of argument is followed in the extremely suggestive articles on the *Genesis of Science* and the *Origin and Function of Music*. Finally, in the elaborate essay on *Progress: Its Law and Cause*, evolutionary principles are enunciated with the utmost distinctness. The law of progress is shown to consist in the transformation of the homogeneous into the heterogeneous (an imperfect statement afterwards completed by the addition of a factor for the time being overlooked¹); and this process is illustrated by examples taken from all orders of phenomena, while the cause of the transformation is found in the law of the multiplication of effects, afterwards worked out fully in *First Principles*.

¹ This additional factor being, as we shall presently see, increase in coherence. A change must consist in increasing heterogeneity and increasing coherence, to constitute evolution.

¹ *The Philosophy of Style*. First published in the *Westminster Review*, October, 1852.

In this essay, too, as in that on the *Development Hypothesis*, the general law of evolution is presented as holding good in the production of species and varieties, though here again direct adaptation to the conditions of existence is the only factor recognised as playing a part in the stupendous drama of unfolding life.

III.

I have said enough, I think, to show how active was the period with which we have just been dealing—active alike in original production, in the absorption of fresh material, and in the organisation of new ideas. But these five-and-twenty essays do not represent the whole of Spencer's labours during this time. His studies in psychology, of which the essays of *The Universal Postulate* (1853) and *The Art of Education* (1854) were the immediate results, took more systematic form about the date of the publication of the latter paper; and in 1855 the first edition of his *Principles of Psychology* made its appearance. As this work was subsequently included as a portion of the two volumes on the *Principles of Psychology* in the Synthetic System, any analysis of its contents does not fall within the scope of the present chapter. One remark may, however, be appropriately made ere we pass on. Ignoring for the moment the immense developments of psychology during the past half-century, and taking the purely historic point of view, it is well that we should remind ourselves how enormously this book was in advance of the whole thought of the time—not the common thought only, but the cultivated thought as well.¹ It was in the

¹ How true this was may be strikingly shown by a consideration of the attitude taken up towards the evolutionary psychology by John

fullest sense of the term an epoch-making book, because it placed the study of mind upon an entirely new basis, and, by applying to it that hypothesis of evolution which, for the time being, even the biologists refused to accept, indicated a fresh method of inquiry which in the long run has entirely revolutionised the subject. Hitherto, mental philosophy had concerned itself only with the facts of adult human consciousness. Spencer, breaking away from all the traditions of the schools, started out on an original course of investigation, in the wide sweep of which he took in not only the mental growth of children and savages, but also the phenomena of intelligence as displayed by the whole range of the animate world down to the lowest creatures. To quote his own words, "Life in its multitudinous and infinitely varied embodiments has arisen out of the lowest and

Stuart Mill. The bias of this distinguished thinker in favour of the experiential philosophy was so strong that he hesitated to accept the compromise which the developmental view offered to effect between the special doctrines of his own school of pure empiricism and those of the intuitionists. Yet he came at length to recognise how large a step in advance the evolutionists had really made. Dr. Carpenter, referring to Mill's gradual change of front, quotes from a letter addressed to him on the subject by Mill himself, part of which runs as follows: "There is also considerable evidence that such acquired facilities of passing into certain modes of cerebral action can in many cases be transmitted more or less completely by inheritance. The limits of this transmission and the conditions on which it depends are a subject now fairly before the scientific world; and we shall doubtless in time know much more about them than we do now. But so far as my imperfect knowledge of the subject extends, I take much the same view of it that you do, at least in principle." (See Carpenter's *Principles of Mental Physiology*.)

simplest beginnings by steps as gradual as those which evolved an homogeneous germ into a complete organism." Clearly, then, the whole conception of the work is evolutionary. As Spencer many years afterwards wrote of it, the development hypothesis, though not distinctly proclaimed till towards the close, is tacitly implied on almost every page.¹

It is not, I think, needful to pause, after even such a rapid summary of the activities of these ten memorable years, to say anything about the extraordinary perversion of judgment which has led critics from whom, having regard to their position and general culture, something better might have been expected, to treat these writings as "stock-writings," and to refer to their author as having "the weakness of omniscience" and a desire to discourse on all kinds of subjects. We are now in a fair position to realise how much, or rather how little, these curiosities of oracular criticism are really worth. So far from Spencer's various essays during this decade being merely examples of journalistic versatility (as such estimates would imply), we have seen how they are united and held together by that thread of common principle and common purpose which runs through them all. Casual and unrelated as they may appear to superficial readers, they may, broadly speaking, be regarded as separate and methodical studies in preparation for a complete working out in general and in detail of the doctrine they all illustrate—the doctrine of universal evolution.

Here one important point has to be emphasised. The real significance of Spencer's versatility is missed if we fail to take account of the fact that in treating

of all sorts of different topics, from the Nebular Hypothesis to manners, fashions, architectural types, music, dancing, and the characteristics of style, he made substantial contributions to the discussion of nearly all of them. Specialists in almost every field acknowledge their indebtedness to him, and find it necessary, even when it is only to express disagreement, to take his speculations into consideration, and define their own position in regard to them. This is not, of course, because Spencer himself wrote as a specialist upon all these various themes. Comprehensive as his erudition was, this would have been impossible. The explanation must rather be sought in his extraordinary penetration, and even more particularly (as I have elsewhere shown¹) in his marvellous powers of generalisation. It seemed as if in his hands facts apparently the most alien entered into wholly unexpected relationships; as if the phenomena under study, whatever the line of inquiry might be, grouped themselves of their own accord into such patterns as to make recognition of the laws they exemplified inevitable.

IV.

The foregoing survey of Spencer's earlier and more miscellaneous writings should have interest and value because both of the light that it throws upon his mental growth and of the help it may presently give us in the study of his later systematic work. But, beyond this, I have had, in taking it, a more special object in view. For it is only by reference to such a record that we can understand Spencer's historic position in modern thought—that is, his true relation to the great doctrine of evolution.

¹ *Autobiography*, i., 469.

¹ *Westminster Review*, January, 1904.

On this question I want to make myself as clear as possible, because it is one in reference to which there has long been and is still current a great deal of misconception, even among the generally well informed. Vagueness and instability in the meaning of certain words in common use have been in this case, as often elsewhere, a main cause of confusion in ideas; another instance being thus furnished of the truth of Bacon's dictum that, while we fondly suppose that we govern our vocabulary, it not infrequently happens that, as a matter of fact, our vocabulary governs us. In the common speech of the day the word "Darwinism" is almost invariably employed as if it were absolutely synonymous with the word "evolution"; the one is treated as being at all points not only coextensive, but also cointensive with the other. Two notable results of this indiscrimina- tion are: first, that Darwin is habitually regarded as the author of the modern doctrine of evolution at large; and, secondly, that this doctrine has, ever since the publication of his *Origin of Species*, become so intimately bound up with the special views therein contained that by the soundness or unsoundness of his arguments the whole theory of evolution is supposed to stand or fall.

That all this has given rise to much deplorable confusion in the discussion of evolutionary questions in general, I do not now pause to show. Here we are concerned merely with the entirely unjust and erroneous estimate of the historical significance of Spencer's work, and consequently of the relations of Spencer himself to the greatest of modern generalisations, which originated from, or which at least has been largely kept alive by, the misconception of which I speak.

To what extent this unjust and erroneous estimate has taken root, even in more cultivated thought, may be shown briefly and conclusively by one or two quotations. For example, we find the *Saturday Review* remarking, in the course of an article on Professor Tyndall's famous Belfast Address, now some thirty years since, that "what Darwin has done for physiology [!] Spencer would do for psychology, by applying to the nervous system particularly the principles which his teacher had already enunciated for the physical system generally." In much the same strain, and obviously under the same impression that Spencer's ideas were all obtained at second-hand,¹ and are, in fact, little more than precarious inferences from other people's discoveries, an American writer of some eminence, Colonel Higginson, once declared: "It seems rather absurd to attribute to him [Spencer] as a scientific achievement any vast enlargement or further generalisation of the modern scientific doctrine of evolution." Once more, sketching

¹ There has perhaps never been so original a thinker as Spencer, who has had such a hard struggle to get or keep possession of the credit due to his own ideas. Not only is he thus reduced to the position of a mere aide-de-camp to Darwin, but many of his critics are never weary in insisting, in spite of all disproof of their assertions, upon his vital indebtedness to Auguste Comte. Even his educational theories have repeatedly been traced back to Rousseau's *Émile*, though, as he himself informed me, he had never even heard of that work at the time his own book on education was written (see my *Rousseau and Naturalism in Life and Thought*, p. 206, note). The singularly distorted current ideas of his general relation to evolution, above animadverted upon, may be partly the results of the anonymity of his earlier publications; and all wrong-headedness is marvellously tenacious of life.

the college life of his friend, the late lamented Professor Clifford, with whose untimely death so many brilliant promises came to naught, Sir Frederick Pollock says: "Meanwhile, he [Clifford] was eagerly assimilating the ideas which had become established as an assured possession of science by Mr. Darwin, and were being applied to the systematic grouping and gathering together of human knowledge by Mr. Herbert Spencer." Similarly, a professed historian of philosophy—M. Lefèvre—refers to Spencer as "relying on the marvellous conjectures of Darwin." And, finally (not to weary by needlessly multiplying quotations), a man from whom, on account of his own contributions to psychology and wide knowledge of English thought, a more correct judgment might surely have been looked for—the late M. Taine—thus summed up his view of Spencer's work: "Mr. Spencer possesses the rare merit of having extended to the sum of phenomena—to the whole history of Nature and of mind—the two master-thoughts which for the past thirty years have been giving new form to the positive sciences; the one being Mayer and Joule's Conservation of Energy, the other Darwin's Natural Selection."

Now, all this, to the extent to which expressly or by implication it relegates Spencer to the position merely of an adapter, enlarger, or populariser of other men's thoughts, is entirely false and unfounded, as the rapid survey of his earlier writings which we have just taken makes absolutely clear. So far from its seeming "rather absurd" to credit Spencer with any great personal contribution to the formulation of the doctrine of evolution; so far from his being in any sense of the term a pupil or unattached follower of Darwin; we

have seen that he had worked his own way independently, from a different starting-point and through an entirely dissimilar course of investigation, to a conception of evolution as a universal process underlying all phenomena, before Darwin himself had made public his special study of the operation of one of the factors of evolution in the limited sphere of the organic world. A simple comparison of dates will serve to set this matter at rest. The first edition of the *Origin of Species* was published in the latter part of 1859. The essay on the *Development Hypothesis*, in which the transformation theory was stoutly maintained, appeared in 1852; in 1855—or four years before the advent of Darwin's book—there came the first edition of the *Principles of Psychology*, in which the laws of evolution (already conceived as universal) were traced out in their operations in the domain of mind; and this was followed in 1857 by the essay on *Progress: Its Law and Cause*, which contains a statement of the doctrine of evolution in its chief outlines, and an inductive and deductive development of that doctrine in its application to all classes of phenomena. Spencer's independence of Darwin is thus placed beyond possibility of question.

Let it not be imagined that I am endeavouring in the slightest degree to underestimate the special value of Darwin's work. Yielding him the fullest meed of praise for the immense part which he played in the development of scientific thought, I am aiming only to show, as simple justice requires to be shown, and as, with the fine modesty which characterised him, he himself endeavoured to show, that it is historically incorrect to speak of him as the father of the modern doctrine of

evolution. What Darwin did was to amass an enormous number of facts from almost every department of biological science, and by the persistent labour, patient examination, and searching thought of many studious years, to establish, once and for all, not the reality of evolution, nor even the laws and conditions of evolution, but the operation of one of the main factors of evolution—a factor which, though it had till his time entirely eluded the scientific mind, was yet required to render comprehensible a vast array of phenomena otherwise without interpretation. How near Spencer's own investigations had led him to a realisation of the process of natural selection, or, as he afterwards called it, the survival of the fittest in the struggle for existence, we have already been able to remark; and he himself took occasion to point this out when, in the course of his later work, he came to deal more systematically with the whole problem of animal fertility and its practical implications.¹ But the factors mainly relied

¹ See *Principles of Biology*, § 373, note. The whole of this very interesting note should be studied carefully, not only because it makes clear the scientific relations of Spencer and Darwin, but also for the foreshadowing which it contains of a reaction against that exclusive recognition of natural selection which soon became typical of biological students at large. The fundamental fact of evolution being now universally accepted, scientists of the present day are divided into two hostile camps upon the question of the processes of evolution: one party, often described as the neo-Darwinian, holding to natural selection, and to that alone; the other, antithetically called the neo-Lamarckian, maintaining that other factors have to be taken into account. The controversy, which mainly turns upon the problem as to whether or not acquired characters are inheritable, is now for the most part immediately connected with the writings of Professor Weismann, in which an elaborate

upon by him, in common with all pre-Darwinian developmentalists, were the direct action of the environment and the inheritance, with increase, of functionally-produced modifications; and as these processes, whatever may be their individual importance, are obviously incapable of throwing light upon a large part—indeed, the larger part—of the facts which pressed for explanation, the theory of evolution could not for the time being hope for inductive establishment. Darwin's book put the whole question upon a new foundation, by exhibiting a process which *did* account for the hitherto unmanageable facts; and undoubtedly it was thus to a large extent effectual in bringing the general theory into open court as an entertainable hypothesis. But while all this is freely conceded—while the greatness of Darwin's work in itself, and its importance as a contribution to scientific thought, are acknowledged without hesitation, it has still to be remembered that that work was special and limited in

attempt is made to prove that, of all alleged evolutionary factors, natural selection is alone demanded by facts and supported by evidence. Spencer himself remained firm to the position adopted in the note just referred to, his contributions to the discussion being the essays on *The Factors of Organic Evolution* (1886); *A Counter-Criticism* (1888); *The Inadequacy of Natural Selection* (1893); and *A Rejoinder to Professor Weismann* (1893). It may be interesting to add that, when he came to write of the appearance of the *Origin of Species*, Spencer could not remember whether he was vexed at the time by the thought that in 1852 he had failed to carry further the idea then expressed, "that among human beings the survival of those who are the select of their generation is a cause of development." On the whole, he did not doubt that, if any such feelings arose, they were overwhelmed by gratification on seeing the theory of organic evolution at length fully justified (*Autobiography*, ii., 50).

character, and that with the general doctrine of evolution at large it had itself nothing whatever to do. The laws of evolution as a universal process—a matter which the aims and objects of Darwin's work did not lead him to touch—were worked out by Spencer irrespectively of the special process of natural selection; and when Darwin's book appeared, that process fell into its place in his general system, quite naturally, as a single manifestation of a far wider law—the law of equilibration, and therefore as a supplementary, and not in any way as a disturbing, element. Thus it appears that if any one man is to be looked upon as the immediate progenitor of a doctrine which, in common phraseology, may be said to have been to some extent in the

air—a “truth of science, waiting to be caught”—that man is not he who first elucidated one factor of its process in one domain of phenomena—the biological; but rather he who first seized upon it as a comprehensive law, underlying all the phenomena of the universe. In a word, it is not Charles Darwin, but Herbert Spencer.

We have thus followed the general course of Spencer's thought through what, in the light of his subsequent work, must be regarded as the period of experiment and preparation. We now turn from these earlier writings to that colossal undertaking to which the greater part of the energies of his after-life was to be devoted—the *System of Synthetic Philosophy*.

CHAPTER III.

THE SYNTHETIC PHILOSOPHY—FIRST PRINCIPLES—THE PRINCIPLES OF BIOLOGY AND OF PSYCHOLOGY.

I.

EARLY in the course of the composition of the *Principles of Psychology* in their original form—that is, in 1854—Spencer had reached that conception of evolution as a universal process which he subsequently worked out in detail in the essay on *Progress: Its Law and Cause*. The writing of this article, which first saw the light in the *Westminster Review* for April, 1857, doubtless helped in

large measure to systematise and co-ordinate the various ideas that were then lying scattered in his mind. It was in the following year, while he was engaged in preparing a long essay in defence of the Nebular Hypothesis, that there dawned upon him the possibility of dealing in a more methodical and connected manner than he had hitherto found practicable with those foundation-principles of evolution which he had been gradually formulating during the

miscellaneous studies of the past eight or nine years. Instead of treating the diverse phenomena of life and society in a fragmentary manner, why should he not consider them after some orderly plan and in their mutual relationships? The idea took root, developed rapidly, and before long assumed the proportions of an elaborate scheme, in which all orders of concrete phenomena were to fall into their places as illustrations of the fundamental process of evolution. Thus the conception of evolution now presented itself to him as the basis of a system of thought under which was to be generalised the complete history of the knowable universe, and by virtue of which all knowledge was to be unified by the affiliation of its various branches upon the ultimate laws underlying them all. Such was the origin of the *Synthetic Philosophy*.

Though a rough sketch of the main outlines of the system as they occurred to him at the time was mapped out almost immediately,¹ it was not till the following year, 1859—a year otherwise made memorable by the publication of Darwin's book—that a detailed plan of the various connected works in which these conceptions were to be developed was finally drawn up; and not till March, 1860, that it was made public in the form of a prospectus. Spencer's original intention was to issue the proposed work to subscribers in periodical parts. This course was persevered in till the publication of the forty-fourth division, in 1876, completing the first volume of the *Principles of Sociology*. It was then discontinued, and from that date onward the publication was in volume form only.

The following is a reprint, slightly

¹ See *Autobiography*, ii., 15, 16.

condensed by the omission of some explanatory matter not now of any special interest, of the programme as originally given to the world:—

FIRST PRINCIPLES.

PART I. The Unknowable. Carrying a step further the doctrine put into shape by Hamilton and Mansel; pointing out the various directions in which science leads to the same conclusions; and showing that in this united belief in an Absolute that transcends not only human knowledge, but human conception, lies the only possible reconciliation of Science and Religion.

II. Laws of the Knowable. A statement of the ultimate principles discernible throughout all manifestations of the Absolute—those highest generalisations now being disclosed by Science which are severally true not of one class of phenomena, but of *all* classes of phenomena; and which are thus the keys to all classes of phenomena.

[In logical order should here come the application of these First Principles to Inorganic Nature. But this great division it is proposed to pass over; partly because, even without it, the scheme is too extensive; partly because the interpretation of Organic Nature after the proposed method is of more immediate importance. The second work of the series will therefore be—]

THE PRINCIPLES OF BIOLOGY.

Vol. I.

PART I. The Data of Biology. Including those general truths of physics and chemistry with which rational biology must set out.

II. The Inductions of Biology. A statement of the leading generalisations which naturalists, physiologists, and comparative anatomists have established.

III. The Evolution of Life. Concerning the speculation commonly known as the Development Hypothesis—its *à priori* and *à posteriori* evidences.

Vol. II.

IV. Morphological Development. Pointing out the relations that are everywhere traceable between organic forms and the average of the various forces to which they are subject; and seeking in the cumulative effects of such forces a theory of the forms.

V. Physiological Development. The progressive differentiation of functions similarly traced ; and similarly interpreted as consequent upon the exposure of different parts of organisms to different sets of conditions.

VI. The Laws of Multiplication. Generalisations respecting the rates of reproduction of the various classes of plants and animals ; followed by an attempt to show the dependence of these variations upon certain necessary causes.

THE PRINCIPLES OF PSYCHOLOGY.

Vol. I.

PART I. The Data of Psychology. Treating of the general connections of mind and life, and their relations to other modes of the Unknowable.

II. The Inductions of Psychology. A digest of such generalisations respecting mental phenomena as have already been empirically established.

III. General Synthesis. A republication, with additional chapters, of the same part in the already published *Principles of Psychology*.

IV. Special Synthesis. A republication, with extensive revisions and additions, of the same part, etc., etc.

V. Physical Synthesis. An attempt to show the manner in which the succession of states of consciousness conforms to a certain fundamental law of nervous action that follows from the First Principles laid down at the outset.

Vol. II.

VI. Special Analysis. As at present published, but further elaborated by some additional chapters.

VII. General Analysis. As at present published, with several explanations and additions.

VIII. Corollaries. Consisting in part of a number of derivative principles which form a necessary introduction to Sociology.

THE PRINCIPLES OF SOCIOLOGY.

Vol. I.

PART I. The Data of Sociology. A statement of the several sets of factors entering into social phenomena—human ideas and feelings considered in their necessary order of evolution ; surrounding natural conditions ; and those ever-complicating conditions to which Society itself gives origin.

II. The Inductions of Sociology. General facts, structural and functional, as gathered from a survey of societies and their changes ; in other words, the empirical generalisations that are arrived at by comparing different societies and successive phases of the same society.

III. Political Organisation. The evolution of governments, general and local, as determined by natural causes ; their several types and metamorphoses ; their increasing complexity and specialisation ; and the progressive limitation of their functions.

Vol. II.

IV. Ecclesiastical Organisation. Tracing the differentiation of religious government from secular ; its successive complications and the multiplication of sects ; the growth and continued modification of religious ideas, as caused by advancing knowledge and changing moral character ; and the gradual reconciliation of these ideas with the truths of abstract science.

V. Ceremonial Organisation. The natural history of that third kind of government which, having a common root with the others, and slowly becoming separate from and supplementary to them, serves to regulate the minor actions of life.¹

VI. Industrial Organisation. The development of productive and distributive agencies considered, like the foregoing, in its necessary causes ; comprehending not only the progressive division of labour and the increasing complexity of each industrial agency, but also the successive forms of industrial government as passing through like phases with political government.²

¹ In their published form these three divisions are entitled respectively : *Political Institutions* ; *Ecclesiastical Institutions* ; *Ceremonial Institutions* ; and the last named is properly made to take precedence of the other two. A part on *Domestic Institutions* is inserted (as Part III.) after the Inductions, and this of course disturbs the subsequent numbering of the divisions, as well as, to some extent, the volume arrangement ; the first two volumes, as outlined, having expanded into three.

² This division and the whole of Vol. III. were skipped by Spencer when, led by increasingly poor health to the belief that the entire scheme could never be carried out, he decided at all hazards to push on with the far more

Vol. III.

VII. Lingual Progress. The evolution of languages regarded as a psychological process determined by social conditions.

VIII. Intellectual Progress. Treated from the same point of view: including the growth of classifications; the evolution of science out of common knowledge; the advance from qualitative to quantitative prevision, from the indefinite to the definite, and from the concrete to the abstract.

IX. Æsthetic Progress. The fine arts similarly dealt with: tracing their gradual differentiation from primitive institutions and from each other; their increasing varieties of development; and their advance in reality of expression and superiority of aim.

X. Moral Progress. Exhibiting the genesis of the slow emotional modifications which human nature undergoes in its adaptation to the social state.

XI. The Consensus. Treating of the necessary interdependence of structures and of functions in each type of society and in the successive phases of social development.

THE PRINCIPLES OF MORALITY.

Vol. I.

PART I. The Data of Morality. Generalisations furnished by biology, psychology, and sociology, which underlie a true theory of right living; in other words, the elements of that equilibrium between constitution and conditions of existence which is at once the moral ideal and the limit towards which we are progressing.

II. The Inductions of Morality. Those empirically established rules of human action which are registered as essential laws by all civilised nations: that is to say, the generalisations of expediency.

III. Personal Morals. The principles of private conduct—physical, intellectual, moral, and religious—that follow from the conditions to complete individual life; or,

important volumes on Ethics. The *Sociology* was ultimately completed by the publication of divisions on *Professional Institutions* and *Industrial Institutions*; but in these the matter was less thoroughly organised than in preceding parts, and in places signs of haste and weariness were quite apparent. Vol. III., as originally planned, had by this time been dropped from the scheme.

what is the same thing, those modes of private action which must result from the eventual equilibration of internal desires and external needs.

Vol. II.

IV. Justice.¹ The mutual limitations of men's actions, necessitated by their coexistence as units of a society—limitations the perfect observance of which constitutes that state of equilibrium forming the goal of political progress.

V. Negative Beneficence. Those secondary limitations, similarly necessitated, which, though less important and not cognisable by law, are yet requisite to prevent mutual destruction of happiness in various indirect ways: in other words, those minor self-restraints, dictated by what may be called passive sympathy.

VI. Positive Beneficence. Comprehending all modes of conduct, dictated by active sympathy, which imply pleasure in giving pleasure—modes of conduct that social adaptation has induced and must render ever more general; and which, in becoming universal, must fill to the full the possible measure of human happiness.

I reproduce this historic document here for two reasons. First, it is important for the student of Spencer to have under his eye for reference and guidance such a general programme of the scope and aim of the system as a whole, and of the concatenation of its various parts. And, secondly, it is instructive to observe with what fidelity Spencer, in working out his system, adhered to his original plan. Any one who compares the above prospectus with the contents of the ten volumes in which the *Synthetic Philosophy* was finally embodied, can

¹ This part is practically co-extensive with *Social Statics*. Among various points of difference in the treatment of the same questions between the earlier and the later work, one specially calls for remark. In *Justice* the supernaturalistic elements of *Social Statics* have disappeared, and the whole discussion is based firmly on a naturalistic foundation.

hardly fail to be astonished by the remarkable correspondence between the original design and the completed edifice. Here and there changes will be noted in the order of the divisions; there are several considerable additions to the scheme; and, more important than all, the parts which were to have composed the third volume of the *Sociology* are left out altogether.¹ Otherwise, Spencer adhered to his prospectus with a fidelity which shows how fully he must have had the whole vast territory mapped out in his mind before he sat down to commit himself to the penning of a single line.

II.

The philosophic system of which we have thus before us an abstract or syllabus differs from all other comprehensive bodies of thought with which in its external characteristics it might be compared, alike in its method and its scope. In approaching the study of the *Synthetic Philosophy* we must try first to understand its uniqueness in both of these respects.

¹ That the *Sociology* none the less actually comprises three volumes is due to the expansion of the first two. There can, I think, be little reason to regret that Spencer abandoned his original intention of dealing with linguistic, intellectual, and æsthetic progress. Great as will be our gain when these subjects are systematically treated on the basis of evolution, Spencer himself was prepared neither by sympathy nor by training to do full justice to them; and though without question he would have said many things about them which would have been illuminating and suggestive, his discussion of them must necessarily, on the whole, have been unsatisfactory. Meanwhile, the gaps left are to some extent filled by certain of his essays—notably those on *The Genesis of Science*, *The Origin and Function of Music*, and *The Philosophy of Style*.

In the early days of philosophic speculation it was sufficient if, in the building up of his elaborate structure of doctrine, the thinker succeeded in making the various parts of his system coherent and harmonious among themselves. So long as they would hang together without internal friction or disorder, so long as in this way they would, verbally considered, produce the impression of organic unity, nothing more was required. How far they might or might not be congruous with the actual laws and processes of the universe was a question which, in the then condition of knowledge, was of comparatively small importance. Thus the Platos of old days, and the Hegels of more recent times, could start from whatever datum they chose to postulate, and spin their poetic webs of fanciful metaphysics without troubling themselves very seriously to consider whether the facts of the world were for or against them. In the former case, well and good; in the latter, *tant pis pour les faits*: in either event their work went on uninterrupted and untrammelled.¹ Wherever they looked out on the universe they saw nothing but a reflection of their own whims and theories; reminding us of Coleridge's brilliant metaphor of Jack Robinson between two mirrors, prolonged into an endless succession of Jack Robinsons. But Science, in opening up the arcana

¹ In Lord Bolingbroke's *Letter to Alexander Pope* there is a passage even more appropriate to certain later philosophers than to those he himself had in view when penning it: "Rather than creep up slowly, *à posteriori*, to a little general knowledge, they soar at once as far and as high as imagination can carry them. From thence they descend again, armed with systems and arguments *à priori*; and, regardless how these agree or clash with the phenomena of Nature, they impose them on mankind."

of the universe, has passed all such methods under summary condemnation. The fabled German is said, in the familiar story, to have evolved a camel out of the depths of his inner consciousness; and the monstrosity which he boldly offered to the world would have done well enough so long as no real camel had been examined and studied. But the importation of a genuine animal into the matter at once changes the attitude and increases the responsibilities of the would-be naturalist. His description of the camel must now not only possess the qualities of internal balance and abstract credibility, but must also meet the additional requirement of resemblance to the actual camel of zoology. The parable hardly needs a gloss. For this simply means that all philosophy worthy of the name must henceforth build upon foundations firmly laid in scientific truth. Any system that neglects science as its corner-stone stands self-condemned, and does not merit serious attention.

Now, the first characteristic mark of the Spencerian philosophy is that its vast superstructure is reared not independently of science, still less in spite of science, but out of the very materials that science itself has furnished. It is a body of doctrine which is not only verbally intelligible and logically harmonious within itself, but at every point challenges the supreme test of direct comparison with fact. Spencer proceeds in his task of organising knowledge by first examining separately the various concrete sciences in quest of the highest truth or truths that these will each yield; then, setting together the generalisations thus reached, he formulates from these the still wider generalisation in which they all merge. Close

analysis of this widest generalisation then reveals the ultimate axiom—a datum which, as referable to nothing beyond or behind itself, must be taken, so to speak, upon its own credentials, and accepted both as the final result of our inductive inquiry, and, in turn, as the foundation or the starting-point of any attempt at the synthetic, or deductive, reconstruction of philosophy.¹ Induction, then, is the method pursued from the first; the established truths of science are directly investigated; and by generalisation after generalisation—each tried and verified again and again by reference to all orders of concrete facts—we are led at last to a generalisation which comprises them all, beyond which we cannot venture without losing ourselves in mere speculation, and in which, therefore, we have to rest. I shall endeavour in a moment to indicate the course of inquiry and thought which Spencer followed in thus working his way to the first principles of his philosophy. But here let me point out at once that, though this method of induction was rigidly adhered to, until its final results were obtained, those results were not allowed to remain in inductive form. This would have been to leave the system incomplete, for, while the processes of universal evolution would have been set forth, no *rationale* of those processes would have been suggested. As we shall presently see more clearly, the

¹ It is well not to lose sight of the fact that the most rigid method of induction does not relieve us of the obligation of postulating an unproved and unprovable principle. We must fasten the final link of our chain somewhere, if we have to introduce the foot of Jove for the purpose. Otherwise, our philosophy is without a basis, like the old Hindu theory of the universe. See the essay on "Mill *versus* Hamilton" (*Essays*, vol. ii.).

very purpose of philosophy demands that the laws of the universe revealed by induction shall be re-stated deductively. This re-statement Spencer undertakes in detail, exhibiting the laws revealed by his most comprehensive generalisations as necessary consequences of the ultimate datum to which they at last bring us. Hence the logical completeness of the Spencerian philosophy. It presents us on the one side with an empirical account of the laws and processes of the knowable universe, and then, translating these into deductive terms, it furnishes us with a rational history of the knowable universe as well.

What further has to be said about the building of the *Synthetic Philosophy* may be conveniently postponed until we come to consider the evolution of its fundamental principles. To clear the way for this, we have, first of all, however, to deal with another point. What meaning does Spencer himself attach to the word "philosophy"? What are the scope and limitations of his own work? Or, to phrase the question differently, what is it that, in the development of his system, he really undertakes to do?

The older philosophers demanded an explanation of existence; the problem for which they sought a solution was ontological—the problem of the nature of things; and, not content with the study of the phenomenal universe, they endeavoured to sound the mystery of absolute being. What is the primary cause of the cosmos? What is its final cause—the end for which it exists? These, and such as these, were the questions which generations of metaphysicians busied themselves to answer. With what result? With the result that failure followed every effort, and that every scheme, no matter how carefully planned, how

ingeniously developed, how attractive and plausible, was sooner or later forced to take its place among the curiosities of misapplied effort in the intellectual lumber-heap of the world. The futility of all the study devoted in the past to these perennially fascinating but perennially elusive questions—the absurdities that each fresh speculator will freely acknowledge as the characteristics of every system but his own—the total inadequacy of each new master-word to roll back for us the eternal gates that shut from human knowledge the final mystery of life: all these things in themselves sufficed to lead some of the clearest and sanest intellects of earlier days to an appreciation of the truth that the old-world riddle remains unsolved simply because it is insoluble.¹ Renewed efforts to read the enigma of the Sphinx can only result, therefore, in the same disappointment. What has never been accomplished in the past will never be accomplished in the future, merely because, in its very essence, the task is hopeless. Modern psychology shows us the reason of the inevitable failure by making clear the conditions under which all our thinking must be done—conditions which, when

¹ Goethe—among the first to appreciate to the full the philosophic consequences of the limitations of human faculty—again and again insisted that our business is with the laws and conditions of the phenomenal universe, and not with the ultimate mystery that lies behind them.

“Wie? Wann? und Wo?
Die Götter blieben stumm.
Du halte dich ans Weil,
Und frage nicht Warum!”

Elsewhere he writes to this effect: “Man is born not to solve the problem of the universe, but to find out where the problem begins, and then to restrain himself within the limits of the comprehensible.”

once duly recognised, reveal beyond the shadow of doubt or the possibility of question why it has been, is, and ever must be, futile for the human intelligence to attempt to rise from the relative and the phenomenal into the consideration of that absolute and noumenal existence of which these are but the manifestations.

Now, by philosophy—to begin with a negative statement of the matter—Spencer does not understand an effort to solve the ultimate problem of the universe. He postulates two categories—the Unknowable and the Knowable; and to the former of these, the proper domain of religion, he relegates, as lying beyond the scope of our inquiry, all those questions concerning the primary and final cause of the universe—its *whence*, its *why*, and its *wherefore*—with which all metaphysics have been principally concerned. What, then, is left us? The answer is simple. The true subject-matter of philosophy is not the problem of absolute cause and end, but of secondary causes and ends—not noumenal and unconditioned existence, but the manifestations of the noumenal in and through the conditioned and phenomenal. What we demand from philosophy, therefore, is not an explanation of the universe in terms of Being as distinguished from appearance; but a complete co-ordination, or systematic organisation, of those cosmical laws by which we symbolise the processes of the universe, and the interrelations of the various phenomena of which the universe, as revealed to us under the conditions of our intelligence, is actually composed. The old antithesis between common knowledge and what we call science on the one hand, and philosophy on the other, thus disappears. They are not essentially unlike; their differences

are differences in degree of generality and unification. “As each widest generalisation of science comprehends and consolidates the narrower generalisations of its own division, so the generalisations of philosophy comprehend and consolidate the widest generalisations of science. It is, therefore, a knowledge the extreme opposite in kind to that which experience first accumulates. It is the final product of that process which begins with a mere colligation of crude observations, goes on establishing propositions that are broader and more separated from particular cases, and ends in universal propositions. Or, to bring the definition to its simplest and clearest form: Knowledge of the lowest kind is *ununified* knowledge; science is *partially-unified* knowledge; philosophy is *completely-unified* knowledge.”¹

III.

Such, then, are the methods and scope of the *Synthetic Philosophy*. We proceed now to the briefest possible statement of its foundation principles, merely premising that readers who are not specially interested in the more technical side of philosophic discussion may do well to pass on at once to the exposition of the doctrine of evolution in the next section.

If philosophy is to undertake the complete unification of knowledge, it is clear that it must establish some ultimate proposition which includes and consolidates all the results of experience. It is impossible for us here to follow Spencer, step by step, in the long and subtle argument by which this ultimate proposition is reached. In such broad statement as alone is compatible with

¹ *First Principles*, § 37.

the purposes we have now in view, the main stages of the inquiry may be just indicated, and no more. Philosophy, then, in the nature of things must start with certain assumptions, justifying them, as it goes on with its work, by exhibiting their congruity with all other dicta of consciousness. This is a proposition from which manifestly we cannot dissent without committing ourselves to absolute nihilism. Yet involved in it there is one primordial datum—the assumption (without which all thought would be impossible) that in the manifestations of the unknowable in and through the phenomenal universe congruities and incongruities exist and are cognisable by us. Setting out from this assumption, Spencer goes on to show that in the last analysis all classes of likeness and unlikeness merge in one great difference—the difference between object and subject. The profoundest distinction among the manifestations of the unknowable we recognise by grouping them into *self* and *not-self*.¹ His postulates, therefore, are “an unknowable power; the existence of knowable likenesses and differences among the manifestations of that power; and a resulting segregation of those manifestations into those of subject and object.”² These are postulates which common sense asserts, which in every step science takes for granted, and which no metaphysician has ever succeeded in destroying; and from these philosophy has to proceed to the achievement of its purpose as above set forth.

Pushing the argument through a consideration of space, time, matter, motion, force, the indestructibility of matter, and

the continuity of force, Spencer at length reaches his ultimate dictum—the persistence of force; by which “we really mean the persistence of some Cause which transcends our knowledge and conception.”¹ This dictum—that the Force of the Universe is constant, since it “can neither arise out of nothing, nor lapse into nothing,” and can, therefore, be neither added to nor destroyed—is shown to possess the highest kind of axiomatic certitude for two reasons: it constitutes the required foundation for all other general truths; and it is a psychological necessity—that is, it remains stable and unresolvable—the one inexpugnable, yet inexplicable, element of consciousness. Of such persistence of force under the forms of matter and motion all phenomena are necessary results. Eliminate this conception, and consciousness collapses. “The sole truth which transcends experience by underlying it is thus the Persistence of Force. This, being the basis of experience, must be the basis of any scientific organisation of experiences. To this an ultimate analysis brings us down, and on this a rational synthesis must build up.”²

The first deduction drawn from this ultimate universal truth is that of the persistence of relations among forces, or what is commonly known as the uniformity of law, whence we pass to two important corollaries—the transformation and equivalence of forces (correlation) and the undulatory character, or rhythm of motion. The first of these follows naturally from the truth that, however much forces may change their form, the force of the universe remains constant; the latter is just as clearly a

¹ *First Principles*, § 44.

² *Ibid*, § 45.

¹ *First Principles*, § 62.

² *Ibid*, § 62.

necessary result of the antagonism of opposing forces. Both these principles are shown to hold good throughout the whole range of phenomena, from the physical and chemical to the psychical and social. These truths, then, are "philosophical" truths—they have that character of universality which constitutes them parts of philosophy, properly so-called. "They are truths which unify concrete phenomena belonging to all divisions of nature, and so must be components of that complete coherent conception of things which philosophy seeks."¹ But none the less they are truths of the analytical order, and "no number of analytical truths will make up that synthesis of thought which alone can be an interpretation of the synthesis of things."² The problem now before us will be set in a clearer light if we remember the relation, already noted, between the partially unified knowledge which we call science and the completely unified knowledge which is the aim of philosophy. The various sciences advance from the resolution of their phenomena into the action of certain factors to the larger question: How from such combined actions result the given phenomena in all their complexity? They thus arrive at special syntheses. But such syntheses, up to the most general, are more or less independent of one another; the syntheses of biology, for example, remain within the domain of biology, the syntheses of psychology within that of psychology. The business of philosophy is now to establish a universal synthesis, comprehending and consolidating such special syntheses.

¹ *First Principles*, § 89.

² *Ibid*, § 90.

"Having seen that matter is indestructible, motion continuous, and force persistent—having seen that forces are everywhere undergoing transformation, and that motion, always following the line of least resistance, is invariably rhythmic, it remains to discover the similarly invariable formula expressing the combined consequences of the actions thus separately formulated."¹

It is from this fresh point of departure that Spencer proceeds to reduce to systematic and comprehensive expression the laws of that continuous redistribution of matter and motion which is going on throughout the universe in general and in detail. All sensible existences, and the aggregates which they form, have their history, and this history covers the entire period between their emergence from the imperceptible and their final disappearance again into the imperceptible. The redistribution of matter and motion which brings about this passage from the imperceptible, through the various stages of the perceptible, and back into the imperceptible, comprises two antagonistic processes: one characterised by the integration of matter and the dissipation of motion; the other by the absorption of motion and the disintegration of matter. The former produces consolidation and definiteness; the latter, diffusion and incoherence. These two universal antagonistic processes are evolution and dissolution. The entire universe is in a state of continual change, and it is in terms of these processes that all changes, great and small, inorganic, organic, physical, vital, psychical, social, have to be interpreted.

This brings us face to face with the whole question of the universal trans-

¹ *First Principles*, § 92.

formation of things, and of the ultimate uniformities which that transformation reveals. Our next business will be to understand what we mean by evolution.

IV.

What, then, is evolution?

A broad answer has already been given to this question. As dissolution is disintegration, so evolution is integration. But this definition takes note only of the primary element in the evolutionary process. While evolution must always mean an integration of matter and concomitant dissipation of motion, or, in other words, an increase in definiteness and coherence, it will commonly imply much more than this. We must, therefore, examine the secondary changes by which this primary change is habitually complicated before our theory of evolution can be complete. Indeed, these secondary changes are so much the most conspicuous characteristics of the evolutionary process that, as we shall see, it is from these that Spencer himself started, and with these that he remained for a long while pre-occupied. Our best plan will now be to follow him rapidly along the line of thought by which his full statement of the law of evolution was gradually reached. Points otherwise obscure will thus be robbed of much of their difficulty, and a good deal of subsequent elucidation will be spared.

We have noted that Spencer's earliest speculations were of a humanitarian character, and that his way of approach to the study of general evolution lay through that limited phase of development which we call progress. The theory of progress had been handed down to the thinkers of the nineteenth century by their forerunners of the eighteenth, and despite the absurdities

and extravagances that had long vitiated it—despite the vagueness and the crudity that it bore with it as an hereditary taint, the kernel of vital truth which it enfolded rendered it a fertile contribution to thought. Spencer's earliest writings are dominated by this idea of individual and social advance; but it was altogether foreign to his intellectual character to interest himself in the working out of a conception that was not at bottom susceptible of definite interpretation. It is all very well to talk about progress; but what *is* progress? This was the special form of the question to which for a number of years he was gradually feeling his way to an answer.

Already in *Social Statics* he had reached what then seemed to him an adequate reply. Asserting the necessity of progress (here metaphysically associated with a pre-ordained order),¹ he borrows from Coleridge the theory which Coleridge in turn had derived from German speculation, that life is "a tendency towards individuation." It is in the fulfilment of this tendency, says Spencer, that all progress will be found to consist. Throughout the whole animate world we discover it at work in the production of higher and higher forms of organisation and structure, and in man its fullest manifestation is reached. "By virtue of his complexity of structure he is furthest removed from the inorganic world in which there is least individuality. Again, his intelligence and adaptability commonly enable him to maintain life to old age—to

¹ This is one of the many points at which this remarkable book presents itself as a connecting link between eighteenth-century theories of progress, with their express or implicit teleology, and the purely naturalistic interpretation of Spencer's later work.

complete the cycle of his existence; that is, to fill out the limits of this individuality to the full. Again, he is self-conscious; that is, he recognises his own individuality. And.....even the change observable in human affairs is still towards a greater development of individuality—may still be described as ‘a tendency to individuation.’”¹

Translated into more philosophical language, this tendency to individuation is found to embrace two closely inter-related processes. Obviously, increasing complexity is one of these; not so obviously, this increase of complexity must have increase of unity as its natural accompaniment. Universal specialisation, with its resulting advance in heterogeneity, is only possible if, while all things are becoming more and more characteristically marked off from one another, they are at the same time becoming gradually more and more interdependent. The line of growth is “at once towards complete separateness and complete union.”² Differentiation without concomitant unification would lead to chaos and confusion; differentiation along with concomitant unification produces that enlargement of the organic harmony which we call progress.

This double aspect of the matter is clearly recognised in *Social Statics*,³ and was never entirely lost sight of in Spencer’s subsequent speculations.⁴ Yet, as was not unnatural, it was the more striking and conspicuous element in progress that for some time alone absorbed his attention. Allowing the

doctrine of unification to drop practically out of his thought, he fixed his mind upon the factor of increasing differentiation, which, detached from all other considerations, he attempted, in the essay on *Progress: Its Law and Cause*, to expand into a complete theory of universal development.

In this course he was materially assisted by German speculations on the evolution of the individual organism.⁵ “The investigations of Wolff, Goethe, and Von Baer,” he writes in the early part of the just-named article, “have established the truth that the series of changes gone through during the development of a seed into a tree, or an ovum into an animal, constitute an advance from homogeneity of structure to heterogeneity of structure. In its primary stage every germ consists of a substance that is uniform throughout, both in texture and chemical composition. The first step is the appearance of a difference between two parts of this substance; or, as the phenomenon is called in physiological language, a differentiation.....By endless such differentiations there is finally produced that complex combination of tissues and organs constituting the adult animal or plant. This is the history of all organisms whatever. It is settled beyond dispute that organic progress consists in a change from the homogeneous to the heterogeneous. Now, we propose.....to show that this law of organic progress is the law of all progress.....From the earliest traceable cosmical changes down to the latest results of civilisation, we shall find that the transformation of the homogeneous

¹ *Social Statics*, chap. xxx., § 12.

² *Ibid*, chap. xxx., § 13.

³ Chap. xxx., §§ 13, 14.

⁴ In the essays on the *Philosophy of Style* and the *Genesis of Science*, for example, the doctrine of increasing unification is clearly stated.

⁵ These he became acquainted with in 1852—that is, after the publication of *Social Statics*. See *First Principles*, § 119, note.

into the heterogeneous is that in which progress essentially consists."

A full half of the essay in question is devoted to an inductive establishment of this thesis; the other half being taken up with the affiliation of this universal process upon the law of the multiplication of effects, to which we shall come directly. The statement set forth, therefore, is that evolution consists wholly in increase of complexity—is a change from a condition of homogeneity to a condition of heterogeneity, brought about by ever-increasing differentiations. So certain had Spencer now become that this was not only *a* law of evolution, but *the* law of evolution, that he incorporated the formula in the first edition of his *First Principles*.¹

Further thought, however, led him to see that this was an imperfect view of the case. An important truth, of which he had just caught a glimpse in *Social Statics*, had now to be reinstated in his plan. The mere change in the direction of increasing heterogeneity or complexity could not, as he came presently to realise, be held to constitute evolution, since there are many such changes which make, not for evolution, but for destruction. An injury to an organism renders that organism more multiform in its composition; a cancer in the system produces marked increase in heterogeneity; a revolution in the social state makes the state far less homogeneous;

¹ "In that essay [on Progress]..... as also in the first edition of this work, I fell into the error of supposing that the transformation of the homogeneous into the heterogeneous constitutes evolution; whereas.....it constitutes the secondary redistribution accompanying the primary redistribution in that evolution which we distinguish as compound—or rather.....it constitutes the most conspicuous part of this secondary redistribution" (*First Principles*, § 119, note).

but we look upon none of these changes as changes in the line of progress or evolution. On the contrary, we see at once that they tend in the opposite direction—in the direction of dissolution; for, let them go on long enough and far enough, and dissolution will be the inevitable result. It is clear, then, that we must seek for another law to condition this of progressive differentiation. When is it that the transformation from the homogeneous to the heterogeneous means evolution, and when is it that it means the reverse? The answer to this question will be found in a return to our half-realised but now partly-forgotten principle of unification. Add this to the previously-enunciated doctrine of increasing heterogeneity, and the complete formula is reached. The differentiation of an organism into many specialised parts is one requirement of the developmental process; the other requirement is seen to be fulfilled when, and only when, these various specialised parts become more and more interdependent. Along with advance towards increasing heterogeneity there must also be an advance towards completer organic unity. Apply this new statement of the law to the cases above referred to, and it will be seen immediately that the want before felt is now made good. A cancer in the system, a revolution in the state, while they increase the complexity, break up or jeopardise the unity, of organisation. Evolution, therefore, as we have before said, is always integration, as dissolution is disintegration.

Thus we have followed Spencer to the establishment of his world-famous formula of evolution in its completed shape. Abstract and concise as it is in statement, it will now be found to present no insuperable difficulty, for we have

reached it by a route that has made each part of it separately clear. Evolution, then, is to be defined as *a continuous change from indefinite incoherent homogeneity to definite coherent heterogeneity of structure and function, through successive differentiations and integrations.*¹

The world at large has a horror of abstract statements, and there is in the air a vague, but none the less influential, belief that because long and unfamiliar words are often used to disguise paucity of thought, paucity of thought must always be predicated where they are employed. It is not surprising, therefore, that many people are more inclined to ridicule this formula than to attempt to understand it; it is surprising only when we find men of philosophic cultivation following the same vulgar course. Professor Goldwin Smith it was, I believe, who years ago remarked that the universe must have heaved a sigh of relief when this explanation of her processes was given to an astonished world through the cerebration of a distinguished thinker. Perhaps we may be allowed to smile at the epigram without losing one particle of our faith in the doctrine which it is sometimes supposed to bring into disrepute. But of

¹ In a purely introductory volume like the present, I have thought it best to give this definition in the simplest form compatible with complete statement. In its most fully developed shape it runs: Evolution is an integration of matter and concomitant dissipation of motion; during which the matter passes from an indefinite incoherent homogeneity to a definite coherent heterogeneity; and during which the retained motion undergoes a parallel transformation (*First Principles*, § 145). Practically speaking, what we mainly have to keep in mind is that evolution is a double-sided process—multiformity in unity, or specialisation along with mutual dependence.

all the efforts hitherto made to meet a great principle with the weapons of verbal wit, that of Mr. Kirkman, the well-known mathematician, holds an easy supremacy. Taking the formula as it stood in the edition of *First Principles* of 1862—the statement there given differing slightly from that adopted later—he undertakes to translate it “into plain English,” and the following jargon of uncouth phraseology is the result: “Evolution is a change from a nohowish, untalkaboutable, all-alikeness to a somehowish and in-general talkaboutable, not-all-alikeness, by continuous something-elseifications and sticktogetherations.” For myself, I can only say that I regret that Spencer ever saw fit to take this amusing exhibition of intellectual gymnastics seriously, as he did in the appendix to the fourth edition of *First Principles*. As a joke it is well enough; but a man who knows so little about the needs of language that he puts it forth in place of argument, and appears to think that he has thereby made short work of the principle that the formula embodies, is surely not worth powder and shot. Provided that Mr. Kirkman’s translation is absolutely accurate (which in one or two points may be taken as doubtful), and provided, further, that the English compounds which he offers in place of the Greek and Latin equivalents can be made to bear the same high degree of generality that the original words convey, then all that it is necessary to say is that the principle remains just as true in the one form of statement as in the other. Let Mr. Kirkman call heterogeneity “somethingelseification,” and integration “sticktogetheration,” if it pleases him best to do so; it none the less remains a fact that the double change towards diversity in unity is that in

which all evolution will be found to consist. Translate the whole formula into Hottentot or Cherokee if you like; the truth for which it stands will not be made a whit less true.

V.

But with the formulation of this all-pervading process we reach only the starting-point of a fresh investigation. Philosophy—the complete unification of knowledge—demands the re-statement of the law of evolution in deductive form. Such being the transformation exhibited by all classes of concrete phenomena, we have to ask: Why this continuous metamorphosis? We have formulated the ultimate uniformities of that metamorphosis—the laws to which, as we symbolically say, it everywhere conforms. We must now seek the *rationale* of the universal changes inductively set forth—must undertake to interpret them as *necessary* consequences of some deeper law, in the same way as Kepler's empirical generalisations may be interpreted as necessary consequences of the law of gravitation.

In thus undertaking to present the phenomena of evolution in synthetic order, Spencer starts from the law of the instability of the homogeneous, itself a corollary from the persistence of force. The condition of homogeneity is a condition of unstable equilibrium, because in any finite homogeneous aggregate the different parts are unequally exposed to incident forces. Moreover, "every mass or part of a mass, on which a force falls, subdivides, and differentiates that force, which thereupon proceeds to work a variety of changes"; and while every cause thus produces more than one effect, with the result that complexity continually increases, and with con-

tinually-increasing rapidity, the process of segregation, "tending ever to subdivide unlike units and to bring together like units," serves at the same time "to sharpen or make definite differentiations otherwise caused." Thus we have three comprehensive laws—the instability of the homogeneous, the multiplication of effects, and segregation—by which to account for the continual changes which we call evolution; we now see not only that these universal changes do take place, but also why they must take place. Nor is this all. These three laws are in turn exhibited as deductions from the deepest of all truths—as inevitable results of the persistence of force under the forms of matter and motion. In this way the circle of induction and deduction is made complete.

While the foregoing outline has had for its main purpose the exposition of the fundamental principles of the *Synthetic Philosophy*, it should also have helped, as we anticipated that it would, to make clear the method pursued by Spencer in the working out of his system. But as this is a point upon which we cannot well be too explicit, I shall complete this survey by following his own account (given to me in a letter after the publication of the first edition of this little book) of the course of thought by which he was led to the formulation of the ideas above summarised. This will, indeed, involve some little repetition, but not enough, considering the somewhat abstruse nature of the subject, to give cause for regret.

The simple nucleus of his philosophic system, he told me, first made its appearance in *Social Statics*, where, in the chapter entitled "General Considerations," mention is made of the biological truth that low types of animals are

relatively homogeneous—are composed of many like parts not mutually dependent; while higher animals are relatively heterogeneous—are composed of parts that are unlike and are mutually dependent. This, he wrote, “was an induction which I had reached in the course of biological studies—mainly, I fancy, while attending Professor Owen’s lectures on the vertebrate skeleton.” With this was joined the statement that the same is true of societies, “which begin with many like parts not mutually dependent, and end with many unlike parts that are mutually dependent.” This, again, was an induction. “And then in the joining of these came the induction that the individual organism and the social organism followed this law.” Thus the radical conception of the entire system took shape before Spencer became acquainted with Von Baer’s law, which, as we have seen, did not occur till two years later. Yet this law, though applying to the unfolding of the individual organism only, had its use. In furnishing the expression, “from homogeneity to heterogeneity,” it presented a convenient intellectual implement, for, “by its brevity and its applicability to all orders of phenomena, it served for thinking much better than the preceding generalisation, which contained the same essential thought.” The essays which followed *Social Statics* were marked by the establishment of various separate inductions, in which other groups of phenomena were brought under this large principle; while in the first edition of the *Psychology* not only was this principle shown to comprehend mental phenomena, but there was also recognised the primary law of evolution—integration and increase in definiteness. What followed may best be given in Spencer’s own words:—

Then it was that there suddenly arose in me the conception that the law which I had separately recognised in various groups of phenomena was a universal law applying to the whole cosmos: the many small inductions were merged in the large induction. And only after this largest induction had been formed did there arise the question—Why? Only then did I see that the universal cause for the universal transformations was the multiplication of effects, and that they might be deduced from the law of the multiplication of effects. The same thing happened at later stages. The generalisation which immediately preceded the publication of the essay on *Progress: Its Law and Cause*—the instability of the homogeneous—was also an induction. So was the direction of motion and the rhythm of motion. Then, having arrived at these *derivative* causes of the universal transformation, it presently dawned upon me (in consequence of the recent promulgation of the doctrine of the conservation of force) that all these derivative causes were sequences from that universal cause. The question had, I believe, arisen—Why these several derivative laws? and that came as an answer. Only then did there arise the idea of developing the whole of the universal transformation from the persistence of force. So you see that the process began by being inductive, and ended by being deductive; and this is the peculiarity of the method followed. On the one hand, I was never content with any truth remaining in the inductive form. On the other hand, I was never content with allowing a deductive interpretation to go unverified by reference to the facts.

The body of philosophy wrought by this two-fold method into a firmly-knit logical whole may thus be described as a science of the sciences, and is properly called Synthetic.¹

VI.

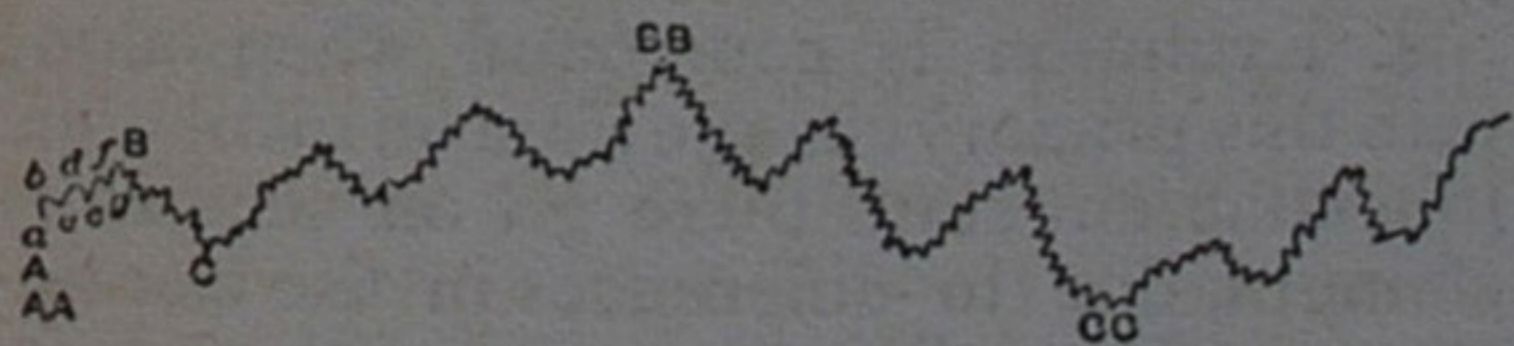
One supremely important point must here be noted, to prevent possible misapprehensions.

It is a common error to suppose that

¹ The work was originally announced simply as *A System of Philosophy*. The distinctive title was adopted in 1867.

evolution is continuous and uninterrupted—that its course may be symbolised by a straight line. A wavy line would, roughly speaking, be its more correct expression. An immediate corollary from Spencer's first principle of the persistence of force is, as we have seen, the law of the rhythm of motion. Were there only a single body in space, a single force would impel that body at a uniform rate to all eternity along an undeviating course; but in that case no variety would ever arise, and no evolution would be possible. As it is, the processes of evolution and dissolution are continually in conflict, locally and generally; and since throughout the whole universe motion is rhythmical or undulatory, evolution necessarily implies dissolution. This is true of all phenomena, from the minutest changes cognisable by science to the latest transformation of societies studied by the economist and the historian.¹

¹ Diagrammatically, making allowance for the rhythm of all motion and the consequent alternation of evolution and dissolution (progress and retrogression), the history of the universe in general and detail may be approximately presented in this way:—



it being understood that, while each of the smallest lines is supposed itself to be made up of undulations and so on in a diminishing scale, the whole diagram as here given is likewise only a limb of a larger rhythm, and this again of a still larger rhythm, *ad infinitum*. In other words, as the minute undulations, *a, b, c, d, e, f, g*, etc., are components of the larger undulations *A, B, C*, etc., and these again of the still larger undulations *AA, BB, CC*, etc., these still larger undulations *AA, BB, CC*, themselves go to make up vaster sweeps of rhythm, and so forth, to any

Evolution, then, as we have always to bear in mind, does not sum up the entire history of the universe, but only its ascending history. All existence passes through a cycle of change, and sooner or later dissolution asserts itself to undo the work that evolution has done. Individuals die, organisms disintegrate, societies collapse, races and civilisations are extinguished; and in the life and death of a gnat we thus find a tiny symbol of the pulsations that produce the birth and decay of worlds. Thus we have throughout to recognise the ascending and the descending scale, and to understand that the one is the necessary complement of the other. The flood of new light that this consideration lets in upon the problems of psychology and sociology is only now just beginning to be appreciated;² but the mind staggers before its

extent. All this reminds us of De Morgan's verses:—

“Great fleas have little fleas upon their backs
to bite 'em,
And little fleas have lesser fleas, and so *ad
infinitum*;
And the great fleas themselves, in turn, have
greater fleas to go on,
And these again have greater still, and greater
still, and so on.”

² The law of rhythm, when once fully recognised by the student of human affairs, will introduce important changes into the philosophy of history. In other practical directions its influence promises to be at least as significant. Dealing with various illustrations of it, as furnished by individual and social life, Spencer wrote: “Nor are there wanting evidences of mental undulations greater in length than any of these [which he had just been considering]—undulations which take weeks, or months, or years, to complete themselves. We continually hear of moods which recur at intervals. Very many persons have their epochs of vivacity and depression. There are periods of industry following periods of idleness, and times at which particular subjects or tastes are cultivated with zeal,

larger possible implications. If the doctrine of rhythm—of the alternation of evolution and dissolution—holds good of every detail of the universe, it must hold good no less of the universe taken as a whole. We pause a moment upon the conception of eternal change—eternal in the past, eternal in the future—to which this doctrine unavoidably leads. “Apparently the universally-co-existent forces of attraction and repulsion, which, as we have seen, necessitate rhythm in all minor changes throughout the universe, also necessitate rhythm in the totality of its changes—produce now an immeasurable period during which the attractive forces, predominating, cause universal concentration, and then an immeasurable period during which

alternating with times at which they are neglected. Respecting which slow oscillations, the only qualification to be made is that, being affected by numerous influences, they are comparatively irregular” (*First Principles*, § 86). The following striking passage from Dr. O. W. Holmes’s *Over the Teacups* (chap. viii.) reads almost like a commentary upon the one just given: “I think if patients and physicians were in the habit of recognising the fact I am going to mention, both would be gainers.....It is a mistake to suppose that the normal course of health is represented by a straight horizontal line. Independently of the well-known causes which raise or depress the standard of vitality, there seems to be—I think I may venture to say there is—a rhythmic undulation in the flow of the vital force. The ‘dynamo’ which furnishes the working powers of consciousness and action has its annual, its monthly, its diurnal waves—even its momentary ripples—in the current it furnishes. There are greater and lesser curves in the movement of every day’s life—a series of ascending and descending movements; a periodicity depending on the very nature of the force at work in the living organism. Thus we have our good seasons and our bad seasons, our good days and our bad days, life climbing and descending in long or short undulations, which I have called the curve of health.”

the repulsive forces, predominating, cause universal diffusion—alternate eras of evolution and dissolution. And thus there is suggested the conception of a past during which there have been successive evolutions analogous to that which is now going on; and a future during which successive other such evolutions may go on—ever the same in principle, but never the same in concrete result.”¹

VII.

We may supplement this brief survey of some of the main doctrines of *First Principles* by the following summary of his philosophy which Spencer himself drew up a number of years ago for publication in Appleton’s *American Cyclopædia*, and which is here reproduced from that work:—

1. Throughout the universe, in general and in detail, there is an unceasing redistribution of matter and motion.

2. This redistribution constitutes evolution where there is a predominant integration of matter and dissipation of motion, and constitutes dissolution where there is a predominant absorption of motion and disintegration of matter.

3. Evolution is simple when the process of integration, or the formation of a coherent aggregate, proceeds uncomplicated by other processes.

4. Evolution is compound when along with this primary change from an incoherent to a coherent state there go on secondary changes, due to differences in the circumstances of the different parts of the aggregate.

5. These secondary changes constitute a transformation of the homogeneous into the heterogeneous—a transformation which, like the first, is exhibited in the universe as a whole and in all (or nearly all) its details—in the aggregate of stars and nebulae; in the planetary system; in the earth as an inorganic mass; *in each organism, vegetal or animal* (Von Baer’s law); in the aggregate of organisms throughout geologic

¹ *First Principles*, § 183.

time ; in the mind ; in society ; in all products of social activity.

6. The process of integration, acting locally as well as generally, combines with the process of differentiation to render this change, not simply from homogeneity to heterogeneity, but from an indefinite homogeneity to a definite heterogeneity ; and this trait of increasing definiteness, which accompanies the trait of increasing heterogeneity, is, like it, exhibited in the totality of things, and in all its divisions and subdivisions down to the minutest.

7. Along with this redistribution of the matter composing any evolving aggregate there goes on a redistribution of the retained motion of its components in relation to one another ; this also becomes, step by step, more definitely heterogeneous.

8. In the absence of a homogeneity that is infinite and absolute, this redistribution, of which evolution is one phase, is inevitable. The causes which necessitate it are :

9. The instability of the homogeneous, which is consequent upon the different exposures of the different parts of any limited aggregate to incident forces. The transformations hence resulting are complicated by—

10. The multiplication of effects : every mass and part of a mass on which a force falls subdivides and differentiates that force, which thereupon proceeds to work a variety of changes ; and each of these becomes the parent of similarly multiplying changes : the multiplication of these becoming greater in proportion as the aggregate becomes more heterogeneous. And these two causes of increasing differentiations are furthered by—

11. Segregation, which is a process tending ever to separate unlike units, and to bring together like units, so serving continually to sharpen or make definite differentiations otherwise caused.

12. Equilibration is the final result of these transformations which an evolving aggregate undergoes. The changes go on until there is reached an equilibrium between the forces which all parts of the aggregate are exposed to, and the forces these parts oppose to them. Equilibration may pass through a transition stage of balanced motions (as in a planetary system), or of balanced functions (as in a living body), on the way to ultimate equilibrium ; but the state of rest in inorganic bodies, or death in organic bodies, is the necessary limit of the changes constituting evolution.

13. Dissolution is the counterchange which sooner or later every evolved aggregate undergoes. Remaining exposed to surrounding forces that are unequibrated, each aggregate is ever liable to be dissipated by the increase, gradual or sudden, of its contained motion ; and its dissipation, quickly undergone by bodies lately animate, and slowly undergone by inanimate masses, remains to be undergone at an indefinitely remote period by each planetary and stellar mass, which, since an indefinitely remote period in the past, has been slowly evolving : the cycle of its transformations being thus completed.

14. This rhythm of evolution and dissolution, completing itself during short periods in small aggregates, and in the vast aggregates distributed through space completing itself in periods which are immeasurable by human thought, is, so far as we can see, universal and eternal : each alternating phase of the process predominating—now in this region of space, and now in that—as local conditions determine.

15. All these phenomena, from their great features down to their minutest details, are necessary results of the persistence of force under its forms of matter and motion. Given these in their known distributions through space, and their quantities being unchangeable, either by increase or decrease, there inevitably result the continuous redistributions distinguishable as evolution and dissolution, as well as all those special traits above enumerated.

16. That which persists, unchanging in quantity, but ever-changing in form, under these sensible appearances which the universe presents to us, transcends human knowledge and conception ; is an unknown and an unknowable power, which we are obliged to recognise as without limit in space, and without beginning or end in time.

VIII.

The whole body of philosophy, or completely-unified knowledge, Spencer divides into two parts : “On the one hand, the things contemplated may be the universal truths : all particular truths referred to being used simply for proof or elucidation of these universal truths.

On the other hand, setting out with the universal truths as granted, the things contemplated may be the particular truths as interpreted by them. In both cases we deal with the universal truths; but in the one case they are passive, and in the other case active—in the one case they form the products of exploration, and in the other case the instruments of exploration. These divisions we may appropriately call General Philosophy and Special Philosophy respectively.¹ General Philosophy forms the subject-matter of *First Principles*; the remaining nine volumes of the Synthetic series are devoted to the task of applying the universal truths there formulated to the particular phenomena of Biology, Psychology, Sociology, and Ethics.

Some of the most striking features of Spencer's treatment of the two last-named subjects will be dealt with in the following chapters—their more obviously practical bearings justifying this special consideration. The rest of the present chapter will be devoted to the earlier portions of the work.

The aim of the *Principles of Biology* was, as Spencer himself stated in the preface, "to set forth the general truths of biology as illustrative of and as interpreted by the laws of evolution." Due notice must be taken of the phrase—"the general truths of biology." To write an exhaustive treatise on the subject was no part of Spencer's plan, which called only for such a co-ordination and synthesis of fundamental principles as, expressed in terms of the universal laws of evolution, and finally affiliated upon the ultimate truth, would present in broadest outline the science of life. Students of these two volumes

¹ *First Principles*, § 38.

have also need to bear in mind that they were published at a time when the whole question of evolution was still under fierce discussion, and when even the scientific world itself was divided into hostile camps over every issue involved. Hence the special historic significance, over and above the general philosophic significance, of Part III., setting forth the arguments in favour of the development-hypothesis, and dealing with the factors of organic evolution. Beyond this, little needs to be said by way of introduction to the work. Attention may, however, be directed to the law of equilibration, and some of its more significant bearings.¹

Life being defined as "the continuous adjustment of internal relations to external relations," Spencer proceeds to show that the degree of life varies as the correspondence varies between organism and environment; the highest point being reached where the correspondence exhibits a maximum of complexity, rapidity, and length of maintenance. Lack of correspondence—that is, inability on the part of an organism to balance external actions by internal actions, or, in other words, to meet the demands of the environment at every point—means death; absolutely perfect adjustment, on the other hand, would be absolutely perfect life. Observe, then, that equilibration, biologically considered, expresses the tendency on the

¹ The general law is worked out in full in *First Principles*, Part II., chap. xxii. The question is there raised—Can the changes constituting evolution go on without limit? And the answer is, No. "The changes go on until there is reached an equilibrium between the forces which all parts of the aggregate are exposed to, and the forces these parts oppose to them." Hence, in all cases, "there is a progress toward equilibrium."